# East Offaly Badger Research Project (EOP):Interim Report for the Period January 1989 to December 1993

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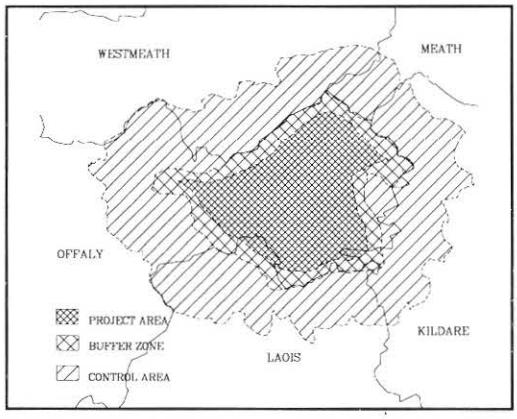
## Introduction

The East Offaly Badger Research Project (EOP) was continued during 1993 and is ongoing. The objective of this observational study is to monitor and analyse the effect of the intensive control of a tuberculous badger population on the tuberculin testing outcome in the associated cattle herds. These data are compared with the data from the cattle herds in a surrounding control area in which there is no badger control programme (Fig. 1).

**Figure 1. The Project, Buffer and Control Areas of the East Offaly Badger Research Project.**




## Results

The badger trapping programme continued during 1993 and the results are presented in Table 1. The proportion of badgers trapped in the Buffer Zone initially was 16%. This figure increased to 45% in 1993, and most of the remaining badgers were trapped towards the periphery of the Project Area.

The tuberculin testing data showed that at the end of 1993, there had been a decrease of 82% in the APT (reactor animals per 1000 animal tests) in the Project Area compared to the 1988 figure. In the same period the APT for the Control Area initially increased by 56% and then decreased to 45% less than the 1988 figure (Fig. 2).

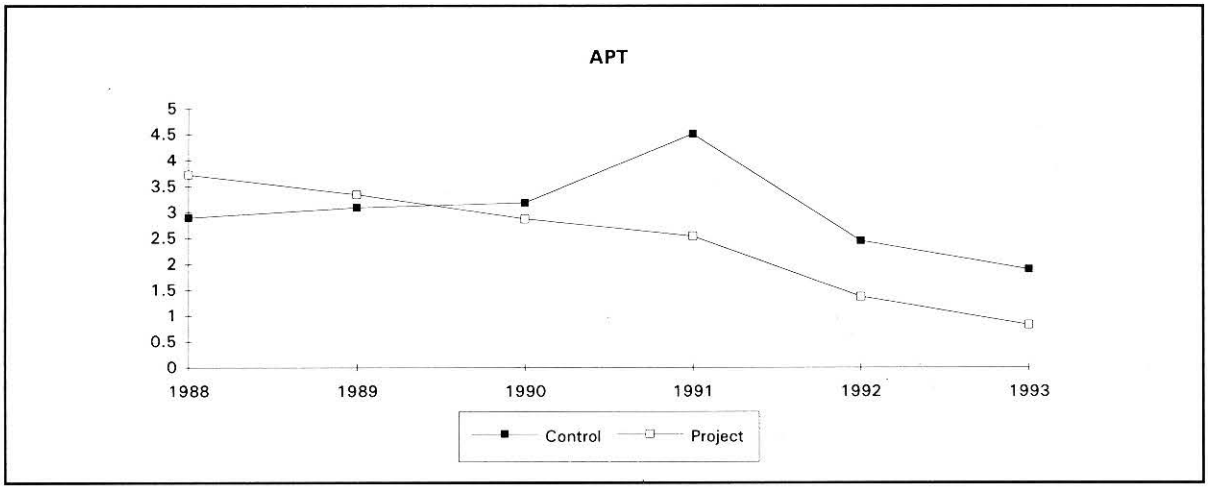
The change in the percentage of total reactors identified was similar to that observed in the APT rates (Table 2).

**Table 1. The number of badgers trapped and the number found to be tuberculous in the Project Area and Buffer Zone of the EOP from 1989 to 1993, inclusive.**

| Year | Project Area | Buffer Zone | Total |
|---|---|---|---|
| 1989 | 700<br>94(113)* | 137<br>25(18) | 837<br>119(14) |
| 1990 | 197<br>24(12) | 103<br>3(3) | 300<br>27(9) |
| 1991 | 117<br>13(11) | 74<br>8(11) | 191<br>21(11) |
| 1992 | 108<br>7(6) | 72<br>2(3) | 180<br>9(5) |
| 1993 | 63<br>8(13) | 51<br>2(4) | 114<br>10(9) |
| Total | 1185<br>146(12) | 437<br>40(9) | 1622<br>186(11) |

( )* number and percentage of badgers found to be tuberculous on gross post-mortem examination

**Figure 2.** **The APT* for the Project and Control Areas of the East Offaly Project - by year**




*** Reactor animals per 1000 animal tests**

**Table 2.** **The number of tuberculin reactors, APT and % change, by year, in the Project and Control Areas of the EOP**

| Year | Area | No. of Reactors/year | | APT/year* | |
|---|---|---|---|---|---|
| 1988 | | 321 | | 3.72 | |
| 1989 | Project | 343 | | 3.34 | |
| 1990 | | 281 | | 2.87 | |
| 1991 | | 176 | | 2.54 | |
| 1992 | | 102 | | 1.37 | |
| 1993 | | 58 | (-82) | 0.83 | (-78) |
| 1988 | | 720 | | 2.89 | |
| 1989 | Control | 829 | | 3.09 | |
| 1990 | | 789 | | 3.18 | |
| 1991 | | 966 | | 4.51 | |
| 1992 | | 567 | | 2.45 | |
| 1993 | | 399 | (-45) | 1.90 | (-34) |

*Reactor animals per 1,000 animal tests.
( ) % change from 1988 figure.

## Discussion

The APT figures for both Project and Control Areas have reduced further in 1993 in line with the overall national trend. The APT for the Control Area was 1.8 times greater than the figure for the Project Area both in 1991 and 1992. In 1993 this difference increased to 2.3 times.

An analysis of the tuberculin testing data between the Project and Control Areas, from 1982 to 1992, showed that there was a statistically significant difference in the herd breakdown rate between the two areas in 1991 and 1992, the lesser rate being in the Project Area. This had not occurred in any of the previous years (Williams and O Mairtin, 1994).

An analysis of data undertaken during 1993 using Geographical Information System technology (G.I.S.) demonstrated that there was a statistically significant association between the distance to setts where tuberculous badgers were captured and herd breakdowns (Dolan, Hammond, Eves, Griffin and Martin, in press).

## Reference

Williams, D.H. and O Mairtin, D. (1994).
East Offaly Badger Research Project 1982-1992.
University College Dublin. Internal Report.