

SILVICULTURE

OVERVIEW

Forest policy changes made in the 1980s to diversify the species composition of the forest estate resulted in a significant expansion in the area of broadleaved tree species. From a very low base 20 years ago broadleaves have now reached almost 30% of the annual afforestation programme. This has presented Irish foresters with a challenging situation as broadleaves are more demanding in terms of site requirements; and are more costly in terms of establishment, maintenance and subsequent management than the conifer species which have formed the greater part of the afforestation effort to date. Issues such as matching of species to site types, planting pure or mixed crops, compatibility of species, shaping, tending and more recently thinning have tested foresters silvicultural skills for some time. Much has been learned from practical experience: however, research has helped and the **BROADFORM** and **GBREVIEW** projects, both of which combine a scientific and practical approach, have greatly assisted in providing much needed guidance for forest managers and owners. All of the experience and experimentation to date with broadleaves in Ireland is currently being reviewed in the **GBREVIEW** project. The findings will update our knowledge on the silviculture of broadleaves and will be published in a book which will replace *Growing Broadleaves* first published in 1998.

Another area that requires a high level of silvicultural skill is the management of forests under continuous cover. These less intensive alternative silvicultural systems, that are practised in many European countries have the potential to deliver multifunctional outputs from forests, particularly for sensitive sites. However, these systems are new to Ireland and have evolved in a forest environment that is very different to that experienced in this country. The **CONTINUCOVER** project is evaluating the potential of these systems in Ireland.

Good timber properties and the ability to survive and grow on difficult sites have led to the widespread planting of the Sitka spruce. Sometimes, however, the species has been extended to sites of low nutrient status where it cannot develop into a merchantable crop without additional application of fertilisers. Aerial fertilisation is no longer an option in many of these areas and alternative application methods are required. **GROWCHECK** is a development project that seeks to find practical solutions to this problem.