



Title	Studies of bovine tuberculosis in defined areas in Ireland
Authors(s)	McArdle, Pat, Clancy, Patrick J., Dolan, Leonard A.
Publication date	1993-03
Publication information	McArdle, Pat, Patrick J. Clancy, and Leonard A. Dolan. Studies of Bovine Tuberculosis in Defined Areas in Ireland. University College Dublin. Centre for Veterinary Epidemiology and Risk Analysis, March, 1993.
Series	Selected Papers, 1992
Publisher	University College Dublin. Centre for Veterinary Epidemiology and Risk Analysis
Item record/more information	http://hdl.handle.net/10197/8921

Downloaded 2023-03-15T17:09:45Z

The UCD community has made this article openly available. Please share how this access benefits you. Your story matters! (@ucd_oa)



© Some rights reserved. For more information

Studies of Bovine Tuberculosis in Defined Areas in Ireland

P. McArdle, P.J. Clancy and L.A. Dolan

Introduction

Two studies of bovine tuberculosis in defined areas of Counties Westmeath and West Cork which were completed in 1992 are described here.

Data were assembled and analysed on computer in both studies using the Epi Info statistical software package.

Study A.

This was a study of the effect of badger culling on the level of tuberculosis in the associated cattle in Co. Westmeath. It was designed as "an intervention study". Badgers were culled from the case area and the tuberculin testing data for the cattle was compared with that of the cattle in a designated control area.

There were 45 and 47 herds with 2,133 and 1,871 cattle in the case and control areas, respectively. Tuberculin testing data were assembled for the period, 1977-1991. Badger trapping commenced in the study area in 1985; some badgers were captured in 1986 and 1987 in the control area. Tuberculous badgers were identified in both areas.

Data were analysed for the following parameters: reactor animals per 1,000 tests (APT); incidence of herd breakdown; total reactors; visible lesion rate; multiple reactor breakdown; and number of non-reactor animals with lesions at slaughter.

During the period of the study there was considerable variation in each of these parameters; overall there was less variation in the herds in the study area, however.

It was concluded that, in order to identify whether or not there had been any association between the removal of badgers and the tuberculous status of herds in the study area, the period of the project would require to be extended.

Study B.

The purpose of this descriptive study was to examine the relationship in time and space of tuberculosis breakdowns in herds in a defined area. The study area was located at Innishannon in West Cork. Tuberculin testing data were examined for the period 1980 to 1991 inclusive.

The study area was triangular in shape, bounded by roadways and was comprised of 25 herds with approximately 1,400 animals. Details were recorded for all farm boundaries, animal class, test types, reactor type and lesion rates and sites.

There were three main outbreaks of tuberculosis in the area during the study period. An outbreak in 1985 - 86 was the most extensive and accounted for 57% of all the reactors identified. Overall a total of 500 reactor animals were identified and a further 125 animals were removed as in-contact animals in four herd depopulations. Only one herd in the area had no breakdown during the 12-year period.

Half of all reactors were identified on tests that were carried out from November to January and 20% were identified on tests between May and October. Approximately three quarters of all tests in which reactors were disclosed were carried out at an interval of 8 months or less following the last clear test in the herd. There was no correlation between the test type on which reactors were disclosed and the number of reactors identified.

The pattern of the disease outbreaks observed was that the breakdown herd, in almost all cases, was one of a number of contiguous herds which disclosed reactors in the same time period. However, it was not possible to demonstrate a straightforward progression of tuberculosis through contiguous herds over time, i.e., each new outbreak appeared to be a separate event.