plant; EM examination of specific tissues; leaf-hopper transmission; and comparison with Flax Yellow Leaf MLO DNA.

Philip Simpson
Science & Research Division
Department of Conservation

Influences of site and discount rate on silviculture

Sir,

In Cpt 236 of Oji Sankoku’s Mohaka Forest we were shown a stand grown on the “Timberlands Regime” – 250 pruned stems per ha at age five, with very heavy branching following at age eight. Evidence, it was suggested, of the disastrous consequences of thinning too heavily too early.

Yet on the journey back from this ridge-top stop we passed without comment through a ravine where scattered radiata were growing straight, tall, and with fine branching despite no tree competition.

The contemporary wisdom seems to be that competition inhibits branch size. Older foresters have long held that shelter, rather than competition, is the critical determinant, and that high stocking controls branch size and encourages height growth by providing mutual shelter for the crop trees. On sites sheltered from the wind the “Timberlands regime” might look much more attractive in terms of both height growth and branch size than it would on a windswept ridge. No doubt Carter Holt or FRI staff could easily put this proposition to the test. It would be unfortunate for the profession to make a rushed judgement against heavy early thinning for the wrong reasons.

Having said that, I am not a proponent of low early stocking. At the risk of gaining (or reinforcing) a reputation for idiosyncrasy, I suggest that those who say that such regimes are economically attractive but silviculturally repugnant have the wrong end of the stick.

Those who remember me advancing this case against short rotation regimes in 1978 may feel that the intervening 15 years have not entirely vindicated my position. I am prepared, however, to wait another 15 years for a more conclusive verdict, for or against!

Geoff Fischer

Institute links with Whirinaki initiative

Sir,

In the deserved praise handed out to the Napier Section of the Institute of Foresters in May, I was surprised that a major commercial initiative which that section successfully brought off in 1966 received no mention.

The Napier Section conceived and ran a large public meeting which launched the concept that as the 16 million cubic feet of wood available per annum from the Kaingaroa 320 million cubic feet 20 year sale roughly matched the volumes then predicted from the Hawkes Bay State Forests 20 years hence, then by allocating the bulk of that Kaingaroa sale to an envisaged Hawkes Bay processing plant, such a plant could be operative 20 years earlier than the HB wood supplies would allow.

On the panel for that meeting were the backbench MP for Hastings, Duncan MacIntyre, the then Deputy General of Forestry, Priestley Thomson, plus the local Harbour Board and County, chaired by the local NZIF Section Chairman.

Soon after, Duncan MacIntyre became Minister of Forests, hence followed the 1969 Forestry Development Conference, which allocated to HB a number one priority for extra planting to achieve wood-based exports. Thence soon followed the successful tender of the Carter Holt Kokosaku Sangyo Consortium for a sawmill and pulp mill initially conceived to operate at the Napier Wharf, but eventually to become the PanPac Mill at Whirinaki. This history is used to demonstrate that the Institute, through knowledge, foresight and drive, can influence major strategic commercial decisions and developments; in this case one whose benefit to the region is now well established.

Ross Usmar

Sustainable yield

Sir,

May I refer to Paul Smale’s letter in Vol. 38(2), which caused me some dismay. The topic is that forest crops, which may take up to 150 years to mature, are in a different category from beef or strawberries. Those countries which found, within the last three centuries, that their forest resources were well nigh exhausted (e.g. Japan, Germany, Finland) understand perfectly well that a sustained yield of wood is imperative for their well-being, and legislate accordingly. The impending world-wide wood famine (see “State of the World, 1993” pp 16-17) reinforces the wisdom of these countries.

We have been led into a semantic and philosophical quagmire where words no longer mean what we thought they did. “Natural” finds its way into innumerable advertisements, but it no longer means the opposite of “un-natural”. I was recently offered “organic honey” although I foolishly thought that all honey is organic; it certainly isn’t “inorganic”! “Sustainable use of resources” has been obfuscated by the Resource Management Act because it is there applied to non-renewable resources which, by definition, can’t also be sustainable. The word has come to mean “rationing until the resource is totally consumed”, with the pious hope that something else can be found to replace it. And why sustainable yield should not apply to forests as much as to land I fail to understand. Land can be sustainable if it produces nothing.

What your correspondent is championing is the current orthodoxy that every thing must be decided by the market (that is, by those who control the levers of economic power), whereas it is patently obvious that the market can’t deliver welfare, and can’t look forward much beyond its
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 ploys.

If we abandon the principle of sustained yield (which is not necessarily tramelled 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.

<table>
<thead>
<tr>
<th>Mohaka Field Measurements</th>
<th>Cutting Plan Mohaka Crop Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>22</td>
</tr>
<tr>
<td>Mean dbh</td>
<td>57.4 cm</td>
</tr>
<tr>
<td>Sawlogs</td>
<td>480 m³/ha</td>
</tr>
<tr>
<td>Pulp</td>
<td>120 m³/ha</td>
</tr>
</tbody>
</table>

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, STANPAKs, IFS, buts or FOLPs. 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-

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