Primary wood processing principles and practice


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 53.

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 forestry 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 Kinimmond

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 Cullinan 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.”