



Editorial

Pinus prognostications

By necessity, anyone involved in the forest sector is obliged at some point to stir the tea leaves, examine the entrails or otherwise come up with some sort of prognostication as to future trends in the industry. The results of these prognostications guide the size and timing of investments in new processing capacity, the area planted and the volume harvested. Given the importance of decisions based on views of the future, the premises on which they are based and the degree to which we might be confident in their outlooks should always be critically examined. This issue of the journal provides three articles which to some degree provide an outlook for future timber supplies in New Zealand. These range between the latest National Exotic Forest Description (NEFD) wood supply forecasts for 1996 to 2040, a study of future afforestation intentions to 2010, and the effects of future harvesting decisions on New Zealand's national accounts.

The latest NEFD outlook shows a stable wood supply of 32 million m³ per year after 2017 with no new planting, an increase of about 73% over current levels of harvest. If new planting of 40,000 ha per year is undertaken, this increases to 50 million m³ per year. At a rate of 90,000 ha per year of new planting, the stable wood supply increases to 80 million m³ per year. The study of afforestation intentions surveyed estimates of intended annual new planting, for each of the five years from 1996 to 2000, and for new land planting during the period 2001 to 2010. The results showed that new planting was expected to decrease from about 72,000 ha in 1996 to nearly 66,000 ha in 2000, before levelling out at about 56,000 ha/yr between 2001 and 2010. The third article looked at future timber harvests and their potential impacts on the national accounts. Future harvests become linked to the cyclical establishment pattern of new plantations in the past, creating a corresponding cyclical harvest pattern. This cyclical pattern ultimately means that there are a number of years in which there is a negative contribution of forestry to the national accounts rather than the positive contribution experienced so far.

There are obvious linkages between all the studies, yet none provides an indica-

tion of the same wood supply. The NEFD outlook and national accounts study provide stark contrasts of wood supplies from the same plantation base, one stable and the other cyclical. A key feature of the NEFD wood supply scenarios are that they gradually increase to a relatively stable plateau. The reason for this is that the projections are based on an objective function which forces harvests to provide a non-declining yield. In other words, the harvest decisions of many individual owners are implicitly constrained to provide this outcome. The premise of the national accounts study was that forest owners would harvest forests at a 30-year rotation age, a value similar to that found in the planting intentions study, and one which is commonly assumed in forestry investment analysis. The planting intentions study has the potential to influence both of the other studies, in that new planting provides an indication of wood supply changes from the base scenarios of no new planting.

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So where does this leave a potential investor trying to get a glimpse of the future? A common feature of all of these articles is the lack of economic criteria in determining the level of activity, be it planting or harvesting. What the future may hold is thus based on some unknown set of market conditions which are assumed to generate the predicted activity. The objective function of the 1996 NEFD was simply to maximise wood flows subject to a non-declining yield, with no mention of prices or producer response to price changes. The projections explicitly recognise that artificial constraints have been imposed and that plantation forests will generally be managed to maximise the benefits to the enterprise which owns them. As such, the forecasts

are essentially estimates of attainable harvests, given the assumptions, rather than a prediction of what will actually happen, or prescription for what should happen.

The assumed 30-year rotation in the national accounts study also made no explicit reference to underlying market conditions which would be required to produce the projected wood supply. The study simply assumed market conditions would be sufficient for trees to always be harvested at age 30. The afforestation study suffers similar problems. It did not ask what the market parameters were which would lead to the intended planting levels, nor did it ask how these intentions might change if market conditions changed. As is pointed out in the paper, little is presently known about the composition of small forest owners, even though they own an increasingly large proportion of the national exotic plantation forest estate. Not only do we not know who is in this group, from a measurement and modelling perspective, we do not know what motivates them.

The net effect of these limitations is that we are making decisions about the future which are based largely on physical criteria alone, and in which the effects of the market are not known or explicitly included in the projections. If markets are not explicitly incorporated in the forecasts, then what sort of implicit market conditions are required to bring about the changes? The NEFD scenario can be crudely obtained by forcing producers in effect to stockpile 110 million m³ of logs (185,000 hectares) over a 20-year period to 2020. This stockpile is then drawn down over the next 10-year period. This in turn requires that log prices fluctuate substantially enough to either bring forward or delay decisions to harvest so that an uneven-age-class distribution results in even annual harvests. The fixed 30-year rotation on the other hand implies that market conditions are such that prices do not fluctuate sufficiently enough to force producers to change their harvesting plans.

The difference between these scenarios to some extent depends on whether one assumes that log prices will be set in the domestic market or that the domestic market is the dominant outlet for log sup-

plies. In the current open market for log exports, it could be argued that prices are set internationally rather than domestically, and the export market will provide the buffer for changing domestic production of logs. This would result in stable rather than fluctuating prices. All this discussion of implicit market conditions, though, is a convenient method of arguing our way around the fact that some of our most important projections for the future are not based on economic factors. Ultimately, this is less satisfactory than explicitly incorporating economic decisions into our planning models.

This is not a criticism of the researchers involved. Part of our current problem is that the research agenda is being guided by what the funders will pay for. An additional and probably the largest part of the problem is that the importance of the disaggregate, market-driven decision-making we are seeing now is a relatively recent phenomenon. As a result, we have little data and no well-developed research agendas to deal with it. We have to face up to the fact that the old textbook forest estate management model of a single dominant forest manager who makes optimising decisions based on a large-

scale and well-defined forest estate, is increasingly irrelevant in the multi-owner and uncoordinated plantation forest we have in New Zealand. In addition to the physical modelling capabilities we possess, economic criteria which help to explain forestry behaviour will be crucial in the future in making any prognostications relevant. My belief is that we need to put more resources into research which will lead to an understanding of the market in which forestry in New Zealand will be practised in the future.

Hugh Bigsby

Progress with privatisation

This article attempts to put on record the efforts of A.L. Poole, G.M. O'Neill and myself to block the sale of Kaingaroa Forest.

The Government announcement in April that it was proceeding with the sale did not result in any public excitement. There was a surprising lack of political comment with only NZ First and the Alliance voicing opposition. Both organisations vowed to buy back the sale if it were made, the latter though with conditions. The Alliance had already mounted a public petition in an attempt to get 10% of all voters in favour of a national referendum. There was little editorial comment and few letters to Editors. This was surprising, considering the amount of public opposition expressed by many people to Lindsay Poole, Mick O'Neill and myself.

On April 25 I wrote to Mr Birch suggesting that Whaka Forest should be withdrawn from the sale and handed over to FRI. It was claimed that this move would guarantee FRI a permanent source of income as well as giving it a forest under its own control for a variety of research purposes. The suggestion had previously been made to Treasury, who found it a new and interesting idea. The reply from Mr Birch, though, contained all the conventional arguments for maintaining the status quo. It was riddled with clichés. I could have written every word of it myself.

On April 30 Mr O'Neill wrote a letter to the Editor of *The Dominion* in reply to an editorial which quoted and accepted some of Mr Prebble's quite erroneous comments on forestry. *The Dominion* did not publish it until June 18 and then in an abbreviated and quite inadequate form. We did not appear to have much influence with *The Dominion* editorial staff.

The Listener meanwhile had made no comment on the sale. I spoke to the editorial staff in late June and got a courteous

hearing, but the reply clearly was that *The Listener* was not interested unless the material was new. I sent them quite a bit of material, including some which had not been widely published previously, but they did not respond.

Exasperated by the apparent secrecy of Treasury and Government, I wrote to Mr Birch on July 25 repeating all the unanswered questions which we had previously put to him. He did not reply until after the sale decision had been made. This was presumably the safe thing to do. The reply endeavoured to give reassuring answers to our questions, but some of them were far from convincing, particularly in respect to a continued supply of sawlogs to domestic sawmills, some measure of Government control of log exports, the danger of overcutting, and the real, though understated, reasons for the sale. Mr Birch stated that the reply would be widely distributed and is available to anyone who writes to him.

Press Speculation

In mid-August there was considerable press speculation about the date on which the sale would be announced and which of the three main tenderers would be the successful one. The sale was finally agreed to on August 20 and a document was signed between the Government and a consortium of Fletchers, Brierleys and a State-owned Chinese Corporation. We welcomed very much Mr Birch's statement at the time that "Fletcher Challenge Ltd plans to process in New Zealand both Forestry Corporation's and Fletcher Challenge Forests' own current saw-log exports". There did, though, seem to be a big discrepancy between the huge volume of logs involved in the export trade and the new investment plans announced by Fletchers which totalled only \$260 million

over the next seven to eight years. Furthermore, there was no mention of log exports in the long question-and-answer statement that Mr Birch put out on the same day. The statement, however, did talk of a Fletcher Challenge policy to supply wood to domestic wood processors and it did prophesy an increase in direct employment of up to 700 jobs.

Serious Worries

The new ownership pattern presents serious worries. Brierleys do not have a good reputation as long-term investors in New Zealand resources and the Chinese involvement could have even worse implications. Not only does it apparently guarantee continued log sales but it also raises the question as to why the Chinese Government should be allowed to own 37.5% of Kaingaroa Forest when there is an objection to the NZ Government owning it themselves. This is, to say the least, bizarre.

The worst features, though, were statements in an article in the *Sunday Star Times* of August 25. Fletchers stated that they intend to harvest radiata pine at 27 years instead of 34 and Douglas-fir at 45 years instead of 65. They propose to increase the cut of Douglas-fir from the current figure of 165,000 cu. metres to 600,000 cu. m. until the year 2000. The radiata cut will go up from 2.5 million cu. metres to 3.4 m cubic metres, also as far as the year 2000. Many foresters have already expressed concerns about lowering rotation ages and the difficulty of marketing juvenile wood in the Asian market, and they have also expressed doubts as to whether some degree of overcutting is not already taking place. These measures would appear to be an example of, at the best, doubtful and, at the worst, extremely bad forest management. They could be a prime example of one of the major draw-