

Broadleaf Silviculture

This Teagasc-funded project is led by Dr Ian Short and will develop previous broadleaf silviculture work by Teagasc. It will continue to investigate the establishment and management of broadleaf crops, utilising sites established in the previous CoFoRD-funded B-SilvRD project.

Project objective

To build upon the medium- to long-term trials established during the 5-year B-SilvRD project, to continue their management and monitoring, to establish a new remedial silviculture fully-replicated trial and fully-replicated shade-tunnel trial, and to disseminate the results (some 10-year results) to industry and stakeholders, increasing broadleaf silviculture knowledge of the Irish forest industry.

Rationale / Methodology

Broadleaf planting has increased over the last two decades yet broadleaf silviculture knowledge has been limited. Many of these stands are of poor quality or have lacked timely management. The B-SilvRD project (2010 – 2016) established some broadleaf silviculture trials, designed for medium- to long-term use to help fill some knowledge gaps. The proposed project will continue the management and monitoring of these trial sites and dissemination. Some additional new trials will also be established for medium- to long-term use.

With the advent of Chalara ash dieback (*Hymenoscyphus fraxineus*), pre-emptive management on ash plantations is prudent, facilitating a change of species and ensuring that a second crop is established in the eventuality that a stand of ash must be felled for sanitary reasons prior to full rotation age. This project will include an experiment on the impact of shade on three species. A new fully replicated trial related to remedial silviculture of poorly performing pole-stage oak will also be established involving a stumping back / coppicing intervention, a process that the B-SilvRD project initiated in ash and sycamore on a pilot basis which is showing promising results.

Sites being investigated include:

- 2 oak:birch nursing trials
- An oak:Scots pine shelter-in-advance establishment trial
- An oak:Scots pine thinning trial

- A network of broadleaf thinning demonstration sites
- A spacing trial incorporating a mixture of ash and sycamore

The project will also use shadetunnels from the B-SilvRD project to investigate the growth of three species under various amounts of shade. The project will also develop previous B-SilvRD work investigating the management of poorly performing broadleaf crops using sites established during that project:

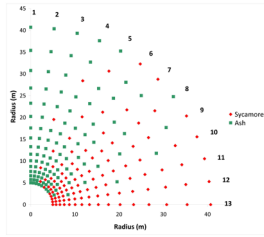
- Coppice-with-standards
- Free-growth
- Systematic thinning with underplanting and/or coppice regrowth
- A new trial in Teagasc Oak Park will also be established to investigate the remedial management of poorly performing oak (the oak in Oak Park has been significantly affected by grey squirrel in the past).

Dr Ian Short
Silviculture Research Officer
ian.short@teagasc.ie

Establishment and management of broadleaf crops

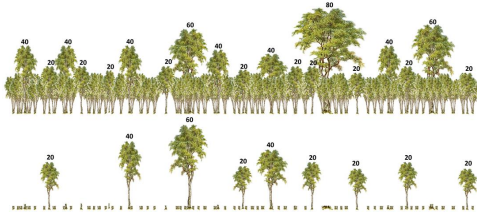
Objectives

- To build upon the medium- to long-term broadleaf silviculture trials established during the 5-year B-SilvRD project.
 - Establishment
 - Spacing
 - Configuration
 - Shelter-In-Advance
 - Thinning
 - Remedial silviculture for poorly performing broadleaf stands
- Establish a new remedial oak silviculture trial



Notes:

Remedial silviculture of poorly-performing broadleaf crops



Notes:
