

Differences between published TB datasets

Introduction

Incidence of TB in Cattle in GB is a statistical release published by the Department for Environment, Food and Rural Affairs (Defra) on a monthly basis. The figures are National Statistics and are used by Defra and the Devolved Administrations to monitor trends in the incidence and prevalence of bTB, as well as its impact on the cattle industry (for example number of animals slaughtered) and the effect of the disease eradication strategies implemented in each country of GB.

The *bovine TB Annual Surveillance Reports*, commissioned by Defra and the devolved administrations and produced by the Animal and Plant Health Agency (APHA) provide a comprehensive account of the current descriptive epidemiology of bovine TB in Great Britain. The dataset used for the surveillance reports is the same as that used to populate iBTB, the online tool showing the locations of TB breakdowns.

The TB Surveillance Reports, iBTB and the National Statistics on TB in Cattle in GB are all underpinned by source data held in the Animal and Plant Health Agency (APHA) work management IT support system, known as Sam, which is used for the administration of TB testing in GB. However, once this source data has been extracted it is treated differently depending on the end use, which can result in differences in published figures.

Different uses for the Sam data

The National Statistics are produced on a monthly basis only three months in arrears, meaning that data for January is published in April. Because of the timeliness of this data, and because the statistics are based on reports run directly from Sam itself, it is not practicable to investigate unexpected results in the data with farmers of local APHA offices before publishing it. This means that the National Statistics reflect the data used operationally by APHA. Any data which appears to be inaccurate is checked with local offices and, if necessary, amendments are made to the data at source. However because the data on Sam is linked to legal issues, such as a farm's ability to trade animals, any amendments to Sam must be checked to ensure the changes are completely legitimate. This means that it is a time-consuming process.

The Surveillance Reports are published once a year around nine months in arrears and take approximately three months to complete. Surveillance Report data derives from Sam data, but is transformed into a new database specifically designed for epidemiological analysis conducted at APHA. In making the transformation certain amendments are made to make the data as epidemiologically sound as possible. An example of this is the issue around the cleansing and disinfecting form described in (2) below. From an epidemiological point of view the farm is not continuing to be under a breakdown, but from an operational and legal point of view it is.

Differences between the datasets

There are a number of general scenarios where the data (e.g. the number of breakdowns) used in the Surveillance Report differs from that used in the National Statistics:

1. Herds experiencing more than one breakdown at one time. For example, in some cases, herds split into separate management groups has led to partial herd restrictions and de-

restrictions which can technically lead to more than one breakdown on the same herd at the same time. In the Surveillance Report dataset a herd can only experience one breakdown at any one time whereas the National Statistics would count both of these breakdowns separately¹.

2. Breakdowns that are waiting to be closed. An example of this is where a farm has tested clear for TB, but the farmer has not returned their BT5 cleansing and disinfection form. Legally, this farm is still under restrictions, but historically in practice trading is likely to have resumed². In the Surveillance Report and on iBTB this farm would not count as being under restrictions for that extended period, but in the National Statistics it would. This means that the National Statistics would count this farm as being under a breakdown for longer than the Surveillance Report. It might also mean that if reactors are disclosed at a subsequent test, it would appear as a new breakdown in the Surveillance Report but not in the National Statistics.
3. Start date of breakdowns. The Surveillance Report uses the date on which a vet visited the farm to carry out a tuberculin skin test as its start date (known as the 'TT1' date). The National Statistics use the 'TT2' date – that is, the date when the vet visited to interpret the results of the skin test and to confirm the presence or absence of TB – because this is when the farm is put under movement restrictions. This leads to a small discrepancy between the annual number of breakdowns presented in each dataset where, for instance, the TT1 date was at the end of December and the TT2 date was at the beginning of January, technically the following year. In 2013, 37 breakdowns had a TT1 (tuberculin injection date) in 2013, but the TT2 (reading date) was in 2014. This means they were counted in the Surveillance Report for 2013, but would not have appeared in the National Statistics until 2014.

Work is on-going to harmonise reporting between the APHA TB Surveillance Reports and iBTB and the National Statistics and we anticipate fewer discrepancies in future.

¹ A recent change in policy has stopped the practice of split management of herds regarding breakdowns

² A new policy has been invoked to encourage farmers to complete and return the BT5 form on time which will reduce the potential for this scenario.