



Animal &
Plant Health
Agency

Regional six-monthly report of descriptive bovine TB epidemiology for the Low Risk (4 yearly testing) Areas of England

**North Yorkshire, West Yorkshire, South Yorkshire
and Humberside**

2019 Mid-year (first six months)

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1. Geographical distribution of bovine TB breakdowns in the region

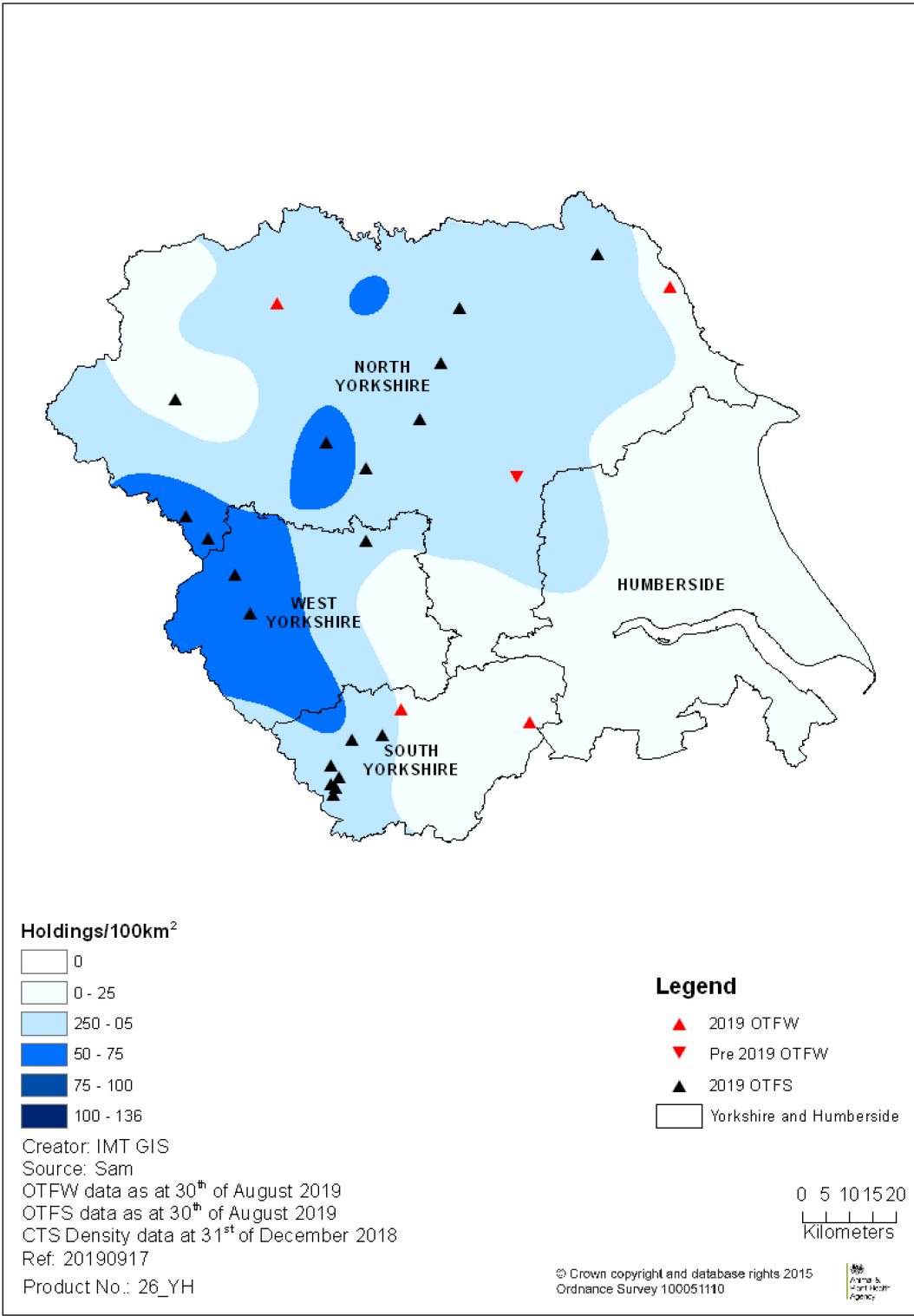
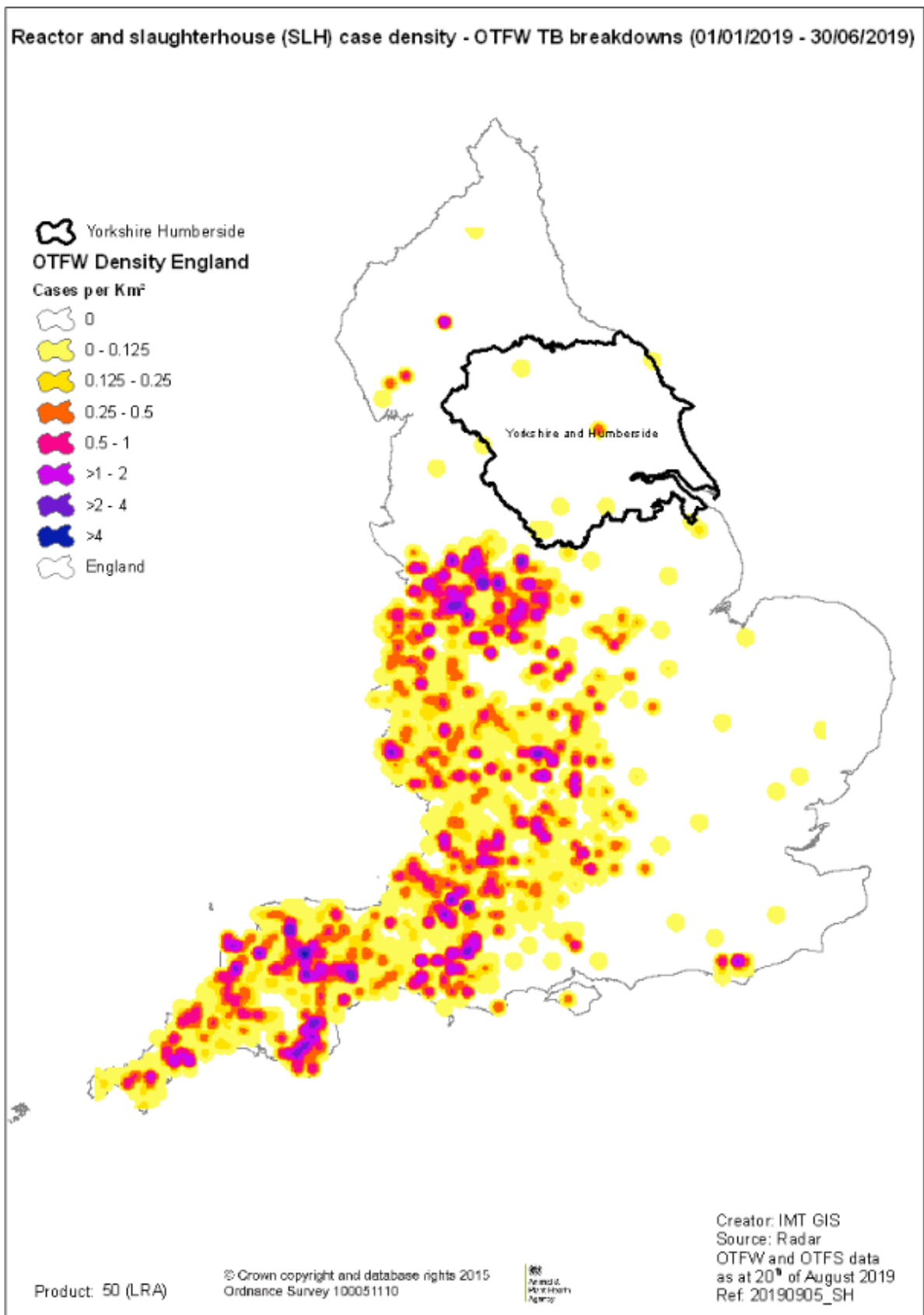


Figure 1: Geographical distribution of all new TB breakdowns (OTFW and OTFS) in 2019 and pre 2019 OTFW breakdowns still ongoing at the end of the report period overlaid on a cattle holding density map.

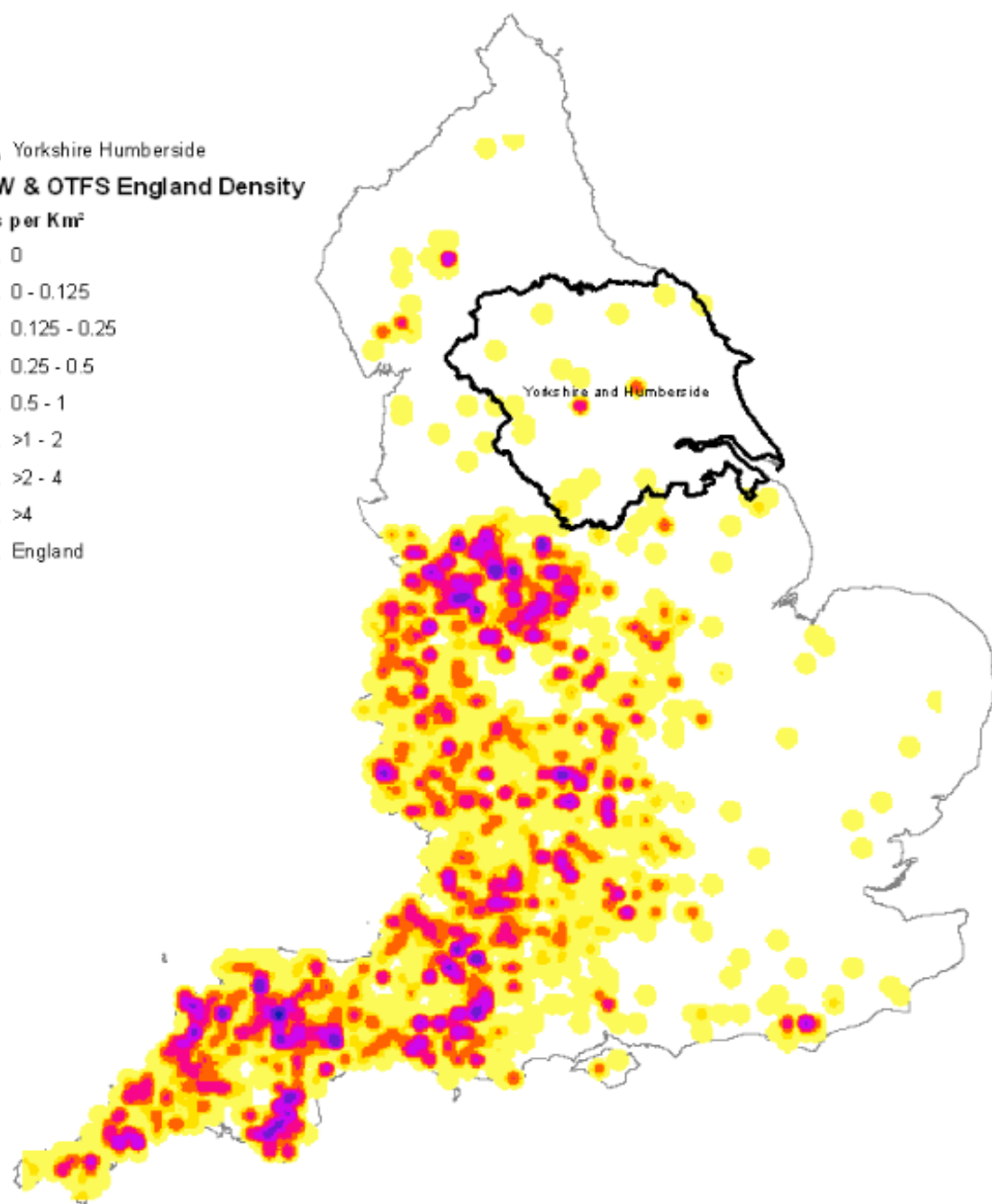


Figures 2: Display the density of skin test reactors, interferon-gamma test positive animals and slaughterhouse cases per km² in OTFW TB incidents in the first six-months of 2019

Reactor and slaughterhouse (SLH) case density - All TB breakdowns (01/01/2019 - 30/06/2019)

 Yorkshire Humberside
OTFW & OTFS England Density

Cases per Km²



Product: 58 (LRA)

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 Ordnance Survey 100051110



Creator: IMT GIS
 Source: Radar
 OTFW and OTFS data
 as at 20th of August 2019
 Ref: 20190905_SH

Figures 3: Display the density of skin test reactors, interferon-gamma test positive animals and slaughterhouse cases per km² in all TB incidents respectively in the first six-months of 2019

2. Summary of the regional headline cattle TB statistics

Yorkshire has a relatively small number of bTB incidents (breakdowns). Eradication of infection from these has so far been relatively easily achieved by application of standard herd testing regimes, including supplementary interferon-gamma blood testing of all herds with OTF status withdrawn. The majority of new cases result from direct movement of infected beef fattening animals from endemic bTB areas. There is a small subset of cases each year that result from movement of infected animals between herds within the region prior to their detection. There is currently no convincing evidence of wildlife infection.

From 1 January 2019 until 31 of June 2019 there were 24 new herd incidents in Yorkshire, of which four had animals with TB lesions or culture-positive results (OTF status withdrawn). The first half of 2018 saw 14 new TB herd incidents, of which five were confirmed. There is an increase in the number of OTFS cases comparing to the same period last year, but it is comparable in the number of OTFW cases.

During the reporting period, several additional incidents were detected in the active radial surveillance zones instigated in this region, but only one of those was located in a new radial zone triggered by an OTFW breakdown that had begun in 2019.

Herd-level statistics	South Yorkshire	North Yorkshire	West Yorkshire	Humberside/East Yorkshire
(a) Total number of cattle herds live on Sam at the end of the reporting period	485	3654	1184	813
(b) Total number of cattle herds subject to annual TB testing at the end of the reporting period (any reason)	97	280	30	32
(c) Total number of herd tests carried out in the period	180	681	180	167
(d) Total number of OTF cattle herds TB tested during the period for any reason	80	394	157	96
(e) Total number of OTF cattle herds at the end of the report period (i.e. herds not under any type of TB2 restrictions)	466	3619	1168	805
(f) Total number of cattle herds that were not under restrictions due to an ongoing TB breakdown at the end of the report period.	478	3635	1183	812
(g) Total number of new TB breakdowns detected in	9	11	3	0

cattle herds during the report period:				
• OTFS	7	9	3	0
• OTFW	2	2	0	0
(h) Of the new OTFW herd breakdowns, how many:				
• occurred in a holding affected by another OTFW breakdown in the previous three years?	0	0	0	0
• could be considered secondary to a primary breakdown based on current evidence?	0	0	0	0
• were triggered by skin test reactors or 2x Inconclusive Reactors (IRs) at routine herd tests?	0	2	0	0
• were triggered by skin test reactors or 2xIRs at other TB test types (forward and back-tracings, contiguous, check tests, post-movement, etc.)?	2	0	0	0
• were first detected through routine slaughterhouse TB surveillance?	0	0	0	0
(i) Number of new breakdowns revealed by enhanced TB surveillance (radial testing) conducted around those OTFW herds:				
• OTFS	0	1	0	0
• OTFW	0	0	0	0
(j) Number of OTFW herds still open at the end of the period (including any ongoing OTFW breakdowns that began in a previous reporting period)	2	3	0	0
(k) New confirmed (positive <i>Mycobacterium. bovis</i> (M.	0	0	0	0

bovis) culture) incidents in non-bovine species detected during the report period (indicate host species involved)				
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Animal-level statistics (cattle)	South Yorkshire	North Yorkshire	West Yorkshire	Humberside/East Yorkshire
(a) Total number of cattle tested in the period (animal tests)	7658	54499	7103	8320
(b) Reactors detected:	27	39	37	0
• tuberculin skin test	20	16	37	0
• additional gamma interferon (IFNg) blood test reactors (skin-test negative or IR animals)	7	23	0	0
(c) Reactors per breakdown	3	4	12	0
(d) Reactors per 1000 animal tests	3.53	0.72	5.21	0
(e) Additional animals identified for slaughter for TB control reasons (Direct Contacts (DCs), including any first-time IRs)	0	0	0	0
(f) Slaughterhouse (SLH) cases (tuberculous carcasses) reported by Food Standards Agency (FSA)	0	8	0	0
(g) SLH cases confirmed by culture of <i>M. bovis</i>	0	0	0	0

3. Suspected sources of *Mycobacterium bovis* infection for all the new officially tuberculosis free status withdrawn breakdowns identified in the report period

Most likely origin	Provisional	Final
Introduction (e.g. purchase) of infected animal(s)	0	3
Local - lateral spread from neighbouring holdings:	0	0
• exposure to infected wildlife e.g. badgers	0	0
• other farmed species	0	0
• recrudescence of residual infection from a previous TB breakdown	0	0

• infected human source	0	0
Undetermined/obscure	1	0
Other (explain)	0	0

Categorisation of all new OTFW TB breakdowns identified in your region using the following risk matrix, according to:

- (a) the probability of them being the result of introduced infection (inward cattle movements) and
- (b) the strength of evidence that we are dealing with an isolated incident without further propagation from the index farm to neighbouring herds (or vice versa)

		Probability of isolated, sporadic ('one-off') breakdown, without secondary local spread from the index case		
		Likely (no secondary breakdowns detected)	Possible (no secondary breakdowns detected, but dataset incomplete)	Not likely (secondary spread from the index case, or exposure to a common wildlife source has occurred)
Probability of M. bovis infection introduced through cattle movements	Definite	0	2	0
	Likely	1	0	0
	Possible	0	0	0
	Not likely (indigenous infection in the locality)	0	1	0

4. Overview of the Bovine TB Eradication Programme in the region

- Background four-yearly routine surveillance testing of cattle herds across the region.
- Enhanced bTB herd surveillance (radial testing) instigated for all OTFW breakdowns by default.
- Licensed Finishing Units have been encouraged so that slaughterhouse cases from those units will not generate radial surveillance or enhanced testing of neighbouring herds.
- TB in other species: see Section 7 below.
- No confirmed or suspected cases of zoonotic (human) M. bovis infection.
- No suspected cases of non-specific or fraudulent skin test reactors.

- No bTB breakdowns involving producer-retailers of raw drinking milk, unpasteurised cheese-makers or open farms during the reporting period.
- The meeting of the TB Eradication Group for the Yorkshire area took place at the York NFU office. Key stakeholders were involved and the general opinion was that it was a useful meeting. Further meetings have been organised as the perceived need indicates, which will be driven by local issues and national policy development.

5. Wildlife

No confirmed *M. bovis* infection has been detected in wildlife in the area.

6. Other susceptible species

None to date

Glossary

- bTB – (bovine) Tuberculosis (infection of cattle with *M. bovis*)
- Edge Area (EA) – the annual TB testing area of England situated between the High and Low Risk Areas
- Epidemiology – the science that studies the patterns, causes, and effects of health and disease conditions in defined populations
- Genotype – the genetic makeup of a cell, an organism, or an individual usually with reference to a specific characteristic under consideration
- High Risk Area (HRA) – the annual testing area of England comprising the South West, West Midlands and part of East Sussex, in which *M. bovis* infection is endemic in cattle herds and in badgers
- IFN- γ – interferon-gamma test. A supplementary in vitro blood test for TB used by APHA in conjunction with the tuberculin skin test in some situations, usually to improve the overall diagnostic sensitivity in infected herds with OTF status withdrawn
- Low Risk Area (LRA) – the four-yearly TB testing area of the North and East of England in which *M. bovis* infection occurs only sporadically in cattle and is not considered endemic in wildlife. Although the default testing interval for routine TB surveillance is four years, some higher risk herds in the LRA are subjected to annual testing. There is also more intensive surveillance testing (radial testing) around any herds in the LRA (and parts of the Edge Area) that have their officially TB free status withdrawn due to a TB breakdown
- OTF – Officially Tuberculosis Free status. Herds that are not subjected to TB movement restrictions of any type are classified as OTF
- OTF-S – Officially Tuberculosis Free Suspended status. In England, an OTFS breakdown is a herd in which all the reactors removed had no visible lesions (NVL) on post-mortem examination and had negative culture results for *M. bovis*
- OTF-W – Officially Tuberculosis Free Withdrawn status. In England, an OTFW breakdown is a herd in which at least one test reactor with visible lesions (VL) and/or an animal with *M. bovis*-positive culture result have been disclosed
- Persistent herd breakdown – a herd that has been under TB movement restrictions for 18 months or longer due to infection with *M. bovis*
- Potential ‘Hotspots’ – a temporary area of enhanced TB cattle and wildlife surveillance that may be declared around some OTFW TB breakdowns of uncertain origin detected in a Region of historically low TB incidence
- SIT – short-interval test. A tuberculin skin test of all bovines in a TB breakdown herd, carried out 60 days after the removal of the last test reactor (or laboratory confirmation of a TB slaughterhouse case) in order to restore the OTF herd status. In the majority of cases, two successive SITs with negative results are necessary. The results can be read using standard or severe interpretation of the skin test. Calves under 42 days old are usually exempted.
- VRA – Veterinary Risk Assessment.



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