groups such as the International Dendrology Association. He has also led forestry tours to Australia, United States, Europe and the UK.

Although Peter is renowned both nationally and internationally for his expertise on farm forestry, throughout his working life he remained first and foremost a farmer, and a farmer of considerable merit. Until the day he retired in 1992, he was intimately involved in the day-to-day running of his farm, and everything he did with farm forestry was aimed at improving farm practice and increasing production. It is this close involvement and commitment to farming that has made him so credible to other farmers and enables him to have such an impact in persuading the farming community at large of the benefits to be obtained from wise farm forestry.

Dudley Franklin

Visiting forestry speaker

Dr Andrew W. Ezell is visiting New Zealand in May to present a paper to the NZIF Conference in Napier and to speak to NZIF branch meetings around the country.

Dr Ezell is on the faculty of the Mississippi State University and also works for the Mississippi Cooperative Extension Service. He has been much involved in the development and promotion of "Best Management Practices" in S.E. USA, i.e. voluntary guidelines and self regulation by the industry to avoid the imposition of punitive environmental law in vague elsewhere in the USA.

His travel to branch meetings from Whangarei to Christchurch will be funded by the NZIF Travel Award, in line with the resolution at the 1992 Annual General Meeting that the funds could be used for visiting speakers alternative to supporting New Zealand members abroad. Unfortunately his schedule will not allow visits to Otago and Southland this time.

John Galbraith

Sustainability of exotic forest yield management practice in New Zealand

INTRODUCTION

This report to the Council of the New Zealand Institute of Forestry sets out the findings of a Working Group formed to examine whether or not the exotic forest estate in New Zealand has been overcut recently. Mr A.P. Thomson had raised the issue at both the 1991 and 1992 Annual General Meetings of the New Zealand Institute of Forestry. A sub-committee was set up to canvass the opinions of all Fellows and some other senior Members of the Institute. The results of that survey were contained in a report by Mr A.W. Grayburn (with assistance from Messrs O'Neill and Childs), published in New Zealand Forestry, volume 37(2) 27-29, August 1992. Mr Grayburn concluded that the Institute should not make a stand on overcutting, but should

- encourage provision of annual harvesting and replanting returns;
- provide examples of the consequences of high levels of log exports in one or two regions;
- prepare a position statement for the Minister.

Following the publication of this report, the Institute Council established the following Working Group:

M. Colley, Tasman Forestry Ltd, Rotorua
J. Fleming, CHH Forests Ltd, Auckland
H. Levack, Ministry of Forestry, Wellington
J. Shirley, Forestry Corporation of NZ Ltd, Rotorua
G. Whyte, School of Forestry, University of Canterbury, Christchurch (Chairman)
Dr B.R. Manley, a member of the Institute Council, has acted as convener. Mr P. Lane (Ministry of Forestry, Wellington) has deputised on occasions for Mr H. Levack.

Report to the New Zealand Institute of Forestry Council

In the early debates within the Institute, the issue of the potential for adding value through production of manufactured forest products being undermined because of sharp rises in log exports, was much to the fore. Nevertheless, the resolutions at the AGMs and the directions of the Council to the Working Group were clearly concerned just with overcutting, and not at all with the possible loss of potential for adding value before exporting. The Working Group, while also noting that a consequence of any premature harvesting can lead to loss of amenity and other such non-commercial values of forests, decided to retain as narrow a focus as possible in interpreting the directions for its deliberations. That focus was realisable wood yield.

A basic need in this regard is an agreed definition of sustained yield. Agreement was finally reached on the following broad meaning of sustainability in the above narrow sense: "A sustained yield can be defined as that yield, which, when harvested, does not reduce the capacity of a forest resource (i.e. estate) to supply, continuously or periodically, the same or a higher quantity of wood of the same or higher average maturity indefinitely."

The Working Group considered that this definition includes all sizes and kinds of forest estate that are likely to contribute to regional woodflows. In particular, interpretation of the word "periodically" should provide sufficient flexibility to assess individual sets of circumstances, which can vary widely from region to region, forest owner to owner and year to year.

As previously mentioned, a majority of the Working Group strongly supported the view that the focus of sustainability should pertain to wood yield alone, and that other benefits and services which forests confer (such as soil and water protection, amenity, recreational opportunities and the like) should be deliberately excluded.
Nevertheless, maintenance of soil fertility and land productivity, a prime social responsibility in the opinion of the whole working group, will no doubt be achieved if sustained yield, as defined above, is also attained.

**DISCUSSION OF TERMS OF REFERENCE**

(1) To review the adequacy of the existing data-base for describing the quantity and quality of forest resources throughout the country, and for reporting on how raw material is used throughout the forest industry

Since 1982, the Forestry Council and now the Ministry of Forestry have published eight sets of statistics on the area, location, age-class and species class distributions, growth and yield of the plantation forests of New Zealand. The latest, (Neumann, 1992) appeared in October and brings the information up to date as at April 1, 1991. It is expected that a further update to April 1, 1992 will materialise early in 1993. The yield tables have been thoroughly overhauled in 1992 although there is obviously still an ongoing need to refine on behalf of more. It was a majority opinion of the group that individual forest owners rather than the NEFD unit be encouraged to continue this refining process.

This regular series of publications entitled “National Exotic Forest Descriptions”, or “NEFD” for short, together with the availability of yield tables of regional applicability, allows wood supply potential to be reviewed and analysed by anyone who cares to do so. In almost all countries, including leaders like USA, Sweden and Finland, a State forestry organisation collects the data on behalf of people and bears the costs of doing so. In New Zealand over 90 per cent of the plantation area is voluntarily reported on an annual basis. All the large and most of the middle-sized ownerships bear the cost of this exercise, while the Ministry of Forestry provides support in various ways, including publication of the findings. There has been much catching up to do since major restructuring of the forest sector in 1987.

The Working Group was able to share and pool much personal experience concerning NEFD exercises and publications. In its deliberations, it recognised that:

(i) the forest industry in New Zealand should be heartily commended for its voluntary reporting of the NEFD database;

(ii) new owners of the cutting rights for State forests should be encouraged to continue to provide basic forest data as was done in the past;

(iii) further major efforts should be made with calibration and revision of yield tables, probably through formally comparing actual wood realisations with production forecasts broken down into crop type, age and product for each wood supply region;

(iv) the calculation of annual harvests of wood should no longer be derived from utilisation consumption statistics, but from direct estimates of actual removals by species and log type for each wood supply region;

(v) because of the growing numbers of small forest owners and a likely increasing portion of new planting and replanting by such groups, it is vital to seek better means of capturing their plantation and woodlot data now that PRIFO information is obsolete and its functions no longer implemented;

(vi) the quickening pace of publishing NEFD statistics by the Ministry of Forestry and imminent release of NEFD Yield Tables is commended, though long overdue as a consequence of government restructuring;

(vii) even more resources and further commitment are needed in MOE, to increase further the tempo for publication of NEFD and market reporting, if the results they contain are to be of any value for informing industry, politicians, the Commissioner of the Environment, the forestry profession and the public at large about the state of the nation’s plantation forests.

The Working Group is of the opinion, therefore, that information of the right kind and quality is available for anyone to check the trends in wood supply potential and the consequences of adopting certain levels of cut within regions, provided that the present level of statistical servicing is at least maintained. Refinements and further support are needed, however, to ensure that the right quality of information is made available, as indicated particularly in (i), (iii), (iv), (v) and (vii) above.

A member of the Working Group has provided the following example of the kind of exercise that can be done.

<table>
<thead>
<tr>
<th>Estate: - radiata pine plantations throughout New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stocked Area (ha)</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>At 1.490</td>
</tr>
<tr>
<td>At 1.491</td>
</tr>
<tr>
<td>Area changes</td>
</tr>
<tr>
<td>Yield Table Revisions</td>
</tr>
</tbody>
</table>

The allowable cut (column 4) is the current sustained yield multiplied by (current maturity/target maturity). The derived actual harvest between April 1, 1990 and March 31, 1991 was estimated to be 13.5 Mm³. That if that figure for the actual harvest is reliable then it was less than the yield that the estate could sustain as of April 1, 1991. Hence, there was an increase in average maturity of the estate, to some extent induced through revisions to the yield tables, but not entirely. Obviously, there is room for more detailed analysis and reporting, but the principles and methodology involved are clearly apparent.

(2) To evaluate existing methodologies for documenting the state of the planted forests and the industries they supply, and for forecasting the consequences of present strategies for utilising forest produce

The Working Group observed that there were many studies of regional wood flow planning, many of which were public documents. The major forest companies, Ministry of Forestry, Trade Development Board and others have had an ongoing commitment to regional and national planning exercises, using tools such as FOLPI (a forest oriented linear programming model), REGRAM (a regional harvest planning and resource allocation model), RMS (a resource maturity simulator using indices for change as shown in the earlier example) and WPPM (regional wood processing planning model). With the exception of the last of these the others are used largely for in-house analyses. But the potential is there to use any of these tools for public good studies.

Such an exercise has in fact been carried out using FOLPI. The Ministry of Forestry and the Forest Owners’ Association commissioned a NZFRI team to determine the long-term sustainable cuts for each of the ten NEFD wood supply regions of New Zealand. The results of this analysis are still being checked and reviewed, but are likely to appear early in 1993. The Council’s attention is particularly directed, therefore, to this forthcoming publication which will provide the means for making an assessment of the
very issue with which the Council is concerned and a forecast of the long-term harvest potential compared with estimates of actual realisations. The major problem in this is, as always, how accurate are the figures of actual harvests realised in each region. The Working Group felt that the estimates derived for the growing crops are of a superior accuracy to that achieved in deriving the actual realisations, so that if comparisons are to be improved, emphasis should be given to improving the latter procedures, as was explained in points (iii) and (iv) when discussing term of reference #2.

(3) to identify what further ongoing research on related forest sector studies needs to be undertaken, and by whom

There were major differences of viewpoint within the Working Group on what kind of ongoing research should be concerned with forest sector analyses. All were agreed, however, that improving the quality and timeliness of the basic data collected for and reported in the NEFD and Market Report publications of the Ministry of Forestry is of paramount importance. Given such information, potential woodflows, calibrations of forest estate supply capacities and revisions of production forecasts can be independently evaluated.

There was also agreement that the particular kind of indicative planning done for the CNIPS exercise in 1985 was largely a waste of time and money. There was criticism too of the 1992 Forest Industry Study, which seemingly gave misleading impressions about the future potential for added value manufacturing. But, given the narrowing of the focus and the interpretation of the Council's terms of reference by the Working Group, it was decided that there was little point in pursuing this particular aspect further.

(4) To provide reports periodically to the Council on current utilisation patterns and their implications for the future based on data releases which comply with confidentiality provisions of the Statistics Department

The Working Group was wholly in favour of the Institute's playing a vital supportive role in analysing published reports on plantation resource statistics and on utilisation patterns. It also strongly believed that the Institute should take a lead in communicating its findings as a professional body to government agencies, the industry and the public. The Group recommends to the Council that it retain, therefore, a group (though not necessarily composed of the present individuals) to maintain a watching brief on wood removal and forest maturity statistics and to provide a sound professional review of the methodologies used to prepare and report these statistics.

The Institute has not the financial resources to conduct detailed independent studies that need to be done regularly so that opinions that are based on sufficiently refined analyses could be reported on aspects such as regional overcutting. The group also dismissed the suggestion that a review based on hearsay and other such informal local knowledge could be mustered. There is paid work already being done on obtaining the requisite information with due sensitivity and the group considered, therefore, that increasing the publishing tempo and even releasing some more in-house information for professional and public scrutiny would be much preferred.

The Group recommends that the Council maintain a group which reviews available information and which reports annually to the Council, so that members of the Institute can receive as up-to-date information as possible on the state of the plantation resource wood supply capability. The group also recommends that the Council make a concerted effort to advise the Minister of Forestry, the Commissioner for the Environment and the public at large of its annual findings.

CONCLUSIONS

This Working Group supports the recommendations made in the Grayburn Report on making pronouncements on possible overcutting and supports the view that the Institute Council continue to play a supportive role in critically reviewing statistical information about the plantation forest resource, its rate of harvest, the pattern of utilising its produce in the market place and the analytical methodologies that are employed to derive relevant statistics. The Working Group further urges the Council to disseminate this information for the good of the country, while at the same time raising its own professional profile as an informed and independent body within the community.

A.G.D. Whyte
(Chairman of Working Group)

NZIF membership increase

In the year ending March 31, 1993, 52 new or returning members joined the Institute. There were 17 resignations. The names are listed below for the interest of members.

New membership

Resignations
D. Barwick, M. Bloomberg, R. Croft, A.


1993 Conference sponsors
Carter Holt Harvey Forests Ltd
Tasman Forestry Ltd
Oji Sankoku Forests Ltd
Port of Napier Ltd
Pan Pac
NZ Aerial Mapping Ltd
Groom Poyry
Hawkes Bay Business Development Board
Forestry Corporation of NZ

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