

LETTERS

Reply to a critical son

Sir,

It is not unknown for fathers to be subjected to indignities by their sons (think what happened to poor old Noah!). But I have to register concern when they are encouraged to do so within the pages of a professional journal (such as I had hitherto supposed New Zealand Forestry to be). Moreover, when your correspondent M.D. Richardson clouds the issues by introducing red herrings (New Zealand never had any corn-laws and slavery is a sensitive issue here) I have to conclude that, while the boy doubtless means well, he is unable to distinguish satisfactorily between economic and ethical options with respect to sustainability. In case the disability is inherited, let me share with him a note which is both lighthearted and profound from the Director of "Resources for the Future", Robert Fri, in which he posed three questions: Is sustainable development more likely to thrive under some particular set of political and economic institutions than under others? Should the values that underpin this development become part of mainstream ethical systems? And, if the answer to these questions is 'yes', are we prepared to live with the results? He concludes that the political, economic, and ethical settings in which sustainability is pursued will determine success or otherwise. In reading these questions and Fri's answers, I was reminded of the words of one of my own mentors - Lady Jackson (Barbara Ward) who commended "that combination of modern science with local inventiveness and local responsibility that is at the core of the only effective and sustainable ecological balance".

S.D. (Dennis) Richardson

Forest valuation

Sir,

I agree completely with E.M. Bilek as to what Faustman shows; however I doubt that this was ever used when decisions were made to invest large sums of money in forests in the 1920s and it certainly was not considered when large sums of private money was invested in the 1970s. Perhaps it was used by Roger Douglas and his economists when they decided that the State Forests should be sold off as rapidly

as possible.

My main concern is with the dirt forester who has to account for his stewardship. Forest models can provide good figures for the standing volume in a forest and they can be used to predict with a fair degree of certainty the growth in volume and the change in quantity that will occur in future years. However, in accounting on an annual basis, reductions in value of the standing forest caused by possible losses from wind throw, fire and other reductions such as thinning have to be shown.

On the question of money values, the figure must be unique to that particular forest, taking into account the cost of logging and transport to the selling point, whether it be a mill or port. This will vary from year to year as costs and prices vary. Using this figure to predict future values is only of use to show how forest growth improves values with age. Something of which owners should be kept aware. Forecasting market trends has no place in this. The forest manager's job is to produce the best result, volume and quality wise, and this monetary figure should only be used to quantify the expected improvements over time and to produce a figure that has meaning to non-foresters.

Foresters can in this way provide reliable figures year by year of the value of their forests. Accountants have yet to come to grips as to how to show this value in their accounts.

J.E. Henry

Not true to type (soil type)

Sir,

At risk of being labelled a pernicky soil scientist, I feel I must draw your readers' attention to a rather too free use of the term 'soil type' in your last issue. Dr Tat Smith was careful to define most terms in the body of his article (Is Plantation Forestry Good or Bad for Soils?), but Figure 5 has somehow slipped through whatever checking was carried out. At only one of the six sites on this figure was soil type applied correctly; BURNHAM (Lismore silt over gravel). The others were an amazing mixture of geology, topography and/or detailed soil classification.

An abbreviated definition for soil type is that it is a basic unit of soil mapping and should be designated by the geographic name of its series coupled to a textural name which indicates the texture of the topsoil.

Soil scientists, particularly those work-

ing in forestry, are few and far between these days, and are under much pressure to keep accountants happy. However, it is now more important than ever to keep standards high. The application of forestry trial data from very specific sites to broader areas is potentially more reliable if the soils are correctly identified at the outset of the trial. So how about some consistency in our soil typing for the future?

Geoff Mew

Tat Smith replies

Sir,

My thanks to Geoff Mew for pointing out the misuse of the term "soil type" in the manuscript that was published in New Zealand Forestry. I was unaware of the way in which this term is used by New Zealand soil scientists. Being educated under a different soils system led me to use the term too loosely for a New Zealand publication; and I am glad to be educated in its proper technical usage. Sometimes it is difficult to learn the new system fully without taking the proper undergraduate course!

However pleased I am to stand corrected, I also have to admit to feeling a bit blind-sided by your letter, as there was an opportunity for you to correct the misuse prior to publication. Please do not hesitate to correct me as soon as possible the next time!

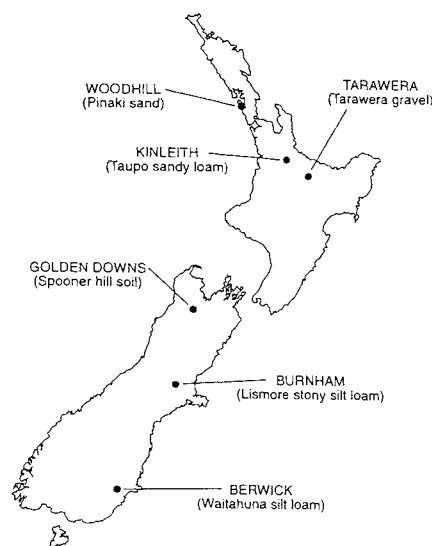
You raise some good points about the small number of soil scientists working in forestry these days; and I agree that we must keep standards high. Correct use of technical terms is basic to maintaining high standards. However, I question whether I should have used "soil types" in the manuscript, even if correctly applied. My experience with foresters in the US indicates that names like "Taupo sandy loam" may not be as useful as a term that incorporates some combination of information about parent material, texture, fertility and moisture status, management limitations, and perhaps weathering status.

In the US system, soil series names convey very little, and require more education in soil taxonomy than most non-soil scientist foresters get exposure to in their undergraduate forestry programmes. As a result, and to provide a useful aggregation of soil series on the basis of properties important for forest management, the New Hampshire state soil scientists (Sidney Pilgrim and others) developed a system parallel to the SCS classification, referred to as Important Forest Soil Types. These grouped soils according to texture, fertility and moisture-holding capacity,

drainage class, slope, surface boulders, and other properties that would either affect productivity and silvicultural options or limit management. In addition, a USDA Forest Service silviculturist in New Hampshire (Bill Leak) felt compelled to develop Habitat Types based on parent material differences in granitic glacial till. Hence, I chose the "amazing mixture of geology, topography and/or detailed soil classification" to describe the soils and sites our trials are located on. I was concerned about conveying the important differences among trial sites. Perhaps the best choice would have been the soil type name followed by some term describing whether it was on a sand dune or a sandy pumice or sandy alluvium.

In any case, soil scientists need to be aware that some elements of soil classification are too broad to be useful in distinguishing among soils without an armful of technical books; and need to ask what might be required to make the information more user friendly. I am also aware of the increasing difficulty in obtaining the required background technical bulletins, as we shift to Hewitt's system, and as New Zealand pursues corporate research organisations. It is not easy to take a soil type name as a starting point and find out all one needs to know about that soil to manage it properly, or to understand how it differs from another soil type. And we know how deficient the New Zealand soils data base is for interpreting the limitations of soils for intensive forestry purposes. Perhaps we could discuss this some time.

Below is a copy of a revised map, which hopefully is technically correct! Thanks again for your feedback. I am concerned that if we do not address the issues you raised in your letter, and that I mentioned above, we will be managing New



Zealand forests in the dark, and it will be impossible to achieve the sustainable dream of which we speak.

Tat Smith

Effects of discount rate

Sir,

Dr R. Fenton states "If regime B, say, is ahead at a 10% discount rate it is very likely to be ahead at three per cent", and refers to his paper in the NZ Journal of Forestry Science 2(3) p 382. In the context, "ahead" obviously means "has a higher land expectation value".

In response, I would suggest that rotation lengths will be determined not so much by the LEV, as by the rate of increase in liquidation value of forests. So long as the liquidation value is perceived to be growing faster than the discount rate, the rotation will, in the normal course, be extended.

Given a high premium for logs of large size, a change in the discount rate from 9% to 4% predicates an extension of the economic rotation from 27 to 35 years. Dr Fenton might be willing to accept these indicative figures: they do suggest that a dramatic change in discount rate is necessary to cause an eight-year increase in the economic rotation length.

Nevertheless, I do not believe that postulating the possibility of 4% discount rates within the next 30 years should qualify me to "join the Flat-earth Society". From 1900 to 1956 yields of high-grade corporate bonds in the United States rarely exceeded 4%, and 4% remains the borrowing rate for many Japanese corporations. The high rates experienced in Western economies in the second half of this century may prove to be either anomalous or illusory, or both.

My original letter attempted to suggest that our consideration of the matter of discount rates has lacked a historical perspective. The fact that I am what Dr Fenton describes as a "zero-interest doctrinaire" neither inhibits, nor, in my own opinion, disqualifies me from an intellectual study of the methodology of discounted cash flow analysis.

He suggests that successfully addressing the "choice of discount" rate problem would warrant the award of a Nobel prize, implying, perhaps, that it is futile to make the attempt. I believe he overstates the case. There is much to be gained from a diligent study of the existing information on economic rates of return, and only

modest academic abilities are required to carry out the task.

The point I wish to make is that we should not underestimate the pace of change, nor should we neglect to study its dynamics. Twenty years have elapsed since Dr Fenton's ground-breaking studies, and while his methods may remain unchallenged, new economic circumstances, new technologies, and another two decades of experience may yet point us in different silvicultural directions from those indicated in 1972.

Geoff Fischer

Irrelevant academia

Sir,

In a recent "Economist" I saw by chance an advertisement for positions, including the Chair, in the School of Forestry in Christchurch.

Much to my surprise, nowhere was there any mention of the rapidly rising economic importance of forestry in New Zealand, and of the corresponding importance of training, research and the development of a philosophy of sustainable forest practice, of the need for the stimulus of ideas.

Do I read into this a subconscious yearning for dreaming spires and knowledge gained entirely for its own sake, in brief, of the British disease of a contempt for commerce?

John Purey-Cust

CRI staffing

Sir,

In a recent issue (May 1994, p 35) Colin O'Loughlin remarked on the losses of science staff from NZFRI and Landcare Research since the formation of Crown Research Institutes (CRIs). Members of the Institute may be interested in the following data on the situation pre- and post-CRI formation for Landcare Research.

Over the five years pre-CRI formation science staff losses (researchers and technical staff) from the predecessor organisations were as shown in Table 1.

These staff losses amount to 24% of the science staff of these components of FRI and DSIR in 1987.

By research area, and by year, the staff losses were as shown in Table 2.