

Preface

The importance of plantation forests has increased steadily since the first edition of this book was published in 2006. Plantations supply increasing amounts of wood for human consumption as firewood, for paper production, as timber for building, or as energy through conversion to liquid fuel or by firing boilers to produce electricity. Also, their environmental benefits are being appreciated more fully for uses such as remediation of damaged sites, for disposal of industrial and human wastes or by increasing floral and faunal biodiversity in regions where native forests have been cleared. Plantations act also as ‘sinks’ for the storage of carbon dioxide, the greenhouse gas that is being emitted to the atmosphere in increasing amounts and is believed to be a major contributing factor to climate change.

Whatever the use being made of plantation forests, their owners want them to grow vigorously and to remain healthy so they can achieve their objectives as soon as possible. So varied are plantation forests around the world and so varied are the practices necessary to grow them successfully that it is impossible to consider them completely in a single volume. However, wherever successful plantation forests are grown there is a set of scientific principles that underly what is done. It is those principles this book describes so that readers anywhere in the world might glean some idea as to how their plantations will behave and what problems they might face.

I have attempted to reach a wide range of readers, from those with no formal forestry education through to forest scientists involved in research. This has meant dealing with topics from basic plant biology through to advanced concepts of forestry science. To maintain the interest of all readers, I have tried wherever possible to illustrate the concepts with practical examples drawn from plantation forests throughout the world. The decisions as to which topics to include or exclude were not easy. In general, I have tried to cover as much as I feel can be taught reasonably in a one-semester undergraduate university course on plantation forestry.

Areas of plantation forestry that have developed significantly since the first edition include the relationship between silviculture and tree wood properties, the use of mixed-species plantations, genetic engineering of trees, and concern about the long-term sustainability of plantation forests. New material has been added about these topics in particular. In addition, research findings in other areas of plantation

forestry have been updated. I thank again those colleagues who reviewed all or part of the original manuscript. Dr. Geoff Downes kindly offered useful comments on the new material that makes up [Sect. 3.4](#) of this edition.

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