

Forest Research Institute 50th Jubilee

From April 1 to 4, 1997 a big crowd gathered in glorious weather to celebrate the 50th Jubilee of the NZ Forest Research Institute. This tended to be an up-market event.

FRI reunion

Day 1 was a reunion day. The highlights included the launching of Ken Klitscher's book, "Characters of FRI" by Alan Duff (son of former FRI scientist Pat Duff). This was followed by Dr Colin Bassett launching Dr John Kininmonth's excellent book "A History of Forest Research in New Zealand". Other highlights of this day was the presentation of the Ansett New Zealand FRI Awards, and a dedication of a Commemorative Plaque in the Douglas-fir grove (see photos).

The FRI was open to people attending the reunion. And many enjoyed the great debate on "Suits vs scientists: who will lead New Zealand forestry into the new millennium". The day concluded with an enjoyable dine and dance.



The Commemorative Plaque in the Douglas-fir grove. Photo: D.J. Mead



Lindsay Poole arrives to dedicate a plaque at the "Old Stables". Photo: D.J. Mead

Forestry celebration day

The second day focused on celebrating 100 years of plantation forestry. It began with Lindsay Poole unveiling a plaque on the former stables of the original Forest Service Nursery. Lindsay Poole's talk is reprinted elsewhere in this issue.

Later, at the Rotorua Conference Centre, the Prime Minister, Rt Hon Jim Bolger, opened the celebration and conference.

Special Awards

Five special pioneer research awards were presented as follows:

Alex R. Entrican – this award was presented to his daughter, in memory of his work in research and drive in developing integrated forest industries.

Dr Dennis Richardson – in thanks for his efforts when director of FRI and his drive to increase the science of the institution.

Dr Jack Holloway – for his lead in mountainland research and for his pioneer ecological research.

E. Harry Bunn – for his excellence in guiding the research of the Production Forestry Division and the impact of his original ideas, and of the scientists below him, on radiata pine and indigenous forest management.

Alan Mackney – for his pioneering research in the pulp and paper industry. Alan is also noted for the way he moved from technology to corporate leadership.

There were a series of views on forestry presented in the afternoon. The late Andy Kirkland gave his views on the creation, ownership and marketing of forests, and this was followed by contributions by Dr Syd Shea (CALM, Western Australia), Professor Clark Binkley (University of British Columbia), Wei Ming Yi (CTIC) and Dr Israel Klabin (Klabin Industries from Brazil).

The culmination of the day was the superb Symphony under the Redwoods



Priestley Thomson (left), the first officer in charge, with Professor Ray Meyer, the inaugural NZFRI Chairman, unveiling a commemorative plaque to staff in the Douglas-fir grove. Photo: D.J. Mead

followed by a banquet.

International Conference

On the final two days a conference was held in the Rotorua Convention Centre. The programme involved all invited speakers, many from overseas. The proceedings of the conference are to be published, but a few of the highlights are given in the boxes. The general theme of the conference was to look ahead at

research needs for the next 50 years.

Personal impressions

I personally found the Jubilee very rewarding to attend. Meeting friends and making new contacts was a personal highlight for me. Professionally, it was valuable to be exposed to the thinking of others, particularly those expressed at the conference. I have selected seven excerpts from the papers to give you a feel of the

papers presented (see boxes).

I was disappointed that the cost had prevented many attending and that there were no FRI scientists giving papers at the conference. Nevertheless, it was an admirable celebration of forestry in New Zealand.

Congratulations to the organising committee led by John Groome.

Don J. Mead

The integrated approach

"The integrated approach to conservation and land management is based on the principle that policy formulation is made by politicians in response to the community, not by bureaucrats, and that a system that allows the maximum integration of skills and logistical support systems is the most efficient way to implement public land management and wildlife policies.

"The integrated model also allows for the incorporation of commercial principles into natural land, wildlife management and rehabilitation of the environment and ... is an essential component of any conservation strategy for both public and private lands."

Dr S.R. Shea – From "The integrated approach to conservation, public land and wildlife management and commercial forestry – case study Western Australia"

The transition

"The transition from reliance on natural forests to plantation-based technologies is inevitable. Natural forest management is under increasing social and economic pressure. Some of the putative solutions are not attractive. For example, forest management certification has been proposed as a means to counter societal concerns about exploiting natural forests. Roundwood production of all the currently certified forests of the world average about 0.7 m³/ha/yr ... Admittedly, these forests comprise only about 0.1% of all the world's total, so they may represent a poor basis for generalising the outcome for *all* forests potentially certified as 'well managed'. However, at this low level of productivity, about 4.7 billion ha of forest land would be required to produce all the wood currently consumed worldwide. But the world's forests now cover only about 3.6 billion ha, ... Without major changes in consumption patterns, managing all forests to the same level of intensity as is practised on today's certified forests would leave no natural forest land for parks, recreation areas, wildlife reserves or other non-timber uses.

"The transition between natural plantation forests have some predictable outcomes ... These generally involve substituting capital and technology for land."

Professor Clark S. Binkley from "Advances in Forest Management Practices"

Key manoeuvres

"The five key 'manoeuvres' ... are:

1. The forest industry needs to assume a leadership role and work together with foresight.
2. The future role of the Government is to promote an environment in which the forest industry acts for itself wherever possible. Key will be making sure that the information gaps are filled.
3. Our best response to international initiatives for sustainable forest management will be to take a holistic approach to the management of our planted and natural forests and to consider forestry in the wider sense as part of an integrated land management system.
4. Maori will be a major player and force in tomorrow's forestry industry.
5. As an industry that in the future years will "touch" all New Zealanders in one way or another, the forest industry will need to place a high priority on the duty it owes to the community."

Dr John Valentine from "The politics of New Zealand's planted forestry industry – an evolutionary perspective"

Environmental issues

"Issues arising from both the Climate Convention and Biological Diversity Convention have redefined the entire approach to forest-related matters, to wit:

- a) The requirement that planted forests contain a biodiversity mix from native forests.
- b) Planted forests were defined as a 'tool to absorb' carbon emissions. As a result, the development of planted forests would be at a par with the development of energy forests based on fossil fuels.
- c) Planted forest developed along the current concepts of biodiversity corridors will increasingly affect the speed at which biodiversity can be restored to highly-degraded areas.
- d) The multipurpose use of forestry resources in planted forests must replace the harvesting of native woods in tropical forest ...
- e) Technological developments already consolidated are likely to provide a new market for planted forests via the use of biomass for energy through gasification techniques.

Dr Israel Klabin from "Response to sustainability and environmental issues – creation of opportunities"

Stargazing

"What role will biotechnology and the new genetics play in the year 2050 when most of those registered at this conference will, like me, have been recycled as nutrients for plant and other animal material? ...

"In the year 2050 I believe that we will be in an era where trees and other plants of economic importance will each have their own genetic maps. Breeding will be even more predictable for forest trees than presently is the case for soybean and corn. Specific traits will have been transferred to the important forest species and these will confer absolute resistance to insect attack. These same trees will incorporate a series of genes specifically added to enhance market potential, particularly those governing fibre type and lignin content, as well as genes to promote the synthesis of materials able to promote resistance to fungi and bacteria. These latter genes will have been identified in other plant and animal species and transferred to plantation species, thereby eliminating the need for all wood preservatives and timber protection.

"In the countryside New Zealand will be intensively horticultural on the flat land, but the hills will have been reforested with a mixture of indigenous and exotic species. Almost all production forestry will be for wood with residuals being processed for energy, the electronic revolution having largely replaced the need for newspapers and for high-quality copying paper. In the year 2050, recycling will provide the supply for packaging. As the fibres soften and deteriorate, recycling will be for more personal and intimate uses.

"In 2050 designer trees will be harvested for specific purposes. The juvenile-adult transition problem (as well as juvenile wood) will have been largely, although not entirely, eliminated through the creation of novel transgenic trees with new growth and form. Many of these will be Australian eucalypts – now grown extensively in New Zealand. Those in Australia will largely be New Zealand species engineered for better growth and form. This arrangement will have been reached after extensive negotiation to meet the concerns of the indigenous people of both countries. A formal trans-Tasman agreement will provide for the growing of each other's engineered native species in the other country – rather than one's own – in view of the sensitive cultural issues involved in both countries.

"In 2050, houses will be built of the non-rotting and self-preserved cedar-like *Pinus radiata* made resistant to micro organisms by the addition of appropriate genes. A burst of artistic creativity will result from our architectural colleagues – who in 2050 will design houses that are the envy of an increasingly environmentally-conscious world. Strong growth in tourism, particularly from the new 2050 tiger economies of Russia and South America, will push tourism earnings to new highs, thereby boosting our wealth and prosperity. Most New Zealanders in 2050 will spend the majority of their time relaxing and watching the trees grow."

Professor Richard Bellamy from "The future prospects for the application of biotechnology to the New Zealand forest industry"

Innovation

"The attributes of innovative organisations and individuals who make things happen are:

- They are led by people with a vision and passion for their ideas.
- They lead from the front rather than from an office or 'walnut row'.
- They have wide experience of many jobs at various levels.
- They have travelled widely or in some way acquired cultural insights.
- Their values are explicit – e.g. innovation comes from people and sound processes, not from structure.
- They know how to set up processes which capture ideas.
- They invest heavily in R & D."

Dr Dai Gilbertson adapted from "'Black Magic'; the building of internationally competitive teams in New Zealand's innovative organisations"

Shorter rotations

"When tree crop rotations are 30 to 80 years it is hard to get excited about trying to alter wood and fibre properties. But when these rotations are shortened to five to eight years one's interest intensifies.

"... someone will work with even shorter rotation plants including those that produce an agricultural crop to make these plants' fibre more suitable for paper making ... We've used ryegrass stems for paper making quite successfully."

Dr Norman Johnson from "New products, new markets – creating a stretch for industry"

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