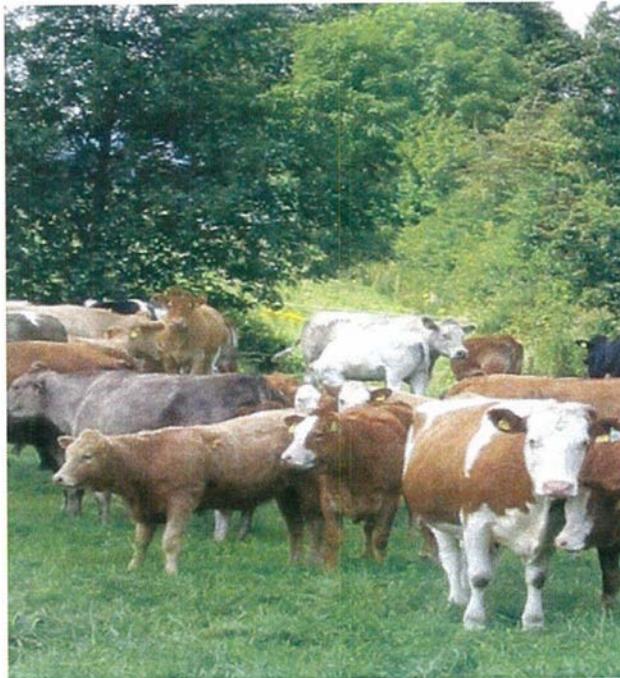


# TB TESTING PROGRAMME

## COMPARATIVE STATISTICS

### 2005- 2012



Compiled By: ERAD Division

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# TB TESTING PROGRAMME

## YEARS 2005 -2012

### Executive Summary

The objective of the TB testing programme of the Department of Agriculture, Food and the Marine is the control and ultimate eradication of Bovine Tuberculosis.

**Bovine Tuberculosis** is a chronic highly infectious disease of cattle most commonly caused by the bacterium *Mycobacterium bovis*; however any member of the Mycobacterium tuberculosis complex may cause bovine tuberculosis. These bacteria can cause disease in other domestic or wild animals and also in humans.

The main aspects of the TB Disease Eradication Scheme are as follows:

- annual testing (the "Round" test) of the national herd for bovine TB
- follow-up and focused strategic additional testing, including use of blood testing in certain circumstances;
- rapid removal of reactors, to slaughter, normally paid for by the Department;
- a range of compensation measures for farmers whose herds are effected by disease;
- detailed epidemiology and feedback to farmers;
- a comprehensive research programme aimed at identifying constraints to disease eradication, preventing TB spread by wildlife, the development of blood tests, vaccines and other technological tools required to improve effectiveness of the programme.

The Department uses a secure computerised identification and movement monitoring system designed to monitor all cattle movements (AIM).

Responsibility for arranging and paying for the first herd tests each year rests with farmers. In addition, farmers have primary responsibility for the implementation of biosecurity measures to protect their own herds. They are also encouraged to assist the Department's District Veterinary Offices in research activities, as necessary.

### Statistical Analysis 2005-2012

In 2005 the number of individual herds exceeded 123,000. Over the following 8 years the numbers reduced by approximately 6% to under 116,000, an average reduction of approximately 875 herds per annum. Over the same period the cattle population at 31 Dec fluctuated overall and decreased from 6.4 million to 6.1 million, an average reduction of approximately 37,500 animals per annum.

### **Over the past eight years:**

1.1 million herd tests were carried out, incorporating in excess of 71 million individual cattle tests, an annual average of almost 140,000 herd tests and 8.9 million individual cattle tests.

The Department carried out an annual testing programme each year from 2005 – 2012.

### **At Herd level:**

An average of 3.8% of all tests annually was positive- identifying on average 4 reactors per positive herd test.

There has been a decline over the 8 years in the parameters of herd incidence, APT, animal incidence, detection rate/10,000 slaughtered.

Changes in indicators over the 8 years:

- Average Herd size increased from 52 in 2005 to 53 in 2012 = 2%
- Herd Incidence decreased from 5.4 in 2005 to 4.2 in 2012 = 22%
- Reactor per 1,000 population declined from 4 in 2005 to 3 in 2012 = 25%
- Reactor per positive herd test declined 4.4 in 2005 to 3.8 in 2012 = 14%
- APT declined from 2.9 in 2005 to 2.2 in 2012 = 24%

### **At Animal level:**

In 2005 the number of reactors was approximately 26,000; by 2012 this number had dropped to approximately 18,500. In this period testing identified approximately 189,000 reactors – an average of approximately 23,500 reactors per annum.

Over the eight years the Average per Thousand (APT) was 2.7; the reactor Visible Lesion (VL) detection rate was 32.8%, while new restrictions as a result of a factory "bluecard" lesion (FLRS) were 31.6%.

Statistical analysis shows there is a significant correlation between the annual variations in

- average herd size and the number of reactors per positive herd test (RPPHT)
- herd tests positive (%) and APT
- the reactor VL detection rate and the "blue card" VL detection rate.

Other statistics of interest include:

Cows as a percentage of total reactors were 58% in 2005 and increased to 61% in 2008 but the numbers fell back to 58% in 2012. Over the same period cows as a percentage of the general bovine population increased from 31% to 40.5% .

- Reactor cows have a lower level of visible lesions in the retropharyngeal glands relative to all other animal classes
- The younger a reactor animal is the more likely it is to have a visible lesion detected at Post Mortem (PM). Also, there appears to be some sex and breed variation in the rates detected
- Multiple lesioned animals are detected at the same rate across all age groups