

nose. In the market philosophy forests can be thought of as mines from which it is legitimate to make maximum profit without any other consideration, as if human beings were incapable of foresight. Mining forests is of course one of civilisation's oldest plays.

If we abandon the principle of sustained yield (which is not necessarily trammelled by the concept of the "normal" forest, then we might as well abandon forestry altogether. In other words, if you reduce your forest capital you inevitably reduce the yield, precisely as you reduce your income if you spend some of your capital deposit in a bank.

**Geoff Chavasse**

## Forestry profession and society

Sir,

Your thoughtful editorial in the August issue of NZ Forestry, centred on the unambiguous statements firstly, that "the profession revolves around the two paradigms of sustainable yield and multiple use", and secondly that "foresters are trained to view forests as complex and requiring a long-term view", could be expected to receive a sympathetic hearing and support from the general public.

Unfortunately, of course, few of this audience are likely to see it.

New Zealand has pioneered an extraordinary national policy of separating production, and environmental forestry. Many would see the programme to privatise the State's forests as equally misconceived and against the long-term interests of the nation.

Be that as it may, no one surely can deny that, as A.L. Poole puts it, land use issues involving long-life plantations, and a huge log trade, are national issues. It is entirely appropriate, therefore, that the Institute should be engaged in a serious debate on the merits/demerits of overcutting and of lowering the rotation age as a management policy for the radiata plantation forests.

It is irresponsible that the Government has chosen to distance itself from forestry issues, declining to provide any ground rules, either in the form of legislation or of professional 'guidance' from the Ministry of Forestry.

It is perhaps hardly surprising, then, that private forest owners are looking to optimise early returns in the interests of their shareholders, but it is disappointing that the Forestry Corporation is adopting a similar strategy in respect of the forests still owned by the people of New Zealand on a long-term basis.

Congratulations to A.P. Thomson for

his outspokenness in emphasising the importance of mobilising public opinion, and of educating the Minister of Forestry and the Minister of State Owned Enterprises about the dangers of persistent overcutting.

Peter Casey, in his letter, identifies the emerging message of today as being that planting trees and processing them in New Zealand is a commercially astute decision.

Amen to that! But processing them in New Zealand? Is not A.L. Poole fully justified when he observes that everybody should be told what the country is losing by exporting logs rather than giving employment to local industry and adding value in New Zealand?

The Institute's determination to pursue the issue of cutting strategy and to adopt a policy line will surely serve to enhance the standing of the profession in the eyes of society and the public at large. It is also fully in accord with the tenor of your editorial.

Perhaps, too, a clear stand by the Institute, based on the professional knowledge and support of the majority of its members, will encourage others in society to bring political pressure to bear on the Government, at the very least in respect of the forest estate still publicly owned.

**Eric Bennett**

## Are short rotations a new development?

Sir,

I was interested to hear the debate at the recent Napier Conference about the apparent shortening of rotation lengths for radiata pine. There is some suggestion that what is happening is somehow new and a departure from best practice as determined by past experience.

In light of the debate I decided to look out the Hawkes Bay Cutting Plan and see what was happening. Sure enough the rotation lengths seem very short. Mohaka 21 years, Esk 22 years, Gwavas 23-25 years and Kaweka 24-27 years. Here is the smoking gun!

However check the date of the plan.... 1993? No it was 1978! These rotation lengths were calculated as the economic optimum using the then 10% discount rate applied as the hurdle rate by the Treasury for Government projects.

The products from the forest were not assumed to be the traditional framing timbers of the time. The management of the forests was aimed at achieving pruned sawlogs of 55 to 60 cm dbh for a high-value end-use market where the lower density wood properties would be less of a problem.

So how did we do?

Barry Keating provided us with some limited information for a stand of radiata pine at Mohaka thinned to 200 stems per hectare and pruned to 6 metres which I could compare with the yield tables from the old 1978 cutting plan.

	Mohaka Field Measurements	Cutting Plan Mohaka Crop Type
Age	22	22
Mean dbh	57.4 cm	55 cm
Sawlogs	480 m <sup>3</sup> /ha	480 m <sup>3</sup> /ha
Pulp	120 m <sup>3</sup> /ha	20 m <sup>3</sup> /ha

Apart from the difference in pulpwood volumes this is a pretty good comparison (the cutting plan yield table that I have did not have a breakdown between the pruned and unpruned volumes). In economic returns it is probably the same result.

All this was done without the aid of SILMODS, STANDPAKS, IFS, butts or FOLPIs. Despite the usual "we could do it better today" comments from some of the people on the field trip the result is that there are many foresters in New Zealand who would envy Barry Keating's problem of what to do with his pruned logs and when to cut them.

**Harold Heath**  
**Dunedin**

## Adding value

Sir,

Bob Edlin stated in the May issue of NZ Forestry that plywood was a low value-added product (pp 6 and 7). I wonder about the basis for this assertion, particularly since the term "value added" means different things to different people. I often see the term used in a manufacturing context, and these days it seems to have found an almost Orwellian popularity amongst those of the "more processing good, less processing bad" and "high price good, low price bad" camps. To me there seems a tendency to confuse either the degree of processing or product price (and sometimes both!) with value added in production.

For economists, value added has a succinct meaning. It measures the difference between the total revenue of a firm and the cost of bought-in raw materials, services, and components. Value added does not necessarily imply anything about either the degree of processing or product price. It instead measures the net return to the labour and capital inputs of production.

The Department of Statistics estimates value added in its 1987 Economy Wide Census of Manufacturing. (Unfortunately more up-to-date data are not available in sufficient detail for the solid wood pro-

cessing and pulp and paper industries.) Ignoring industry size effects for the moment, plywood, veneer, and board manufacturers ranked eighth out of 14 forest products manufacturing groups in terms of total value added (Table 1; sixth in 1984). For measures taking at least partial account of industry size, plywood, veneer, and board manufactures ranked fifth in terms of value added per full-time equivalent person engaged (Table 2; third in 1984), fourth for value added per \$1000 of salaries-wages paid (Table 3; fifth in 1984), and eighth (eighth in 1984 also) for value added as a proportion of total sales and other income (Table 4).

While some caution is warranted, given that veneer and some other board products are included within the plywood groupings, the above measures of added value suggest that plywood is probably not at the low end of the value-added spectrum. Assessment of value added apparently depends on the index adopted, and the indices may also reflect the intensity of labour employment in specific industries. It is also interesting to observe the rather low ranking of industries commonly thought of as adding high value.

The New Zealand measures of added value yield a picture similar to that observed for veneer and plywood in the USA. Even though differences in statistical definitions make cross-country comparison difficult, the net return to labour for softwood plywood and veneer manufacture in the US is at the intermediate rather than the low end of the scale (ranked eighth and tenth in the 1987 census; Table 5). Once again, industries commonly thought of as adding high value seem to rank at an intermediate level in terms of these value added measures.

Unfortunately these statistical measures of value added are incomplete – they do not measure value added in relation to the capital input of production. For this reason the Department of Statistics should be encouraged to publish detailed measures of capital input. After all, comprehensive measurement and publication of up-to-date value added data are in the national interest, particularly given concerns over domestic processing of forest products.

## References

- Department of Statistics. No date. Economy wide census. Manufacturing 1987. Department of Statistics, Wellington.
- Bureau of the Census. 1990, 1987 Census of Manufactures. Industry Series. MC87-I-24A to MC87-I-24D, MC87-I-25A to MC87-I-25B, MC87-I-26A to MC87-I-26C.
- US Department of Commerce, Washington DC, USA.

**Bruce P. Glass**

**Table 1: Value added in selected solid wood and wood fibre manufacturing industries in New Zealand, Economy Wide Census of Manufacturing 1987, Department of Statistics.**

Manufacturing group	Value added (\$NZ000)	Rank
Pulp, paper and paperboard	318,172	1
Sawmills	209,964	2
Wooden furniture and upholstery	173,092	3
Corrugated board, boxes, cases, and containers	139,514	4
Builders' carpentry and builders' joinery	125,961	5
Pulp, paper and paperboard articles n.e.c.	61,376	6
Chipmills, sawmills, planing and other mills n.e.c.	57,181	7
Plywood, veneer and board	44,939	8
Planing, preserving and seasoning timber	29,691	9
Prefabricated and precut buildings	28,018	10
Manufacture of cork and wood products n.e.c.	23,875	11
Wallpaper factories	13,944	12
Wooden and cane containers and small caneware n.e.c.	12,858	13
Paper bags and sacks	11,011	14

**Table 2: Value added per full-time equivalent person in selected solid wood and wood fibre manufacturing industries in New Zealand. Economy Wide Census of Manufacturing 1987, Department of Statistics.**

Manufacturing Group	Value added per full-time equivalent person (\$NZ000)	Rank
Pulp, paper and paperboard	54,678	1
Pulp, paper and paperboard articles n.e.c.	50,144	2
Corrugated board, boxes, cases, and containers	47,795	3
Wallpaper factories	46,635	4
Plywood, veneer and board	44,406	5
Chipmills, sawmills, planing and other mills n.e.c.	40,990	6
Prefabricated and precut buildings	32,467	7
Sawmills	31,876	8
Paper bags and sacks	29,285	9
Planing, preserving and seasoning timber	27,749	10
Builders' carpentry and builders' joinery	24,233	11
Manufacturer of cork and wood products n.e.c.	24,043	12
Wooden furniture and upholstery	23,441	13
Wooden and cane containers and small caneware n.e.c.	20,313	14

**Table 3: Value added per \$1,000 of wages-salaries paid in selected solid wood and wood fibre manufacturing industries in New Zealand, Economy Wide Census of Manufacturing 1987, Department of Statistics.**

Manufacturing Group	Value added per \$1000 of salaries-wages (\$NZ000)	Rank
Manufacture of cork and wood products n.e.c.	2,078	1
Pulp, paper and paperboard articles n.e.c.	2,019	2
Chipmills, sawmills, planing and other mills n.e.c.	1,982	3
Plywood, veneer and board	1,911	4
Wallpaper factories	1,767	5
Prefabricated and precut buildings	1,763	6
Corrugated board, boxes, cases and containers	1,756	7
Wooden furniture and upholstery	1,680	8
Builders' carpentry and builders' joinery	1,679	9
Wooden and cane containers and small caneware n.e.c.	1,641	10
Planing, preserving and seasoning timber	1,628	11
Pulp, paper and paperboard	1,611	12
Paper bags and sacks	1,485	13
Sawmills	1,473	14

**Table 4: Value added per sales and other income in selected solid wood and wood fibre manufacturing industries in New Zealand. Economy Wide Census of Manufacturing 1987, Department of Statistics.**

Manufacturing group	Value added per sales and other income (\$NZ000)	Rank
Manufacture of cork and wood products n.e.c.	40.0	1
Wooden furniture and upholstery	37.0	2
Sawmills	36.8	3
Builders' carpentry and builders' joinery	34.2	4
Wooden and cane containers and small caneware n.e.c.	31.9	5
Corrugated board, boxes, cases and containers	31.7	6
Chipmills, sawmills, planing and other mills n.e.c.	30.9	7
Plywood, veneer and board	30.0	8
Planing, preserving and seasoning timber	29.7	9
Pulp, paper and paperboard articles n.e.c.	27.2	10
Wallpaper factories	25.9	11
Pulp, paper and paperboard	25.8	12
Prefabricated and precut buildings	24.7	13
Paper bags and sacks	23.0	14

**Table 5: Ranking by measures of value added for selected solid wood and wood fibre manufacturing industries in the USA, 1987 US Census of Manufactures, US Department of Commerce.**

Manufacturing group	Value added	Rank according to:		
		Value added per employee	Value added per \$US1000 payroll	Value added per shipment value
Sawmills and planing mills, general	3	10	7	19
Millwork	6	11	11	15
Wood kitchen cabinet	9	15	14	3
hardwood veneer and plywood	17	16	9	20
Softwood veneer and plywood	11	8	10	18
Nailed wood boxes and shook	22	21	22	13
Wood pallets and skids	18	22	18	17
Wood containers, n.e.c.	23	23	23	14
Prefabricated wood buildings	15	13	12	16
Wood preserving	19	9	5	23
Reconstituted wood products	13	4	4	10
Wood household furniture	5	18	13	5
Upholstered household furniture	7	17	17	7
Wood television and radio cabinets	21	19	20	11
Wood office furniture	14	12	8	1
Wood partitions and fixtures	12	14	19	2
Pulp mills	10	1	1	6
Paper mills	1	3	3	9
Paperboard mills	2	2	2	8
Setup paperboard boxes	20	20	21	4
Corrugated and solid fibre boxes	4	5	15	22
Folding paperboard boxes	8	7	16	12
Bags: Uncoated paper and multiwall	16	6	6	21

# Forestry booming

New Zealand's annual forest product exports are forecast to reach the \$3 billion mark by 1995/96, Forestry Minister John Falloon said on October 20.

This follows a 67.7 per cent increase in New Zealand's forestry exports over the past three years, from \$1.386 billion in the year ended June 1990 to \$2.324 billion in the year ended June 1993.

The Ministry of Forestry expects the further increase to come from growth in value-added panel and remanufactured wood products, strong log and timber prices, and the recovery of international pulp and paper prices.

Mr Falloon said: "The past six months have seen a consolidation of the recent gains in New Zealand's log and timber prices. These gains are unlikely to be substantially reversed.

## Positive Outlook

"The outlook for New Zealand log and timber prices is more positive now than at any other time in the history of forestry in this country. This is transplanting into surging confidence and a boom in new planting.

"The rate of new planting has made a remarkable comeback over the past three years, from the 1991 low of only 16,000 hectares.

"It is estimated that over 60,000 hectares of new planting has been undertaken this winter, in addition to the 24,000 hectares of forest being restocked after harvesting. Next winter about 100,000 hectares of new planting will be undertaken."

## More People Employed

Mr Falloon said the number of people employed in the forestry sector has also increased by 9.6 per cent during National's term in office.

"In addition, New Zealand is processing more logs on shore with a 22.6 per cent increase in sawn timber production over the past three years, and a 80.7 per cent rise in the volume of sawn timber exports over the same period.

"New Zealand's forestry sector is highly successful as an environmentally sustainable way of providing jobs and adding value to our primary exports," Mr Falloon said.