



Editorial

The changing face of forestry decision making

Foresters in the past have always been subject to a straight jacket of conformity. This is manifested in our remarkable uniformity in forest growing, with predominantly one species, managed on a predominantly low final stocking, pruned regime. The 'correct' regime has changed over time, particularly with the quantum leap in thought provided by Fenton and Suttons' advocacy of the direct sawlog regime, but deviations from the accepted practice of the time were certainly not part of the corporate culture.

This conformity spread right across the industry spectrum from the dominant Forest Service and few major growers to even influence the more independent minded farm forestry estate. There were exceptions, of course. Forest Products maintained a more mill dominated approach to forest growing and Dunedin City was not convinced by some extreme low stockings that were advocated, and can probably afford to feel vindicated in its stance.

One of the strikingly positive aspects of the new companies that have purchased the State assets is their willingness to look at other options. Their overseas perspective is an obvious factor. New Zealand foresters can never claim to have had the mortgage on 'correct' forestry practices, nor, more particularly, on decision-making processes.

Juken Nissho has openly admitted considering longer rotations, higher stockings and even higher pruned heights for its forests (I recall a Mr G. Chavasse suggesting something similar around the time of Noah); other owners are giving a refreshing degree of autonomy to their forestry managers. Douglas fir is back in vogue, macrocarpa and Corsican pine tree stocks are increasing rapidly and there has been a considerable boost in the area planted in eucalypts, particularly for the chip market. Even redwood has been mentioned as an alternative. Some will be wondering where the mad hatter is.

There was a time when any advocate for these alternatives was looked at askance. It was analogous to the romney, rye-grass and clover man wondering whether his neighbour had completely lost his marbles for breeding goats, or, worse still, planting kiwifruit on his best hay

paddock. It is fortunate for both land uses that change and diversity is now more acceptable and no one particular model is necessarily right.

Regional Variations

The conformity of the past was reflected in our regional variation. There wasn't much. FRI advocated an optimum stocking, often from work undertaken on the volcanic plateau, and more often than not the regional recommendations were similar. Never mind a discussion of differing objectives, resources, constraints, appropriate decision criteria or the sensitivities and errors inherent in the models used.

The south of the South Island is a case in point. We southerners (the only thing more enjoyable than being an advocate for the south to northerners is advocating your northern birthplace to southerners) pride ourselves on our high basal area potential. It's approximately 40% above the middle of the North Island and higher still than areas of Northland. The only area higher is the moist high country. This has major implications for tending regimes, as was pointed out by Geoff Chavasse (that man again) in times gone by, and has been advocated by Dennys Guild in more recent times. Yet our regimes did not differ markedly.

Decision-making Tools

Our forestry decision making has been dominated by two major decision tools, Net Present Value and Internal Rate of Return. They are positively lethal in the wrong hands because they do not account for many important criteria that should be included in any decision-making process, and require a good understanding of their limitations. Unfortunately, all too often, the figure that was calculated to three significant figures at the bottom of the page was seen as the answer, period.

The decision-making culture has led to a product-driven industry that was, to some extent, an understandable phenomenon when the corporate emphasis was on establishing whole new forests around the country.

The culture is only now changing to a more market lead approach, coinciding with an ever increasing harvest volume,

and increasing contact with an international market that is growing in complexity. Strategy is now the name of the game. Strategic decisions require far more considerations than a mere computer-generated figure. Today's decisions require an understanding of the wood resource, the market in which you are trading and the customers' wants and needs. They also require an acknowledgement that forestry management is an art as well as a science.

Objective, Resources and Constraints

Peter Drucker wrote that any decision-making process should consider the objectives of your actions, the resources available, and have particular regard for the limiting resource and other constraints. He went on to write that the decision maker (manager) should attempt to achieve high returns to the limiting resource.

An illustration of his point is worthwhile. Farmers planting trees in the past were often faced with few advice options. Their objective might be weed control; their major constraints might be off-farm capital and expertise, yet in many cases the recommendations were for an intensive tending regime that might fail for lack of expertise and capital, and in the end wouldn't have achieved the objective required. Yet, because somebody's NPV model had pointed to this regime as being 'the best', they could not recommend any other, even though the model is flawed, for this particular situation, by its assumption of unlimited resources.

This is not a hypothetical example. These recommendations were often made, and there were actually directions to State advisers from 'higher up' to limit themselves to the 'correct' management options. People still talk of a "well-managed" stand being pruned and thinned *P. radiata*, even though that stand may not achieve its owner's objectives.

Drucker's suggestions indicate that decision makers should look beyond the model's answer, and apply some common sense.

Portfolio Theory and Diversity

There are in fact some very rational arguments for the diversity of options in species choice and management regimes that are starting to occur, irrespective of practical considerations of markets, sites and other available resources.

As with any investment portfolio, a mix of investments incurs a lower overall risk than a single option. Where the addition of another investment reduces the portfolio risk, financial analysts argue for the use of a so-called 'risk free' discount rate to apply in decision making. That rate is often stated as being 3% to 4% real. Applying those rates to Douglas fir, particularly at the present log prices, would have some interesting implications. But then, reducing the diversity debate to the level of single-minded quantitative analysis is exactly the narrow decision making we should be glad to move away from.

To the Future

If the trends to more broadly based decision making continues, it bodes well to those trained in Forestry Science and Marketing, and conversely (is this a blind

hope?) should loosen the dominant grip of the bookkeepers. It is the foresters and marketers who are best qualified to contribute to the planning function of management, and to the strategic decisions that need to be made in order to achieve their goals and objectives. The bookkeepers' contributions are necessary, but far less important, particularly in a rapidly changing marketplace. Unfortunately, the Anglo-Saxon disease is to always stack our Corporate Boards with B.Comms and LLBs.

This does not necessarily mean that foresters should be smug. We need to produce foresters who can think broadly, with 'think' being the operative word. Perhaps, like the first Bachelors degrees, philosophy needs to be a prerequisite. Its inclusion was in part to ensure that graduates were able to look at an issue from differing points of view, and to be able to reason and argue to support that view. I say this partly tongue in cheek, but when you are arguing against the myopic quantitative logic of the bean counters, you need all the help you can get.

Chris Perley



Ex-editor Hamish Levack – a true student of philosophy – exercising his rare ability to look at forestry issues from fresh and unusual perspectives.

PROSEED'S FUTURE

Among the remnants of the now long gone but perhaps increasingly fondly remembered NZ Forest Service is that curious entity we currently know as Proseed.

The terms "increasingly fondly" and "curious" I use deliberately because, in the first instance I suspect many look back with affection on those days of order where everything had a place, was in its place, and any staff member worth his or her salt ensured that everything remained sufficiently in place to ensure a happy and comfortable retirement. The 'curiosity' bit arises from the results of the Forest Service restructuring which meant that everything and everyone was no longer necessarily in their place and Proseed, presumably because of its small size in comparison with the other forest assets, became somewhat of an orphan relegated to a position desperately unworthy of its importance to the forest industry.

Why do we once again seem to have priorities in reverse order? How is it that we can be rapidly increasing exports of forest produce at increasing prices and yet do not have the will to do something about the unsatisfactory state of the company that provides the seed which is the basis of our future forests?

Seed Supply

There are three issues to be addressed. Firstly, seed supply. Enormous progress has been made in the genetic improvement of *P. radiata* to the extent that New Zealand is the world leader in the field. The advantages of planting genetically superior material are so successfully promoted that the best we had available five or six years ago is now not considered good enough. Foresters want the best, they are learning to be prepared to pay for it and they want lots of it, but supply of seed is restricted. In the 1991 sowing season nurseries received an allocation of two-thirds GF17 and one-third GF16. For the 1992 sowing season allocation of open pollinated seed again had to be made but this time it was one-third GF17 and two-thirds GF16. Admittedly only a small difference, but only achieved by collection and artificial ripening of immature cones. So what effect is that going to have on next year's supply?

Then, of course, there is the Control Pollinated situation. Reasons have been put forward for the crop failure which, if correct, indicate that the technology we believed made us world leaders is faulty. If the technology is not faulty then the reason for crop failure must lie with the competence with which the technology is applied.

Approximately 100 kg of CP seed was available of which Proseed, in their wisdom, decided to sell 20kg by tender and use the resultant prices to establish a value for the total amount, the rest being allocated to members of the Radiata Breeding Co-op. Curious? This despite their monopolistic position and despite the pleas from the Forest Nursery Growers Association to revert to the equitable system of allocation dependent on total *P. radiata* seed usage, which meant every grower got something whether for seedling production, establishment or maintenance of cutting stool beds. The result has been:

- an increase in Proseed's perceived value of CP seed based on prices entrepreneurs are prepared to pay for short-term gain;
- the risk of this seed being sent out of the country (visions of kiwifruit);
- the available 20kg of seed being used for mainly seedling production producing at best 40,000 seedlings, instead of using that scarce resource to much greater effect by cutting production;
- the inability of the majority of nurseries to obtain material for the establishment or maintenance of cutting stool beds;