

Ireland

**2014 Eradication Programme for Bovine
Tuberculosis
Standing Committee on Plants, Animals,
Food and Feed**

May 2015



Department of
**Agriculture,
Food and the Marine**

An Roinn
**Talmhaíochta,
Bia agus Mara**

www.agriculture.gov.ie

Introduction

- The eradication programme for Bovine TB for 2014 was implemented effectively;
 - 98.63% herds tested (balance no stock when test scheduled or new herds not yet with stock)
- **Significant reduction in incidence of Bovine TB in 2014 compared with 2008:**
 - Number of reactors down from 29,901 in 2008 to 16,145 in 2014 i.e. (**45% reduction**)
 - 5.88% - 3.88% reduction in Herd Incidence (**38% reduction**)
 - 3.25 -1.91 reduction in APT (**41% reduction**)

Ireland

- Demographics

- **December 2014**
 - **116,976 holdings with bovines** (114,508 = 97.89% OTF and 96% herds OTF in excess of 1 year)
 - **6.1m animal population December (6.8m June)** Population peaks post Spring calving prior to Autumn slaughter
 - **approx. 2.3 million cows (50% dairy cows)**
 - **Approx. 83,000 breeding herds (20% dairy herds)**
 - **Average herd size: 53**

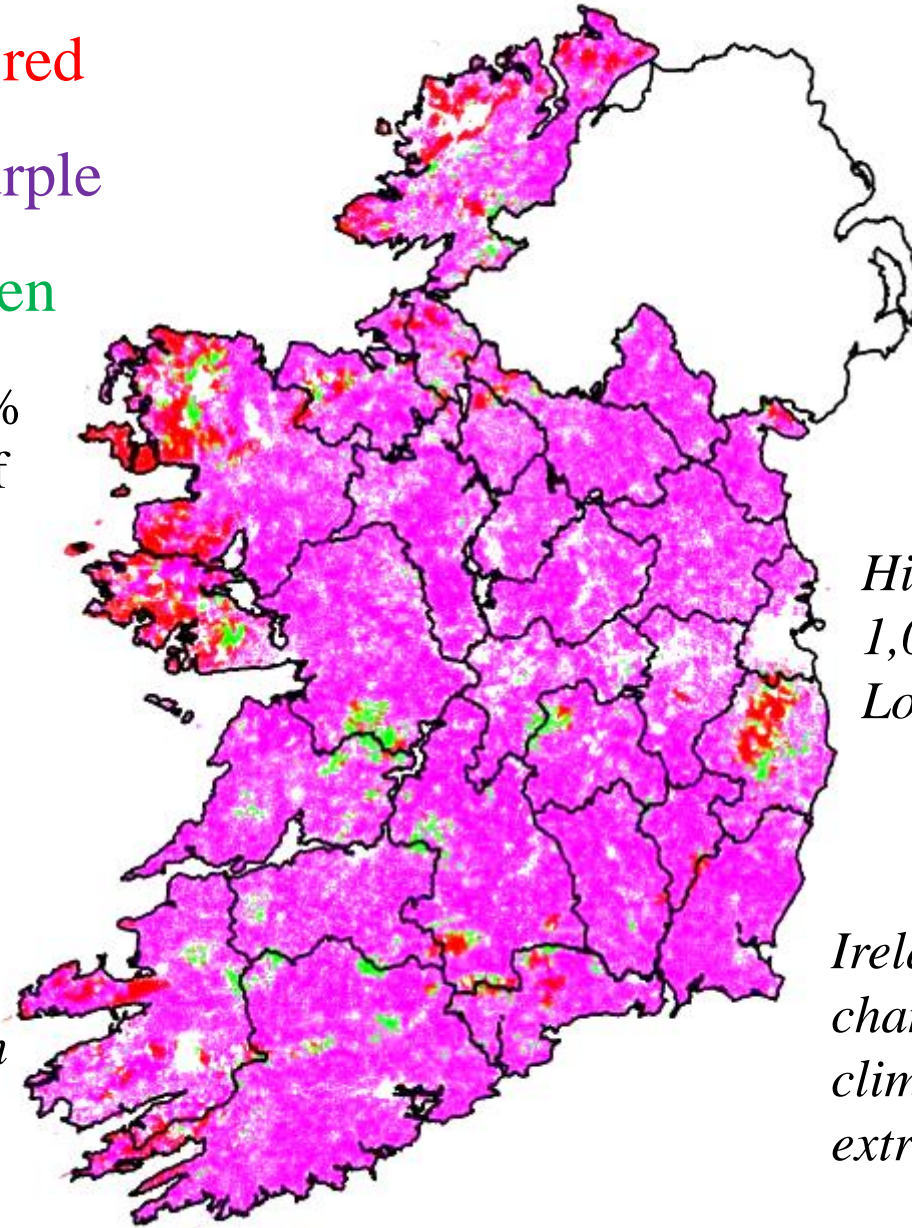
Mountains are red

Farmland is purple

Forests are green

Approximately 91%
(3.82 million ha) of
agricultural area is
devoted to grass
(silage, hay and
pasture, rough
grazing)

*Pastureland
dominates with
hedgerows between
fields*



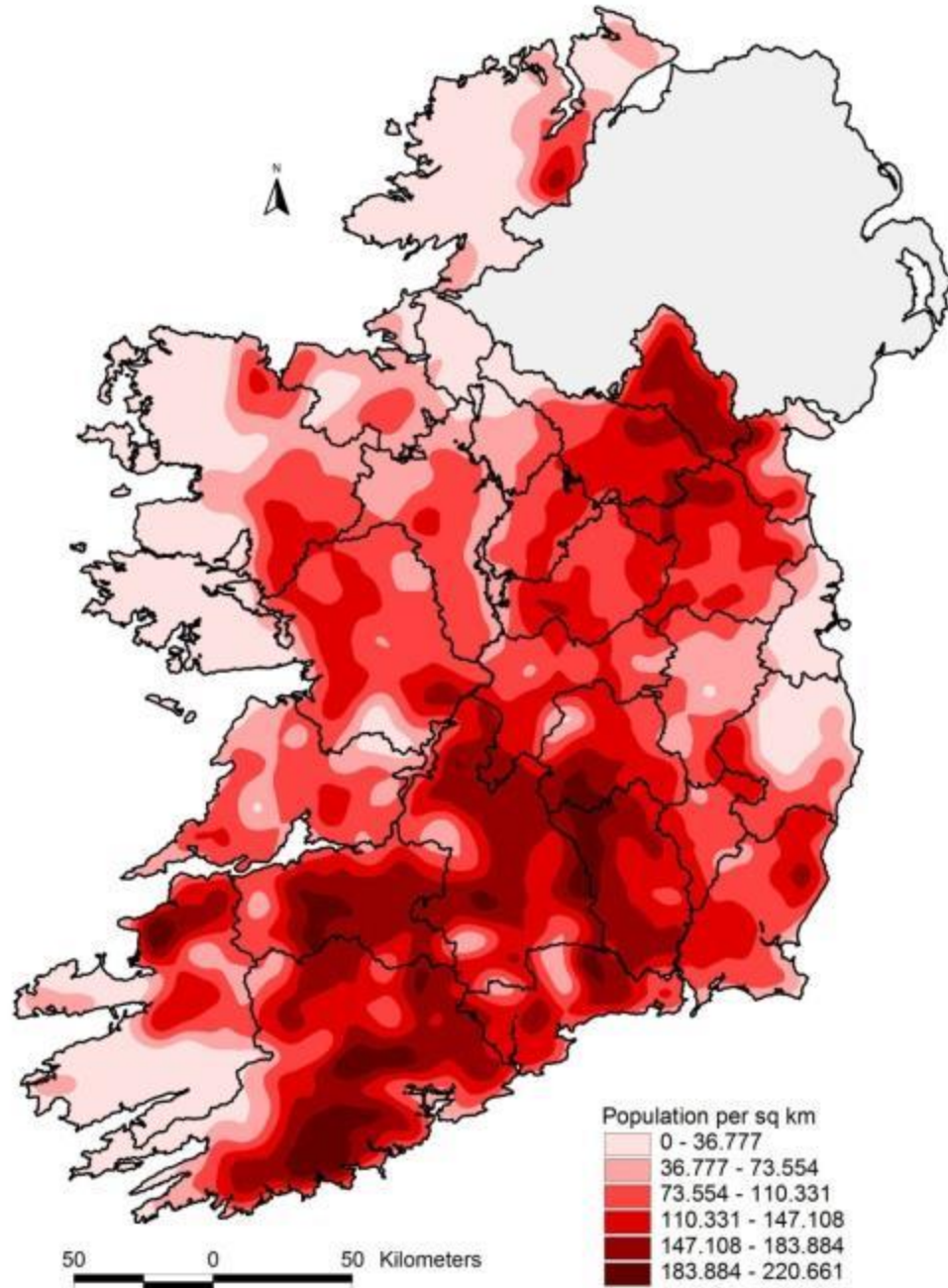
*Highest mountain is
1,038 m
Longest river 386 km*

*Ireland has a mild but
changeable oceanic
climate with few
extremes*

cattle density map 2013



cattle and badgers share and feed on the same grassland areas



2014 TB

Programme – main measures

- Disease detection:
 - Annual herd screening test – Single Intra-dermal Comparative Tuberculin Test (SICTT)
 - Routine veterinary *post-mortem* slaughterhouse surveillance
 - Additional targeted risk-based testing on an epidemiological basis e.g. check tests on herds contiguous to infective breakdown, TB history etc.

2014 TB Programme – contd.

- Post Disease detection
 - Holding and movement restrictions (OTF status suspended/withdrawn as per Directive) on suspect & positive animals/herds
 - Gamma-interferon assay in infected/problem herds
 - Epidemiological investigations to include field visits, as necessary, on infective breakdowns
 - Wildlife control in infected areas (targeted badger removal under license where badgers implicated)
 - Depopulation (stamping out) of heavily infected herds
 - Farm hygiene – disinfection of premises
 - Compensation for removal of reactors

2014 TB Programme – main measures contd.

- Status restored after clear tests at 60 days & 4 months
- Herd check tests at 6, 12 & 18 months
- Standard inconclusive reactors (in otherwise clear herds) confined to herd of disclosure for life even after passing retest.
- Badger population control measures maintained pending availability of effective and licensed TB-vaccine

2014 TB Programme – contd.

- *QC of SICTT*
 - supervision and monitoring of performance of testing veterinarian
 - tuberculin assay on naturally infected bovines
- *Computerised database AHCS & AIM (linked)*
 - links disease test recording and identification & movement databases (ensures testing of all animals)
 - Electronic communication with veterinarians
 - Animal movements control at marts, assembly centres, between farms and at slaughter
 - Display of animal test data on AHCS at marts and assembly centers

Research

- CVERA – Centre for Veterinary Epidemiology and Risk Analysis – staff from Department of Agriculture and Food, Veterinary Faculty of University College Dublin and Teagasc (Irish Agriculture and Food Development Authority). Covers major areas of interest.
- Wildlife Unit – undertakes badger population controls and investigates the role of the badger in the spread of bovine tuberculosis
- Badger Vaccine Development Project in collaboration with UK and France
- Diagnostics – UCD (*interferon- γ Assay*), - CVRL (*histology, culture, strain typing, ELISA*)

Interferon- γ assay in infected/problem herds

GIF 2013	
Total Samples submitted	14,621
Total Positive	8,637

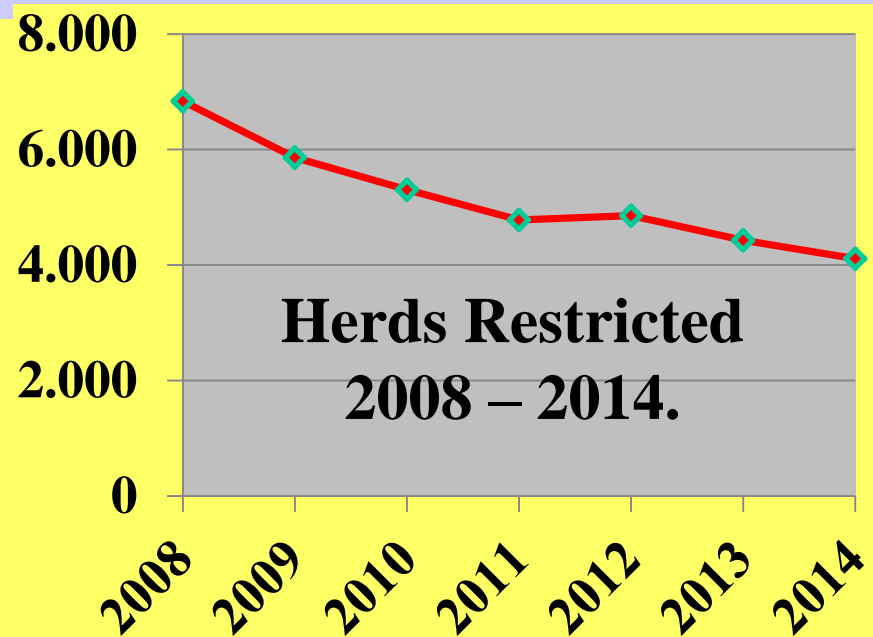
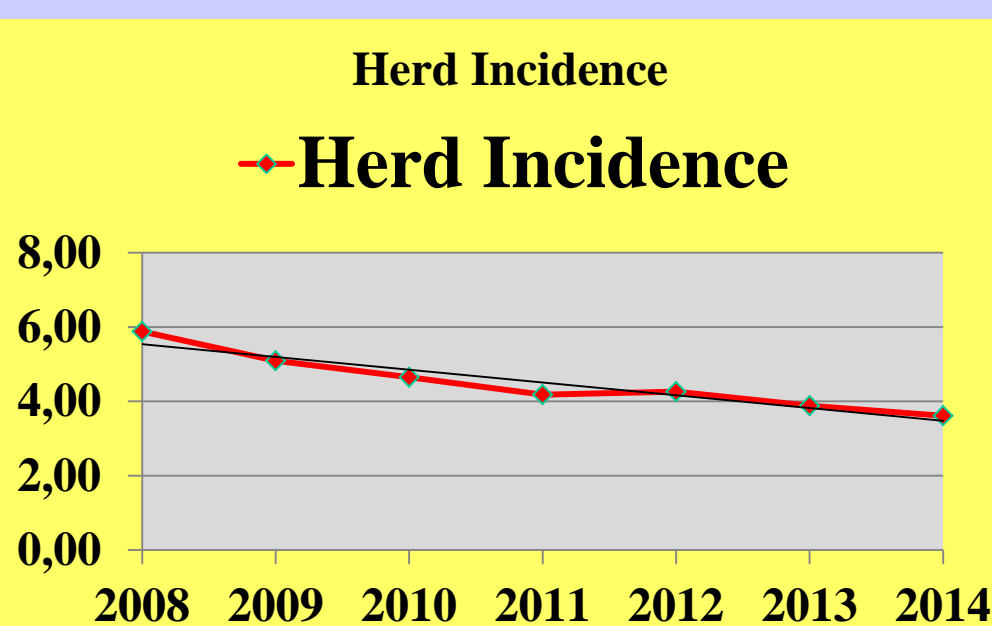
GIF 2014	
Total Samples submitted	19,405
Total Positive	10,259

- 25,000 samples targeted in 2015 (earlier & more)

Main TB trends 2008- 2014

Herd Incidence

➤ 5.88% in 2008 - 3.64% in 2014
(34% reduction)



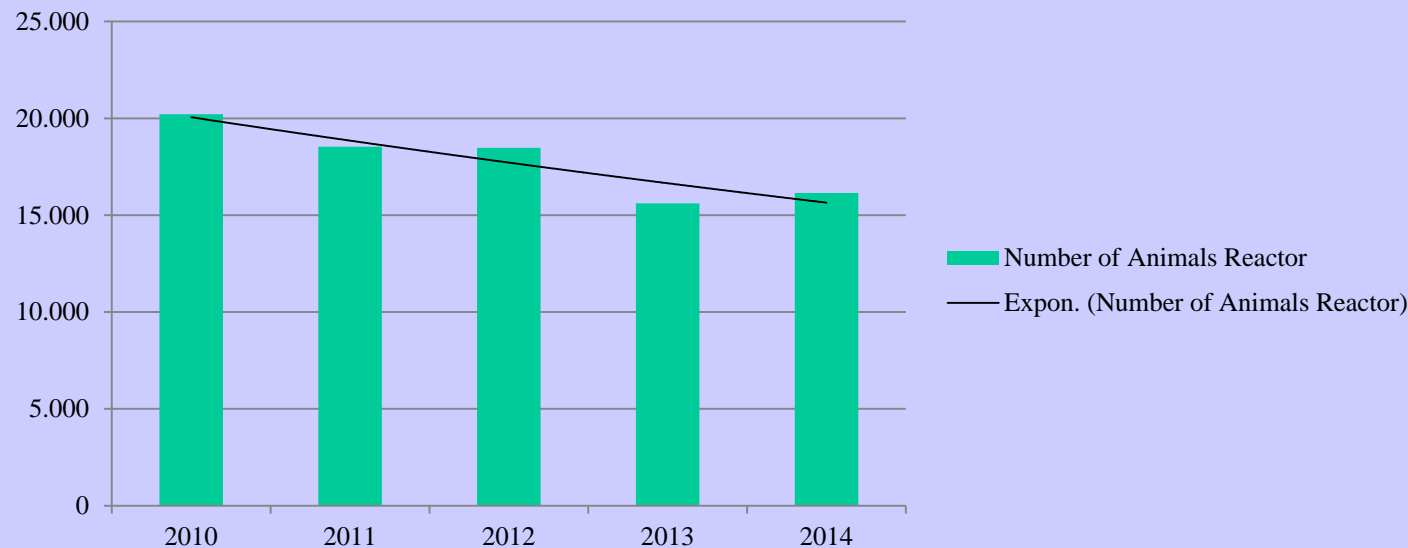
Main TB trends 2008 - 2014

➤ Number of reactors

29,901 in 2008

16,145 in 2014 (41% reduction)

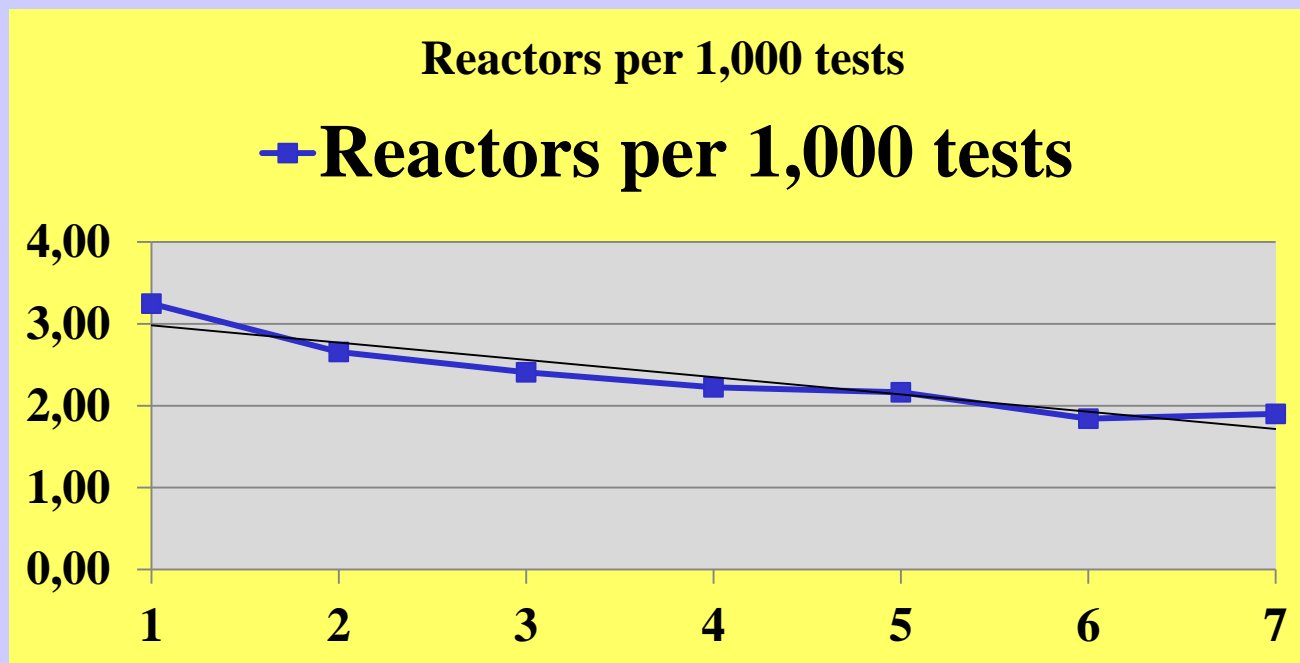
Number of Animals Reactor
5 years



Main TB trends 2008- 2014

APT – Reactors per 1,000 tested.

➤ 3.25 in 2008 - 1.91 in 2014
(41% reduction)



Ongoing

- Continuous monitor of programme performance
- Integration of data/research evaluations together with routine system and performance reviews leading to
 - Constant update and enhancement of herd and animal level controls in an integrated and targeted manner

Ongoing

- Evaluation of
 - contribution of shortfall in test specificity (<100%) to reduction in positive predictive value of test as true disease levels decline
 - Contribution of ‘false positives’ to apparent herd incidence (based solely on SICTT test positives) and impact of these on ability to achieve a pre-specified target reduction as set by Commission

The Future

- Badger removal programme (despite limitations applicable to a protected species) as addition to normal measures appears to be paying dividends.
- Continue to implement programme on similar lines including badger removal to control badger-population density
- Research into Badger vaccination is on-going (in collaboration with UK) but definitive conclusions as to efficacy in wild population will not be available until mid 2015 at the earliest.
- Sustained progress towards ultimate eradication of bovine TB is dependent on effective and sustained control of disease in the sympatric infected wildlife (badger) and cattle populations

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Thank you for your attention



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