and we need them, but we must never forget that if their ancient wisdom had been heeded in the past the money would have gone into more commercially correct activities elsewhere and we probably would not now have a plantation forest resource; or if we did, it would be untended and aimed resolutely at the bottom of the market.

The expansion of interest in forestry syndicates pushes up the area planted outside the corporate fold but adds even less to the evolution of ideas. Forestry as an investment is the nearest thing we have to a cash-in-superannuation scheme, but the members of syndicates want a guarantee of their money in 30 years' time, not a glorious adventure into uncharted seas which they can get readily enough in the conventional marketplace.

And over the whole thing lies the fact that land barons, whether corporate or individual, have never been popular in New Zealand.

So how do we spread forest ownership? In fact it is probably happening without any need for help as more and more farmers do seem to be realising that trees are a respectable crop, and that if they had planted more, earlier, fewer of them might have gone down the plughole in hard times. The challenge will be to turn them from farm foresters to forest farmers, as they would be, for example, in Scandinavia.

This has been suggested before, by Neil Barr I think, and picked up by some Maori incorporations, but the mechanisms which would have started it on its way for the pakeha farmer are now gone, untested. New ways have to be found, and most of them will begin with radiata pine. Nothing wrong with that, so long as there is exploration of silvicultural opportunities and a share of effort spent on other species. The revolutionary move, from grass back to trees, has been made; from now on it is evolution we need.

There are two professional bodies in the field to assist - the Farm Forestry Association and the Institute of Forestry, but so far they do not seem to have worked well together, regarding each other respectively as hobbyists or electronic modellers intent on knowing more and more about less and less.

Both attitudes have an element of truth in them, but the fact remains that both organisations have qualities that are needed, though not necessarily as now under separate umbrellas. The expansion of farm forestry needs the conventional skills of professional foresters working as consultants, and forest farmers will need that help more in the future when they get into cooperative marketing organisations, as they surely will.

But I doubt very much that these professional skills will be of much help in the move on from radiata. For one thing, consultants service a demand and they should not, by definition, lead, unless, like a horse in a cart, they are merely in front. They operate best when working to very clear terms of reference, to explore exactly what the client specifies he wants done. Left to themselves they will only make money vanish like snow in summer.

The problem is that we are on uncharted ground here. Providing for the needs of future generations is central to the concept of sustainable forestry, yet the needs of future generations are not known, so how do we know what sort of forest to aim at? What numbers can we pop into the spreadsheet?

The conventional economist's answer to that of course would be to head off difficult questions by popping in a high rate of interest, thus aborting the exercise, and then to wander off to other pastures, remembering only that our two original forestry corporates began their lives without the need for any such justification. One began as an investment scam and the other started on the back of a long-term peppercorn stumpage, yet both would be considered a success.

This is the field where farm foresters generally hold the ring, through experience and intuition, and they, helped by the Forest Research Institute, will probably be the ones who mark out the paths away from convention for others to follow.

But in the end the two groups are complementary, and there should be closer contact between them, though I am not sure now of the overwhelming advantage of marriage. I still feel that overall the advantage lies with the Institute, if it cares to take up the opportunity to lead forestry in new directions, but if in the end its members prefer the comforts of number crunching for the corporates, then so be it; the Farm Forestry Association will probably fill the gap, and those professional foresters more attuned by temperament to variety will be there too.

John Purey-Cust

The bankruptcy of science

Sir,

I concur with the observations of H.A.I. Madgwick (NZ Forestry, February '93) and echo his concern at the loss of some of the NZFRI's most able staff. But it is the wider view of changes to science in New Zealand which gives me even greater concern. The loss of staff from other CRIs and research organisations through resignations and redundancies is, in many instances, even greater than at NZFRI.

The New Zealand science community is a small one with a high degree of interdependency; changes in one group can drastically affect the ability of others to carry out effective research. A good example is the Forest Health Group at NZFRI, which supports a number of entomological research programmes, all to some degree dependent on the fundamental taxonomic research of Landcare's Insect Taxonomy Group. These taxonomists, and the associated National Arthropod Collection, provide the foundation for entomological research in this country. The recent science 'reforms' have seen the group decimated by redundancies and retirements, showing an appalling ignorance by those responsible of the fundamental role of taxonomy in the natural sciences. This lack of appreciation for research that underpins the science that is supposed to drive this country into the 21st Century, could well anchor us in the 20th.

Forest entomologists, like most other science groups, draw the solutions for today's problems from the fundamental knowledge and understanding generated by taxonomists, physiologists, ecologists and many others whose work is in turn underpinned by such resources as the National Arthropod Collection. Such collections, databases and fundamental research should be nurtured, added to, and valued as national resources, and in some cases as national treasures.

It is a sad fact that the mindless excesses of egocentric politicians, corporate junkies and flash Harrys of today will be paid for by the scientific community, and ultimately the people of New Zealand, tomorrow. The price will be extracted through poor science, poor decisions, and an inability to grapple with increasingly complex scientific issues which affect the prosperity and quality of life of all New Zealanders.

Gordon Hosking

Nothofagus seed request

Sir,

I have received correspondence from Andrew Jackson, of Kew Gardens, requesting seed of different provenances of New Zealand Nothofagus species and any notable hybrids.

If readers are able to aid him with seed collection it would be appreciated if data
could be collected as follows:

- Latitude
- Longitude
- Description of location, e.g. one mile north of . . .
- Altitude
- Habitat, including associated species
- Soil type
- Any particular feature of the plant
- Date of collection
- Collector's number.

Such information would be used to help future researchers.

Seed could be sent directly to: Andrew Jackson, Royal Botanic Gardens, Wakehurst Place, Ardingly, West Sussex RH17 6JN, England; or to myself at 218 Otipua Road, Timaru, and I would be happy to forward it to him.

Mike Bunckenburg

Silvicultural diversity

Sir,

Your editorial in the February issue of the journal makes some interesting if not totally accurate claims about the conserva-
tive approach of foresters in the past and compares this with the more dynamic approach now being adopted by some of the new owners of forests previously con-
trolled by the Forest Service.

You are critical of the lack of species diversity in our exotic forests with man-
agement restricted predominantly to low
final stockings with pruning, and you fur-
ther claim that foresters in the past have always been subject to a straight jacket of conformity. It appears that this straight jacket was strapped on by some faceless individual or individuals from "higher up" and I presume I fall into this category.

The earliest plantings of exotic pro-
duction forests were characterised by
intensive site definition and an attempt to
match species with each site change. Parts of Conical Hill and Dusky Forests are or
were good examples of this type of devel-
oment. The result was a mix of hard-
woods and softwoods which created all
sorts of problems in management and
final harvesting. At the other end of the
spectrum were the plantings almost totally
-dominated by P. radiata particularly in the period from 1960 to the present day.

The reason for this domination was sim-
ple. From the far north to the far south and from sea level to about 600 metres a.s.l. radiata gives the best return to the forest grower and can be utilised for a full range of forest products. Nothing else matches it. I guess there will always be reserva-
tions raised by the monoculture bogey but
this problem may be more perceived than
real, particularly now that we have a full
range of radiata genetic material available.

How plantation forests should be man-
aged has of course been subject to intense
scrutiny for years. I think it was generally
conceded that to improve timber quality
and maximise returns, pruning and thin-
ning were essential when growing radiata.

However, within this general prescription
there was considerable variation. In fact
the variation was so great that FRI was
given the job of checking out radiata man-
agement region by region within the For-
est Service. This was the genesis of the
Radiata Task Force which then proceeded
to go well beyond its original terms of
reference. I recall that there were about
150 different management regimes being
used at that time. In addition in some
forests where the site index was low or
where weeds such as gorse were a prob-
lem tending consisted of one thinning and
no pruning. What you see as something
new, you will probably find has already
been tried and rejected or if it makes sense
is still being used.

If you intended to be provocative in
your editorial then I think you have suc-
ceeded but you appear to be basing your
comments on personal perceptions rather
than solid facts.

G.M. O'Neill

Editor's reply

Mr O'Neill misunderstands the point I
was trying to make. Criticism of the old
foresters (including Mr O'Neill) or the
Forest Service was not my intention, and
I apologise to Mr O'Neill for giving him
that impression. Nor was I saying that the
radiata pine direct sawlog regime was
"wrong" and we should all jump on an
alternative species bandwagon. I have no
doubt that radiata pine, managed in its
many and various ways, will continue to
dominate plantation forestry for the fore-
seeable future. An anarchy of impractical
silvicultural options, without reason, is
no-one's idea of good management. Mr
O'Neill's comments in this regard are not
in dispute.

The "target", for want of a better word,
was our decision-making process. A nar-
row focus on financial criteria alone, with-
out considering a broad decision-making
environment, particularly the market, is a
production-driven approach that does not
always provide the best solution. Differ-
ent companies and individuals have dif-
ferent objectives and resources, and no
one solution is necessarily correct - there
are horses for courses. I gave the exam-
ple of the farmer with the different needs
to highlight that point.

On that note, I would suggest there is
no universally "correct" silvicultural
regime. A forester can justify any number
of options by simply changing the deci-
sion-making criteria and adopted strategy.
Here I take issue with Mr O'Neill. Radi-
ata pine does not necessarily give the "best
return to the forest grower". That depends
on how you assess "return". Even on a
purely financial basis it is not given; and
I have yet to hear conclusive evidence that
the discount rate we use to give us that
answer is appropriate, nor that we can
compare that answer adequately with an,
on the face of it, inferior NPV for a longer
rotation species such as Douglas fir. As an
example of a broader decision-making
approach, Tasman have recently stated an
intention to review their rotation lengths
to ensure log quality matches their cus-
tomer requirements.

It may be my personal perception, but
the increasing diversity in decision-mak-
ning approaches we are beginning to see as
the wood-flows increase, and the owner-
ship base broadens, is good news, and was
worth pointing out.

Editor

Forest Accord and
mission statement

Sir

Council of the New Zealand Institute
of Forestry is currently reviewing the mis-
sion statement, and also considering
whether the Institute should adhere to the
Forest Accord signal in 1991 between the
NZ Forest Owners’ Association and a
majority of the environmental organisa-
tions. This Accord is intended to provide
a mutually agreed discipline of action for
environmentally-friendly treatment of New
Zealand’s remaining indigenous
forests.

Within New Zealand, the goals of sus-
tainability in respect of natural resources
were considerably strengthened in 1991
with the adoption of the Resource Man-
agement Act. Whilst overseas, in Novem-
ber 1992, New Zealand became a member
of the International Tropical Timber
Organisation. The ITTO was set up under
the United Nations in 1985. Although
principally a timber trade organisation,
one of its aims is to encourage moves
towards the sustainable production of
tropical rainforest by the year 2000. Clear-
ly, this aim stands in stark contrast to
the present reality of continuing tropical
forest destruction.

As a member of the ITTO, New Zea-
land is now committed none the less to
furthering the goal, not only in tropical
timber trade and in support for sustainable

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