will be dis-established. These include the Trades Certification Board (through which the trades certificates in timber machining and sawmilling operate), the Authority for Advanced Vocational Awards (through which the Certificate of Forestry at Wairariki Polytechnic operates), and the Universities Entrance Board.

ETSA will take over the training functions of New Zealand Training Support, which is presently located within the Department of Labour. The new agency will encompass Access schemes in forestry and the Timber Industry Apprenticeship scheme. It will operate as a freestanding organisation working under a special arrangement with the Ministry of Education.

Both ETSA and NEQA are to assume responsibility for their functions from July 1. The Boards and the General Managers of both organisations have been appointed.

Because the Vocational Training Act is to be repealed, the Logging and Forest Industries Training Board has had to establish an alternative legal structure for itself, and has registered as an incorporated society.

Pre-entry Training
Polytechnic and ACCESS pre-entry training in basic forestry and logging skills is becoming more widespread, although it is recognised that just because people have undergone pre-entry training in certain skills they don't necessarily have work experience or an adequate level of productivity.

Forestry Option for the B.Sc.
(Technology) Degree at Waikato University
From 1990 the University of Waikato will offer a programme in forestry within their Bachelor of Science (Technology) degree. The B.Sc.(Tech.) is a four-year degree in which one year is spent in work experience in industry. The degree, which includes basic sciences, management economics, computing, statistics and a core of applied forestry courses, is very flexible and allows students the opportunity to develop their own emphases. The degree will be run in conjunction with Wairariki Polytechnic in Rotorua. An Advisory Committee for forestry education at Waikato University has been established.

Diploma in Pulp and Paper Technology
PAPRO, in partnership with the University of Auckland, plans to run a Diploma in Pulp and Paper Technology in order to equip future managers, early in their careers, with a thorough technical knowledge of the industry. Applicants must have a degree in engineering or science from a recognised university, or an equivalent qualification. PAPRO will be offering one scholarship a year which will be open to any student who is not already employed by a company associated with the pulp and paper industry. Both the FRI and the Forestry Training Centre will provide some of the lecturers for the Diploma.

Dr Mike Leamy

Dr Mike Leamy, until recently the Director of the Soil Bureau of the DSIR, died on January 1, 1990.

In a career in which he reached the top of his profession and was very active internationally, Mike still found time for a long association with forestry. He was for many years a member of the Protection Forestry Research Advisory Committee, which advised the Director-General of Forests on the research programmes of the Forest Research Institute's Protection Forestry Division.

He was also a member of the Scientific Co-ordinating Committee for Beech Research, which advised the Minister of Forests on all scientific aspects of the beech forest utilisation proposals of the 1970s. He agreed to stay on with that group when it was given the wider mandate of advising on the reservation, for scientific reasons, of State forests throughout New Zealand.

Sir,

It has been tremendously stimulating over the months leading up to the time of this column to observe the increase in the public's concern regarding imminent potential changes in the global environment due to the "Greenhouse Effect". Whilst there is widespread debate and uncertainty as to magnitude and rate, some changes do seem imminent, due to man's past ignorance and frequent disregard for the environment.

For both the forestry profession and the NZ Institute of Forestry this current situation presents both fantastic challenges and opportunities. One positive measure widely advocated for those concerned on a local or individual level is to plant more trees. Here lies a real opportunity for the profession and the Institute to increase their esteem and elevate public perceptions in the course of a positive contribution to our society. Let us ride on the current wave of public concern and initiate community tree planting campaigns under one national umbrella. Campaigns adopted in other countries such as "Think Trees, Grow Trees" or "Global Re-leaf" may provide some ideas for an inspiring and appealing concept.

Inspiring, encouraging and teaching the public to grow, plant and care for trees in their local area would reap numerous benefits. Tree plantings, whether for ornamental, timber production or multiple use purposes, stand to enhance greatly our quality of life.

Now is the prime time for the profession to capitalise on mounting public enthusiasm for environmental mobilisation.

Roger Arnold
Te Teko

Ecological economics

Sir,

In the August issue of NZ Forestry, the article by John Halkett demonstrates:

a) the commonly-held misconception that tropical foresters have not been successful in developing ecologically acceptable systems for managing tropical forests to produce timber (page 26). In reality, a considerable fund of technical information and opinion has come to exist in this field during the past century, and is beginning now to expand rapidly.
b) that conventional economic theory concerning tropical forests is threadbare in the face of the world's diminishing natural resources.

As far as the first point is concerned, it is widely acknowledged that the apparent failure to develop silviculture and management in natural tropical forests is not due to technical reasons, but derives from what is termed a "lack of political will". That is to say, technical treatments and procedures have been developed, but the forests in which they have been applied have been sacrificed to short-term political objectives.

With regard to the second point, I suggest readers should peruse an article in The Economist of August 26, 1989 and a paper by Ehrlich which appeared in the journal Ecological Economics, Volume 1, 1989.

These two articles show clearly that conventional economics will be obliged to widen its horizons, coming to regard the value of a nation's resource base and its environment as an integral part of a national accounting system. For example, the dredging of alluvial gold earns foreign exchange (recognised by conventional economics), but at the same time reduces the store of national assets and permanently damages the environment in a matter and to a degree not considered by conventional economics.

It is interesting to note that the Governments of Britain, Canada, France, and Norway are investigating this new school of national accounting and economic theory. Perhaps it would be appropriate for all of us to follow suit.

Ian Hutchinson
Turrialba
Costa Rica

Editor's Note:
Ian Hutchinson raises an important economic issue. The two articles referred to both point to the need to value natural resources. The Economist article emphasises that National Income Accounts do not allow for changes in a country's natural capital and therefore have nothing to do with "sustainable" income. Paul Ehrlich notes that many industries dealing with biological resources were not necessarily concerned with achieving long-term sustainable yields from them, but were only concerned with maximising return on capital - even if it meant extermination of the resource. He argued that ecologists and economists need to get together.


Another recent article, which looks at values of non-wood products, is 'Valuation of an Amazonian Rainforest' by Charles Peters, Alwyn Gentry and Robert Mendelsohn (Nature 339, June 1989).

Don Mead

Paper* on yields in early thinned stands

Sir,

I wish to correct a misquotation in the Woollons and Whyte paper in the November 1989 issue of N.Z. Forestry.

In their opening paragraph they quote me as claiming a projected mean dbh of 64.5 cm for the 200 stems per hectare at age 26. As was clearly stated, my 1976 paper was a summary of an earlier publication. In both my paper and in the original reference the 64.5 cm was given as the diameter which we achieved by stand height 36.6 metres. (No year was actually mentioned.) The diameter estimate (as given in both papers) for age 26 was only 61.7 cm. In the original 1968 Fenton and Sutton*** paper the mean dbh estimate for age 26 was 55.9 to 58.4 cm (22 to 23 inches).

Others more qualified than I can comment on the applicability of results from regeneration stands to stands planted with genetically proven stock. There is ample other evidence from both trials and practice that supports the current practices of heavier and early thinning.

W.R.J. Sutton

References:

Swedish visit

Thirty-four graduating students and School of Forestry teachers from Umeå, Sweden, visited New Zealand recently. Their three-week trip was organised by Jessica Hunter of the Forest Research Institute, Rotorua; Jessica had recently worked in Sweden.

Mike Orchard said their visit to Westland was a great success as they had both brilliant sunshine and heavy rain - the latter is excellent to appreciate the kind of climate needed for subtropical rain-forest growth.