



## Quarterly publication of National Statistics on the incidence and prevalence of tuberculosis (TB) in Cattle in Great Britain – to end March 2017

These statistics were released on Wednesday 14 June 2017 at 9:30. The next quarterly notice to be updated on Wednesday 20 September 2017 at 9:30. The underlying monthly datasets will next be updated on Wednesday 19 July 2017.

These statistics are obtained from the Animal and Plant Health Agency (APHA) work management IT support system (Sam), used for the administration of TB testing in GB. They are a snapshot of the position on the date on which the data were extracted. These statistics may be subject to small revisions until all test results are available. In particular figures from 2014 onwards will be subject to further revision as test and incident records are completed.

**Short term changes in these statistics should be considered in the context of long term trends. The charts in this statistical notice give the latest indication of how trends in bovine TB have changed since 1996.**

### Key points – March 2017

Please read the detailed guidance on how these measures are calculated at <https://www.gov.uk/government/statistics/data-and-methodology>.

**Table 1: Herd incidence and herd prevalence**

	New herd incidents per 100 herd years at risk		Disease restricted herds as a percentage of registered herds at end	
	12 months to end March 16	12 months to end March 17	12 months to end March 16	12 months to end March 17
England	10.0	10.4	6.1	6.3
High risk area	18.7	18.1	12.2	12.4
Edge area	5.9	6.7	3.7	4.1
Low risk area	1.1	1.0	0.4	0.3
Scotland	0.6	0.7	0.2	0.2
Wales	7.7	6.6	5.6	5.1

In England the **herd incidence rate** and **herd prevalence** have increased between the last two 12-month periods. In Scotland both Incidence and prevalence have remained fairly stable. In Wales incidence and prevalence have decreased. Incidence and prevalence are highest in the High Risk Area of England (HRA) and lowest in the Low Risk Area of England (LRA) and in Scotland.

**Table 2: New herd incidents and non-OTF herds**

	New herd incidents			Herds not officially TB free at the end of the period due to a bovine TB incident (non-OTF herds)		
	12 months to end March 16	12 months to end March 17	Year-on-year change	12 months to end March 16	12 months to end March 17	Year-on-year change
England	3,925	3,836	-2%	3,138	3,194	2%
High risk area	3,411	3,317	-3%	2,795	2,840	2%
Edge area	357	400	12%	264	292	11%
Low risk area	157	119	-24%	79	62	-22%
Scotland	42	37	-12%	31	33	6%
Wales	769	694	-10%	648	598	-8%

Between the 12 months ending March 2017 and the previous 12 month period, there was a decrease in the number of new TB incidents in the HRA, LRA, Wales and Scotland. In the Edge Area of England there was an increase in the number of new incidents. Prevalence at end March 2017 (the percentage of herds which were not Officially TB Free (OTF) due to a TB incident) increased in the HRA and Edge Area of England and decreased in the LRA compared to March 2016. In Scotland the number of non-OTF herds is very low and approximately 57% of cattle herds are now exempt from routine TB surveillance testing.

In Scotland and the LRA, there are proportionately more false positive results to the tuberculin skin test than elsewhere in GB<sup>1</sup>. Consequently it is also important to consider the number of new TB incidents where OTF status is withdrawn (OTFW) following confirmation of TB by post-mortem examination or laboratory culture of tissue samples. During the 12 months ending March 2017 there were 36 such incidents in the LRA, compared to 48 in the previous 12 months. In Scotland there were 11 OTFW incidents in the period ending March 2017 and 9 in the 12 months to end March 2016. The OTFW incidence rate in the LRA was 0.3 breakdowns per 100 herd-years at risk in both periods. In Scotland the OTFW incidence rate of breakdowns per 100 herd-years was 0.2 in the 12 months to end March 2017 and 0.1 in the previous 12 month period.

**Table 3: Total animals slaughtered\***

	12 months to end March 16	12 months to end March 17	Year-on-year change
England	28,899	30,079	4%
High risk area	25,415	26,231	3%
Edge area	2,793	3,338	20%
Low risk area	691	510	-26%
Scotland	139	191	37%
Wales	8,691	9,923	14%

\* Includes test reactors, direct contacts and inconclusive reactors.

There was an increase in the number of cattle slaughtered due to a TB incident in the HRA and Edge areas of England and also in Scotland and Wales. In the LRA there was a decrease. Much of the rise in England and Wales is attributable to changes in the testing policy for non-OTF herds. In herds undergoing recurrent or persistent incidents there is increased use of the interferon-gamma blood test. This is more sensitive than the standard skin test and discloses more reactors per breakdown. Also since April 2016 all herds suffering TB incidents in the HRA of England, irrespective of post-mortem and laboratory findings, must undergo two successive skin tests at severe interpretation in order to regain their OTF status (the same policy was introduced in the Edge Area in December 2013). Severe interpretation of skin test results is intended to improve the probability that all infected animals in a herd are removed before incidents are closed and restrictions lifted.

<sup>1</sup> See for example: [veterinaryrecord.bmj.com/content/vetrec/177/10/258.summary.pdf](http://veterinaryrecord.bmj.com/content/vetrec/177/10/258.summary.pdf) and [veterinaryrecord.bmj.com/content/177/10/258](http://veterinaryrecord.bmj.com/content/177/10/258)

## Supplementary data

**Decreases in the number of “Total tests on Herds” and “Tests on officially TB free (OTF) herds”** - See tables 4 and 5 of this notice.

From October 2015 to November 2016 there were steady decreases in the number of TB tests completed on herds. The decrease is mainly as a result of changes in APHA testing procedures made in November 2015, and more specifically to testing of cattle that have moved out of TB-infected herds before detection of the disease ('TB forward tracings'). Changes to these 'tracing' tests include:-

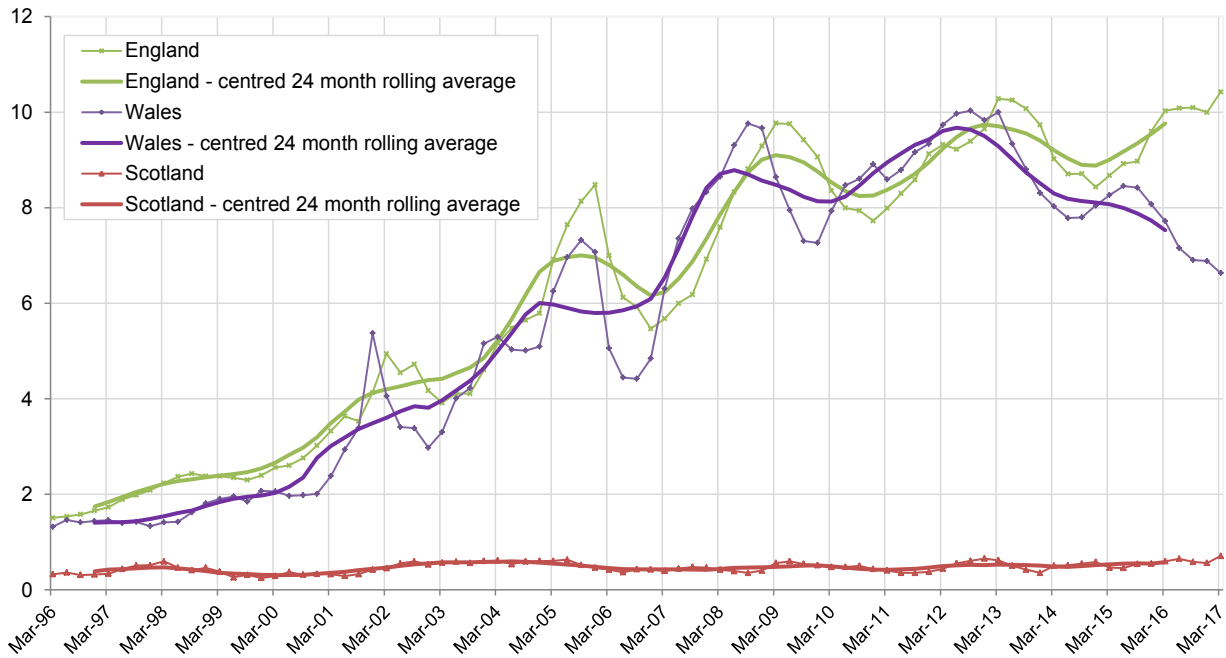
- Bespoke tracing tests of individual animals are no longer performed in England if a whole-herd (or similar) test is already due in the herd of destination within 60 days of the tracing test date, and in Wales if the tracing test is due within the existing herd test window.
- Combining multiple tracing tests for a herd where the traced cattle originate from more than one holding and where test deadlines are within a one month period. Such tests were previously counted separately.

TB tracing tests are included in the “Herd tests” and the “Total cattle tests” measures and these changes are thought to account for much of the decrease in the herd test measures.

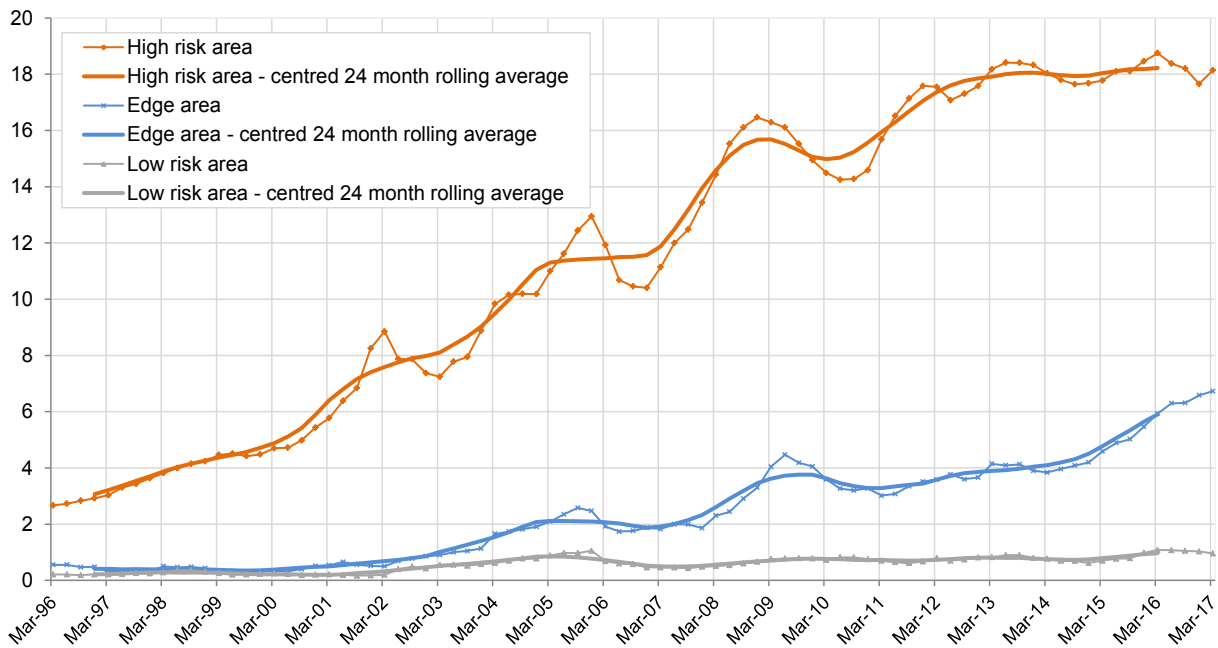
Further detail can be found in Tables 4-7. The charts published in this statistical notice, together with the equivalent figures from January 1996 onwards, are also available in spreadsheet format at <https://www.gov.uk/government/publications/incidence-of-tuberculosis-tb-in-cattle-in-great-britain>.

## Herd incidence

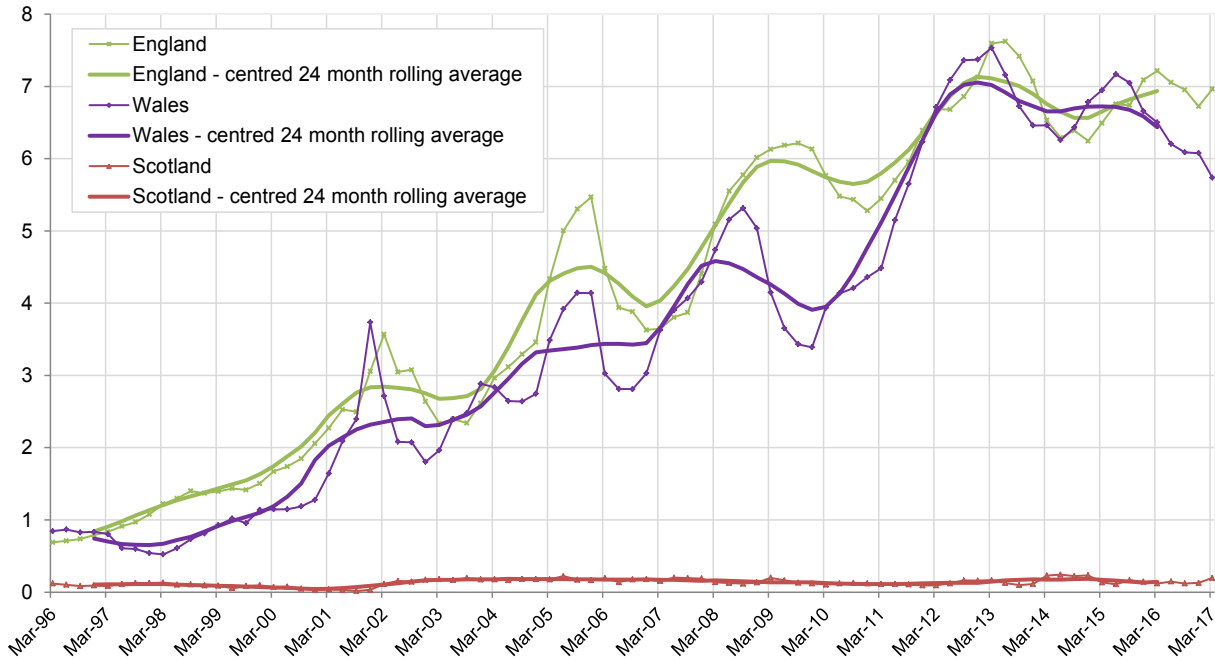
**Figure 1: New herd incidents per 100 herd years at risk of infection during the year - GB, per quarter**



**Figure 2: New herd incidents per 100 herd years at risk of infection during the year – England, per quarter**

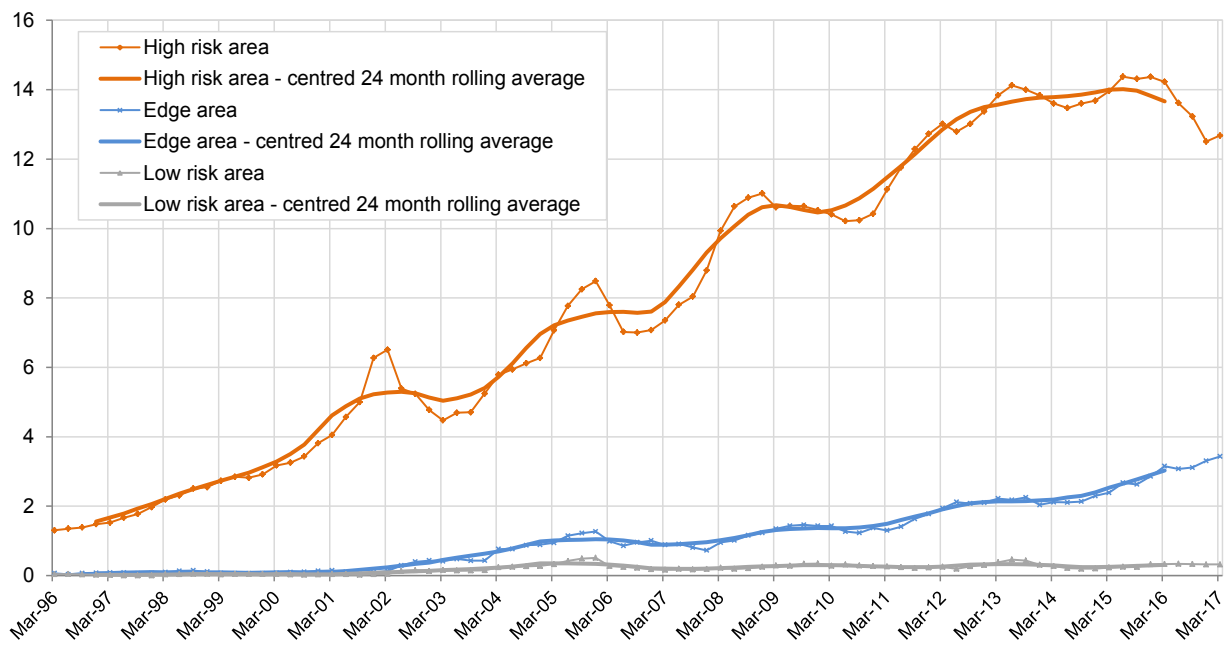


**Figure 3: New herd incidents with officially TB-free status withdrawn (OTFW) per 100 herd years at risk of infection during the year – GB, per quarter**



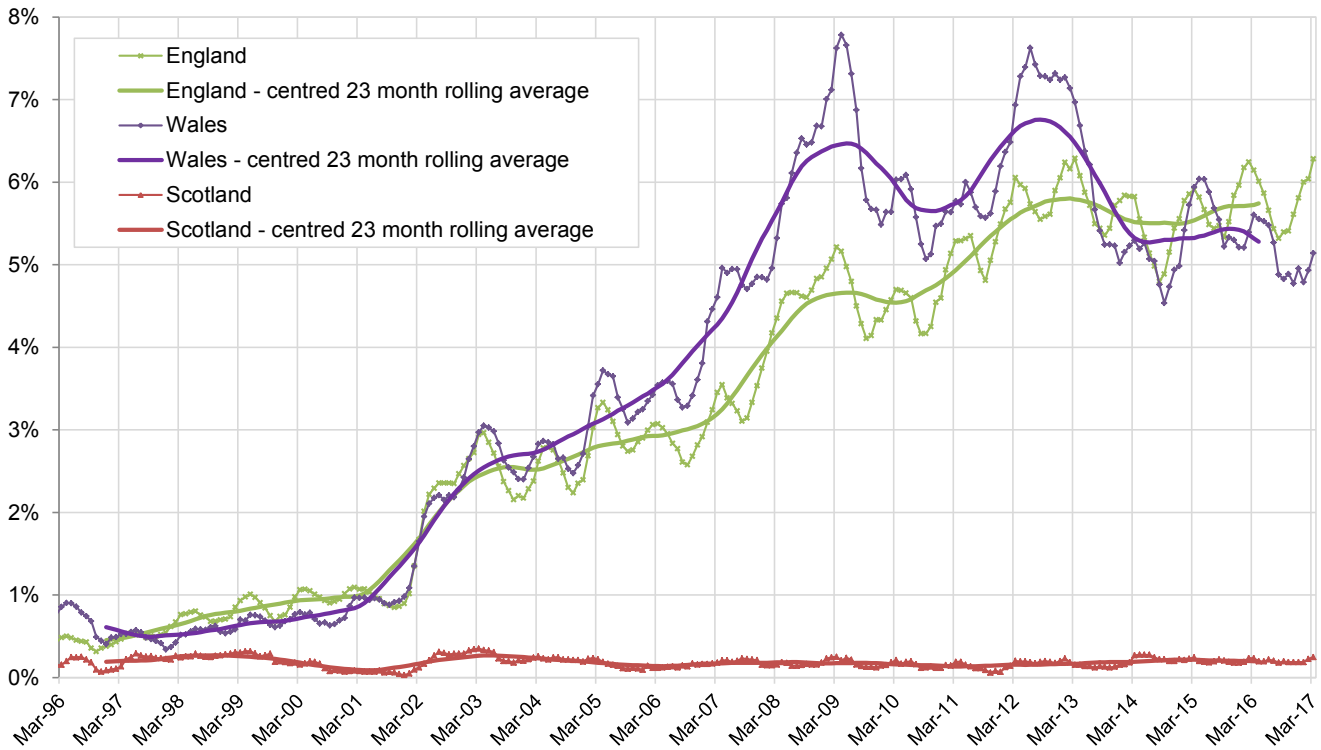
**NOTE:** from 2011, the figures presented above for OTFW incidents per 100 herd years at risk in Wales are not directly comparable to England or Scotland. This is due to the inclusion of some incidents in Wales which have their OTF status withdrawn for epidemiological reasons only, in the absence of post-mortem confirmation. The figures presented here are not comparable with those for Wales in Table 6 of this notice.

**Figure 4: New herd incidents with officially TB-free status withdrawn (OTFW) per 100 herd years at risk of infection during the year – England, per quarter**

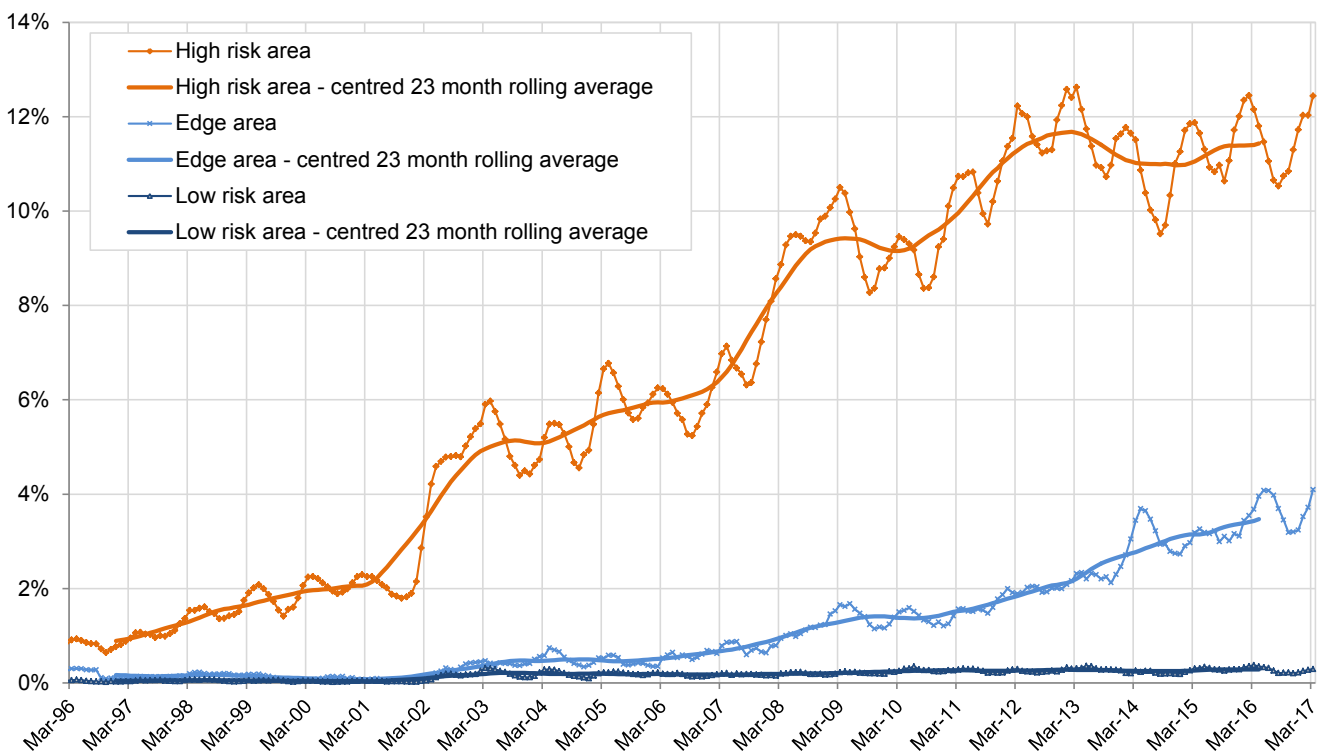


## Herd prevalence

**Figure 5: Number of herds under disease restrictions at the end of the period as a percentage of registered and active herds – GB**



**Figure 6: Number of herds under disease restrictions at the end of the period as a percentage of registered and active herds – England**



## Trends in TB

There has been an overall long-term upward trend in the incidence of TB in cattle herds in England and Wales since 1996 (when these statistical series begin), although there is evidence that the rate of new incidents is levelling off in most areas of the country.

There was a fairly steady increase in the herd incidence rate until early 2001 when there was an outbreak of foot and mouth disease (FMD) from February to October. During this period TB testing was suspended. In the meantime, new bTB breakdowns continued to be detected on farms through routine post-mortem meat inspection of cattle carcasses in abattoirs. Following the 2001 FMD outbreak there was a gradual resumption in TB testing.

There appears to be a three-year cycle in the bTB herd incidence rate from 2001 onwards. This can be observed in figures 1 to 4, above, with peaks in 2005, 2008 and (to a lesser extent) 2013, and troughs in 2006 and 2009. This pattern has stabilised somewhat in recent years. There is no clear explanation for this pattern, because bTB is a chronic disease with a complex epidemiology and reservoirs of infection in cattle and, in some areas of GB, wildlife. As a result of surveillance and testing changes, there has been no stable time series until recently. For example, there have been different herd testing frequencies in each parish over time, ranging from annual to four-yearly and changing every year until those frequencies were unified in Wales in 2010 (annual) and in England in 2013 (annual and four-yearly).

There are several possible explanations:

1. The smoothed trend represents true seasonal changes in the transmission risk and prevalence of infection in wildlife and cattle populations. However there is no strong evidence to support this.
2. After FMD higher risk herds were tested every 3 to 4 years and could have contributed to a cyclically higher incidence rate. However breakdowns in the 4-yearly (and formerly 3-yearly) testing areas represent a small and decreasing proportion of the breakdowns in any given year.
3. When testing resumed in 2002 following the 2001 FMD outbreak, high-risk herds may have been identified and put under restrictions if a reactor was identified, then control tested for a period (when they cannot generate a new incident). Once the bTB incident has been resolved and OTF herd status is restored, the herd becomes susceptible to a new incident as it undergoes post-breakdown surveillance tests at 6 and 18 months after regaining OTF status.

4. The incidence rate reflects changes to testing policy unrelated to the FMD outbreak, in particular increases in testing in 2005 and 2008.

In terms of prevalence (the percentage of herds with an open TB incident), figure 5 shows an increase in England and Wales at the beginning of 2002. This may have been the result of the suspension of TB testing during the FMD outbreak in February-October 2001 (including the 60-day tests of TB-infected herds to regain OTF status) along with the detection of new breakdowns through routine slaughterhouse surveillance. Although TB herd testing gradually resumed from the end of 2001, a proportion of higher-risk herds were put under TB restrictions pending completion of their overdue tests. Prevalence continued to increase steadily from 2002. In Wales there were peaks in 2009 and 2012, following which there has been a decline and stabilisation of the trend. After a peak in England in early 2013 the trend appears to have stabilised. However, for both England and Wales it is too early to conclude that this is part of a new longer term trend.

## **Regional differences**

The regional and county-level statistics published as part of this statistical notice show that there are considerable differences in the distribution and frequency of bovine TB across GB.

Note that since 2011, the trends for the herd incidence rate showing incidents with officially TB-free status withdrawn (OTFW) per 100 herd years at risk of infection during the year (i.e. figure 3) are not directly comparable for Wales and the other countries of GB. This is because from 2011 onwards, for Wales the number of incidents includes those where there is no confirmation of TB via post mortem examination or bacteriological culture, but where the herd's OTF status is withdrawn for epidemiological reasons. The overall herd incidence rate (figure 1 and table 1) should be used to compare countries.

Scotland, which has had officially TB-free (OTF) status since 2009, has relatively few herd breakdowns. The herd incidence is very low and stable and is largely driven by sporadic introductions of infected cattle into Scotland.

In Wales, TB incidence and prevalence varies across regions. The South West, East and South East regions have high levels of bovine TB whereas the regions in the North West, North East and South Wales have relatively low levels. To attempt to contain the disease and prevent its spread into these lower-incidence regions, all herds in Wales are tested for the disease at least annually. The strategically-located Intensive Action Area (north Pembrokeshire and small parts of Ceredigion and Carmarthenshire) has one of the highest incidence rates of bovine TB in Wales. Here there are extra measures in place to control the disease, such as stricter cattle controls, 6-monthly testing and improved biosecurity.



In England, there are wide geographical variations in the incidence and prevalence of bTB. This is reflected in the division of the country into three different epidemiological areas, with different disease control strategies and herd testing regimes applied in each of them:

- In the *Low Risk Area* of the North, East and South East of England, the incidence of bTB is very low and stable and most cattle herds are routinely tested every four years. Similar to Scotland, the majority of breakdowns in the Low Risk Area can be linked to movements of undetected infected cattle from other areas of GB.
- In the *Edge Area*, which spans most of Cheshire, parts of the counties of Derbyshire, Warwickshire, Oxfordshire and East Sussex and the whole of Nottinghamshire, Leicestershire, Northamptonshire, Buckinghamshire and Hampshire, the herd incidence is higher than in the Low Risk Area, although this varies from county to county. After a small spike in the first half of 2014 prevalence may be starting to stabilise.
- In the *High Risk Area* of the West Midlands and South West of England, the incidence and prevalence of infected cattle have increased steadily to relatively high levels. This is partly a result of a reservoir of endemic *M. bovis* infection in the local wildlife. There is evidence of a slowing down in both the incidence and prevalence rates since around 2012.

**Table 4: Herd and test numbers – Great Britain**

	England				Scotland				Wales				Great Britain (5)			
	Number of cattle herds registered on		Tests on officially TB free (OTF) herds (3)	Total cattle tests (4)	Number of cattle herds registered on		Tests on officially TB free herds	Total cattle tests	Number of cattle herds registered on		Tests on officially TB free (OTF) herds	Total cattle tests	Number of cattle herds registered on		Tests on officially TB free herds	Total cattle tests
	Sam (1)	on herds (2)			Sam	on herds	herds		Sam	on herds	herds		Sam	on herds	herds	
2005	62,015	40,660	33,428	3,656,667	14,667	3,884	3,800	226,921	15,083	11,296	9,456	915,856	91,765	55,844	46,688	4,799,522
2006	60,960	46,791	40,182	4,086,589	14,495	4,171	4,103	235,892	14,904	13,452	11,725	1,086,672	90,359	64,417	56,013	5,409,238
2007	58,871	46,599	39,610	4,223,950	14,100	4,525	4,435	286,727	14,148	13,011	10,801	1,221,558	87,119	64,138	54,849	5,732,372
2008	58,380	47,417	38,505	4,540,585	13,889	4,367	4,289	257,780	13,780	14,646	12,058	1,380,278	86,049	66,433	54,855	6,178,790
2009	57,376	50,141	40,333	4,829,107	13,759	3,641	3,555	217,737	13,183	18,422	15,005	1,793,639	84,318	72,205	58,894	6,840,614
2010	56,515	52,955	42,896	5,367,553	13,675	3,580	3,512	231,996	12,939	17,936	15,176	1,848,115	83,129	74,473	61,586	7,447,694
2011	54,293	54,122	42,825	5,496,051	13,316	3,426	3,359	229,824	12,821	19,108	16,302	1,861,996	80,443	76,656	62,486	7,587,871
2012	53,561	63,499	51,815	5,857,660	12,981	2,880	2,811	222,368	12,721	22,209	19,038	1,950,958	79,321	88,588	73,664	8,030,993
2013	53,706	64,428	52,807	6,283,185	12,952	2,322	2,276	162,945	12,642	20,082	17,085	1,943,846	79,392	86,848	72,183	8,390,230
2014	51,722	68,909	57,713	6,927,096	13,070	2,579	2,499	217,258	12,019	19,643	17,295	1,899,712	76,916	91,161	77,537	9,044,408
2015	51,232	69,000	57,327	7,302,291	13,176	2,634	2,565	265,800	11,669	20,575	18,132	2,022,804	76,124	92,232	78,047	9,591,205
2016	51,120	61,745	49,672	7,559,032	13,273	2,529	2,461	244,723	11,646	17,980	15,650	2,034,105	76,056	82,268	67,796	9,838,104
12 months to end March 16	51,074	65,862	54,137	7,210,801	13,182	2,550	2,488	243,424	11,565	19,470	17,039	2,001,253	75,862	87,898	73,680	9,455,646
12 months to end March 17	50,851	61,312	49,245	7,693,070	13,298	2,241	2,174	228,694	11,637	17,825	15,490	2,052,541	75,800	81,390	66,920	9,974,596
Jan-14	53,580	7,340	6,053	767,987	12,968	367	364	34,497	12,576	1,983	1,714	197,101	79,216	9,693	8,134	999,612
Feb-14	53,557	6,750	5,775	653,049	12,967	353	353	30,689	12,541	1,944	1,766	180,653	79,156	9,050	7,897	864,394
Mar-14	53,376	7,171	6,246	671,707	12,983	315	305	24,030	12,410	2,091	1,893	184,501	78,856	9,577	8,444	880,267
Apr-14	53,429	6,073	5,042	607,341	12,997	177	171	12,715	12,385	1,829	1,611	178,438	78,903	8,082	6,827	798,532
May-14	53,433	6,320	5,188	550,158	13,024	200	193	12,658	12,393	1,779	1,560	154,376	78,943	8,301	6,943	717,234
Jun-14	53,437	4,444	3,521	425,461	13,044	106	96	8,911	12,366	1,167	972	113,000	78,946	5,717	4,589	547,372
Jul-14	53,285	4,449	3,465	459,126	13,047	108	95	5,352	12,314	1,169	968	114,196	78,750	5,730	4,532	578,736
Aug-14	53,282	4,067	3,304	399,698	13,048	104	95	6,826	12,295	1,207	1,010	111,516	78,728	5,380	4,411	518,050
Sep-14	52,266	4,598	3,825	480,968	13,041	95	88	6,692	12,280	1,402	1,228	151,502	77,691	6,097	5,143	639,196
Oct-14	51,770	6,045	5,147	635,521	13,063	145	140	10,676	12,106	1,952	1,758	206,216	77,041	8,147	7,050	852,476
Nov-14	51,789	6,520	5,750	686,014	13,065	283	276	28,263	12,071	1,706	1,553	168,943	77,033	8,513	7,583	883,251
Dec-14	51,722	5,132	4,397	590,066	13,070	326	323	35,949	12,019	1,414	1,262	139,270	76,916	6,874	5,984	765,288
Jan-15	51,226	7,298	6,125	752,914	13,063	455	449	52,047	11,960	2,164	1,937	210,794	76,334	9,921	8,515	1,015,788
Feb-15	51,110	6,845	5,844	680,021	13,077	391	384	49,734	11,879	2,097	1,919	171,006	76,132	9,337	8,151	900,840
Mar-15	51,073	6,949	6,023	714,136	13,080	297	291	34,088	11,871	2,211	2,048	202,718	76,087	9,459	8,364	951,021
Apr-15	51,092	7,037	5,814	696,419	13,097	186	176	18,133	11,858	2,111	1,839	201,748	76,109	9,340	7,835	916,364
May-15	51,091	4,975	4,085	493,192	13,134	202	199	19,112	11,860	1,518	1,304	141,299	76,154	6,697	5,590	653,606
Jun-15	51,148	4,586	3,633	480,467	13,148	85	79	6,579	11,864	1,166	959	116,625	76,198	5,838	4,672	603,674
Jul-15	51,219	5,314	4,141	554,607	13,165	90	84	3,984	11,856	1,422	1,155	141,760	76,278	6,828	5,382	700,374
Aug-15	51,116	4,360	3,566	440,296	13,160	81	75	4,877	11,812	1,296	1,123	133,332	76,130	5,737	4,764	578,505
Sep-15	51,153	4,701	3,863	476,618	13,154	84	78	4,646	11,705	1,437	1,251	143,283	76,062	6,222	5,192	624,551
Oct-15	51,258	6,350	5,385	691,046	13,163	161	152	14,475	11,684	2,135	1,915	205,116	76,153	8,646	7,452	910,637
Nov-15	51,257	5,665	4,823	692,927	13,170	281	277	25,160	11,682	1,659	1,486	199,536	76,156	7,605	6,586	917,623
Dec-15	51,232	4,920	4,025	629,648	13,176	321	321	32,965	11,669	1,359	1,196	155,587	76,124	6,602	5,544	818,222
Jan-16	51,235	6,550	5,358	750,094	13,163	403	397	40,874	11,658	1,772	1,537	194,797	76,103	8,727	7,294	985,771
Feb-16	51,199	5,945	4,836	694,251	13,169	374	369	46,943	11,609	1,816	1,647	184,901	76,018	8,135	6,852	926,005
Mar-16	51,074	5,459	4,608	611,236	13,182	282	281	25,676	11,565	1,779	1,627	183,269	75,862	7,521	6,517	820,224
Apr-16	51,128	7,345	5,810	862,822	13,200	227	214	27,495	11,579	2,240	1,994	235,505	75,948	9,812	8,018	1,125,892
May-16	51,171	4,397	3,511	492,805	13,217	185	177	15,937	11,581	1,382	1,183	150,766	76,012	5,964	4,871	659,528
Jun-16	51,123	3,704	2,698	472,646	13,228	125	118	7,919	11,589	994	795	121,660	75,981	4,823	3,611	602,225
Jul-16	51,092	3,912	2,786	552,667	13,244	72	68	5,637	11,600	978	772	126,525	75,979	4,964	3,628	684,834
Aug-16	51,099	3,796	2,992	454,003	13,244	88	79	4,345	11,614	1,103	914	124,642	75,987	4,988	3,986	583,000
Sep-16	51,039	4,760	3,785	627,488	13,245	94	89	5,416	11,622	1,506	1,291	180,641	75,938	6,362	5,167	813,566
Oct-16	50,998	4,885	4,071	612,457	13,247	124	120	7,399	11,642	1,510	1,352	165,659	75,919	6,522	5,546	785,524
Nov-16	51,081	5,494	4,699	715,759	13,257	262	261	18,003	11,649	1,514	1,317	186,855	76,022	7,270	6,277	920,617
Dec-16	51,120	5,498	4,518	712,804	13,273	293	288	39,079	11,646	1,386	1,221	178,885	76,056	7,180	6,029	930,828
Jan-17	51,215	5,612	4,613	705,768	13,285	275	272	30,201	11,634	1,521	1,318	171,671	76,151	7,409	6,204	907,736
Feb-17	51,241	5,435	4,402	684,340	13,290	253	249	37,710	11,620	1,678	1,520	173,386	76,166	7,366	6,171	895,436
Mar-17	50,851	6,474	5,360	799,511	13,298	243	239	29,553	11,637	2,013	1,813	236,346	75,800	8,730	7,412	1,065,410

**Table 5: Herd and test numbers – England**

	High risk area				Edge area				Low risk area				England			
	Number of cattle herds registered on Sam (1)	Total tests on herds (2)	Tests on officially TB free (OTF) herds (3)	Total cattle tests (4)	Number of cattle herds registered on Sam	Total tests on herds	Tests on officially TB free (OTF) herds	Total cattle tests	Number of cattle herds registered on Sam	Total tests on herds	Tests on officially TB free (OTF) herds	Total cattle tests	Number of cattle herds registered on Sam	Total tests on herds	Tests on officially TB free (OTF) herds	Total cattle tests
2005	29,040	31,615	24,681	3,153,470	9,110	3,232	3,080	190,014	23,865	5,813	5,667	313,183	62,015	40,660	33,428	3,656,667
2006	28,501	33,667	27,358	3,350,061	9,023	4,644	4,483	277,719	23,436	8,480	8,341	458,809	60,960	46,791	40,182	4,086,589
2007	27,466	33,183	26,583	3,512,762	8,627	4,979	4,749	308,840	22,778	8,437	8,278	402,348	58,871	46,599	39,610	4,223,950
2008	27,167	35,287	26,786	3,848,087	8,505	4,781	4,497	320,008	22,708	7,349	7,222	372,490	58,380	47,417	38,505	4,540,585
2009	26,659	37,845	28,578	4,158,654	8,353	5,315	4,929	355,455	22,364	6,981	6,826	314,998	57,376	50,141	40,333	4,829,107
2010	25,965	38,303	28,847	4,512,604	8,443	6,066	5,668	428,467	22,107	8,586	8,381	426,482	56,515	52,955	42,896	5,367,553
2011	25,189	40,536	29,905	4,646,234	7,970	6,016	5,539	491,483	21,134	7,570	7,381	358,334	54,293	54,122	42,825	5,496,051
2012	24,748	47,631	36,628	4,979,450	7,767	7,713	7,181	552,248	21,046	8,155	8,006	325,962	53,561	63,499	51,815	5,857,660
2013	24,503	46,665	35,841	5,045,666	7,902	9,196	8,620	778,103	21,301	8,567	8,346	459,416	53,706	64,428	52,807	6,283,185
2014	23,382	47,501	37,458	5,186,897	7,435	11,220	10,259	1,104,018	20,905	10,188	9,996	636,181	51,722	68,909	57,713	6,927,096
2015	23,065	47,462	36,911	5,425,337	7,235	11,200	10,310	1,118,566	20,932	10,338	10,106	758,388	51,232	69,000	57,327	7,302,291
2016	22,961	43,016	32,166	5,645,346	7,197	10,286	9,293	1,173,568	20,962	8,443	8,213	740,118	51,120	61,745	49,672	7,559,032
12 months to end March 16	22,996	45,410	34,834	5,359,194	7,172	10,773	9,864	1,114,052	20,906	9,679	9,439	737,555	51,074	65,862	54,137	7,210,801
12 months to end March 17	22,835	42,877	32,024	5,759,068	7,132	10,330	9,336	1,195,496	20,884	8,105	7,885	738,506	50,851	61,312	49,245	7,693,070
Jan-14	24,385	5,027	3,827	569,406	7,894	1,140	1,079	120,446	21,301	1,173	1,147	78,135	53,580	7,340	6,053	767,987
Feb-14	24,355	4,543	3,662	476,832	7,904	1,150	1,071	104,604	21,298	1,057	1,042	71,613	53,557	6,750	5,775	653,049
Mar-14	24,167	4,731	3,888	472,002	7,895	1,304	1,234	133,759	21,314	1,136	1,124	65,946	53,376	7,171	6,246	671,707
Apr-14	24,150	4,130	3,191	449,776	7,912	1,085	1,009	101,344	21,367	858	842	56,221	53,429	6,073	5,042	607,341
May-14	24,141	4,317	3,313	413,810	7,898	1,038	930	84,627	21,394	965	945	51,721	53,433	6,320	5,188	550,158
Jun-14	24,121	3,145	2,358	341,234	7,895	713	598	60,870	21,421	586	565	23,357	53,437	4,444	3,521	425,461
Jul-14	24,031	3,212	2,352	371,125	7,820	656	548	65,855	21,434	581	565	22,146	53,285	4,449	3,465	459,126
Aug-14	24,025	3,006	2,338	326,988	7,803	595	513	52,099	21,454	466	453	20,611	53,282	4,067	3,304	399,698
Sep-14	23,624	3,313	2,627	369,676	7,546	725	656	70,751	21,096	560	542	40,541	52,266	4,598	3,825	480,968
Oct-14	23,388	4,347	3,547	484,908	7,464	934	846	99,250	20,918	764	754	51,363	51,770	6,045	5,147	635,521
Nov-14	23,395	4,446	3,743	505,120	7,466	1,015	965	102,503	20,928	1,059	1,042	78,391	51,789	6,520	5,750	686,014
Dec-14	23,382	3,284	2,612	406,020	7,435	865	810	107,910	20,905	983	975	76,136	51,722	5,132	4,397	590,066
Jan-15	23,033	4,836	3,757	553,492	7,338	1,214	1,137	111,891	20,855	1,248	1,231	87,531	51,226	7,298	6,125	752,914
Feb-15	22,964	4,628	3,713	493,494	7,310	1,057	988	106,489	20,836	1,160	1,143	80,038	51,110	6,845	5,844	680,021
Mar-15	22,928	4,604	3,755	495,294	7,291	1,251	1,190	130,868	20,854	1,094	1,078	87,974	51,073	6,949	6,023	714,136
Apr-15	22,924	4,897	3,794	506,182	7,292	1,183	1,090	114,643	20,876	957	930	75,594	51,092	7,037	5,814	696,419
May-15	22,922	3,422	2,621	360,498	7,280	774	700	74,191	20,889	779	764	58,503	51,091	4,975	4,085	493,192
Jun-15	22,962	3,173	2,310	377,583	7,274	701	632	65,141	20,912	712	691	37,743	51,148	4,586	3,633	480,467
Jul-15	23,009	3,752	2,718	432,439	7,268	832	722	79,932	20,942	730	701	42,236	51,219	5,314	4,141	554,607
Aug-15	22,993	3,173	2,455	354,808	7,218	629	573	54,971	20,905	558	538	30,517	51,116	4,360	3,566	440,296
Sep-15	23,023	3,453	2,702	379,637	7,212	731	660	69,626	20,918	517	501	27,355	51,153	4,701	3,863	476,618
Oct-15	23,058	4,546	3,676	520,893	7,237	1,006	930	96,087	20,963	798	779	74,066	51,258	6,350	5,385	691,046
Nov-15	23,075	3,739	2,979	495,597	7,242	973	908	115,797	20,940	953	936	81,533	51,257	5,665	4,823	692,927
Dec-15	23,065	3,239	2,431	455,420	7,235	849	780	98,930	20,932	832	814	75,298	51,232	4,920	4,025	629,648
Jan-16	23,043	4,369	3,280	545,084	7,237	1,099	1,017	118,653	20,955	1,082	1,061	86,357	51,235	6,550	5,358	750,094
Feb-16	23,034	4,000	2,989	508,919	7,221	1,001	922	106,267	20,944	944	925	79,065	51,199	5,945	4,836	694,251
Mar-16	22,996	3,647	2,879	422,134	7,172	995	930	119,814	20,906	817	799	69,288	51,074	5,459	4,608	611,236
Apr-16	23,021	5,055	3,656	647,655	7,177	1,318	1,215	143,732	20,930	972	939	71,435	51,128	7,345	5,810	862,822
May-16	23,017	2,953	2,173	357,839	7,180	747	668	81,851	20,974	697	670	53,115	51,171	4,397	3,511	492,805
Jun-16	22,917	2,680	1,793	379,819	7,191	597	499	63,265	21,015	427	406	29,562	51,123	3,704	2,698	472,646
Jul-16	22,866	2,934	1,935	438,429	7,185	593	491	78,935	21,041	385	360	35,303	51,092	3,912	2,786	552,667
Aug-16	22,885	2,817	2,126	360,532	7,176	580	484	65,017	21,038	399	382	28,454	51,099	3,796	2,992	454,003
Sep-16	22,911	3,630	2,758	502,803	7,179	708	618	81,934	20,949	422	409	42,751	51,039	4,760	3,785	627,488
Oct-16	22,908	3,506	2,770	462,454	7,179	807	742	94,563	20,911	572	559	55,440	50,998	4,885	4,071	612,457
Nov-16	22,942	3,748	3,037	509,763	7,193	940	869	110,962	20,946	806	793	95,034	51,081	5,494	4,699	715,759
Dec-16	22,961	3,677	2,770	509,915	7,197	901	838	108,575	20,962	920	910	94,314	51,120	5,498	4,518	712,804
Jan-17	22,998	3,749	2,841	508,263	7,204	976	902	112,341	21,013	887	870	85,164	51,215	5,612	4,613	705,768
Feb-17	23,015	3,700	2,748	504,198	7,207	960	889	107,917	21,019	775	765	72,225	51,241	5,435	4,402	684,340
Mar-17	22,835	4,428	3,417	577,398	7,132	1,203	1,121	146,404	20,884	843	822	75,709	50,851	6,474	5,360	799,511

**Table 6: TB incidents and animals slaughtered – Great Britain**

	England				Scotland				Wales				Great Britain (5)			
	Herds not officially TB free at the end of the period due to a bovine TB incident (1)	New herd incidents (NHI) (2)	NHI of which: officially TB free herd status withdrawn (OTFW) (3)	Total animals slaughtered (4)	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered
2005	1,799	2,895	1,865	22,847	14	37	13	194	490	732	430	6,783	2,305	3,665	2,308	29,824
2006	1,778	2,719	1,808	16,393	24	44	19	224	567	767	477	5,903	2,369	3,531	2,304	22,520
2007	2,206	3,196	2,042	18,916	22	58	22	515	686	935	485	7,963	2,914	4,190	2,549	27,394
2008	2,832	3,766	2,448	27,815	25	47	18	460	920	1,198	627	11,400	3,777	5,012	3,094	39,675
2009	2,484	3,363	2,283	26,668	20	49	11	357	723	1,186	553	11,671	3,228	4,600	2,848	38,696
2010	2,598	3,632	2,483	24,600	16	45	13	160	711	1,039	513	7,618	3,325	4,721	3,011	32,378
2011	2,982	3,802	2,628	26,467	9	43	8	140	794	1,046	522	8,068	3,804	4,914	3,165	34,675
2012	3,242	3,919	2,867	28,286	26	54	12	418	921	1,109	563	9,289	4,220	5,115	3,452	37,993
2013	3,102	3,890	2,806	26,594	20	28	10	95	635	877	447	6,102	3,793	4,813	3,264	32,791
2014	2,874	3,804	2,789	26,413	29	47	17	240	599	858	525	6,378	3,525	4,718	3,332	33,031
2015	3,055	3,964	2,896	28,031	24	40	10	134	608	835	475	8,086	3,709	4,848	3,383	36,256
2016	2,970	3,750	2,528	29,223	25	37	9	187	577	711	394	9,946	3,598	4,504	2,932	39,361
12 months to end March 16	3,138	3,925	2,805	28,899	31	42	9	139	648	769	412	8,691	3,838	4,744	3,228	37,734
12 months to end March 17	3,194	3,836	2,533	30,079	33	37	11	191	598	694	365	9,923	3,852	4,578	2,912	40,196
Jan-14	3,129	428	311	2,299	21	3	2	10	648	101	55	635	3,824	534	368	2,944
Feb-14	3,122	356	251	2,159	24	4	1	8	656	68	37	845	3,827	429	289	3,012
Mar-14	3,109	342	245	2,425	35	13	6	20	657	79	45	472	3,825	435	296	2,917
Apr-14	2,966	287	191	2,306	36	2	0	57	643	70	34	518	3,670	361	226	2,881
May-14	2,849	284	184	2,180	36	5	1	33	652	84	44	543	3,561	373	229	2,756
Jun-14	2,746	213	152	2,184	36	4	2	47	627	51	31	427	3,431	268	185	2,658
Jul-14	2,656	263	204	1,819	32	2	0	33	621	59	41	476	3,332	325	245	2,328
Aug-14	2,557	255	196	1,683	29	1	0	2	585	40	26	264	3,194	296	222	1,949
Sep-14	2,555	297	226	2,111	29	5	1	13	557	59	42	436	3,163	362	269	2,560
Oct-14	2,668	374	288	2,296	26	1	0	6	573	98	69	627	3,289	473	357	2,929
Nov-14	2,820	410	305	2,201	26	3	2	5	596	86	56	530	3,465	500	363	2,736
Dec-14	2,874	295	236	2,750	29	4	2	6	599	63	45	605	3,525	362	283	3,361
Jan-15	2,959	379	273	2,339	28	3	0	8	648	109	72	655	3,653	492	345	3,003
Feb-15	2,993	347	259	2,300	30	6	1	15	680	87	52	654	3,721	440	312	2,969
Mar-15	3,018	369	275	2,482	32	4	1	16	705	84	55	535	3,773	457	331	3,034
Apr-15	2,973	326	248	1,994	26	3	1	6	716	81	38	581	3,734	412	287	2,582
May-15	2,895	266	184	2,110	25	1	0	5	716	65	31	746	3,655	332	215	2,861
Jun-15	2,805	259	188	2,071	24	2	0	5	698	50	24	537	3,547	313	213	2,613
Jul-15	2,786	308	216	2,354	26	6	1	8	674	68	36	701	3,506	382	253	3,063
Aug-15	2,797	257	192	2,091	29	5	2	3	655	57	31	570	3,501	320	225	2,665
Sep-15	2,727	278	214	2,344	27	2	2	35	611	41	22	637	3,386	322	238	3,016
Oct-15	2,829	414	302	2,501	25	2	1	4	623	83	52	711	3,500	501	356	3,216
Nov-15	2,994	414	289	2,644	24	4	1	9	619	63	32	726	3,659	481	322	3,379
Dec-15	3,055	347	256	2,801	24	2	0	20	608	47	30	1,033	3,709	396	286	3,855
Jan-16	3,164	392	258	2,332	25	6	0	8	607	66	39	798	3,818	464	297	3,138
Feb-16	3,197	357	239	2,824	31	6	0	30	626	83	51	900	3,876	446	290	3,754
Mar-16	3,138	307	219	2,833	31	3	1	6	648	65	26	751	3,838	375	246	3,592
Apr-16	3,073	364	237	2,278	26	2	1	21	643	61	31	799	3,765	429	269	3,098
May-16	3,002	258	155	2,692	26	5	0	16	640	54	23	779	3,692	318	178	3,487
Jun-16	2,892	216	133	2,110	29	4	2	43	635	54	27	1,039	3,580	274	162	3,192
Jul-16	2,777	236	163	2,112	27	2	0	11	611	52	26	719	3,438	290	189	2,845
Aug-16	2,718	230	157	2,135	24	1	1	14	567	38	15	716	3,332	269	173	2,865
Sep-16	2,754	351	253	2,501	26	6	3	5	561	51	32	972	3,365	409	288	3,478
Oct-16	2,759	332	230	2,442	25	0	0	5	569	66	45	675	3,377	398	275	3,122
Nov-16	2,865	377	262	2,558	25	1	0	16	556	52	36	745	3,472	432	299	3,319
Dec-16	2,970	330	222	2,406	25	1	1	12	577	69	43	1,053	3,598	400	266	3,471
Jan-17	3,074	374	254	2,716	25	4	0	4	557	54	23	848	3,681	434	278	3,568
Feb-17	3,094	353	227	2,640	30	6	1	9	573	60	26	673	3,722	420	254	3,322
Mar-17	3,194	415	240	3,489	33	5	2	35	598	83	38	905	3,852	505	281	4,429

**Table 7: TB incidents and animals slaughtered – England**

	High risk area				Edge area				Low risk area				England			
	Herds not officially TB free at the end of the period due to a bovine TB incident (1)	New herd incidents (NHI) (2)	NHI of which: officially TB free herd status withdrawn (OTFW) (3)	Total animals slaughtered (4)	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered	Herds not officially TB free at the end of the period due to a bovine TB incident	New herd incidents (NHI)	NHI of which: officially TB free herd status withdrawn (OTFW)	Total animals slaughtered
2005	1,722	2,696	1,763	22,040	34	101	53	354	43	98	49	453	1,799	2,895	1,865	22,847
2006	1,681	2,492	1,697	15,757	62	136	73	356	35	91	38	280	1,778	2,719	1,808	16,393
2007	2,114	2,980	1,957	17,651	55	131	51	733	37	85	34	532	2,206	3,196	2,042	18,916
2008	2,687	3,495	2,346	25,812	105	181	67	1,385	40	90	35	618	2,832	3,766	2,448	27,815
2009	2,344	3,074	2,172	24,726	97	200	71	1,214	43	89	40	728	2,484	3,363	2,283	26,668
2010	2,441	3,274	2,342	22,971	102	226	95	1,016	55	132	46	613	2,598	3,632	2,483	24,600
2011	2,786	3,466	2,486	24,938	149	238	112	1,070	47	98	30	459	2,982	3,802	2,628	26,467
2012	3,029	3,582	2,697	26,876	155	234	131	1,199	58	103	39	211	3,242	3,919	2,867	28,286
2013	2,850	3,480	2,609	24,616	195	301	158	1,518	57	109	39	460	3,102	3,890	2,806	26,594
2014	2,632	3,346	2,560	22,706	203	349	193	3,024	39	109	36	683	2,874	3,804	2,789	26,413
2015	2,770	3,460	2,666	24,677	225	346	179	2,745	60	158	51	609	3,055	3,964	2,896	28,031
2016	2,691	3,230	2,296	25,331	233	387	193	3,293	46	133	39	599	2,970	3,750	2,528	29,223
12 months to end March 16	2,795	3,411	2,569	25,415	264	357	188	2,793	79	157	48	691	3,138	3,925	2,805	28,899
12 months to end March 17	2,840	3,317	2,296	26,231	292	400	201	3,338	62	119	36	510	3,194	3,836	2,533	30,079
Jan-14	2,870	376	283	2,054	214	41	25	205	45	11	3	40	3,129	428	311	2,299
Feb-14	2,837	296	223	1,908	241	49	25	215	44	11	3	36	3,122	356	251	2,159
Mar-14	2,781	278	206	1,977	272	48	31	385	56	16	8	63	3,109	342	245	2,425
Apr-14	2,624	244	175	1,875	292	37	14	384	50	6	2	47	2,966	287	191	2,306
May-14	2,507	236	169	1,679	288	33	13	310	54	15	2	191	2,849	284	184	2,180
Jun-14	2,417	185	139	1,789	274	19	10	289	55	9	3	106	2,746	213	152	2,184
Jul-14	2,358	241	190	1,596	252	18	13	183	46	4	1	40	2,656	263	204	1,819
Aug-14	2,286	233	183	1,554	229	15	9	117	42	7	4	12	2,557	255	196	1,683
Sep-14	2,291	257	206	1,889	222	29	17	175	42	11	3	47	2,555	297	226	2,111
Oct-14	2,417	348	274	2,078	208	20	13	196	43	6	1	22	2,668	374	288	2,296
Nov-14	2,575	381	288	1,909	205	21	11	259	40	8	6	33	2,820	410	305	2,201
Dec-14	2,632	271	224	2,398	203	19	12	306	39	5	0	46	2,874	295	236	2,750
Jan-15	2,697	322	253	2,078	213	37	15	218	49	20	5	43	2,959	379	273	2,339
Feb-15	2,721	299	240	1,918	217	33	15	344	55	15	4	38	2,993	347	259	2,300
Mar-15	2,722	316	245	2,170	232	33	21	270	64	20	9	42	3,018	369	275	2,482
Apr-15	2,670	280	228	1,652	238	35	16	245	65	11	4	97	2,973	326	248	1,994
May-15	2,592	222	167	1,770	232	24	13	267	71	20	4	73	2,895	266	184	2,110
Jun-15	2,509	224	170	1,768	230	29	16	223	66	6	2	80	2,805	259	188	2,071
Jul-15	2,492	264	202	2,069	234	32	11	245	60	12	3	40	2,786	308	216	2,354
Aug-15	2,522	238	184	1,932	216	13	7	137	59	6	1	22	2,797	257	192	2,091
Sep-15	2,448	239	190	2,094	224	29	19	222	55	10	5	28	2,727	278	214	2,344
Oct-15	2,552	378	284	2,242	218	22	13	188	59	14	5	71	2,829	414	302	2,501
Nov-15	2,704	362	264	2,437	229	39	20	187	61	13	5	20	2,994	414	289	2,644
Dec-15	2,770	316	239	2,547	225	20	13	199	60	11	4	55	3,055	347	256	2,801
Jan-16	2,846	326	225	2,032	249	44	26	219	69	22	7	81	3,164	392	258	2,332
Feb-16	2,867	302	218	2,468	256	39	18	331	74	16	3	25	3,197	357	239	2,824
Mar-16	2,795	260	198	2,404	264	31	16	330	79	16	5	99	3,138	307	219	2,833
Apr-16	2,716	305	210	1,970	284	50	25	278	73	9	2	30	3,073	364	237	2,278
May-16	2,639	208	141	2,214	293	37	11	343	70	13	3	135	3,002	258	155	2,692
Jun-16	2,533	176	123	1,777	293	31	8	270	66	9	2	63	2,892	216	133	2,110
Jul-16	2,436	210	149	1,871	286	22	12	207	55	4	2	34	2,777	236	163	2,112
Aug-16	2,409	208	144	1,857	265	18	13	236	44	4	0	42	2,718	230	157	2,135
Sep-16	2,461	313	236	2,229	248	28	12	233	45	10	5	39	2,754	351	253	2,501
Oct-16	2,484	294	206	2,193	229	29	21	230	46	9	3	19	2,759	332	230	2,442
Nov-16	2,592	331	240	2,269	230	39	20	264	43	7	2	25	2,865	377	262	2,558
Dec-16	2,691	297	206	2,047	233	19	11	352	46	14	5	7	2,970	330	222	2,406
Jan-17	2,767	315	219	2,449	254	42	27	236	53	17	8	31	3,074	374	254	2,716
Feb-17	2,768	312	215	2,269	268	31	12	327	58	10	0	44	3,094	353	227	2,640
Mar-17	2,840	348	207	3,086	292	54	29	362	62	13	4	41	3,194	415	240	3,489

## **Notes (applicable to all geographical areas)**

### **Herd and test numbers**

- (1) The number of herds registered on the APHA's Sam (computer) system. Occasionally there are changes to the number of herds registered on Sam. This is the result of routine or ad hoc data cleansing.
- (2) Herds for which tuberculin skin testing is carried out on at least one animal during the period shown. Does not include the supplementary interferon-gamma blood tests, which are performed in herds already under TB restrictions.
- (3) Herds for which tuberculin skin testing is carried out on at least one animal during the period shown and when the herd is OTF. Does not include interferon-gamma tests.
- (4) Count of the number of tests on cattle. An individual animal could be tested more than once in each time period. Includes a minority of interferon-gamma blood tests.
- (5) For some statistics the region or disease status is unknown. For this reason the data shown for England, Scotland and Wales will not sum to the GB figure.

### **TB incidents and animals slaughtered**

- (1) Herds which were not officially TB-free (i.e. herds with OTF status suspended or withdrawn) due to a TB incident, at the end of the period shown.
- (2) Herds which were previously OTF, but either had cattle that reacted to a tuberculin test or a tuberculous animal disclosed by routine meat inspection at slaughter, during the period shown. Figures for Wales include incidents where OTF status has been withdrawn for epidemiological reasons only.
- (3) New herd incidents where OTF status was withdrawn from the herd following detection of at least one reactor with visible lesions typical of TB and/or one animal with positive culture results. Figures for Wales do not include incidents where OTF status has been withdrawn for epidemiological reasons only. These are currently included within the "officially TB free herd status suspended" figures, which can be found in the accompanying GB by country and regional county datasets.
- (4) Reactors slaughtered + inconclusive reactors slaughtered + direct contacts slaughtered.
- (5) For some statistics the region or disease status is unknown. For this reason the data shown for England, Scotland and Wales will not sum to the GB figure.

The statistics are a snapshot of the position on the date on which the data were extracted. The statistics from January 2015 are revised monthly.

In addition there are a number of incidents between May and December 2011 which remain unclassified. This followed the transition to APHA's current computer system Sam. This affects only a small number of records and work in 2015 and early 2016 to investigate these incidents has reduced this number substantially.

## What is bovine tuberculosis?

Bovine tuberculosis (bTB) is a chronic infectious disease of cattle<sup>2</sup>. The risk bTB poses to human health is low, largely due to milk pasteurisation. The disease is detected either on farms (through mandatory skin tests<sup>3</sup> of cattle herds for bTB at regular intervals) and at abattoirs (through post-mortem meat inspection of cattle carcasses).

## What are the impacts of bTB?

Bovine TB presents serious challenges to the food and farming industries and has economic and social impacts. The economic costs of a bTB breakdown<sup>4</sup> are shared by farmers and government; in 2012 the estimated average cost of a confirmed herd breakdown in high risk areas of England was £14,000 to farmers and £20,000 to government<sup>5</sup>. Costs are incurred for a number of reasons:

- Cattle which are found (or are highly likely) to have bTB are slaughtered. This loses the farmer the value of the animal and its output. Government pays farmers compensation for slaughtered animals which is based on the market value of cattle.
- There are costs associated with testing animals for bTB. Farmers incur costs from gathering animals together, such as paying workers for their time, and government pays the vets' fees for carrying out tests on the herd (and in the event of a breakdown on herds in neighbouring farms).
- When an animal in a herd tests positive for the disease, the whole herd is put under movement restrictions until all the remaining animals are tested repeatedly with negative results. This presents costs to farmers, for example because they are unable to move their cattle to market or buy in replacements for animals that are slaughtered.

Other impacts of high bTB levels can include:

- Restrictions on international trade in cattle and cattle products.
- Significant stress amongst farmers, their families and local communities<sup>6</sup>
- The infection spilling over to domestic and wild animals<sup>7</sup>.

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<sup>2</sup> bTB is caused by the bacterium *Mycobacterium bovis* (*M. bovis*). Cattle are the natural host of the bacterium, but many other species, including wildlife such as badgers and (less commonly) deer, are also susceptible to *M. bovis*, can develop TB and transmit the infection to other species.

<sup>3</sup> the tuberculin skin test: if tuberculin (a purified sterile cocktail of proteins derived from *M. bovis* cultures) is injected into the skin of an animal infected with *M. bovis*, this will cause a localised allergic reaction characterised by temporary swelling of the skin, which is measured 72hrs after the injection. The principle is very similar to the skin tests for TB in humans.

<sup>4</sup> A *breakdown* is the term used to describe the occurrence in a herd of at least one animal with a positive reaction to the skin test, or the identification of *M. bovis* in an animal with TB lesions detected at routine slaughter. The affected herd is then placed under restrictions and loses its Officially TB Free (OTF) status.

<sup>5</sup> Economic analysis based on [research report SE3112 for Defra, 2004](#)

<sup>6</sup> See for example [research report SE3120 for Defra, 2008](#)

<sup>7</sup> For example Broughan, J. M., Downs, S. H., Crawshaw, T. R., Upton, P. A., Brewer, J. & Cliffo-Hadley, R. S. (2013) *Mycobacterium bovis* infections in domesticated non-bovine mammalian species. Part 1: review of epidemiology and laboratory submissions in Great Britain 2004-2010. *Veterinary Journal* **198**, 346-35. See also <http://webarchive.nationalarchives.gov.uk/20140405112558/http://www.defra.gov.uk/ahvla-en/publication/pub-survreport-tb/>

## Why monitor statistics about bTB?

**Legal requirements:** EU Member States are legally required to have accelerated bTB eradication plans in place in order to achieve officially TB free (OTF) status<sup>8</sup>. Defra and Welsh Government policy is to achieve OTF status for the whole country by 2038, while Scotland achieved OTF status in September 2009. bTB statistics are used in England and Wales to measure progress towards this target, and to support the annual case for Scotland to retain its OTF status, as the qualification is based on herd incidence.

**Monitoring policy effectiveness:** Statistics on the incidence of bTB in cattle herds and the number of cattle slaughtered as a result of bTB are used by policymakers to monitor the spread and concentration of the disease and to inform decisions around the potential approaches to controlling it. Existing controls include routine testing in cattle based on the disease incidence (or risk) in a given area, restricting movements of cattle from herds where an animal has tested positive for the disease and addressing the problem of disease spread through wildlife (principally badgers).

## Factors affecting statistics on incidence of bTB in cattle herds

Variation in the monthly statistics can occur for a number of reasons, including:

- **Disease:** an increase in the trend can be the result of a higher proportion of herds experiencing a breakdown because of an increase in the underlying incidence of bTB.
- **Surveillance policy** (including the frequency of testing): Cattle herds in high risk areas<sup>9</sup> are tested annually and cattle herds in low risk areas are usually tested every four years. In Scotland, which is OTF, a growing percentage of herds are exempt from routine testing. If cattle herds in a low prevalence region are tested more frequently than every four years, the increase in the number of bTB tests will not necessarily be followed by a similar increase in the detection of infected cattle and so this may result in a decline in the incidence rate.
- **Seasonality:** more animals are tested when they are housed, during winter months, compared with when they are grazing outdoors in summer months. This is simply because it is easier to gather and test the cattle when they are already contained within a building. The trend lines in Figures 1 and 2 account for this by presenting seasonally adjusted data.
- **Number of testing days** in a given month: tests tend to be carried out at the beginning of the working week and the results collected and entered into the data system towards the end of the week. Months containing five Fridays may therefore have more positive test results than months containing four.

An extreme example of the impact of testing on the incidence rate can be seen in the statistics for 2001, when bTB testing was significantly reduced for most of the year due to the outbreak of Foot and Mouth Disease but new bTB breakdowns continued to be detected through disease

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<sup>8</sup> "OTF Status" takes its meaning from European law: for a region or Member State of the EU to be considered to be OTF the annual incidence of herds with confirmed *M. bovis* infection must not have exceeded 0.1% and at least 99.9% of the herds within it must have been free from bTB at the end of the year for at least six consecutive years.

<sup>9</sup> South West, West Midlands and East Sussex, where the majority of TB cases are found and where the prevalence (probability) of TB-infected cattle and badgers is relatively high.



surveillance in abattoirs. This led to an unusually high incidence rate for 2001 and 2002, when effectively two years' worth of breakdowns were identified in one year when the normal testing regime resumed.

## **Surveillance policy in GB**

These statistics are presented for GB, but the bTB surveillance and control policy – including how frequently animals are tested for bTB – varies between England, Wales and Scotland and has changed over time.

### **Timeline:**

- **1990s:** most herds in GB tested every four years and background testing intervals determined on a parish basis. Herds in parishes with a high incidence of bTB breakdowns (in the South West of England and in parts of Wales) are tested on an annual or biennial basis, with a smaller number of three-yearly testing herds.
- **2004 to 2010:** the proportion of parishes and herds in England and Wales with annual testing increases gradually as the disease spread, with a corresponding decrease in the proportion of parishes with four-yearly testing.
- **October 2009:** the European Commission designates Scotland as an officially bTB free region of the UK.
- **January 2010:** In England, a core annual testing area is established, spanning entire counties in the South West and West Midlands (the 'high risk area') and surrounded by a 'buffer' of two-yearly testing parishes. Most of the rest of England remains on background four-year testing. The Welsh Government puts all cattle herds in Wales on annual bTB testing (with herds in the small Intensive Action Area of West Wales put on 6-monthly bTB testing).
- **2011 and 2012:** further expansion of the annual testing area in England to the east and north.
- **January 2013:** herd testing intervals are determined on a county basis and England is split into annual testing and four-yearly testing counties. Annual testing of herds is extended to all the counties at the edge of the high risk area (more detail below). Three- and two-yearly testing is abolished.
- **January 2015:** all cattle herds in the edge area of Cheshire are put on six-monthly testing.

## Current differences in surveillance policy in GB

- **England** is divided into two cattle bTB testing frequency areas that broadly reflect the geographically clustered nature of the disease. The majority of bTB breakdowns are found in the High Risk Area and the Edge Area (counties of the South West, West Midlands and East Sussex). These herds are tested for bTB annually (or every six months in the Edge Area of Cheshire) and represent nearly 60% of all herds in England. In the rest of England most herds are tested every four years. Herds that have a high risk of contracting bTB or present a potential public health risk (e.g. producer-retailers of unpasteurised milk) are tested annually regardless of their location.
- All herds in **Wales** are tested annually.
- **Scotland** has in place a risk-based routine herd testing policy. This targets testing at higher risk herds. Around 57 per cent of herds are considered low risk herds and are exempt from routine testing. These are herds which have 50 or fewer animals, minimal import of animals from high risk areas and send a high proportion of animals to slaughter. Herds that are not exempt are tested every four years.

More information on bovine TB can be found at:

England: <https://www.gov.uk/government/policies/reducing-bovine-tuberculosis>

Wales: <http://gov.wales/topics/environmentcountryside/ahw/disease/bovinetuberculosis/?lang=en>

Scotland: <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/animal-welfare/Diseases/disease/tuberculosis>

## Methodology

For a description of the data sources and methodology used in the calculation of the TB statistics, together with notes on data revisions policy etc., please refer to the 'Background and Methodology' annex document at <https://www.gov.uk/government/statistics/data-and-methodology>.

## Further Information

This statistical notice and a wide range of other statistics are available on the internet at: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics>

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