

NATFOREX

Establishing a national resource of field trials and
a database for forest research and demonstration

PROJECT TEAM

Prof. Maarten Nieuwenhuis, University College Dublin*
Charles Harper, University College Dublin
Jacques Hamel, University College Dublin
Ted Lynch, Coillte
Donal O Hare, University College Dublin

* Email: maarten.nieuwenhuis@ucd.ie

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BACKGROUND

Past forest research activity has resulted in an extensive network of experimental trials on many aspects of silviculture and forest management. These trials have provided scientific data to assist in developing best forest practice and have also acted as demonstration areas for communicating research results. The NATFOREX project aims to create a national database of trials established before November 2007. It will give a useful inventory of intact and closed trials with the associated data, and silvicultural and management treatments tested. It will also facilitate reviews of knowledge gained to date and help to show areas where new trials may be required. In addition, important extant trials will serve as demonstrations of good forestry practice.

OBJECTIVES

To identify, maintain and manage a national network of field trials for the study of silvicultural and forest management treatments. Specifically to:

- evaluate the relevance of existing trials in the Coillte experimental plot network and in the research sections of other organisations;
- decide on the reliability of existing data and on the benefits of further data collection;
- carry out necessary maintenance on field trials earmarked for retention;
- collect new data in retained trials where required;
- integrate the findings and data from the trials into a public online database;
- identify information gaps;
- decide on the need to establish new trials.

PROGRESS

To date, more than 300 field trials and experiments have been visited (Figure 1). A total of 158 field reports have been reviewed, summarised and entered into in a database. Where there were originally about 1,500 experiments listed on Coillte's network, this number has now been reduced to about 980 and this figure is expected to reduce significantly as more inspections are undertaken and reports are made available. Work has begun on the transfer of non-metric data, collected prior to 1971, onto Excel for metrication and storage. Data presentation has been designed to be similar to that of other databases including the NoLTFoX database.

Essential maintenance and assessment work continues on a range of experiments. In the past year 55 trials received attention, ranging from growth measurement to thinning

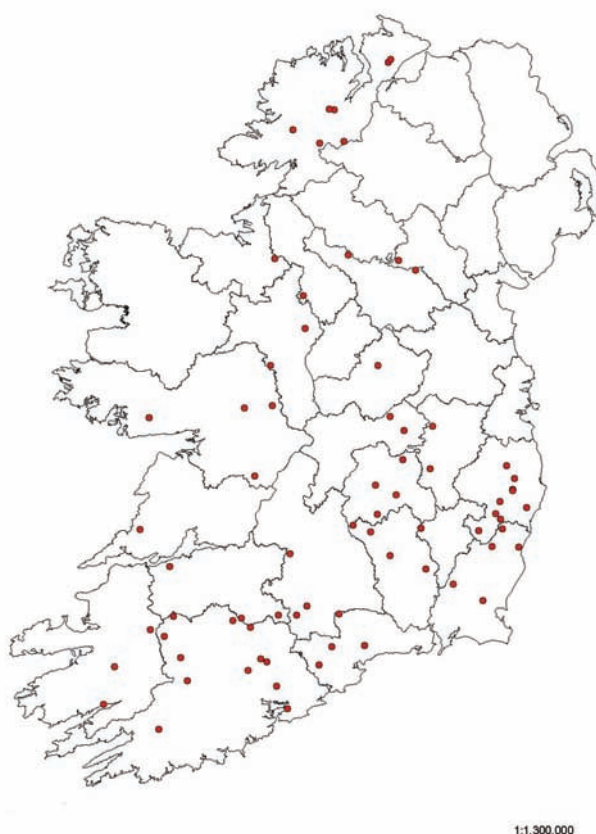


Figure 1: Map of sites visited to date.

to pruning, to scrub clearance, to final crop selection. Data from some of these trials were analysed to get a clearer view on their current status.

Trial sites from Donegal to Cork and Galway to Wicklow have been inspected in the field. A common factor has been the poor quality of the maintenance of the experiments on the ground. This has had an impact on the ability of these trials to perform to their full potential. .

ACTIVITIES PLANNED

- Decision on the retention of intact trials based on the field managers' reports, the quality of the existing data and the statistical soundness of the experimental design.
- Continued digitising of data from experiments that are closed.
- The database for the website (www.natforex.com) will be completed.
- The project management group will make a second field visit, this time to the midlands and West.
- Reporting on field trials will be completed.
- A distinction between trials which are valuable for their data output only, and those still intact and capable of producing valuable data will be made.
- Criteria for the retention of intact experiments will be drawn up.
- Criteria for the inclusion of the data from closed trials will be drawn up.
- The selection process for retained trials will begin.
- Work on selected trials including the compilation of Management Plans will begin.
- Further efforts will be made to include non-Coillte experiments in the work.
- The project group will work with a recently appointed statistician on the authenticity of experimental design and the reliability of experimental data.

OUTPUTS

- Project website www.natforex.com
- COFORD Annual Report
www.coford.ie/iopen24/pub/natforex2008.pdf
- Information on NATFOREX was made available at an EFI conference held in Dublin Castle in September 2009.
- Nieuwenhuis, M. 2009. *COFORD's PLANSFM Research Programme: Planning and Implementation of Sustainable Forest Management*. Presentation to the COFORD Council, AFBI Field station, Hillsborough, Co Down, 24 July 2009.
- Harper, C. and Nieuwenhuis, M. 2009. *PLANSFM - Planning and implementation of sustainable forest management*. [Poster presentation.] UCD School of Agriculture, Food Science and Veterinary Medicine Research Day, 8 December 2009.