



Basic silviculture

Sir,

In his interesting article, "The NZ Forest Service Contribution to Plantation Forestry" (NZ Forestry, May 1987), Dr Sutton poses the question: "Where did the NZFS go wrong?" In fact where did all of us go wrong?

Having decided that a clear-board regime was to be the goal, most of us set out like the State to prune and thin. In this aim we have gone wrong – massively wrong because we did not "monitor our efficiency" down in the woods.

"Rubbish in rubbish out" applies to forest tending as it does in computer practice. A number of farm foresters (John Mortimer and the writer were two of them) have had the enlightening experience of milling 25-year-old pruned forests that were handled on approved regimes. The answer was improved framing grades but very minimal out-turn of clear wood – except in the slab heap. I would have been a very unobservant forest owner indeed had I not anticipated this – but too late. I can remember being critical of late pruning especially in the top lifts at so many field days in state and company forests from whom we beginners took our lead. I remember the report of a farm forestry field day where a top-quality log was selected from a state forest; a lecture on how to prune; the party had lunch while the log was milled. The result, little or no clearwood, red faces and a lecture by the miller on growing macrocarpa. Park, in a paper given at the combined Australia/New Zealand Institute Conference at Rotorua, popped on a slide of an "x-ray of a typical pruned log" (the result of long research). The defect core was like an upturned wine bottle, thick where it should have been thin and thin where it could have been thicker. Entrican was aware of trouble 30 years ago when he called for "more courageous silviculture – wider final spacings". This was noted – and forgotten in the baronial enclaves of most conservancies; not, it must be noted, in Ngaumu State Forest, the closest to head office. Today Ngaumu logs command prices that all our pruned forest should get – but won't until the trees from post 'task force pruning and thinning' become available. A massive, almost scandalous loss, because we as growers did not take time off to sit under our trees to observe and think. Of course, I should add that silviculturists at FRI had been sounding off, but it was not until the findings of the Radiata Pine Task Force had been published that some acknowledgement was given and

timely action taken. Will it be continued under the Corporation?

I think the whole industry – but not farm forestry – has got itself into a bind where chair-bound planning supersedes basic care of the raw material. The efficiency of any farm or orchard is based on the care and questioning management of its grass, stock and crops; so it should be in forestry. I can see State and Company Forestry Corporations going the way of forestry in North America where there is pristine quiet down in the forest but somnolent dronings in countless conference and board rooms.

Is our Institute not a case in point? When have we had a good gutsy meeting on basic silviculture? Sutton writes of the three Forestry Development Conferences. These, to my mind, set the precedent for our present-day obsession with planning (with a big P). There have been two bum-numbing, wall-bound AGMs on subjects within this orbit and there is to be another at the Chateau of all places on something or other. I shall stay home and spend the time pruning my lately planted splendid area of 40 ha of coastal agroforest – meticulously and on time and with all regard to its thinning down to 150 s p h at age six. Drone on you lot. Time is too interesting down at the production end. But if you decide to have a third "symposium on the tending of radiata pine" I'll be there if I'm still alive. My regards to fellow members long absent from my orbit. H. Bunn and I have a travelling road show dedicated to the "new easy-care silviculture" and it is going well.

Neil Barr

Forest Economics

Sir,

In a country which draws 70% of its energy supply from wood, I am contemplating a paper written by a local environmentalist with economic leanings who claims that it can't be done to yield a viable return in any way that is now being tried, so all must be stopped and started anew in a completely different fashion after a due process of planning and research, freed from the pollution of economic gain. But then, in this case, someone else will pay anyway, so perhaps it really doesn't matter much. We will benefit, of course, as local supply runs out quite shortly and for at least some part of the demand we can pencil in a new prospective customer.

But are we in fact any better off? The February issue of the Journal (just arrived) makes me wonder.

First of all we get Roger Proctor's view that time is unimportant, followed by a change of heart that it is.

Then we have Geoff Kerr's argument

that the figures are only illustrative when attacked, though quite binding when they arrive in the form of an instruction. There is an invisible man called social preference, but we can't find him or measure him, so he must be left out.

And then in the book reviews I am reminded of that famous paper by Dr Grant that came before the Council of the Institute in (I think) late 1985. It strayed into some dangerous fields, at one stage reaching a conclusion that it was better to exploit someone else's resources rather than to sustain your own, but finally emerged as a more polished document. The only trouble then was that in one glorious Rambo blast at *Pinus radiata*, it also demolished the concept of long-term investment in and the sustained use of any resource. But then in this case I think enthusiasm pulled the trigger.

It may be, as Ken Piddington said to us about the Treasury, that economists are capable of great comprehension at the stage of intellectual analysis, but are simply unable then to produce the coin that we are looking for. If so, how do we help them, or, probably more profitably, what other great minds who can produce coins of the right colour have actually done so?

On a different path perhaps, I remember as editor of the Journal writing to the Treasury seeking information on the derivation of the famous 10% rate of return. It has always struck me as such a convenient figure that it seemed unlikely to be the product of analysis, but possibly, in the days before calculators, designed to assist a Minister of Finance with limited mathematics. Anyway, I thought it interesting and they said they would consider it, but I left before getting an answer. Did they?

John Purey-Cust,
Sri Lanka

Decision making

Sir,

Cavana and Glass's reply to my letter (31(3):13-14) criticizing their paper in the NZ Journal of Forestry Science further highlights the importance of this subject. One which I believe is second only to the problem of marketing, in today's forestry scene.

Their acknowledgment of the imperfection of the data available on special purpose species supports the main point of my criticism. Any argument based on limited or non-existent data is seriously flawed. All that Cavana and Glass's paper indicates is that there is probably no real difference between the economic viability of the different species.

Economic tools used to predict future profitability are very imprecise. Unfortunately they look authoritative and are

often accepted as precise by those who control the purse strings – e.g. Treasury economists. Apart from being based on inadequate data they cannot adequately deal with the time dimension and as such are dangerous. At most they should be limited to determining the best regime to be followed for a single species.

One aspect they do not address is that of future markets. For example, it is very likely that, when increased volumes of *P. radiata* timber come on to the market in 10 to 15 years' time, the "real" value of the timber will fall or at best remain close to present levels. Thus for small growers to plant radiata now, unless there are definite local advantages, is a foolish choice. The future of *P. radiata* in this country will be dictated by the very large growers.

A more accurate estimate of the future value of a timber crop can be gained by a careful study of world-wide supply and demand statistics.

It is expected that between 1980 and 2000 AD the annual demand for softwood sawlogs will rise from 330 to 399 million m³ (1.0% p.a. growth rate). Hardwood sawlog demand, while not comprising such a large volume, shows a faster increase; from 99 to 143 million m³ (1.9% p.a. growth rate) (FAO, 1982).

Potential supplies are more difficult to determine but FAO studies reveal the following trends:–

- an emerging shortage of high-quality hardwood sawlogs which will restrain the growth of solid wood products.
- exports of hardwood sawlogs from the world's major suppliers in the Far East are expected to decline from 19.4 million m³ in 1980 to 9.2 million m³ by 2000.
- Worldwide there are reasonably abundant supplies of hardwoods available, so the issue is not one of supply but quality.

Analysis of the data above suggests that beyond 2000 AD there will be shortages of high-quality wood, particularly hardwoods. Applying this to the New Zealand scene, it is suggested that as we have a potential oversupply of medium-quality softwood (*P. radiata*) in all product categories, the species to plant now, especially by those involved in small-scale forestry, are high-value hardwoods (e.g. blackwood) and high value softwoods (e.g. macrocarpa).

The type of analysis outlined above is more valid than the nett present worth type of calculation and, providing that future supply and demand have been reasonably projected, is a firmer base upon which to make decisions about which species to plant now.

This whole subject is of vital importance to long-term considerations of New Zealand's forest policy. It must be

debated much more widely and in greater depth and I trust you will make this possible in New Zealand Forestry.

Ian Barton

Ref. "World Forest Products Demand and Supply 1990 & 2000"
FAO Forestry Paper No. 29, 1982.
N.B. The arrival of "Forest Products – World Outlook Projections 1985-2000" – FAO Paper 73, 1987 is awaited. It should contain better data than paper 29.

Whose forest when?

Sir,

I recently read an article in your journal titled "Whose forest when?" by L.A.J. Hunter (August 1986, pp. 3-5). There are two points arising which I would like to address.

The first of these concerns Mr Hunter's statement on page 4: "Yet the debate only becomes sensible if it is recalled that the criterion by which both institutional forms (public versus private resource ownership) are judged is the efficient economic allocation of society's resources, that is, creating a state where the comfort of the beneficiaries of the economic activity simply cannot be bettered without worsening the plight of the others, even after allowing for compensation." This statement should be clarified for the following reason.

The criterion for the efficient allocation of economic resources (i.e., those resources whose use entails an opportunity cost) is whether the marginal cost of using each of those resources equals the marginal return arising from the use of each different resource – for a given distribution of rights and privileges (i.e., resource ownership). The criterion to which Mr Hunter refers is, instead, Pareto optimality – dressed up with the compensation principle. To assert that a Pareto optimal allocation of resources is economically efficient is indeed correct, but the inverse may not always be true. Economically efficient resource allocation need not preclude the possibility that a Pareto better change may be achieved by redistributing resource ownership.

The second point that I want to address concerns Mr Hunter's observation that "... although a public good, option demand for forests has been vigorously advertised and very successfully sold using market good techniques. No economic explanation has been advanced, but it's worth noting that restriction of many of our forests to this single production output has been effected through the public sector" (p.5). It is unclear to me what Mr Hunter means here. Firstly, is it option demand

or the options themselves that are being "sold"? Secondly, if by advertising and sale Mr Hunter is referring to the success of the preservationist (not to be confused with the conservationist) lobby in mobilizing public opinion to preserve publicly owned forest, then I wonder whether options per se are being traded. One could argue instead that one forest use was being traded off against one or more other uses in the political market, the price being the net votes or weight of public opinion for or against the use restriction. (Mr Hunter himself seems to have implicitly recognized this by writing of a "single production output".) Following this line of reasoning a little further, the options of which Mr Hunter writes can be regarded as externalities which many people value positively, in addition to being 'public' goods – to use a pejorative and, unfortunately, widely accepted term. Option value as an externality is then one of the incentives encouraging (or discouraging) trade offs between more or less incompatible forest uses, but the options themselves are not the direct objects of exchange.

The preceding explanation fits a situation in which the distribution of rights to exercise options, in the sense of option demand, is being decided in the process of forest use determination. Whilst property rights might be redefined by internalizing what was previously an externality (e.g., by restricting resource access to paying consumers only and advertising that fact – otherwise known as 'user pays'), simply being able to exercise an option does not necessarily constitute option ownership. It merely means that one has the right to exercise the option if one so chooses. To be even partially convincing, any explanation of how options have been "successfully sold using market good techniques" must first establish how options per se can be either privately or publicly owned, property rights being one of the prerequisites to market exchange transactions.

Bruce P. Glass,
Department of Forestry,
Michigan State University,
USA.

NZ Forest Service contribution

Sir,

As an Affiliate Member of some 20 years' standing, I trust that I may be pardoned for what may seem an intrusion into New Zealand home affairs, but it does stem from an abiding respect for the achievements of the New Zealand Forest Service, which it is pleasing to see on record in your May issue via the efforts of just three of the very many who

have contributed to it, viz. Dr. Wink Sutton, Professor Peter McKelvey, and the last Director-General, Alan Familton.

It is to the letters by Alan Familton and John Groome that this comment is addressed.

At this distance I cannot pretend to understanding of the sequence of events which culminated in the disintegration of the NZFS, but after 40 years in a much smaller but in many ways similar organization, the last 15 of them at the political fringe, I need no interpreter to perceive some currents and effects. Analogous disintegrations have taken place here. May I applaud the publication of Alan Familton's last letter as Director-General.

And I would like to support in capitals or italics, Wink Sutton's last paragraph by amending it to:

"The whole forestry world owes the New Zealand Forest Service a great deal for its contribution to plantation forestry."

It is a proud record which the successors to the Service will find hard to match and have yet to demonstrate.

As a Past President of the IFA and an architect of its Constitution and Forest Policy, I should like to see the New Zealand Institute stand tall in this difficult period. John Groome points the way in his plea for member involvement. It is a problem even more apposite to our Aus-

tralian Institute, if only because of the separate State constitutional arrangements and the greater geographical separation of our members. But it really is vital, and I use that word advisedly, for professional forestry in both of our countries. May I suggest that all your members re-read John Groome's last

paragraph, and yet again.

The Institute's role will not become any easier in the new situation, but permit me to wish it well.

N.B. Lewis
Formerly Assistant Director,
Woods and Forest Department,
South Australia

CURT GLEASON MEMORIAL PRIZE

Submissions for the Curt Gleason Memorial Prize, aimed at fostering communication with non-professionals, are required by April 1, 1988. Begin your preparations now!

Entries should be submitted to the Secretary, NZ Institute of Foresters, P.O. Box 12-314, Wellington North. Any queries should also be sent to that address.

Background and conditions of entry:

- The objective is to foster creative communication in forestry.
- First prize \$500.
- Merit awards (up to three in number) \$100 each.
- Open to New Zealand Institute of Foresters members 30 years of age or under.
- Submission date April 1. Prizes will be awarded at the Institute's AGM.
- Submissions receiving prizes or merit awards will become the property of the Institute, which will have the rights to use them in any way.
- Entrant may choose any topic within the broad field of forestry and can use any tangible communication techniques (writing, film, video, painting, display, etc). The entrant may specify the audience.
- Entries will be judged for their ability to communicate the subject chosen by the entrant to the wider public or the specified audience (non forestry profession).
- The quality of the material will be assessed by two judges, both appointed by Council. One judge should be a communication expert, the other an expert in forestry.



THE INTERNATIONAL FORESTRY CONFERENCE FOR THE AUSTRALIAN BICENTENARY
ALBURY-WODONGA, NEW SOUTH WALES-VICTORIA, 25TH APRIL - 1ST MAY 1988

Species and their contribution to Australia and the World - Past, Present and Future

The AFDI is proud to be the official organizer of this Conference.

A comprehensive programme of paper presentations and field visits along with evening entertainment and tours for partners is planned.

Expressions of interest to attend and requests for the provision of further information should be sent to:

AFI Bicentenary Forestry Conference
 Conference Secretariat
 P O Box 802, ALBURY NSW 2640, AUSTRALIA
 Telephone (060) 411266
 Telex AA58666 Fax (060) 218501



AFDI BICENTENARY FORESTRY CONFERENCE

To the National Secretary AFDI: * Record my interest in attending
 * Provide me with further information

FULL NAME

ADDRESS

TELEPHONE NO

*Please delete if not applicable