Response to SDR's 'Thinking Aloud'

DOUGLAS FIR

Dennis Richardson (SDR) states that "professional foresters ... poured the utmost scorn on any suggestion ... for other than radiata pine" (at the time of Spurr's visit). No references are given for this statement. There are at least three sets of documented data available to correct this. They are also relevant to another letter I have had to write to this journal, so I give them below.

The State Planting Record

In the decade to 1960, over 5100 hectares of Douglas fir were planted – the five years 1966 to 1970 are particularly relevant as, I think, they coincide with Spurr's years in New Zealand – "it comprised 17.3 per cent of State planting" (Fenton 1976). And in the next five years, 4700 hectares were planted (New Zealand Forest Service Annual Reports).

Pruning

The figures show a stronger emphasis. A physically greater area, and a far greater proportionate area of Douglas fir than of radiata pine, was pruned in State Forests. "Selective pruning ... of 25- to 30- and occasionally 35-year-old trees ... was carried out [mostly at Kaiangaroa] throughout the 1950s, despite labour shortages, while on many forests young radiata remained unpruned" (Fenton 1967A). This appears to have escaped notice. It probably made the stands prettier, which seems to be the only silvicultural explanation for this preference.

Douglas Fir Favoured

There was, not just at Kaiangaroa, a considerable bias in favour of the species, which is exemplified in the figures given above. On page 29 of the 1957 NZFS Annual Report, for example, there is a section on the reasons why Douglas fir planting was being extended: "Generally this species is now being established wherever it may be expected to thrive in open country, and it is also being widely used for underplanting...", and this example is typical. This report would have been written well before Spurr arrived in New Zealand. It is possible that Spurr encountered this enthusiasm for the species in State foresters when he arrived in New Zealand.

Farm Forestry Plantings

SDR further states, "though not, praise be, (by) the amateurs of the Farm Forestry movement ..." This reads as if only the farm foresters supported Douglas fir, according to SDR; an interesting reflection on people who paid with their own money (plus some subsidy?) for what they were doing. A response I received from Head Office to statistical queries in April 1966 reads: "(re) Farm Forestry... up to March 31, 1966 ... planting totalled 3500 acres, practically all *Pinus radiata*. There was a **very small amount of Douglas fir"** (my emphasis).

To summarise the points on "professional foresters" and farm foresters' preference for Douglas fir: the truth is exactly the opposite of SDR's unsupported assertions.

DEVELOPMENT AND TIMING OF 'THE DIRECT SAWLOG REGIME'

SDR goes on... "Many [professional foresters] indeed had no time for anything but the direct sawlog regime... and I recollect with sad delight on occasion when Fenton (I have to assume this is me and not the late FRI carpenter) was reduced to apoplectic silence by Steve's [Spurr's] precise articulation of the economic benefits of Douglas fir". As I am a solo consultant, it is necessary to reply to the two implications published; the first that I was unable to counter the economic arguments advanced by Spurr; and secondly, I was "apoplectic" about this. SDR does not make it clear what caused the alleged emotion.

It is necessary to give the chronology of this particular one ("direct sawlog") of my several silvicultural regimes. This is, even now, of some topical interest, if you will allow the detail.

1958-59 Conical Hill Mill. Grade studies were undertaken based as far as possible on log-height classes, which showed where the degrading factors and the grade yields occurred. This was backed up by months of grading at the mill-table. They also showed pruning had to be done early.

1960-61. The Conical Grade studies had one quick result. I was told to stop, and transferred to Waipa to facilitate this. In these two years I found the grade of 14- to 20-year-old thinnings, and worked up the older studies, both for publication (Fenton 1960 and Fenton & Familton 1962) and for the values per log height class. This was an essential step in what is now so obvious – to concentrate economically on a few logs, not the tree.

1961-64. I was recruited by SDR to FRI. One big grade study (Fenton 1967B) was done on a rigidly controlled basis that reinforced the earlier work (on p 45 of the Branch report of this study – June 1965 – there is a strong indication of the silvicultural priority in concentrating on maximum clearwood product from the pruned logs). So the grades and net values up the tree were clear, within the limits of the utilisation data available. The need for timely pruning and the aim of silviculture to concentrate on the pruned logs were paramount.

1966. I was at the Australian National University (ANU). In a massive Branch report – it weighs 0.75 kg – I worked out on a desk calculator a large range of financial results for Douglas fir (Fenton 1967C); it is dated April 1967, but was sent to FRI months earlier, and took six months to type. On page 12 there is a paragraph which **contains for the first time in a publication** my direct sawlog regime: "It is feasible that financially optimal (radiata) management is of a 20-to-25-year rotation without extraction thinning, and with selective pruning of only a number of butt logs". But I needed the growth projections. When these were available, see below, the last block in the synthesis was ready. This was extended in a thesis at the ANU where the mensuration work was acknowledged.

1967-69. (I was back at FRI and treated our earlier distinguished visitor [Spurr] very gently in the 1967 Douglas fir paper cited above [Fenton 1967C].) The final two bits necessary for the new radiata silviculture were available. J. Beekhuis published his yield table for radiata. With difficulty we scrimped up three plots that had been thinned early, and latched onto the more formal yield table at 22 metres or so. W.R.J. Sutton's contribution was in this yield projection.

The second final piece was another grade study (Fenton et al 1971) of reasonably pruned trees of about the size and age aimed at. This was not vital, as I had a good idea of what was possible from pruning by then, but reinforced the synthesis. [The paper was published (Fenton and Sutton 1968) and the rest, as they don't say, was far from history and nearer bloody murder. As it reinforced the unpleasant facts first shown up at Conical Hill, the Establishment scored. Judging from other contributions to the same issue of NZ Forestry (November 1993), the please-ignore-the-investment-locked-

up-in-the-forest and the pure Marxist needs of maximum volume still dominate some correspondents.]

Now, according to SDR, I attended a meeting and listened in silence to an economic disposition. I certainly recall being at an address when Spurr talked on the New Zealand Forest Products Ltd's radiata plots; I do not recall being at a Douglas fir talk, but this is quite possible. I suppose these talks were given in 1960 and 1962?

But even to the weirdest observer, it is easy to believe I said nothing because any financial calculations would have needed both the radiata regime and the Douglas fir work; and I had not got to that stage in 1962 – see the dates of the references given above. Spurr's paper came out in 1962, when the second Conical Hill study was published. The direct regime first fully appeared at the ANU in 1967-68 after its formative years cited above.

Turning to Spurr's "precise articulation of the economic benefits of Douglas fir". This is presumably the paper, Spurr 1961 (see references). Spurr is not here to defend himself; but professional publications are subject to continued amendment, and authors, living or otherwise, are subject to the normal course of scientific criticism. I refer readers to his paper (p15); the economics section consists of about 14 lines and the only figure given is, "a probably 50 per cent greater stumpage than for radiata"; marketability is considered too. In my opinion the economic parts are unimportant. But Spurr's influence, I think, reinforced the already considerable enthusiasm for Douglas fir in New Zealand. I would like to take this a little further in view of the Second Coming of this species as advised by M.D. Wilcox (himself the author of a major review of the species) in the same issue.

There was an FRI meeting on Douglas fir in 1974 (Symposium No. 15, James and Bunn 1978) for which I prepared three papers on risks, marketing and profitability.

One was formally published (Fenton 1976) (for this paper Bob Tennant did the growth analyses). This updated some of the Douglas fir regimes in the branch report of 1967. As part of a sensitivity analysis the returns for Douglas fir were doubled (as well as the full range of sensitivity analyses that were routine). I think it could make 7.5 per cent under this assumption. Radiata export logs, in that fortunate year of 1973, were making over 13 per cent; I didn't bother to double the returns for radiata. I did not update any of this to deal with the post Swiss-needle cast situation.

Douglas fir received relatively full treatment from the financial and economic side in New Zealand partly because, as SDR implies, a visiting authority carries so much weight (shades of the DeGryse report). I had hoped the species had been put in perspective at that time, and the only new developments have been a disease, and the usual changes in international trade. The current enthusiasm based on a doubling of prices had already been dealt with.

Can M.D. Wilcox let us know if these financial studies were updated before yet more money is to be spent on this species?

POISON THINNING OF LARCH

SDR infers larch was poison thinned (in Whakarewarewa? It was only present there and at Waiotapu.). I would be very surprised if this had occurred. Incidentally, there is a stand of *Castanea* in Whakarewarewa, and a reasonable variety of forest species there. Perhaps the dull bits are the bush remnants?

I suppose procustean means Procrustean.

AMENITY AND DIVERSITY

The rest of SDR's contribution is, I think, about amenity planting and variety. I would suggest that, for a start, SDR read the papers cited above, especially the pages 108-112 of the FRI symposium (James and Bunn 1978). On page 437 I make a few observations, in English, on diversification. This includes: "suggesting Douglas fir for amenity planting in New Zealand is akin to stocking a zoo with cows and sheep; there is no shortage whatever of trees suitable for arboricultural purposes in New Zealand and a certain imagination is required for small-scale planting". Plenty of other people at the meeting had the same idea and there are a number of good examples of making forests attractive, for example Hanmer and Dusky to confound this allegation. It is pleasant to record that my criticisms (Fenton 1965) of keeping people out of Whakarewarewa, for example, are now only of use as a past mile-post. I had also said... "Within the forests, definite provisions for greater attractiveness can be, and are, made with only minor interference to the grim business of making money out of low-value bulk, which is what production forestry amounts to".

"Within the forests, definite provisions for greater attractiveness can be, and are, made with only minor interference to the grim business of making money out of low value bulk, which is what production forestry amounts to."

I certainly know that Steve Strand, for example, had relatively elaborate planning for recreational forestry in Hawkes Bay exotic forests in the 1960s. (There are probably other similar endeavours that I do not know about.)

I have written a report (1991) on the use of Japanese ornamental species in New Zealand exotic plantations for the Japanese company concerned, and was glad to do this for nothing. It was based on real experience.

So this SDR straw man collapses too.

There is now a considerable literature on New Zealand plantations, and I suggest SDR becomes conversant with it. In addition, it would help if first-hand experience of the forests was obtained.

This article took some time to research and was done without access to official records.

There are things wrong with New Zealand forestry, but not those dealt with in SDR's article.

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