

ance on where to turn to for updating information about New Zealand's forest sector: for example, there is an annual update of this country's plantation resource which is now published by the Ministry of Forestry, the 1990 version of which Sutton has obviously drawn on, but there is no mention of the regular updating of this National Exotic Forest Description, far less the rationale it adopts; there is a single mention of one edition of Statistics of New Zealand's Forest Industries, the 1987 one, but no indication that it too is an ongoing series with regular updates; and the New Zealand Forest Owners' annual release of Forestry Facts and Figures really deserved a mention as well.

To give but one example of the kind of useful analysis that might have been usefully included to provide a compelling analytical insight, an extension of the comparison of upper stand height trends (pp 68-9) in South Australia, New Zealand, South Africa and Chile into corresponding but contrasting stand volume production, would have been most revealing. There are ways of deriving what the corresponding volume productivities would be and it is a pity the authors chose not to. This appears to reinforce the need, expressed earlier, for authors to use their own initiative instead of feeling compelled in the interests of objectivity to rely on published results, and the further need to identify known means for deriving results rather than the results themselves. One could also remark that there are interesting comparisons in stand volume production trends to be made within as well as among countries. For instance, the maximum of 45 m<sup>3</sup>ha<sup>-1</sup>an<sup>-1</sup> for the Central North Island of New Zealand quoted on page 68 could well be matched by Southland data, but the stocking density and the path towards that value in these two different environments are likely to be very different and worthy of comment.

#### Useful Reference

I have read much of this book with considerable interest, but I have not read it from cover to cover. There is an unfortunate reason for this: the authors have been let down by both their publisher and by their editor. The width of the typing per page, the small font size and narrow line spacing used, the strange paragraphing adopted and the inattention to SI conventions, all detract from its readability. This is a pity, because the book is well worth acquiring. I recommend it as a useful reference which will help promote the obsession we foresters share with this remarkable plantation tree species called radiata pine.

A.G.D. Whyte

# Primary wood processing principles and practice

**'Primary Wood Processing: Principles and Practice'** J.C.F. Walker with co-authors B.G. Butterfield, T.A.G. Langrish, J.M. Harris, and J.M. Uprichard. 595 p. First edition 1993. ISBN 0-412-5480-2. Price £69. Printed by Chapman and Hall, London. The Australasian publisher is Thomas Nelson, 162 Dodds Street, South Melbourne, Vic. 3205, who offers a discount to New Zealand purchasers.

Forestry literature is extremely short of books in the wood technology area. Dr Walker must be highly complimented for producing this large and comprehensive text. He should also be applauded for bringing in specialist co-authors to cover areas where he felt his own knowledge may have been more limited.

The quality of printing is excellent. The book has a single-column, full-page layout, with the print a very readable 12pt palatino for the most part. The subject matter is well illustrated with a large number of very clear photographs, diagrams and graphs.

I did feel that the title of the book doesn't really capture its content – the first six of the 15 chapters give a detailed description of the properties of wood and wood resources. They cover wood structure, chemistry, water in wood and its effects on wood properties, and the characteristics of stemwood. Thus one-third of the pages are completed before chapters on wood processing begin. The next eight chapters give a detailed coverage of sawmilling, drying, wood preservation, grading, plywood and other wood panels, pulp and paper, and wood as a source of energy. The final chapter then goes back to a further discussion of wood quality and of the properties of major world timber species.

This then is much more than a book on wood processing. Overall there is a very good coverage of subject matter, although some specialists in individual areas might see limitations in "their" chapter or would approach the subject differently (and that is true for myself). Each chapter appears to contain a comprehensive range of references but scrutiny of these confirms how few modern books we have. Especially good use has been made of illustrations and detail from current manufacturers of processing equipment. One thing that would have been helpful is a terminology to define technical terms – a particular example was kappa number, mentioned several times from p 493

onwards and finally defined on p 531.

The book was written by New Zealanders and draws quite heavily on technical information about radiata pine and other locally-grown timbers. However, it is essentially a general text covering the subjects in terms of principles and, for the most part, international examples. Thus it is a modern and comprehensive reference book and should appeal as a student text suitable for forestry schools worldwide. This book certainly helps to fill a gap in forestry literature.

Dr John Kininmonth

## Adding value

"Adding value is often narrowly interpreted as 'what happens when a log is processed'. Forestry Corporation takes a much wider view. For us every activity, every task must add value," Chief Executive Tim Cullinane told the Corporation's AGM.

"The value chain starts the second a seedling or cutting is planted. Other links in the value-added chain are forged when sophisticated pruning and thinning operations are conducted; and when efficient felling techniques are used to minimise waste and maximise value," he said.

"And after all this value has been added, we're ready to start processing.

"Forestry Corporation does not view further processing as an end in itself.

"Simply producing the same product range and timber grades as we have in the past won't necessarily ensure the best value gain for the future. Forestry Corporation is developing products to meet real market needs, and uses sophisticated marketing strategies to maximise the returns from them.

"The new mouldings and millwork plant we're building at Waipa will join our existing Mount Maunganui plant, which has been successfully exporting to the United States since January 1993.

"Forestry Corporation's approach to adding value is typified by the upgrade to its Waipa Processing Plant. This plant processes approximately 400,000 cubic metres of logs a year, using advanced sawmilling and optimising technologies.

"We have just installed a state-of-the-art computer optimised board edger. This sophisticated device scans each individual board before automatically setting the saws to maximise the value yield.

"A similar process is used to optimise the value of every log entering the mill."

# Budget 1994 : Increase in science funding

Government announced in the Budget that science funding will rise by \$12 million in 1994/95, \$25 million in 1995/96 and then \$40 million in 1996/97 – a combined total of \$77 million. The majority of the additional science funding will go to the PGSF – \$8.7 million in 1994/95, \$13.5 million in 1995/96 and \$23.5 million in 1996/97 (see table below). The current PGSF funding level is \$275 million. The announced increase will take it to \$298.5 million in 1996/97 (i.e., an increase of nearly 9%).

The bulk of the extra PGSF funding will be applied to the high-priority outputs identified for increase in the 1992 Science Priority Statement (see table below). Forestry is identified as one of the high priority outputs.

The funding level for core competencies that were identified in the 1992 Science Priority Statement will receive between \$1 and \$1.8 million from the increased PGSF. These core competencies include scientific capabilities in taxonomy, palaeontology, ruminant physiology and indigenous forest management.

Forestry research (i.e. plantation and processing research) will receive a \$1.8 million increase in 1995/96. Currently the funding policy for forestry science research is to progressively increase the baseline of \$18.1 million in 1994/95 to \$19.7 million by 1997/98. The increase announced in the recent Budget will add another \$1.8 million to this baseline.

Environmental protection research will also receive a \$1.8 million increase in funding.

There will be a corresponding increase in the Non Specific Output Funding (NSOF) to CRIs (see table). This will help to alleviate specific and identifiable problems within CRIs such as maintaining core competencies in science areas which were either held or decreased in the 1992 priority statements.

A major new initiative in the Budget is the creation of the Basic Science Fund which is funded outside the PGSF. This will free up resources previously committed to basic science research and funded by PGSF for other uses. The newly created Basic Science Fund will have two objectives: to increase the flow of top-

flight researchers; and to underpin “targeted” strategic and applied research. The budget for 1995/96 will be \$4 million, rising to \$9 million in 1996/97. The fund

will be open to all individuals and providers on an equal basis.

Dennis Lee

## ‘Management of Radiata Pine’

**“Management of Radiata Pine” by N.B. Lewis and I.S. Ferguson, in association with W.R.J. Sutton (New Zealand), D.G.M. Donald (South Africa), H.B. Lisboa (Chile). Inkata Press: Melbourne and Sydney, Australia, 1993.**

This book of over 400 pages is an ambitious attempt to document the extent of radiata pine in the southern hemisphere, its growth habits, markets, silviculture, wood products and management. Even in a book this long, it is not really possible to fulfil these aims comprehensively and it is very much to the authors’ credit that they have generally persevered with that ideal. To some extent it succeeds and it will certainly be an invaluable addition to any forestry library, either institutional or personal, and I am sure I shall make regular use of my copy, despite a few limitations it appears to have. But more about this later.

This is not a book that could be regarded as a compelling read to be easily digested in two or three sittings. I see it more as a reference, than as a text book, one that can point inquiring readers in a number of very worthwhile directions. The book is divided up into six parts and 27 chapters. The parts are: introduction to the radiata pine resource; characteristics of the species; restraints on its productivity; stand management; forest management; the radiata pine sectors of Australia, Chile, New Zealand and South Africa and their future outlook. Some of the chapters are very short and none, in the space available, is as comprehensive in its treatment of any topic as readers might wish. But there is a wealth of very useful material that can be gleaned from what is presented, and that is one major reason why it will be a useful addition to any library.

Norm Lewis (I’m guessing it was he alone!) makes it clear in his preface that

this book is not an attempt to cover the same ground as C.W. Scott’s monograph of 1960, nor, one can infer, Peter Lavery’s 1986 monograph, Piers MacLaren’s 1993 NZFRI Bulletin nor anything else of that ilk. Rather, it is intended to be a “distillation of the cumulative practical experience among radiata pine foresters, personally communicated”. I wish it had been. But the authors bend over backwards to be fair in ascribing who said what first, what so and so’s opinion is, and so on. If I could offer a suggestion to potential authors, it would be to avoid the clumsiness of referencing in the text, to provide as comprehensive a bibliography of important contributing material as possible at the end of each chapter and to present a personal view of each topic in a more free-flowing sequence of argument. The purists may

## BOOK REVIEWS

well frown on such an approach, but I for one am becoming increasingly disenchanted with justifications based on what certain people may have written down somewhere at some time. It may be high time we technologists got back to basics and developed our own analytical thoughts and justifications instead of propping ourselves up with quotations from others. That is why I myself would have preferred to read about Lewis’ and Ferguson’s own considered views that have matured over their illustrious careers in Australian and international forestry rather than extracts from a compendium of selected references.

It is always interesting to see what one’s colleagues quote in the way of references and even more revealing to contemplate what they omitted to cite. Chapter 23 by Wink Sutton on “The New Zealand Radiata Pine Sector” was of special interest to me, as it will be to New Zealand readers generally, in this regard. It probably takes years to transform a raw manuscript into a book of this form and it is no surprise that some data are not right up-to-date. But I looked in vain for guid-

	Increase Funding	PGSF	High Priority Outputs	Core Competencies	NSOF	Forestry Research	Environment Protection
1994/95	\$12 m	\$8.7 m	\$7.4 m	\$1.0 m	\$0.3 m	n.a.	n.a.
1995/96	\$25 m	\$13.5 m	\$10.8 m	\$1.8 m	\$0.9 m	\$1.8 m	\$1.8 m
1996/97	\$40 m	\$23.5 m	\$20.5 m	\$1.8 m	\$1.2 m	n.a.	n.a.