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# Brain drain in forest research

A year ago an overseas scientist visiting New Zealand for a second time said to me: "FRI *used to be* one of the best forest research institutes in the world". As a New Zealander by choice and one who was attracted to this country by the international reputation of FRI, I was taken aback by his observation. More recently, as I have witnessed the increasing loss of scientists from FRI, I have been forced to reflect on that comment more deeply.

First a few facts. Of the staff with doctoral degrees listed in the 1988 annual report 15 per cent have since resigned. No less than 25 per cent of the research field leaders have gone. Others are known to have been looking for jobs elsewhere. Of the scientific papers in reviewed journals listed in the 1991 annual report about 10 per cent had senior authors who have resigned or had retired up to four years earlier.

Since at least the Middle Ages there have been some workers whose skills have been in international demand. In those early days it was cathedral builders, today scientists. New Zealand was an importer of scientists for many years. By recruiting overseas, skills could be purchased cheaply as education and experience had been paid for by others. With a reputation of high standing FRI could attract scientists of international calibre both to its permanent staff and as visitors for extended periods.

The tide of movement now seems to be reversed. Scientists have left to take up positions in Europe, North America and, perhaps more importantly, in Chile and Australia – direct competitors in the radiata pine business. One can speculate on the reasons behind such moves. Obviously the benefits of moving are seen to be greater than those associated with staying. In a society where restructuring and change have become a way of life the relative 'costs' of a change of employer are less apparent. The grass on the other side of the fence takes on a greener hue.

The uncertainty of research projects influenced by political whim cannot be overlooked. For instance, changes in tax resulted in reduced forest planting which impacted on forest nursery research. Consequently, specialist staff have been lost. New changes in tax laws have resulted in increased demands for nursery stock but research back-up is not easily replaced.

Some scientists have moved into self employment. A scientist of my acquaintance (*not* in forestry) reports that his earning power has increased dramatically and his potential workload is more than he can

handle since leaving a government research institute. This suggests that top-quality scientists in government service might not be obtaining the financial and other benefits they deserve. A corollary is that his work is no longer available to society at large.

Unfortunately the reversal in movement of scientists has coincided with the retirement of the last of those scientists who made FRI's international reputation in the 50s and 60s. Unlike universities, government research institutes in New Zealand have failed to retain the expertise of such staff through emeritus status. While not so spectacular as staff resigning and moving overseas, retiring staff also represent a significant brain drain in an institution.

A more subtle form of brain drain is also occurring. The 1991 FRI annual report notes that contract reports outnumbered publications by 50 per cent. Less than 30 per cent of publications were in refereed scientific journals. The reputation of a research institute rests firmly on publications in refereed journals. Proceedings of meetings and bulletins receive less

notice and are often difficult to obtain in distant libraries. Contract reports are often confidential. I suspect that the relative merits of contract and public research and the conflicts of interest they engender have yet to be fully explored.

It may be argued that numbers are not everything. Indeed FRI's reputation was made 40 years ago. At that time a small group of scientists working in relatively primitive conditions published journal papers which attracted world-wide attention while at the same time helping to provide the basis for one of New Zealand's major economic enterprises. In retrospect their achievements were remarkable. I suspect that per capita they made considerably more impact than those of us who have followed them. However, the loss of scientists such as Oscar Garcia, described by his major professor as the best mathematician he had ever had as a student, must be lamented. When a quarter of the research field leaders resign within four years it is time to ask some penetrating questions.

**H.A.I. Madgwick**

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## An industry coming of age

On occasions, it can be a little difficult to write about developments in an industry because not much is happening. That is certainly not the case in the New Zealand forest industry today. In fact, the reverse is probably true – it is becoming quite difficult to keep up with all the new announcements.

A renewed surge in the long-term confidence in forestry has resulted in new land planting exceeding 40,000 hectares in 1992 compared with less than 14,000 hectares in 1991. Next year, new land planting will be a record for a single year with up to 60,000 hectares established. The personal enthusiasm of the present Minister of Forests for the expansion of our plantation forests can be attributed to the majority of this new investment.

The second half of 1992 will probably be remembered as the period when New Zealand radiata solid wood products "came of age" in the international market place. More than 20 years of research, communication, international promotion and market development appears to be reaping the first really sustainable benefits in new international markets (helped

along a little by the rapid disappearance of the traditional wood baskets of the Pacific Rim).

The announcement of a series of major new processing facilities in the sector in 1991/93 in MDF, plywood, dimension, laminated and laminated veneer lumber, mouldings, millwork and furniture production is exciting and invigorating news. This rapid expansion and diversification of the processing sector should finally put paid to any lingering doubts as to the wisdom of the Government's decision in 1988 to exit the direct involvement in managing commercial forestry ventures in New Zealand. The timing of the decision was just right.

The New Zealand industry has been transformed in two years, with previously unfamiliar names such as International Paper, Fibreform, Tachikawa, Juken Nisho, Wenita, ITT Rayonier, Ernslaw and other companies now shaping the future of forestry in this country as well as (and often instead of) the familiar local companies of the past.

Importantly, representing these companies are a solid core of skilful and

experienced managers from overseas – for instance, Messrs Oskin, Margiotta, Seidner(s), Song, Nakamoto, Tachikawa, Inagaki, Snavelly and others now too numerous to mention.

The attraction of New Zealand's plantation forests, and radiata and Douglas fir wood fibre is of course a two-edged sword.

It would be a pity if New Zealand companies and management are edged out totally by new international players. However, local companies will have to accelerate the development of a new innovative and opportunistic strategic focus, product development and market distribution efficiency – and move quickly – to survive. The status quo is a deadly and stealthy enemy, and a strong preference for the status quo has characterised too much of our industry thinking in the past.

### Difficult Challenge

The next two years will provide a difficult challenge for solid wood processors as radiata improves its position in international markets from a largely low-grade utility product to a high-grade appearance and, increasingly, a fashion product. This should increase product prices but is likely to increase log values even more. Prices, even for pruned logs will probably not reach the \$NZ12,000 per m<sup>3</sup> FOB that #1 grade Myanmar teak logs fetch today, at least for some years. However, we are likely to see prices for higher log grades moving up in a regular series of increments of \$20-\$40 per m<sup>3</sup> or more from now through the mid 1990s and beyond. Medium/low grade log prices are likely to be dragged up by this process (or in some instances even lead the charge as their value is re-rated). Only the most efficient

# Why the Institute should sign the forest accord

The Institute has changed from Foresters to Forestry to encompass a wider membership, and with the passing of the Resource Management Act in 1991

businesses will have the ability to pay these prices.

Finally, the challenges facing the industry on a national basis will need to be managed by a distinctly different industry association structure than currently exists. The industry needs to move quickly to dismantle the current structure which may have suited a long since obsolete view of the different product categories arising from our forests, and to replace it with a market-driven structure which can more readily adapt to a rapidly changing environment. If it does not take the opportunity soon New Zealand will be the loser, because international developments will tend to overtake us. Some of the new overseas executives now in New Zealand may be able to help in the restructuring process.

It is certainly an exciting, if a little disconcerting, period in the history of the New Zealand forest industry. – **Reprinted from Ministry of Forestry Marketing**

### Development Group Quarterly Report

**Dennis A. Neilson**

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further changes will be forced onto the Institute. Our signing of the Forest Accord would herald that the Institute has begun to view forestry as part of New Zealand's environment society; not just a technical industry hell bent on seeing endless rows of pine trees replacing areas of regenerating shrubland, particularly kanuka. How can we be so presumptuous to say that trees naturally adapted to our environment which are already protecting the soil should be destroyed and replaced by pine trees which would take at least five years to achieve the same effect?

### Act of Goodwill

The New Zealand Forest Owners were able to sign the Forest Accord in 1991 as an act of goodwill. The partners to the Accord have worked together in small regional groups, working on a case by case basis, building up goodwill. Many would argue that technically the definitions of indigenous forest are cumbersome and too restrictive. However, as with any agreement there has to be give and take.

### A Commitment

Recent articles in the paper indicate that the Forest Accord is being tested by the East Coast Reforestation Scheme. With Forest and Bird, a signatory to the Accord, walking away from the discussions with Tasman Forestry and Ngati Porou, some would say the Accord is failing. I take the opposite view. The Accord represents a commitment by the signatories. Its very presence should make the opposing parties try that little bit extra to make it work. It raises the important issues of economic gain compared to the values of biological diversity and an increasing area of natural forest throughout New Zealand.

Over 1993 I hope the Institute will discuss the pros and cons of signing the Forest Accord. As one of many forestry people working off-shore I would like to see the many private forestry consultants who operate throughout New Zealand planting rows of pine trees for their clients having a commitment to saving areas of regenerating shrubland.

**Ket Bradshaw (Smith)**

## SUSTAINABLE WORKING PARTY

### Sustainability of Exotic Forest Yield Management in New Zealand

**Chairman – Graeme Whyte, c/- School of Forestry, Ilam, Christchurch**

The Institute shares the view with members of the New Zealand public that organisations have important responsibilities that go along with any rights to practise industrial forestry and earn profits. The Institute has a code of ethics for its members and is concerned that its members who are forest industry practitioners feel that they can discharge both their normal working duties and ethical responsibilities without conflict.

One such aspect that has arisen recently, and was the subject of an investigation by the Institute, is the claim that New Zealand's planted forests are allegedly being overcut. A working party reported on the difficulties of defining and establishing sustainable levels of cut for these forests (see Grayburn, NZ Forestry, Volume 37(2):27-29, August 1992).

The Institute intends to have a working group that examines this and related issues, and the group will report to the Council regularly on its findings.