

LETTERS TO THE EDITOR

READABILITY

Sir,— In his comment "Dissemination and Application of Research Results" (*N.Z. Jl For.*, 28 (2): 143-9), John Balneaves suggests that some FRI publications are not readable enough for some audiences. Readability tests that I have done on a range of FRI publications support his views.

There are many formulae for testing the readability of written material. The one which is probably the most widely used is the Gunning Fog Index. It is simple to apply and gives results which correlate fairly well with other more complex tests. The Fog Index of an article indicates the years of schooling required to read the article.

The average of Fog Index of articles from a few magazines and some FRI publications is as follows:

	<i>Fog Index</i>
<i>Time Magazine</i>	10
<i>Scientific American</i>	12
<i>What's New in Forest Research</i>	16
<i>N.Z. Journal of Forestry</i>	17
FRI's Annual Report	20

I know that readability tests have many shortcomings and that the Fog Index is based only on sentence length and the number of words with more than three syllables. The results given above should still serve as a warning to FRI authors and editors that some of our reports are very hard to read.

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ECONOMICS OF EARLY CLEARFELLING

Sir,— The article on the economics of early clearfelling by L. A. J. Hunter and B. Everts (Vol. 28 (2), p. 163) raises the important issue on deciding the fate of stands that do not meet our expectations, whether caused by competing vegetation, wind damage or through inadequate pruning.

However, before we use the suggested method we need to clear up the points that are theoretically incorrect, and ensure that we are aware of its assumptions and limitations. The analysis

presented is incorrect in that it uses the present net value criterion to value the stands rather than soil expectation value (SEV), and therefore does not take into account the full opportunity cost of not proceeding with future rotations. The use of SEV is straightforward with the "clearfell now" option as we are immediately adopting a supposedly optimal management regime. With the "*laissez-faire*" option this new management regime is only adopted after the completion of the current rotation. Hence for this option the SEV formula should be used to discount all subsequent rotations to the end of the current rotation, then this value is discounted back by usual means to the present. Only after this procedure can we search for a value of the current material which makes the grower indifferent between the two options. The SEV criterion also automatically clears up the other aspect that is theoretically incorrect, namely that of comparing two management regimes that have been discounted back from different terminal points, as the SEV discounts over an infinite series of rotations (with no additional complexity or computational effort).

An integral part of an economic analysis is ensuring that we use financially optimal management systems and rotations. For the sake of simplicity we can assume that we know of at least a near optimal silvicultural regime, however rotation length varies with different economic conditions. For example, though it may be counterintuitive, expensive planting and site preparation costs (everything else being equal) prolong rotations as we would try to minimize the frequency of incurring these costs over an infinite time period. Given that we have gorse-infested stands, our optimal management regime may well be to clearfell at some time between the present and that of the originally envisaged liquidation point, depending on such simple variables as the interest rate and relative prices. Any economic analysis must therefore include rotation length as a variable.

Apart from these theoretical issues, I question myself whether any reasonable framing material can be produced from 22-year-old stands, given their low wood densities. It must be stressed that this type of analysis is only suitable at the individual stand level, and inappropriate where such volumes are involved that their immediate harvest would depress stumpage price. If the latter holds true, a harvest scheduling algorithm needs to be used that optimises the conversion period before the indifferent stumpage price can be calculated. A full discussion of any of the above issues can be found in papers by D. Brodie and various co-authors.

Finally I object to the use of "current net worth", as it is synonymous with present net worth. Nowhere does it say that the latter term has to be applied to the bare soil situation, that is, to the beginning of a rotation. Let us not jargonise economics any more than it already is.

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