

# Policy Overview

## Statutory TB testing of bovines in England



Animal &  
Plant Health  
Agency

October 2021

## **Statutory tuberculin skin testing policy**

- General policy
- Routine surveillance
- Enhanced surveillance
- Pre- and post-movement
- TB incident



## **Supplementary blood tests – deployment policy**

- Interferon-gamma blood test
- IDEXX antibody test
- Private use of non-approved and non-validated tests

# Statutory TB skin testing policy

- Single intradermal comparative cervical tuberculin (SICCT) test used
- Active surveillance (including pre- and post-movement testing) and enhanced surveillance / TB incident testing when disease identified
- Statutory TB skin testing policy includes Asiatic water buffalo, farmed bison and other exotic bovines in addition to cattle, as stipulated in the Tuberculosis in Animals (England) Order 2021
- All animals 42 days old and over are included in most types of skin test, with scope to test younger calves if a specific TB risk is identified
- Inconclusive reactors (IRs) are re-tested minimum of 60 days later. If 2xIR or reactor at re-test then, compulsorily slaughtered. Keepers have the option to privately slaughter IRs before their re-test
- Resolved IRs policy was introduced in England in November 2017

# Surveillance TB testing

- Active surveillance testing of officially TB free (OTF) bovine herds
- England is split into three bTB risk areas based on prevalence of infection with *M. bovis*
  - High Risk Area (HRA)
  - Edge Area
  - Low Risk Area (LRA)
- Routine herd testing programme using frequencies appropriate to the disease situation

## Six Monthly Testing

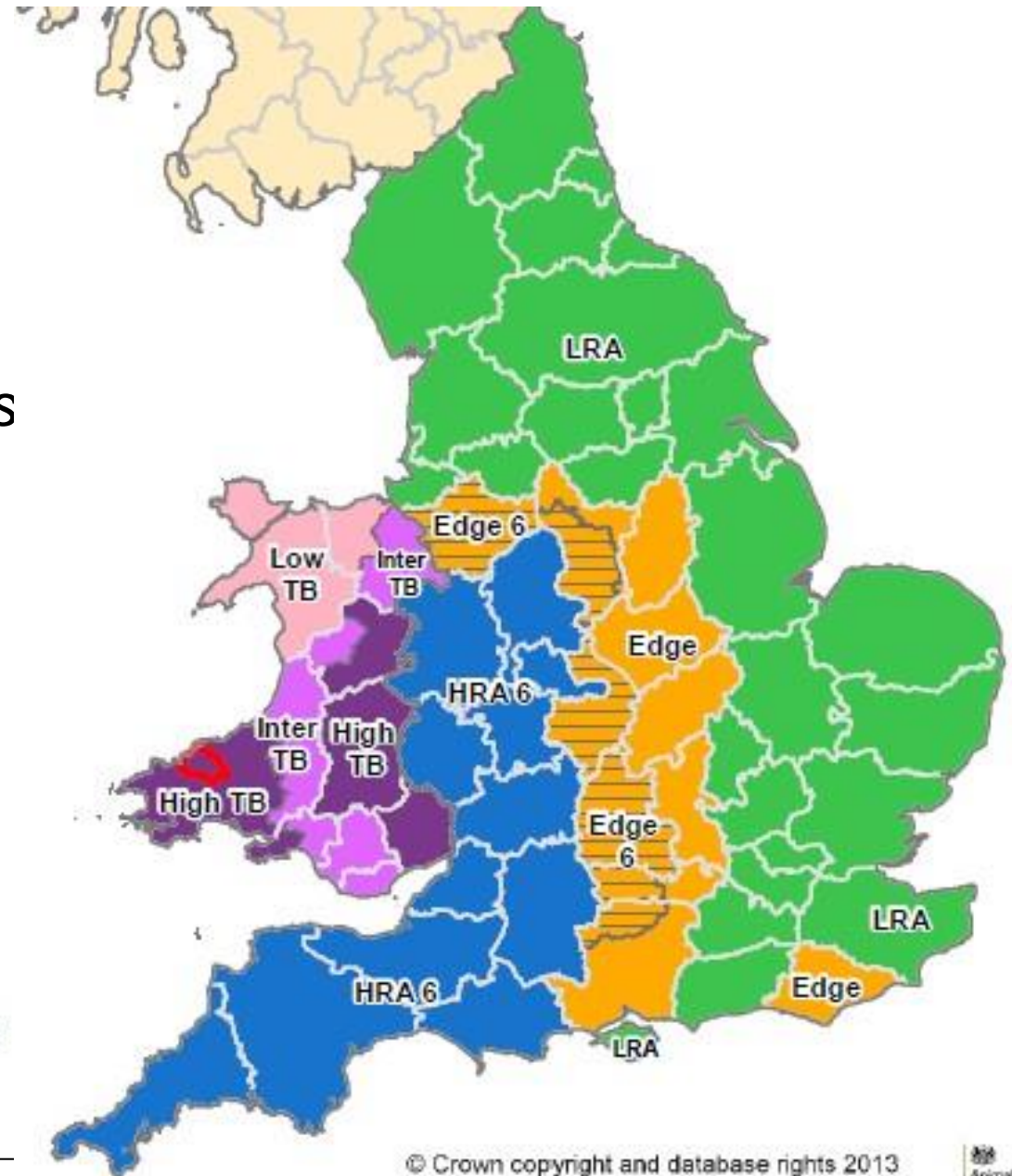
- Edge Area England
- High Risk Area England

## Annual Testing

- Edge Area England

## 4 Yearly Testing

- Low Risk Area England



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# Earned recognition in six-monthly testing areas

Cattle herds in the HRA and parts of the Edge Area that are tested every six-months by default are eligible for annual surveillance testing if they meet either of the following criteria:

- the herd has been in existence for at least six years and has not had a TB breakdown in that six-year period
- the herd is CHECS\* TB accredited at level 1 or above (does not include CHECS TB entry level membership)

CHECS = Cattle Health Certification Standards

<https://cheecs.co.uk/>



# Effectiveness of surveillance TB testing

- Of 20,758 routine surveillance tests completed in England in 2020, 1228 (6.0%) disclosed TB incidents.
- In the HRA, 35% of TB incidents were detected by routine surveillance tests, 55% in the Edge Area and 36% in the LRA.



## England bTB epidemiology report 2020:

<https://www.gov.uk/government/publications/bovine-tb-epidemiology-and-surveillance-in-great-britain-2020>

# Enhanced surveillance TB testing

Testing of OTF herds defined as 'higher risk' and for assessing potential source and spread following the detection of a TB incident with lesion and/or culture positive animals.

- 3km radial testing around TB incidents with lesion and/or culture positive animals in annual surveillance testing parts of the Edge Area, and in the LRA
- 1km contiguous testing in herds on annual surveillance testing in six-monthly testing areas, and exceptionally, in the LRA and annual testing parts of the Edge Area
- Source (herd) and spread (individual animals) trace testing
- Confirmed bTB hotspot testing
- Post-incident six- and 12-month testing
- Newly formed herds
- Ad hoc check testing e.g. following a slaughterhouse case

# Pre-movement TB testing (PrMT)

- Statutory requirement since 2006 when moving cattle in England and across borders to Wales and Scotland
- Reduces the risk of transmission of *M. bovis* between cattle holdings and to wildlife / other susceptible species on the receiving holding, and supplements routine surveillance testing
- All cattle 42 days old and over moving out of an annually (or more frequently) tested herd in England must have completed a skin test with negative results within the previous 60 days (limited exemptions apply)
- Farmers pay for bespoke PrMT or can use a government-funded test if the timing is right
- Compliance with the policy is monitored by APHA

## Guidance on gov.uk:

<https://www.gov.uk/government/publications/pre-movement-and-post-movement-tb-testing-of-cattle-in-great-britain>



# Post-movement TB testing (PoMT)

- Statutory requirement since 2016 when moving cattle from higher incidence areas of England and Wales into the LRA of England
- Reduces impact of undetected infected cattle moved into low incidence areas
- Must be completed within 60-120 days of movement to the LRA and the animal can't move off the holding during this time, except to slaughter
- Exemptions apply e.g. animals slaughtered within 120 days of arrival, animals moving to a licensed finishing unit (LFU)
- Farmers pay for bespoke PoMT or can use a government-funded test if the timing is right
- Compliance with the policy is monitored by APHA

**Guidance on gov.uk including a full list of exemptions:**

<https://www.gov.uk/government/publications/pre-movement-and-post-movement-tb-testing-of-cattle-in-great-britain>

# Effectiveness of movement TB testing

- In 2020, 578 reactors (0.12%) / 272 new TB incidents were detected by a total of 486,209 pre-movement animal tests
- Since 2013, the number of herds that have had reactors disclosed by PrMT has remained fairly consistent as an annual total
- As expected, the majority of TB incidents disclosed by PrMT are in the HRA (83%), with 13% in the Edge Area and 4% in the LRA
- In 2020, 23 reactors (0.05%) / 18 new TB incidents were detected by a total of 49,242 post-movement animal tests
- Reactor disclosure is more variable year on year for PoMT than PrMT
- In 2020, movement testing disclosed just under 10% of new TB incidents in the HRA & Edge (mainly PrMT), but a higher proportion in LRA (18%, mainly PoMT)

## **bTB statistics on gov.uk**

<https://www.gov.uk/government/statistics/latest-official-statistics-on-pre-movement-and-post-movement-testing-for-tuberculosis-tb-in-cattle-in-great-britain-quarterly>

# TB incident (breakdown) testing

To regain OTF status, TB breakdown herds must complete:

## HRA & Edge Area

- Two consecutive short interval tests (SIT) at severe interpretation with negative results at least 60 days apart for all TB incidents
- Disclosing test re-interpreted at severe

## LRA

- As above if lesion and/or culture positive animals found, or if the TB incident meets certain epidemiological criteria
- One negative skin test at standard interpretation if no lesion and/or culture positive animals found

For all TB incidents, reactors at SITs trigger further testing depending on the herd's status and their post-mortem results.

# Mandatory IFNy testing policy in England (1)

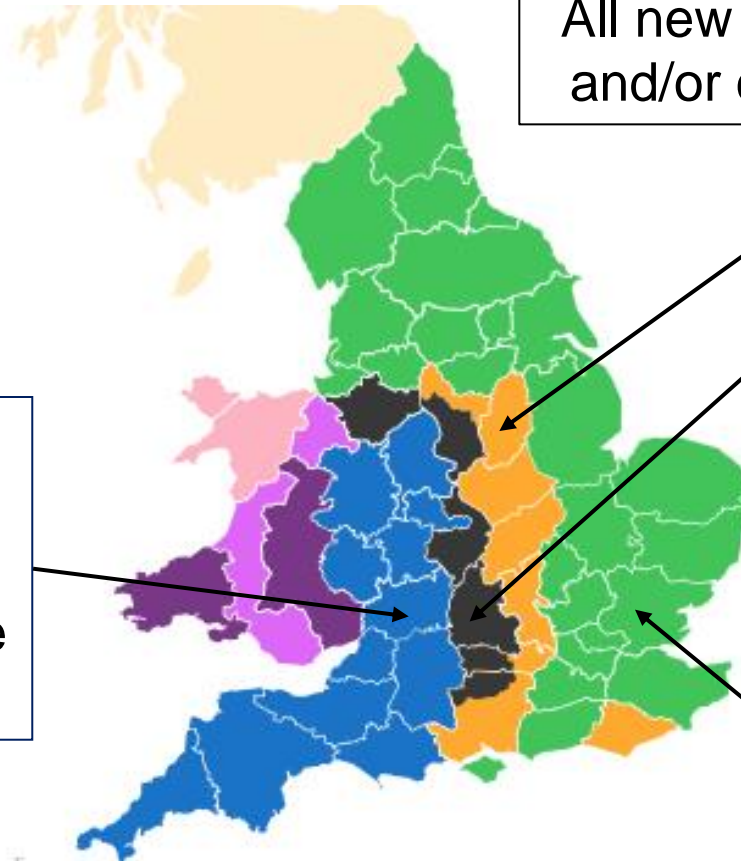
Chronic and persistent breakdowns with lesion and/or culture positive animals in all risk areas

**Edge Area (annual testing)**  
All new breakdowns with lesion and/or culture positive animals

**Edge Area (six-monthly testing)**  
Recurrent breakdowns with lesion and/or culture positive animals

**High Risk Area**  
Recurrent breakdowns with lesion and/or culture positive animals

**Low Risk Area**  
All new breakdowns with lesion and/or culture positive animals



# Mandatory IFN $\gamma$ testing policy (2)

## HRA and Edge Area (six-monthly surveillance testing parts)

From 12<sup>th</sup> July 2021, all new breakdowns with lesion and/or culture positive animals are assessed against the following criterion for recurrence. If a herd meets the criterion then it requires a mandatory IFN $\gamma$  test:

*The breakdown occurred within 18 months of the herd regaining OTF status following a previous breakdown with lesion and/or culture positive animals*

## Edge Area (annual surveillance testing parts) and LRA

All new breakdowns with lesion and/or culture positive animals require a mandatory herd IFN $\gamma$  test



## Mandatory IFN $\gamma$ testing policy (3) - persistent breakdowns

- Persistent TB breakdown herds are those that have been under movement restrictions for at least 18 months
- These herds are assessed at 17 months under restrictions for a mandatory herd IFN $\gamma$  test
- Owners of persistent TB breakdown herds receive a letter at 12 and 18 months under restrictions advising of the potential need for a mandatory IFN $\gamma$  test
- There are also other interventions that keepers are expected to implement alongside supplementary blood testing, such as enhancing on-farm biosecurity
- Further advice and support can be sought from APHA, private vets and the TB Advisory Service

# Discretionary IFN $\gamma$ testing

- Applied in certain situations where the TB breakdown is not automatically eligible for mandatory testing e.g. in breakdowns with high numbers of reactor animals
- Also used by APHA in other ad hoc scenarios, e.g. informing decisions about partial or whole herd slaughter for TB control reasons



# IFN $\gamma$ testing general policy

- Most testing is parallel i.e. remove animal if positive to IFN $\gamma$  or skin test
- Animals less than six months old are excluded as their developing immune system interferes with the test
- By default, IFN $\gamma$  testing should be completed ASAP and decoupled from skin testing
- Standard reactors, animals with visible lesions of TB at post-mortem inspection and slaughterhouse cases trigger a further round of IFN $\gamma$  testing





# Flexible-extended IFN $\gamma$ testing

- Can be used by APHA in chronic/persistent breakdown herds with lesion and/or culture positive animals where Johne's Disease (MAP) infection or vaccination is thought to be interfering with the skin and/or IFN $\gamma$  tests
- In these herds, the specific response to bovine tuberculin may be masked by a MAP-driven increase in avian tuberculin response, leading to false negative results
- Flexible-extended testing uses *M. bovis*-specific synthetic peptide antigens ESAT6 & CFP10 (not expressed by MAP) in addition to the conventional avian and bovine tuberculin antigens

# Private IFN $\gamma$ testing

- Private vets can submit samples for IFN $\gamma$  testing at the keeper's cost with prior approval from APHA (England only)
- Limited to specific scenarios outside of the government-funded testing programme e.g. supplement PrMT/PoMT, screening animals joining high value herds, resolved IRs
- Cattle not eligible: test reactors / other cattle awaiting slaughter for TB control purposes, cattle from herds undergoing government-funded IFN $\gamma$  testing, cattle from herds under restrictions for overdue skin testing
- If a positive result is received, the animal is (with few exceptions) compulsorily slaughtered with compensation paid, the herd will be placed under movement restrictions and normal breakdown procedures followed

**More information on the APHA Vet Gateway:**

<http://apha.defra.gov.uk/vet-gateway/TB/ifng-testing/index.htm>



# IDEXX antibody testing policy

- World Animal Health Organisation (OIE) validated test, but not yet EU-approved and not approved by Defra for routine use in cattle in England
- Applied by APHA to chronic/persistent TB breakdown herds as a third-line test on a case-by-case basis
- Whole-herd or specific groups of animals tested
- Seropositives are compulsorily slaughtered with compensation paid when the test is instructed by APHA (government-funded), unlike with private use



# Private use of non-approved and non-validated TB tests

- Private use of IDEXX, Enferplex and non-validated tests (e.g. Actiphage) for TB permitted in England under Defra's published protocol
- Chronic/persistent TB breakdown herds which must have already undergone mandatory, discretionary or private IFN $\gamma$  testing
- Private vet must seek prior authorisation from APHA and the keeper must give their informed written consent
- Results must be reported to APHA by the vet after each testing event
- For private IDEXX/Enferplex tests, seropositive animals must be privately slaughtered (no compensation) before OTF status can be restored, or restricted to the holding for life. Alternatively, a specific testing regime can be conducted to lift movement restrictions

## More information on the APHA Vet Gateway:

<http://apha.defra.gov.uk/vet-gateway/TB/non-valid-tb-testing/index.htm>