

FARMFUNGI

Production of edible fungi in the farm forest

PROJECT TEAM

Dr Tom Harrington, University of Limerick*
 Maria Cullen, University of Limerick
 John O'Connell, private forest owner

* Address correspondence to:
 thomas.harrington@ul.ie

COMPLETION DATE

December 2010

OBJECTIVES

The objectives of this project are to:

- investigate outdoor forest production of oyster and shiitake mushrooms using cut stumps and logs derived from forest thinnings;
- determine whether inoculation of sawn logs and incubation in the forest will yield marketable quantities of oyster mushrooms and shiitake;
- determine whether inoculation of cut stumps will yield marketable quantities of oyster mushrooms;
- determine the influence of log type, size, and moisture content on mushroom yield in outdoor log cultivation of oyster and shiitake mushrooms;
- determine the influence of stump type, size and location on oyster mushroom yield;
- develop a protocol for log cultivation of mushrooms that will be applicable in farm-forest enterprises;
- explore the feasibility of producing home-grown inoculant;
- determine whether host trees inoculated with *Tuber aestivum* (summer truffle) will yield commercially viable quantities of truffles in Ireland;

- determine if inoculated host trees can be successfully established within existing ash plantations, and if commercial quantities of truffles can be harvested;
- compare the yields of truffles from inoculated oak (*Quercus robur*) and hazel (*Corylus avellana*).

PROGRESS

Three farm forests have been identified as experimental sites, the experimental trial protocol has been refined, and inoculum has been ordered.

ACTIVITIES PLANNED

The main activity planned for 2008 is to establish the oyster and shiitake mushroom production trial at three farm forests. Inoculation of oak, beech, ash, sycamore logs with oyster and shiitake mushroom spawn will take place at each of the three sites in spring. Eight hundred logs will be inoculated at each site: 200 each of the four tree species being investigated, half and half with oyster and shiitake spawn. In total, 2,400 logs and 300 cut stumps will be inoculated. Monitoring of environmental variables will also be carried out during the spawn run on logs, throughout 2008. Assessments will be made of tuber mycorrhizae on inoculated oak and hazel samplings.