

Report of the NZIF Education and Training Committee on Graduate and Postgraduate Training

A Council Committee was set up after the 1986 AGM to examine ways and means of implementing the recommendations from three recent reports on forestry education and training. These were:

- the 1981 Forestry Development Conference Working Party on Training
- the 1985 Forestry Council Committee on Forestry Education
- the final report of the NZIF Education and Training Working Group tabled at the 1986 AGM.

The Committee tabled its report at the 1987 AGM where it was accepted subject to minor changes to the wording of two recommendations. The report summarized below, deals with graduate and postgraduate training. A subsequent report will cover operator and field supervisor training, sub-professional training, in-service training, refresher training and retraining.

All three reports strongly supported strengthening the School of Forestry at Canterbury University. In drawing up its recommendations, the Committee accepted the following framework:

- the School's immediate future should be made secure;
- the School must endeavour to produce the very best graduates;
- student intake should not be limited by the perceived availability of jobs within the industry;
- graduates of the School should be encouraged to take up jobs in occupations outside forestry;
- the School should not base its curriculum choice entirely on the needs of the industry, as these can change quite dramatically;

Conference Paper (continued)

its extent can only ever be limited. For the remainder there is an inevitability about an increasing need for the management for a multiplicity of values running in concert. The challenge will be in ensuring that management, whether it is called multiple-use management or not, is able to integrate the values our society expresses to achieve a balance it defines.

- forestry needs a higher profile amongst school leavers.

On the basis of these assumptions, the recommendations were prepared on the following subjects.

1. Staffing levels

A staff of 12 was considered by the Forestry Council Education Committee to be the minimum for a strong vibrant relevant School offering an expanded curriculum. However, the present number of students was insufficient to allow an increase in staffing beyond the nine financed by the University. The Forestry Council sought assistance from the forestry sector to provide for an additional three positions. The private sector, by secondment and grants, has provided support for two positions but the state sector has been unable to make a commitment as a consequence of restructuring.

Recommendation 1

That the NZ Institute of Foresters (NZIF) approaches the Forestry Corporation, Ministry of Forestry and the Department of Conservation seeking their short-term support for the School of Forestry, either by sponsorship or funding, to the extent of one lecturer for four years, thereby matching the contribution being made by the private sector.

2. Contacts with the forestry sector

One of the concerns of NZIF members was the limited exposure of many students to the forestry sector. Members felt that it would be beneficial to have part of the degree course taught in Rotorua. This would enable the School to make use of the expertise locally available within agencies such as:

- the Forest Research Institute
- the Logging Industry Research Association
- the Wildlife Service
- the Pulp and Paper Research Organization
- the Forestry Corporation
- the Forestry Training Centre
- the major forestry organizations.

This occurred fortuitously in 1986 with some courses for the 3rd professional year students being taught in Rotorua but is not being repeated. If the FTC became a recognized out-station of the

University of Canterbury for teaching part of the final year forestry curriculum, the future role of the FTC would be stabilized.

Recommendation 2

- (a) *That the NZIF supports some courses being taught at Rotorua, drawing upon expertise available at FRI, FTC, LIRA, DOC, and the major employing agencies.*
- (b) *That the NZIF favours the FTC being recognized as an out-station of the School of Forestry.*

3. Student recruitment

A vigorous campaign of student recruitment will be needed if student numbers are to reach a level that can sustain 12 staff positions by 1990. Assistance will be needed from the forestry sector.

Recommendation 3

The Council recommends steps along the following lines:

- (a) *That the NZIF co-operates with the School of Forestry, Forest Owners Association and Ministry of Forestry in preparing pamphlets and videotapes on forestry careers and education opportunities.*
- (b) *That the NZIF nominates some of its members in key locations to be contact persons for careers advice. The School of Forestry would be responsible for keeping them supplied with up-to-date material.*
- (c) *That the NZIF vigorously promotes the image that New Zealand foresters are competent, professional and responsible, as a measure to counter the negative publicity forestry has received.*

4. Practical skills and experience

Council believe that a degree course that produces foresters with practical skills as well as scientific and management skills will greatly enhance their future employment prospects. Training in practical skills should be incorporated as a compulsory and integral part of the degree course, entitling students to receive bursary payments during their tuition. The facilities and expertise for providing such training already exist at the Forestry Training Centre in Rotorua.

Recommendation 4

- (a) That the NZIF seeks agreement between the Ministry of Forestry and the University of Canterbury to recognise the Forest Training Centre at Rotorua as a School of Forestry "summer-camp" location for teaching practical skills to second-year students at the conclusion of their first professional year. The course content, range of skills taught, and standards required would need to be agreed on with the main prospective employers.
- (b) That the NZIF assists the School of Forestry in arranging long-term agreements with prospective employers to provide planned vacation employment for 3rd and 4th year students.
- (c) That the School of Forestry specifies the aims and nature of the practical work students should obtain so that theory can be integrated with practice and students know what they are expected to learn.

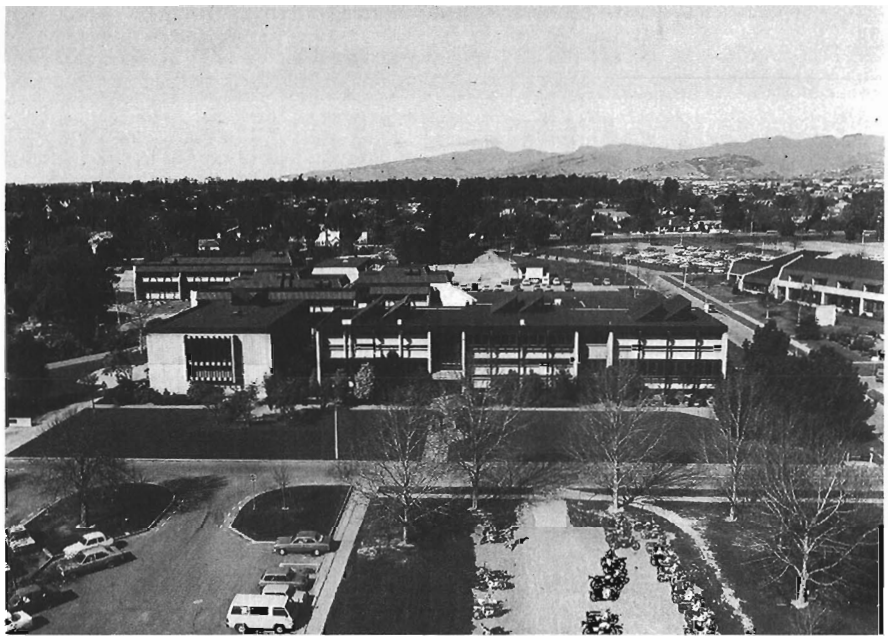
5. Course content and curriculum

All three reports emphasize the need for greater flexibility in the curriculum to offer a wider range of subjects. Eminent forestry educationalists emphasize that the degree course should be primarily educative. Council believe that a degree structure with a common core of knowledge and skills comprising one half of the course, with electives from a wide range of disciplines for the other half, would be appropriate. This would allow subjects from engineering, business management, computer science, commerce, the social sciences and the humanities to be components of a forestry degree. The present course is limited by timetabling difficulties and the Equivalent Full Time Student requirements. Restructuring of the forestry sector will require that the School cater for students from a broader range of organizations with different goals and functions. Future development of the curriculum should aim at strengthening inter-disciplinary teaching.

Recommendation 5

The NZIF recommends that steps along the following lines be considered by the University of Canterbury in the interests of providing a broader, more flexible curriculum.

- (a) That the existing full-year subjects be split into two or more smaller units each capable of being taught in one semester and ranked separately as a subject.
- (b) That interchange of subjects with other faculties be actively sought and promoted, so that units from departments like Engineering, Social Science, Business Management, and



The School of Forestry, University of Canterbury, Christchurch. Photo: D.J. Shaw-Brown.

Parks and Recreation Management can be accepted for a forestry degree.

- (c) That the School of Forestry examines the prospects of designing forestry courses specifically to meet the requirements of other faculties for exchange purposes.

6. Interface with other university departments

At the 1966 AGM of the NZIF, the then Vice-Chancellor of the University of Canterbury presented the University's case for siting the Forestry School at Ilam. It was clear that the University was in favour of forestry courses being taught and research being conducted by both Forestry School staff and specialists from some 15 other departments and associated research facilities at the University of Canterbury and Lincoln College. Consequently, the Institute of Foresters has every right to feel misled when this promise of multi-disciplinary approach was not realized.

There have been suggestions of relocating the School of Forestry at Lincoln College or Waikato University. However, the resources that are available on the Ilam campus and at Lincoln College have the potential to provide an excellent course content for the forestry degree. The problem is to tap it better. The Institute should be telling the University that it wants to see better integration between the departments to allow a better range of options to be offered. One means of achieving this would be to group forestry with the resource management, parks and recreation management, landscape architecture, and the strong postgraduate component of the Centre of Resource Management. This would provide most of the elements

needed for a strong natural resource management option.

Linkages with other departments such as engineering, agriculture, business management, commerce and social science, would greatly enhance the options that could be offered in the undergraduate course. The present emphasis in plantation forestry on harvesting, transportation and processing of stands has major implications for the training of foresters. Graduates will require much stronger engineering skills to work in these areas. Other options include providing elective options for engineering students to take selected forestry or wood science subjects, or to adapt the agricultural engineering degree.

To upgrade the knowledge and skills of those currently working in the industry, a series of short block courses have been identified by LIRA which could be set up and managed by the School of Forestry in association with the Engineering department and industry organizations.

Recommendation 6

- (a) That LIRA be asked to assist the School of Forestry in negotiating with the Departments of Civil and Mechanical Engineering with a view to having relevant forestry subjects, either as individual courses or a composite subject, offered as elective options in the Engineering curriculum.
- (b) That the practicability of substituting suitable forestry subjects for some of the present agricultural subjects in the Agricultural Engineering curriculum be explored, with a view to providing Forest Engineering as a degree option.

- (c) *That the facilities of the Departments of Engineering be used for running short block courses when it is appropriate to do so.*

7. Linkages with Lincoln College

There is very limited interchange of subjects or lectures between Lincoln College and the School of Forestry. This is seen as regrettable, as there are many elements in the Lincoln College courses which are very relevant to forestry. Similarly, there are a number of courses at Lincoln for which it would seem logical to include input from the School. If the School had been established at Lincoln, it is probable that a much wider range of options would have been available.

Recommendation 7

- (a) *That the NZIF conveys its views to the University of Canterbury that it would like the School of Forestry to develop reciprocal linkages with relevant departments at Lincoln College so that the School can have input into Lincoln courses where appropriate, and vice versa. Areas of specific interest are:*
- *the broadening of the Agricultural Engineering and Commerce degrees at Lincoln;*
 - *the teaching of the forestry course to Agriculture and Horticulture degree students;*
 - *the provision of forestry input into the proposed degree in Parks and Recreation Management;*
 - *a closer liaison with the Centre of Resource Management.*
- (b) *That the NZIF would be concerned if autonomy for Lincoln College meant the isolation of the School of Forestry from the other land-based management disciplines and husbandries at Lincoln College. Serious consideration should be given to grouping the School of Forestry with the Centre of Resource Management and other appropriate Lincoln groups into a larger loosely-knit federation.*

8. Post-graduate programme

The limited resources of the School have restricted the development of its post-graduate programme. Most of the studies have been undertaken by overseas students, with limited benefits to New Zealand from its investment in this programme. A strong vigorous and innovative postgraduate programme is needed if it is to have a significant influence on forestry thought in New Zealand.

The research of FRI and more recently LIRA is internationally regarded. The School has much to gain and little to lose from closer co-ordination with the work of FRI, LIRA and

PAPRO. The 'Memorandum of Understanding', which exists between the University of Toronto, Lakehead University and the Great Lakes Forest Research Centre, provides one example of a model on which to develop closer linkages.

Recommendation 8

That the NZIF supports the Forestry Council recommendation that the School of Forestry, FRI and LIRA explore the principle of having a formal "Memorandum of Understanding" along the Canadian lines, as a basis for their future co-operation in research, tutoring and supervision of postgraduate students.

The Centre of Resource Management at Ilam has a strong postgraduate programme with a multi-disciplinary approach. It aims to produce graduates with skills in problem analysis and problem-solving. The same attributes are the hallmark of a good forester.

Recommendation 9

That the School of Forestry examines ways and means of strengthening its association with the Centre of Resource Management.

10. Mid-career training

The Council endorses the initiative taken by the School in offering opportunities for mid-career training for technical managers. To become better known, the School could undertake to organize a 'summer school' programme designed to upgrade existing skills and knowledge, and to promote our expertise in the areas where New Zealand is recognized as a world leader. These courses would be at the postgraduate level and have international standing, importing expertise where necessary. They would be self-supporting with a margin for profit.

Recommendation 10

That the School of Forestry and Associates consider organizing a series of self-sufficient courses as a 'Summer School' programme aimed at mid-career training of forestry managers. Some suitable subjects would be:

- *An advanced harvest planning and systems analysis course, based on the Forest Engineering course offered by Oregon State University;*
- *an agroforestry course;*
- *a plantation management course and study tour.*

11. Overview of forestry education

The recent demise of the Forestry Council and the restructuring of the Forest Service has left no single body that can speak authoritatively on behalf of the whole sector. To maintain an overview, an alternative is required.

Council believe that a Forest Education Advisory Committee, responsible to the Vice-Chancellor of Canterbury University, would be the best means of conveying the sector's views, similar to the research advisory committees that have served FRI so well in the past.

Recommendation 11

The NZIF recommends that the University of Canterbury establishes a Forestry Education Advisory Committee to convey the sector's views on forestry education and training to the School of Forestry and maintain a broad overview over its programme.

Editor's Note

Full copies of the report were distributed at the AGM and additional copies are available by writing to The Secretariat, NZIF, Box 12-314, Wellington North.

Nominations for awards/scholarships

1. Maxwell Ralph Jacobs Fund:
Grants up to \$3000 to support projects in forestry research. Closing date, October 31, 1987.
For further details contact either: The Secretary, N.Z. Institute of Foresters, P.O. Box 12314, Wellington North, or, The Executive Secretary, Australian Academy of Science, G.P.O. Box 783, Canberra, ACT. 2601, Australia.
2. Prince and Princess of Wales Science awards
Closing date, August 31, 1987.
For further details contact: The Royal Society of New Zealand, Private Bag, Wellington.
3. Scholarships for postgraduate study at the School of Forestry, University of Canterbury.
T.W. Adams Scholarship — closing date, November 1, 1987.
Owen Browning Scholarship — closing date, November 1, 1987.
B.N.Z. Scholarship for forestry research — closing date, October 1, 1987.
For further details contact: The Registry, University of Canterbury, Private Bag, Christchurch.
4. Post-doctorate fellowship in forest Genetics.
A two-year fellowship working in the genetics of native forests at the School of Forestry.
For further details contact: Professor G.B. Sweet, School of Forestry, University of Canterbury, Private Bag, Christchurch.