

# Minister gives views on mechanised harvesting

Mechanised harvesting is converting trees to fully processed logs on-truck using multi-operational machines that can do several jobs such as crosscutting, delimbing, extracting, and loading logs. Sometimes such machines are worked by only one person who can spend all day in a safe and comfortable cab.

Machines like this have already been functioning for several decades in places like Sweden, the southern regions of the United States, and parts of Canada. They have helped forestry in these countries become more internationally competitive.

This is another reinforcement of Professor Michael Porter's message that New Zealand must focus on industrial innovation and training to ensure the cost competitiveness of our exports.

So far the use of such mechanised systems overseas has been confined almost entirely to the processing of relatively small even-size lightly-branched trees on flat terrain.

The New Zealand radiata pine is an altogether different prospect.

New Zealand's pine is usually much bigger, more heavier-branched and, in future, will be found much more frequently growing on steep uneven country.

Our challenge is to develop techniques and robust machinery appropriate to New Zealand conditions.

As we set out on this formidable task it is worth reminding ourselves that New Zealand's logging industry nevertheless does begin from a position of strength.

**New Zealand is in a strong position to begin a new era of research and development in more innovative mechanised harvesting systems.**

We enjoy a number of advantages. . .

**(a) Roundwood removals are increasing in value and volume.**

National roundwood removals will approximately double over the next ten years. The average stumpage, which is already about three times what it was in real terms in 1984, is likely to continue to increase steadily (if not quite so spectacularly) in value over the next decade.

The benefits of the intensive silviculture carried out over the last couple of decades are about to be reaped, and Government's transport reforms are beginning to be reflected as increased stumpage values.

This means that for those in the plantation forest logging business, you probably have a more secure future than any

one else in New Zealand. It also means that the next decade will be an ideal time to invest in logging research and develop new mechanised systems.

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**Extracts from a speech to the Logging Industry Research Association's recent seminar on machinery developments in logging by Hon. John Falloon, Minister of Forestry.**

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**(b) The benefits of labour law reforms are still to be fully felt.**

The new Employment Contracts Bill should help logging managers get more productivity out of their teams.

**(c) The full benefits of economic reform are still to come.**

Inflation and interest rates have come and should come down further as Government expenditure is reduced, making it easier for you to invest in new machinery. The Government is investigating the possibility of introducing accelerated depreciation for industry, which could also help.

**(d) New Zealand has a favourable climate for logging.**

Unlike in Scandinavia and much of North America where snow is an annual problem or in tropical countries where the monsoon season stops harvesting operations, our New Zealand climate allows all-year-round logging.

**(e) We are fortunate to have enlightened forestry companies.**

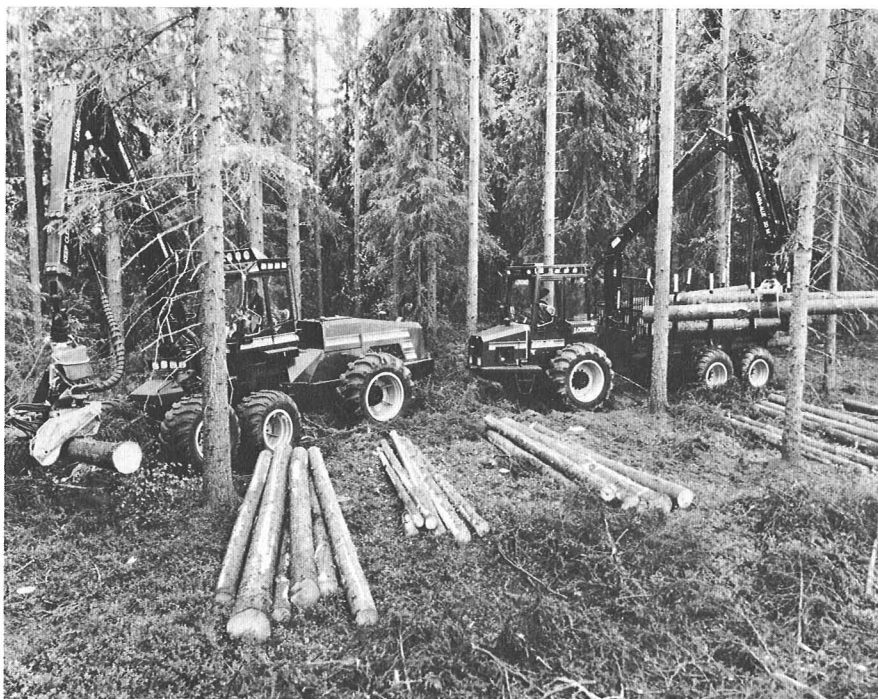
Larger New Zealand forestry companies are encouraging contractors to invest in new mechanised systems that are appropriate to local conditions by guaranteeing them suitable tracts of forest to harvest.

**(f) You already have good role models to inspire you.**

Some local people in the forestry industry are also providing inspirational leadership by inventing new machinery. Dave Cochrane's Waratah processing head and Geoff Perfect's In-woods flail chipper are prime examples of this.

**(g) Accompanying technical training reforms that are needed are already well advanced.**

Your industry has technical training institutions which are the envy of other sectors in New Zealand.



Although 85% of the world's timber is still harvested by the full-tree method, cut-to-length logging is rapidly gaining ground, with multi-function machines specifically designed for the purpose. Two such machines, working extremely well together in all kinds of conditions, are the FMG 990 LOKOMO harvester and the FMG 910 LOKOMO forwarder, manufactured by the FMG Timberjack Group, a division of Rauma-Repola, Finland.

This is as well, because it will be absolutely essential for the operators of the new generation of sophisticated and expensive harvesting machinery to be thoroughly trained.

There is no doubt that operator training and harvest planning and logging management skills still need to be improved. For example, in 1989 only 36% of people in logging held LFITB (Logging and Forest Industry Training Board) certificates but the work of Mike Newbold and his LFITB team has provided a sound training base. The recent initiative taken by the New Zealand Forest Owners' Association in conjunction with the Ministry of Forestry and the New Zealand Education and Training Support Agency (ETSA), the New Zealand Qualifications Authority (NZQA), the New Zealand Timber Industry Federation (NZTIF) and others in the setting up of the Forest Industry Training and Education Council (FITEC) and linking it to LFITB is the envy of other New Zealand sectors. The reforms should remove unnecessary barriers to learning, increase market and social responsiveness of education, and increase the transfer and portability of skills.

**(h) New Zealand has a strong and effective harvesting research programme.**

Your Logging Industry Research Association and the Forest Research Institute are serving you very well, having gained international respect for their ability to evaluate appropriate foreign technology and facilitate technical transfer. The merging of these two research groups later this year will generate synergies which will benefit the New Zealand logging industry even further.

**(i) Alternative stand layouts which may favour mechanisation are being evaluated.**

In a far-thinking manner FRI established stand reorganisation trials in the early 1970s which may favour mechanisation. I gather that these trials are now yielding valuable results.

**(j) Research into the best practical options of dealing with the environmental impacts of new mechanisation is already under way.**

One cannot make any changes, including changes in mechanisation, these days without considering ways of minimising adverse environmental impacts.

FRI has had internationally-recognised trials on the impacts of harvesting machinery on site productivity in place for a decade, and LIRA had done some magnificent work in its development of the Forestry Code of practice last year.

I congratulate Lindsay Vaughan, the co-ordinator of this project, and all those agencies who helped him with both financial and technical assistance.



The single-grip FMG 990 LOKOMO harvester is a multi-function machine which fells, delimbs, bucks, top, sorts and piles in one continuous operation. Its weight of only 13 tonnes results in minimum disturbance of the ground and of the growing timber. The machine has been designed to handle all stages of harvesting, from early thinnings to clear-cutting.

The Forest Code of Practice was conceived of as a means of avoiding having legislation imposed on the forest industry and instead is helping the industry develop meaningful, workable and responsible forest management practices.

The need for a code is related primarily to harvesting the extensive pure plantings of the late 1960s, 1970s, and 1980s on difficult terrain, some of it with high environmental values. Regardless of the machinery used, good planning and good supervision will be essential to protect these values. In comparison, many older plantations such as Kaiangaroa are on easier terrain and most are in their second and third rotation. They have an established network of roads and landings and operations in these forests will generally have limited impacts on environmental values.

The code succeeds in balancing commercial and environmental values for the planning and management of forest operations.

I am particularly interested in LIRA's Forest Code of Practice because it is likely to become an important adjunct to a Forest Policy for New Zealand. Strong industry support for and a commitment to the development of a National Forest Policy stems from the conviction that they need to be taking the lead, in partnership and consultation with other interest groups. The alternative of an imposed regulatory regime would be of great concern.

With widespread official and unofficial support, the code should become a

powerful moral force to encourage good forestry development and harvesting practices. I believe it will be the forerunner to a powerful strategic National Forestry Policy document.

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## Reorganisation of harvesting research

The Harvest Planning Group (HPG) of the Forest Research Institute (FRI) and the Logging Industry Research Association (LIRA) have merged.

### Director

John Gaskin has been appointed director of the merged group.

### Single Group

A Board, with a mixture of industry and government representatives, will overview the new division, which will operate as a single group from a single site, the present LIRA offices. New buildings, funded by the industry, will be located there to house the additional staff from HPG.