

Korea (where there are severe climatic restraints). So the species are known in these two additional markets. I am aware of the Japanese production potential and its costs and problems.

A similar case could be made for growing some of the numerous Japanese hardwoods here too. There are, admittedly, abundant good temperate hardwoods in the USA, but there could be sufficient bias towards their own species to persuade the Japanese to at least install trials here. There seems likely to be a continuation of a rural labour supply in NZ, as against the falling population in Japan, which would be a mild help in evaluation.

I once wrote: "Quality log production plus some freedom of thought provides a likely source of comparative advantage ... " (NZJ For. Sci. 2(3) p.387). The prolonged ordeals over the radiata schedules, and assessing the current species, has prevented further plantation extensions until now. In fact there has been a great deal of no doubt valuable detailed work on radiata silviculture while the basic concepts of silviculture direction have been forgotten. We are now 25 years late in starting. So I at least applaud the idea of evaluating alternatives.

2. Radiata clearwood regime

These have been mentioned in another letter. Despite the research in radiata silviculture, it has not been tested fully as far as I know. It is a matter of testing the interaction between stocking, wind damage, volume, and clearwood production from trees **uninodal above the pruned section. One further log length is probably sufficient.** The drop-off in mortality has, I assume, enabled higher stockings to be retained. There is much less need to accept the restraint of a substantial log diameter if uninodals are used.

I have been sent a paper by M.J. Carson which is on this topic. I will have to work through the paper, and see what the conclusions are.

3. A lack of data

I still do not think NZ has adequate and well-designed species trials established to give growth data and material for wood quality testing. This is the best diversification measure. We resemble more the developing countries I work in, making extrapolations from bits and pieces.

4. Douglas fir again

This has been commented on in my reply to Dennis Richardson's article. "A triumph of hope over experience" (Johnson) I'd say.

5. Crops for hardwood chips

I have the corrected data on world chip

trade and have been following chips since 1977 (Fiji Pine Commission days). I think it is improbable that this crop would pay off as a main crop in New Zealand. It may be sufficiently attractive for some smaller schemes. I would be interested to see the figures. It is granted that the future of Australian supplies is uncertain, but the Indonesian plans for hardwood pulp production are underway and could well affect world hardwood pulp markets. (The Indonesian plans are for hardwood pulp production, based largely on *Acacia mangium* plantations.)

6. Who are these committees and how/who do they decide on these things?

R. Fenton

77 Forrester Drive, Tauranga

Alternative species

Sir,

I can't help but respond to Paul Smale's letter "Species diversity" in your February 1994 issue.

I will not debate the radiata issue. It is a marvellous species. Its growth, ease of processing, and the range of end uses for which it is amply suited make it an exceptional investment choice.

There are, however, a few points of order and Paul should not escape too lightly.

Firstly there is the matter of biological risk, a subject we usually dismiss. The risk to a single hectare may be increased by establishing another species. However, perhaps it is the risk of losing our entire estate that we should be more concerned with. The following analysis is crude and simplistic but there is a lesson here. Supposing the risk of losing the entire radiata estate was 0.1% over one rotation. Now suppose a second species with a different set of potentially virulent pathogens has the same 0.1% risk. The risk then of the total destruction scenario is increased 1000 fold by having only radiata compared with a 50:50 split of the two species.

Secondly, are we not getting a little parochial about our superb radiata? Perhaps if we ventured to our Asian market place and examined the prices and perception of radiata 'at the bottom of the heap' versus the fine-grained softwoods (*Cupressus*, *Chamaecyparis*) at the 'top', our enthusiasm would be somewhat dampened and rekindled in another direction.

Further, what of our other hopeful species? Let us consider *Cupressus macrocarpa* and *C. lusitanica*.

- Between them they will grow almost anywhere radiata will grow (except the hardest sites).
- Yields for many sites are likely to be as much as two-thirds of radiata's at

around 30 years and this proportion may increase on longer rotations.

- They can be harvested on a similar short rotation to radiata; perhaps even more successfully since there is no 'low quality' stem centre, thus allowing better grade recovery from smaller piece sizes.
- Stable, low shrinkage and constant radial density gradient without the heavily spiralled grain core of radiata.
- Naturally durable, etc, etc.
- Able to replace radiata in most end uses (not as pulp) and surpass radiata in many more.
- Now for appearance – "completely in another league". No further comment required.

Referring to Paul's letter. The comments "... diluting it by research on species ..." and "Before investing large sums on research on alternative species ..." and so on leave me wondering if I have missed something. We seem to have invested comparatively little on other species research but perhaps there is some new company-led research initiative about to happen. I wonder about the gain that may result say even from a little genetic research into canker and fluting in macrocarpa.

Paul makes the point that the large 1.3 million hectare radiata estate can drive a substantial radiata research programme and this programme is diluted by thoughts of other species. However, it is the next two million hectares of commercial plantation that we appear to be on the threshold of planting that should excite us all with possibilities.

Alan Somerville

Mea culpa!

Sir,

Mea maxima culpa – but like a venal sin to an old man it was worth it! To have provoked that greyest of Grey Wolves, John Ure, to an appearance in print in a technical journal is an achievement to which few could lay claim during his professional career. And I will willingly assume whatever obloquy may be necessary to prompt a repetition.

I have no excuse (except incipient dotage) for referring to poison-thinned larch: unlike pine and Douglas fir, larch needs no such intervention to provide autumnal coloration. But there is more than meets the eye to the story of the Redwood Grove (as Neil Cooper intimates) and perhaps one day John may be prevailed upon to tell us more.

What, Sir, is *Schleichwirtschaft*?

S.D. (Dennis) Richardson

(More letters on page 48.)

products, without any increase in production, could be worth up to \$4.5 million in increased export earnings when it comes into full force in 1999.

Remanufactured Wood Products

Probably New Zealand's fastest growing area of forestry exports is in remanufactured wood products. These products include a diversity of goods including wooden furniture and furniture components, mouldings, beadings, and prefabricated housing. Exports of these products have increased from \$64 million in 1990 to \$107 million in 1993. With a number of new remanufacturing plants recently commissioned or on the drawing board strong export growth is anticipated to continue into the future. These value-added products are particularly susceptible to tariff escalation, a common phenomenon under which a country's tariff rates become progressively higher as a product is processed to a higher degree. However, in a number of key target markets, notably the United States and the European Union, the GATT Settlement has markedly improved access for remanufactures. For example, the US tariff on wooden furniture which is applied at 2.5 – 6.6 per cent will be eliminated. A similar result was achieved with Japan where the present base tariff on wooden furniture is 4.8 per cent and in the European Union countries where presently the base tariff is 5.6 per cent.

Softwood Components

Softwood components such as mouldings, imported under code 4409.10, achieved similarly good results. In the United States and the European Union these tariffs have been eliminated (with the exception of finessed dowel rods in the US), while in Japan the tariffs in this class, currently applied at 4.8 – 8 per cent, reduce to 3.6 – 5 per cent.

The overall result on forestry sector tariffs, a sector where most of New Zealand's major markets apply moderate to low tariffs in any event, is sound if not spectacular. There now remain few tariffs that are insurmountable barriers for a determined exporter. The Japanese sawn timber tariff, which stands out firmly as the major source of trade distortion, will remain a focus for future unilateral negotiation. In the future decreased tariff escalation should provide additional incentive to substitute away from log exporting and into higher-valued processed products.

Comprehensive Analysis

The Ministry of Forestry is in the process of preparing a comprehensive analysis of the GATT Settlement for forestry.

LETTERS

Dr Wilfred J.B. Crane

Sir,

Readers will be interested that CSIRO has named a circuit road around the oval in front of Forestry House as Wilf Crane Crescent. Wilf was well known in NZ forestry and scientific circles and in November 1991, shortly before his death, had hosted members of a NZFRI cooperative when they visited Canberra. He showed them over an impressive outdoor tree physiology experiment in which water and nutrients were strictly controlled to a stand of radiata pine.

The ceremony took place as scheduled and the main speaker was Hugh Wareing, a forester and scientist well known to New Zealanders who recounted a number of amusing anecdotes about Wilf – an eccentric but well respected character. The road named in honour of Wilf is in front of the old Australian Forestry School where many old-time NZ foresters like myself received our training, before the advent of the Canterbury School of Forestry.

Ryde James

The highest GF rating

Sir,

I have recently been asked by a number of people involved in forestry as to what has been the highest GF rating allocated to any radiata pine seedlot so far.

Readers may like to know that, to date, the highest rating ever allocated to a seedlot involving more than two parents has been GF28. A few two-parent control-pollinated crosses (specific crosses) have been rated GF29* and GF30*. An asterisk indicates that less than normal confidence should be placed on that particular rating, because of the limited availability of the progeny performance data. It is unlikely that any increase in the top rating will occur over the next 12 months.

The availability of planting stock of the most genetically improved material is very limited. Regardless of the GF rating of the material being purchased, buyers should obtain a copy of the appropriate seed certificate from the seller and make sure that the packing note or invoice for the seed or plants being purchased contains the seedlot number and GF rating.

T.G. Vincent

Manager

NZFRI Seed Certification Service

Update on macrocarpa (continued)

old trees from open stands have also been selected. Many of the trees selected to date appear to have more than just macrocarpa in their parentage.

Once clones have been multiplied up, they are then tested for two or three years in the field to ensure they are vigorous and of very superior form before stool beds are established for commercial production of planting stock. The first few thousand rooted cuttings were sold in 1992, and it is hoped to have at least 100,000 available by 1996. So far there has been a strong demand for these plants, with stocks sold out a year in advance of production, despite a price of \$2.50 each. With increased production, costs will drop below \$2 and could even drop to \$1 if production is on a big enough scale.

Although the long-term performance of these macrocarpa clones has yet to be proved, early indications are that on prime sites they are faster growing than Leylands and have lighter branching.

Conclusions

The intrinsic wood properties of macrocarpa make it a very desirable species to grow a range of end uses, and the species enjoys a high reputation, despite the poor

quality of most logs currently available. It is relatively easy to grow but is not suitable for easy-care management. In young stands already established it is possible to produce high-quality logs with intensive pruning. In a few years time it is hoped to have high-quality seed available commercially, and this should greatly enhance growers' ability to produce high-quality logs. In the meantime, rooted cuttings of superior clones offer another avenue of quickly upgrading the quality of planting stock.

NZ training for Indian forestry officials

Seventeen scientists and officials from the Indian Council for Forestry Research and Education are in New Zealand for three-month training fellowships. Hosted by the New Zealand Forest Research Institute, the high-ranking visitors from all over India are undertaking United Nations Development Project Training Fellowships through FAO prior to returning to India to take key roles in major afforestation projects.