young Maori for Year 1 of the Diploma programme. Nine of these students completed the year successfully, and are now fee-paying students in the second year of the Diploma. BUT ... the high number of redundancies in forestry last year had a negative impact on student numbers this year. Overall, the class size is down from 42 in Year 1 in 1998, to 26 in 1999. And only ONE of the ten fully funded places provided by Skill New Zealand for Maori students has been taken up; the rest of the funding was returned to Wellington, sadly unused.

Waiariki has an arrangement with Te Runanga O Turanganui A Kiwa, under which the Runanga teaches Year 1 of the Diploma in Forestry (Forest Management) in Gisborne, with some help from Waiariki lecturers. The students then come to Waiariki for Years 2 and 3 of their studies. This year, there are 12 such students in the Diploma classes at Waiariki; while a group of 18 have started their studies in Gisborne. Of this group, 2 are women - a breakthrough for forestry and Maori on the East Coast.

Maori and women in wood processing education

Maori are very well represented in the full-year programmes in solid wood processing offered at Waiariki's Timber Technology Campus (TiTC). To make wood processing education more accessible to Maori and other students, the classes are offered in Murupara, Kawerau, Whakatane, Tokoroa and Taupo, with students being transported to TiTC for practical parts of the programme which are undertaken in the training sawmill and the sawdoctors' and timber machining workshops. Some of these programmes rely on the financial support of Fletcher Challenge Forests, who provides bursaries to some students, and assists with transport costs.

Of the 81 full-time students studying at TiTC towards certificates in wood processing (with specialisations in sawmilling, timber machining, sawdoctoring, or remanufacturing) in 1999, 68 are Maori, and 20 are female.

Some of the young women who have completed their wood processing education at TiTC have entered careers in timber grading and quality management, and as science technicians at Forest Research.

Forest Industries Training is committed to the development of a National Diploma in Solid Wood Processing in 1999. I sincerely hope that the growing number of Maori and women who are completing the National Certificate in Solid Wood Processing (Introductory Skills) at TiTC will continue their study towards this Diploma, to enable them to take up leadership positions in the value added wood processing industry. And that the excellent work that Forest Industry Training is doing to promote the industry will result in talented Maori and female school leavers choosing forestry and wood processing as their careers.

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Some thoughts on Millennium Forestry

By J.E. Henry

It is interesting that Carter Holt Harvey have come up with a change in their management philosophy and aim to produce a lower grade of wood at a cheaper cost. According to their chief forestry executive Devon McLean, as reported in several newspapers, the objective is to get wood costs down so that they are competitive with overseas suppliers. They are prepared to accept a poorer quality of wood to achieve this. The trees are to be planted wider apart and will not be pruned. The length of the rotation has not been stated but the aim is obviously for a shorter one.

Wider spacing is not new. There will be considerable cost saving from this but the disadvantages are very great. Some companies did this in the 1925-35 planting era for the same reason that is obvious today - to reduce the cost of establishment. The results then were not pretty - nor will these be. The size and the number of branches down to ground level being the major feature. These do increase the cost at time of logging, as well as increasing the danger of the operation and the amount of debris left on the ground. There will also be an increase in the fire danger and the degree of loss will be greater due to the increased fuel factor, should a fire occur,

With the reduced stocking and shorter rotation greater care will need to be taken with the establishment stage. The forest site ceases to be productive from the time a tree on it is felled. It is therefore important to get replacement stock into that ground as quickly as possible. With the highly developed nursery practices of today it is possible to plant for nearly eight months of the year in their region. To enable this to be done, felling practices must be disciplined so that the site is cleared and available for planting as quickly as possible after felling. The aim is to avoid losing a growing season, which would add a year to the site rotation. This would be a 5% increase on a 20-year rotation - the difference between a 20-year tree rotation and a 21-year site rotation. Hopefully good logging practices will have left the site in a suitable condition for planting but if work is necessary to spread debris and to prepare roadsides and dumps ready for planting then this has to be planned ahead so that planting is

Courtesy of Carter Holt Harvey Ltd.

Felling practices must be disciplined to quickly clear sites.

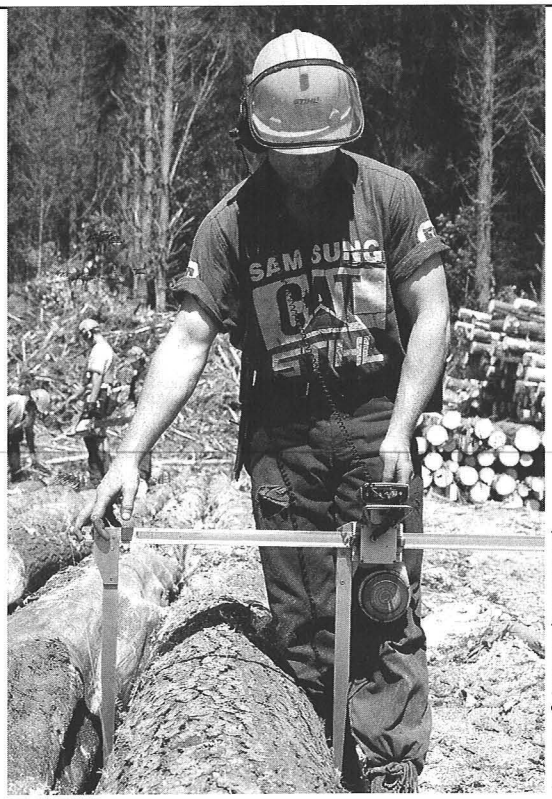
not delayed. The extra cost of these operations must be allowed for in the budgets. Next in importance is to ensure that every piece of productive land has a correctly spaced tree on it. Planting must be done right up to the prescribed distance from legal boundaries and public roadsides. On interior roads planting should be as close to the road formation as possible without interfering with the expected use of the road. Whether the trees on boundaries and roadsides should be pruned is a separate issue not pertaining to wood quality alone. These points are probably well known but it is the achievement not the intention that is important. I would suggest that greater attention to these points would recover a lot that is being lost and that it could be as high as 5% no matter what the regime.

The move to close the "recovery" gap is laudable. It is a very real factor that needs serious and continuing attention. There are two legs to this. One is mensuration, a technical subject that is well understood but has practical difficulties that require regular review. Here a balance between cost and the return from the increased accuracy have to be assessed. It is an area that is vulnerable to the budget axe. The other is the cost/time factor. The utiliser assesses the value of the log or chips at the point where they are fed into the maws of what the late Dave Kennedy picturesquely called "that hungry gutted mollusc in the valley" or its equivalent. This is the point when it ceases to be raw material. Unfortunately forest growers are seldom in the position where they can dictate price (ie they are price takers and they often have to take what is offered "for cash flow reasons"). Too often these are allowed to outweigh good forest management practice. This is easily demonstrated as when the cut is increased for one of two reasons, (a) to offset a price drop or (b) to take advantage of a buoyant market. Forest managers lack clout in these situations and will do so as long as the present accounting practices exist and the increment value of standing trees is ignored.

The standing tree has a standing volume and it has a standing value (ie stumpage). Starting at this point each succeeding operation adds a cost to the log. A lot of good work is done regularly on the efficiency of each of these operations but who takes into account the cost/time factor? Interest accrues on the stumpage value of the log as it is no longer growing and interest accrues on the cost of each operation up to when the change of "ownership" takes place and money changes hands. The cost of these operations plus the accrued interest comes off the increased value that these operations have added to the stump-age value.

On the mensuration side all factors should be checked regularly but the pay off on these can often be illusionary. Millers are long accustomed to "overruns" and they would adjust their price accordingly. Nevertheless measurement data should always be closely monitored especially to compare actual log yields against predicted volume per hectare.

On the subject of pruning, other forest owners need to look at the overall situation before following suit. They need to remember that Carter Holt Harvey has a large requirement and a captive market for bulk wood for linerboard pulp. This suggested regime would produce a quality of wood similar to that that passed through the sawmills in the 1950-60s. The prevalent feature of which were the dead bark-encased knots that frequently fell out during processing. No doubt Carter Holt Harvey has taken this into account and the machinery will be able to cope with the knots falling out and with the bark that will be present with them. The question is will the cost of manufacturing and engineering be as cheap as pruned wood?



Courtesy of Carter Holt Harvey Ltd.

A Timber Tech tool being used to optimise value recovery.

Pruning to two metres would give a great improvement at no great cost. In addition to this an intermediary course would also recommend itself. Brian Allison proposed this. It was to prune only a limited number of the largest and fastest growing trees on each hectare thereby getting a small supply of pruned logs at a cheaper cost. With a reasonable pruning schedule, growth on these trees will not be checked. As Carter Holt Harvey is only pruning 25% of their area now, this could be done over the whole area cheaper than the present practice. It is obvious that the present results are poor because trees are being pruned too heavily and too soon for the size of many of the trees. This is the major cause of the rotation increase of 2.5 years. This is the greatest weakness of the "clearwood" regime and comes from the slavish following of computerised plans rather than the "hands on" management by local managers who know their forests.

The new management proposals suggest to me that it is one costed by accountants and economists to suit budget demands. Pruning is always a prime target for cost cutters. It is the easiest to delete without upsetting other operations. It is also the operation that is the most difficult to demonstrate its worth. This will continue to be a problem until foresters produce annual valuations that show the incremental values of the forest. In later years the foresters will be left holding the baby while the aforementioned gentlemen move on to greater and grander schemes. It would be interesting to see the figures that Carter Holt Harvey has to justify the claim that their wood costs are not competitive with overseas sources. Interesting also would be their forecasts of wood prices 20 years hence. The assumption that the clearwood price differential will disappear is not held by all or backed up by history. There is also the question of the future prices of oil-based adhesives and the environmental factors with these.

Finally, investors should be aware that such a regime would gradually reduce the standing value of their forest. Companies should have to report these values annually. They should also be aware that this reduction in value will be reported as profit under the present accounting methods. There will be none available in 20 years time unless someone decides to reduce the rotation age still further.

I wonder what other foresters think.