



# bovine TB – Current Status & Trends, Epidemiology and Management Options

Foundation for Science and Technology Debate

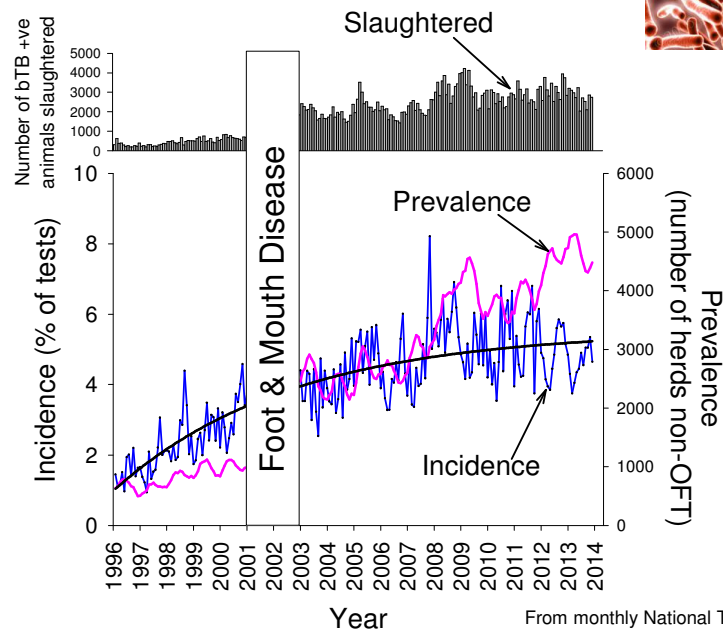
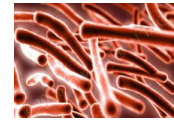
2<sup>nd</sup> April 2014



## Structure

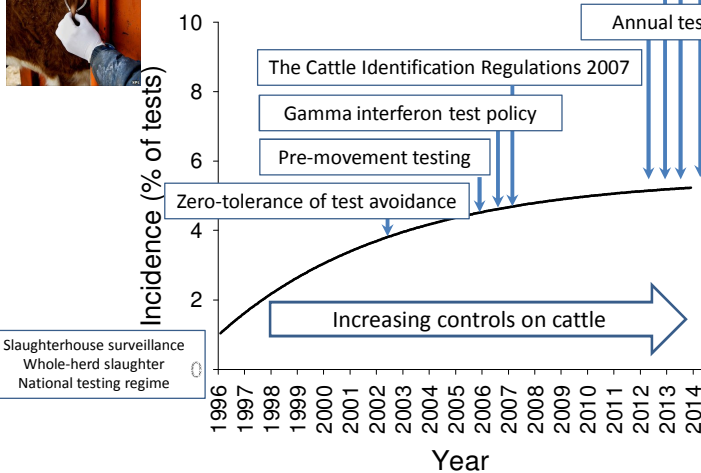
1. Current status and trends
2. Epidemiology
3. Disease management options

# 1. Current status and trends

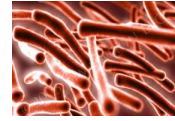


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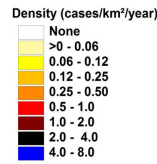
## Controls now and for the future



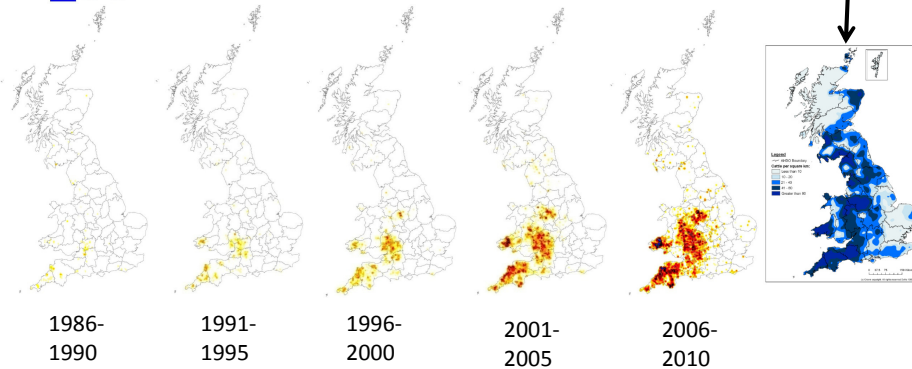
# 1. Current status and trends



## Geographical spread of bTB

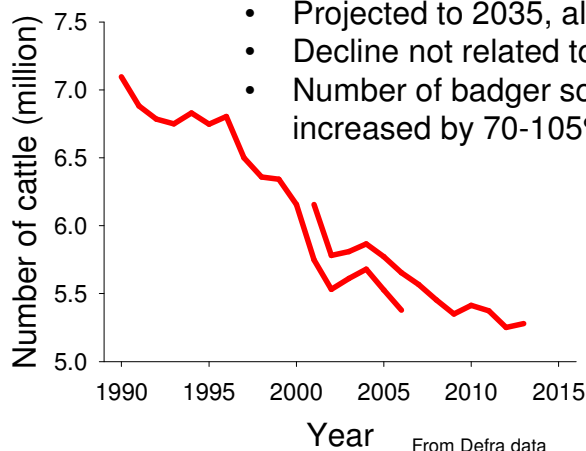


Number of skin (and interferon- $\gamma$ ) test reactors and slaughterhouse cases found in holdings suffering TB breakdowns with officially TB-free status withdrawn (OTF-W), per km<sup>2</sup> per year.



Data from AHVLA and The cattle Book 2008

# 1. Current status and trends



- The national cattle herd has been declining by 90,000 animals/year
- Projected to 2035, almost 50% fewer cattle
- Decline not related to TB
- Number of badger social groups has increased by 70-105% in the same period



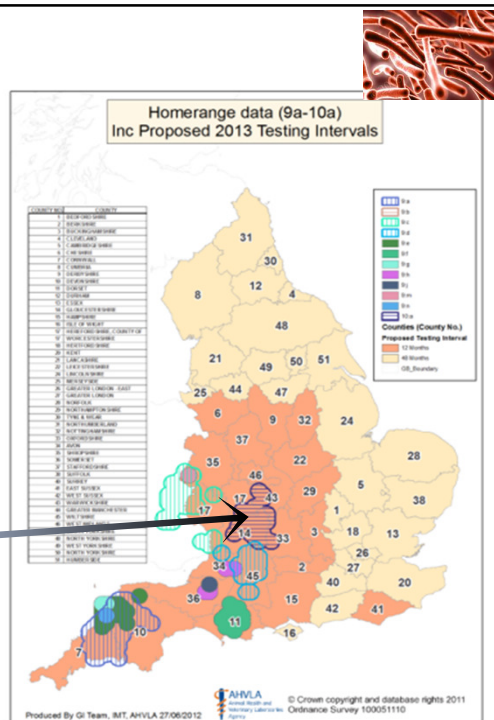
From Defra data  
Judge et al (2014)

## 2. Epidemiology

- Badgers may be indirectly responsible for ~50% of infections in cattle
- But as few as ~6% may be because of direct infection
- Whole genome sequencing showing relationships

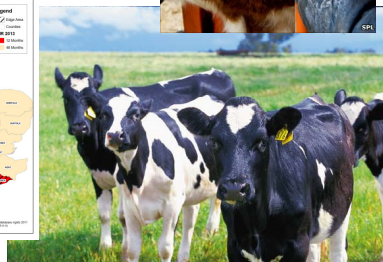
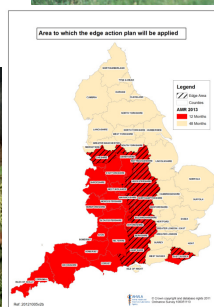
**Genetics shows many mini-epidemics**

Donnelly & Hone, 2010;  
Donnelly & Nouvellet, 2013;  
Biek et al, 2012



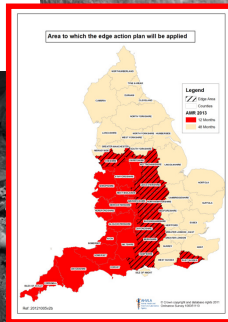
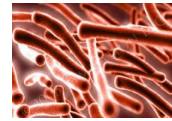
## 3. Disease Management

- Containment
- Intensive testing
- Biosecurity
- Vaccination
- Wildlife control



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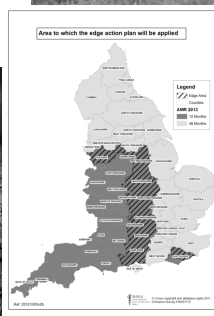
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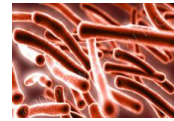
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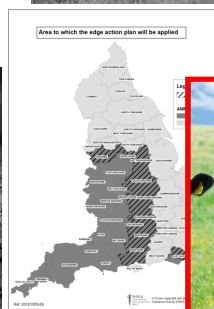


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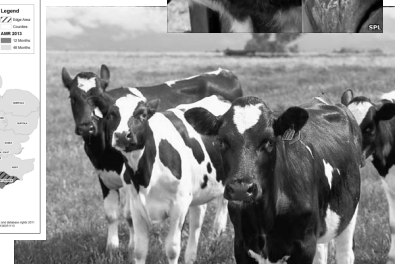
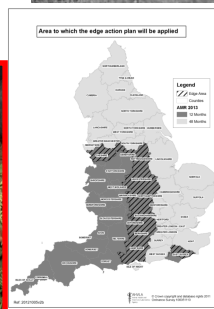


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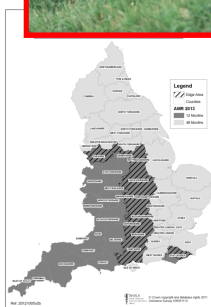
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