<table>
<thead>
<tr>
<th>Title</th>
<th>The tuberculosis eradication programme in Co. Monaghan - a review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors(s)</td>
<td>Griffin, John M.</td>
</tr>
<tr>
<td>Publication date</td>
<td>1996-07</td>
</tr>
<tr>
<td>Series</td>
<td>Selected Papers, 1995</td>
</tr>
<tr>
<td>Publisher</td>
<td>University College Dublin. Centre for Veterinary Epidemiology and Risk Analysis</td>
</tr>
<tr>
<td>Item record/more information</td>
<td><a href="http://hdl.handle.net/10197/8965">http://hdl.handle.net/10197/8965</a></td>
</tr>
</tbody>
</table>
The Tuberculosis Eradication Programme in County Monaghan - A Review

J. M. Griffin

Introduction
At the end of 1994 there were 5,020 active cattle herds in Co. Monaghan containing approximately 202,000 cattle, giving a mean herd size of 40 animals. There has been a steady increase in the number of cattle disclosed as reactors at tuberculin tests in the county. During the early and mid 1980’s, the number of reactor animals disclosed per thousand animal tests (APT) was consistently in the range of 3 to 5. In 1989, the APT increased to 7.4 and this upward trend continued during the early 1990’s. The APT value for 1994 was 8.7 in Co. Monaghan compared to 2.9 for the country as a whole.

The Tuberculosis Investigation Unit was asked to undertake a study to determine the factors which militated against the eradication of tuberculosis in cattle in Monaghan during 1988-94 to a greater extent than in other counties, and to identify the means for their control.

The objectives of the study were

1. To describe any patterns associated with changes in the annual level of bovine tuberculosis (as indicated by the disclosure of tuberculin test reactor animals) at herd and animal levels from 1988 to 1994.

2. To describe the spatial distribution of bovine tuberculosis over time using Geographical Information Systems technology.

3. To determine the impact of changes made to the operation of the eradication programme over the period.

(a) To define the different elements of the tuberculosis eradication programme in County Monaghan since 1988.

(b) To determine how changes in the standard of interpretation of the results of the tuberculin test have influenced the number of reactors disclosed.

(c) To determine the impact of changes in testing frequency during the period, 1988 - 1994 on reactor disclosure rates.

4. To examine the role of the M. bovis infected badger in the epidemiology of bovine tuberculosis, by analysing data collected during badger snaring operations.

5. To determine the impact of herd depopulations in Co. Monaghan.

Background
A comprehensive tuberculin testing programme as undertaken in Co. Monaghan during the period 1988-1994.

---

1 A report prepared for the Department of Agriculture, Food and Forestry by the Tuberculosis Investigation Unit
This programme was implemented in accordance with the guidelines laid down by ERAD management staff. In the period, 1988-1990, most herds underwent more than one herd test. Testing was curtailed in 1991. In the period 1992-94 the volume of testing was somewhat lower than the 1988-90 levels because of a shortage of private veterinary practitioners to undertake testing. There was no direct evidence that this had had a deleterious effect on the true level of tuberculosis, as well over 90 per cent of all herds were tested annually.

Conclusions
Much of the increase in the level of reactor disclosure in Co. Monaghan in the period, 1988-94, was due to a real increase in the underlying level of disease. There was a considerable variation in the location of areas of high prevalence of tuberculosis in cattle from year to year. This suggests that the main problem was that herds were becoming newly infected rather than tuberculosis persisting in previously infected herds. This is a possible explanation as to why the use of a more severe interpretation of the tuberculin test in Co. Monaghan did not lead to an overall improvement in the reactor disclosure rate. That measure was designed to minimise the possibility of tuberculosis persisting in a herd or area. The severe interpretation has now been in place in Co. Monaghan since 1989. The application of such a measure over a prolonged period is now due for review, given the likelihood that such an interpretation if persisted with would continue to give unduly high APT values.

The initial increase in tuberculosis levels occurred in 1989 during a period when the volume of tuberculin testing in Co. Monaghan was at a relatively high level. This evidence indicates that an extensive testing programme is unlikely, in itself, to lead to a decrease in the true level of tuberculosis.

One of the deficiencies in the BTE programme in Co. Monaghan that needs to be addressed is the investigation of the role of badgers in the epidemiology of bovine tuberculosis. By mid-1995, 44 (18%) of the 251 badgers examined had tuberculous lesions.

There was some concern regarding the possible impact of illegal movement of cattle. While there was no conclusive evidence that this was a major source of M. bovis infection for clear herds, this possibility cannot be ruled out and the problem needs to be dealt with. The illegal movement of cattle also has repercussions which are of concern for other Sections of the Department of Agriculture, Food and Forestry and for other Government agencies. The considerable efforts that have been made by the staff of the District Veterinary Office have had limited success. Because of its nature and extent, a resolution of this problem will require substantial resources and increased cooperation between all the bodies concerned.

Realistic targets require to be set for the county aimed at reducing the levels of tuberculosis and herd restrictions, progressively over the next five years. These should include specific targets for testing, epidemiological investigations and badger removals. The degree of success will ultimately be judged by the reduction in specified disease parameters (including APT). A comprehensive review of the programme should take place at the end of each year. In the event of these improvements not being achieved within pre-defined limits then further research and corrective measures should be undertaken. The resolution of the problem in County Monaghan will require some adjustments.
and the inclusion of some additional measures in the programme.

These include:

- Application of a more strategic use of the severe interpretation of the tuberculin test in Co. Monaghan, as in the rest of the country.

- A detailed investigation of the role of the badger population in the county.

- A re-assessment of the basis for deciding if herd de-population is a viable option (See Hahesy, Griffin and Collins, this volume)

- The establishment of a special task force consisting of representatives of various sections of the Department of Agriculture, Food and Fisheries, the Gardai and the Revenue Commissioners to deal with irregularities in Co. Monaghan.

- Ongoing and detailed analysis of tuberculin test and related data along with an epidemiological analysis of on-farm investigations conducted by Veterinary Inspectors. These latter measures should be conducted by designated staff of the District Veterinary Office in collaboration with the Tuberculosis Investigation Unit.

- In particular, as there has been a major increase in the number of herds restricted as a result of the disclosure of a lesion in an attested animal at post-mortem examination, such breakdowns should be the subject of a specific study.