

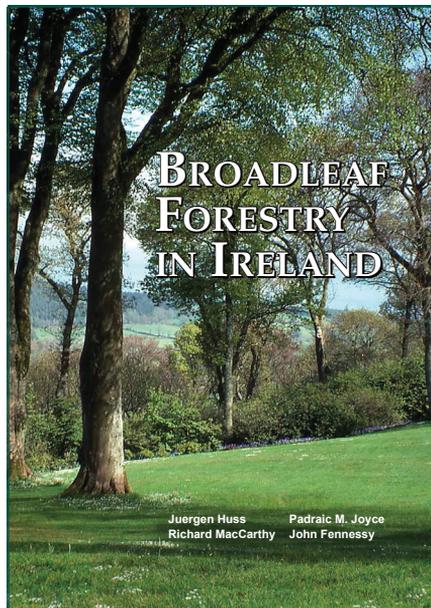
## Broadleaf Forestry in Ireland

Juergen Huss, Padraic M. Joyce, Richard MacCarthy  
and John Fennessy

COFORD. 2016

508 pages. Hardback. ISBN: 948-1-902696-77-5

€40



In 1998, COFORD issued an impressive book entitled, *Growing Broadleaves*. Since 1998, the area afforested with broadleaf trees and the diversity of species planted has increased greatly. There has been a corresponding increase in silviculture expertise relevant to the species planted. This book incorporates much of the experience gained as well as results, from research, which have emerged since 1998. As a result, it is much more extensive and more substantial in scope than *Growing Broadleaves*.

It is presented in two parts, consisting of nine chapters, and comes to almost five hundred pages. Part one focuses upon the silviculture and economics of broadleaf trees and stands while part two describes many attributes of the major and minor timber producing species normally encountered in Ireland. In addition, there is a glossary of terms, a bibliography, an index of tree species mentioned in the text and a general index.

The introductory chapter consists of historical overviews of the development

of forestry in Ireland. It includes a detailed inventory of the broadleaf estate in the country at the present time. Data are presented according to species, age-class distribution and ownership. Chapter 2 consists of an extensive review of the climate and edaphic factors which largely determine species selection, tree growth and plantation development. It includes a series of very clear descriptions and many excellent plates which show the soil types and profiles deemed suitable for the growth of broadleaf trees in Ireland. Recommendations for species selection and site preparation accompany the soil description. All forestry practitioners should find this chapter interesting and informative, especially the guidelines for species selection and lowland and upland sites (Tables 2.4-3 and 2.4-4). The detail given in this chapter is exhaustive with a tendency towards repetition. In Chapter 3, the social, ecological and economic functions which broadleaf stands and individual trees serve are discussed. This presentation on the multiple non-timber benefits of broadleaves is somewhat over-elaborate and even tedious. There is also a section on the economics of broadleaf forestry. The impact of rotation length and the price of land upon the returns that may be expected is clearly expounded. The authors conclude that growing broadleaves on a small scale, even when producing logs of the highest quality and value, is not profitable without subventions. The calculations presented only include the value of the detailed presentation on the non-timber values of broadleaf trees; it is surprising that no attempt is made to include these values in the economic appraisal.

As the primary focus of the book is on silviculture, the most important part is Chapter 4, however, it is also the longest (158 pages). All of the main operations relating to the establishment, tending and management of broadleaf trees are detailed. Topics discussed include: seed procurement, planting materials, site preparation, planting density, the aftercare of young stands, and formative shaping, pruning and thinning. Each subject is appropriately illustrated and recommendations for best practice are given. There is a lengthy discourse on mixed species stands and on the approach to thinning in such areas. The identification and favouring of potential crop trees at an early stage in the rotation is emphasised; this is deemed to be essential for the production of logs of the highest quality and value. Much of this discussion and stand treatment is neatly summarised in two narrative-type tables (4.5-6, 4.5-7). There is also a long presentation on a range of silvicultural systems which may be appropriate for the integration of procedures in the management of broadleaf stands and forest. However, in view of the limited opportunities for the implementation of these systems, this lengthy discourse might have been more rigorously edited. The best chapter in part one of the book is the shortest. In it, the training and research needs for the future management of broadleaf trees and stands are indicated. The authors conclude that skills training and field demonstrations should form a part of any development programme.

Part two of this book consists of four chapters of varying length and significance. The content is, in most respects, quite different from that of part one. Despite this, it integrates smoothly into the general presentation of broadleaf trees. The main theme of Chapter 6 is an outline of systems for the classification of broadleaves. Seven systems are listed, but none of these is given in any detail. This lack of detail is in sharp contrast with most of part one. Indeed, Chapter 6 appears to be largely peripheral to the main themes of the book and this content adds very little to the knowledge of broadleaf trees. On the other hand, Chapter 7 consists of a cornucopia of detail on the natural distribution, botanical features, silvicultural management, growth characteristics, and wood properties of the broadleaf species of significance in Irish forestry. There are also comments on the silvicultural, economic, ecological and aesthetic values of each species. The distinguishing features of land, twig and leaf are given for most species. The entire chapter is again superbly illustrated however, the inclusion of species such as Italian alder, mana ash, Holm oak and black cherry appears to be an anachronism.

Chapter 8 follows the same pattern but as it deals with the so-called minor species, the descriptions given are less detailed. Most of the species included, such as rowan, horse-chestnut, holly and hawthorn are better known for their ecological and aesthetic values than for their timber production. The final chapter gives a brief account of some species which are not found in Ireland. It is noted that some individuals of these species have attained the status of “champion trees”.

Technically, this is a superb book. The design, layout and printing are of the highest order and the text is enhanced by over 450 figures, plates and tables. The colour, clarity and relevance of the plates are excellent throughout. They do much to reinforce recommendations concerning species selection, natural regeneration, the management of mixtures of tree species, and practices associated with silvicultural systems. In addition, the manner in which recommendations and conclusions are highlighted in summary charts is helpful to the reader.

The entire book is a treasury of facts, figures and guidelines relating to broadleaf trees and stands. Despite this however, this book is not without its flaws. There is a strong element of repetition in selections and soils and on the non-timber values of broadleaf trees. The value of hedgerow timber is scarcely touched upon and no suggestions are included for the management of hedgerows or for upgrading the quality of the timber produced therein. Additionally, there is no mention of shelterbelts or agroforestry systems for timber production.

But the principal deficiencies of the book are editorial in character. As is to be expected in a book which has a number of authors, the style and quality of expression lacks consistency. There are instances of poor or clumsy sentence construction in virtually every chapter, e.g. “It has sometimes been argued that the potential to grow high quality timber is more difficult in Ireland when compared with conditions on

the continent.” In addition, tenses are often mixed, even in a single paragraph. There is considerable circumlocution and a drift towards tautology in sections of the book. There are also some very assertive statements with which this reviewer would find it difficult to agree, e.g. “All human activities - including forestry activities must adhere to an economic rational.” It must be emphasised, however, that enquirers such as agriculturalists, landscape architects and environmentalists should find it an indispensable source of information; growers, too, would gain considerable direction from reading sections of this book, as would everyone involved in urban or rural planning. Generally, it is not a book for casual or recreational perusal; rather, it is a book which requires careful reading and study. Since no other publication on the management of broadleaf trees provides such a comprehensive exposition on this subject, this reviewer considers that it constitutes a standard reference. At a cost of €40 per hardback copy, it represents excellent value.

*John J. Gardiner*