

There is great variety in the styles of presentation which range from well thought out to difficult to follow. Some of the tables are over-complicated and only an expert will be able to decipher them. Unconventional references have also been allowed, e.g., Ad Hoc Panel, 1980. One feature warranting special recognition is the summaries and tables of references which appear in almost every chapter. These should prove invaluable.

It was disappointing to see that our work on tissue culture of radiata pine in New Zealand, which is as advanced as any overseas research on forest species, is not well covered in this book.

Jenny Aitken-Christie

## WOOD IN AUSTRALIA

by Keith R. Bootle

McGraw-Hill Book Company, Sydney. 1983. 443 pages.

ISBN 0 07 451047 9. A\$18.95.

This is one of those delightful but sadly uncommon books, which combines considerable scholarship with observations from a lifetime of practical experience, and illuminates both through a gift for straightforward language. The description of compression failures as "localised creases in the wood" is just one example of a familiar phrase used to good effect. For those of us who have tended to rely on the somewhat outmoded "Commercial Timbers of Australia" by I. H. Boas (published 1947) it is good to have an updated book that promises to serve as faithfully for many years to come.

Part 1 of the book, entitled "Wood: Characteristics and applications", covers a wide range of subjects in 21 chapters. Starting with The Nature of Wood (anatomy, morphology, chemistry, and wood formation), other chapters touch on matters as diverse as corrosion in timber, use of sawmill residues (how would you use "mudguts"?), and Australian Standards for the timber industry.

Part 2 deals with properties of species, and offers notes on uses. This contains separate descriptions, covering origins, properties, uses, and availability, of more than 400 timber species or groupings of species. Australian timbers are naturally given generous coverage, but it is especially valuable for descriptions of timbers imported into Australia (and a few well-known timbers that are not), including major New Zealand species. It is an extremely valuable reference for anyone interested in timber. There are also useful Appendices covering Metric Conversion, Moisture Meter Corrections, and a table of Mechanical Properties.

The condensation necessary to cover so much territory within a handy-sized book of less than 450 pages may well attract some criticism from specialists who feel that "their" subject has been dealt with inadequately. However, given that local usage may account for minor oddities, there are few obvious errors of fact.

For those wishing to pursue matters further each chapter concludes with titles for "Further Reading". However, if there is unevenness in the presentation this is where

it lies. The chapter on Bending of Wood, for example, contains only two references – one on bending plywood and one on ammonia plasticisation – whereas Boas contains 15 up to 1947, many of which are still readily available. Similarly the chapter on Some Wood Utilisation Aspects of Tree Breeding has only one reference. Incidentally this chapter rather naively restricts itself to topics which the wood user would wish the plant physiologist and silviculturalist to consider in their aims. It therefore dodges the real problem of choosing between desirable but unrelated features in order to select for those of greatest economic value at a level which will achieve useful genetic gains. Tree breeding is no magic wand, as most wood scientists have reluctantly had to acknowledge.

No doubt these are matters that can be considered when the well-deserved second edition is called for. Perhaps consideration could also be given to the wider use of simple line drawings. Descriptions of cell wall structure and of tests for mechanical properties, to name just two topics, would have benefited greatly from simple illustrations.

The book is cleanly printed, and well set out with chapter heading and number at each opening – a useful feature for ease of reference. Printing errors are remarkably few, and the illustrations and few line drawings that have been used are for the most part very well done. This book should find many appreciative users in New Zealand which, regrettably, has nothing comparable to offer. Perhaps some technical college might produce a list of New Zealand rules, regulations, and standards applying to timber, which, if used in conjunction with Keith Bootle's book, would convert it to an ideal text for local use.

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## BIOTECHNOLOGY IN NEW ZEALAND

Compiled by D. M. Hunt, R. T. J. Clarke, D. J. Bell, R. L. Earle, K. N. Joblin, and  
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DSIR Discussion Paper No. 8, DSIR Science Information Publishing Centre, Wellington. 1983. 83 pages. ISBN 0 477 06731 X.

In recent years powerful new techniques of genetic manipulation and cell fusion have been developed. These techniques permit the modification of microbes or eucaryote cells to enable them to utilise substrates, or produce substances normally outside their competence. The potential for application of these techniques to industrial technology has created a great deal of excitement, resulting in the formation of a number of new multi-national companies, and the "new" science of biotechnology. International awareness of the importance of biotechnology has at last influenced thinking in New Zealand, resulting in this discussion paper.

Biotechnology is defined in the paper as "the application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services". Four major sections of the paper deal with various aspects – Technologies and Sciences Contributing to Biotechnology; Biotechnology and New Zealand Industry;