ent starting points are not negligible in the way different terminal points often are, and there should, in our view, be an identity between the SEV and the PNV approaches, although this would not, of course, apply to the "forest rent" approach.

We agree with Katz that rotation length is an essential variable (p. 171 shows a sensitivity analysis for this variable) and also agree that the method is not suitable for analyses above the stand level (the last sentence, p. 173, sounds a strong warning on this issue). Probably no forestry analyst has yet dared to incorporate a poor export scenario into his stumpage assumptions for the next decade.

Finally, Andrès Katz repeats the statement (pp. 165-5) that CNW and PNV are synonymous. We agree that PNV does not have to be applied to bare soil, but most foresters are so accustomed to doing this, that some mental "flag" appeared necessary. The definitions of "technical term" and "jargon" differ in that the former refers to our discipline, the latter to someone else's. Faustmann was a forester.

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STOCKING RATES

Sir,— I feel I ought to comment on the paper by Whiteside and Sutton in the *Journal of Forestry* (28 (3): 300-13). This is another attempt to claim that the magic stocking figure of 200 stems/ha is the best for all sites in New Zealand. As such, it is misleading.

Table 1 in the paper shows that the results are "rigged" by (a) planting excessive numbers and (b) by late pruning and thinnings. A very different picture would be obtained if in Regime B only 1000 stems/ha were planted, if the numbers pruned were initially the same as in Regime A, and if pruning and thinning were undertaken at the same heights as in Regime A. Regime B, in effect, contains excessive costs and thus, I presume deliberately, favours Regime A.

It seems most likely (Table 4) that timely pruning and thinning would have improved revenue (sawn timber value), while

planting and pruning fewer trees in Regime B would have substantially reduced compounded costs. Timely thinning would also have improved sawlog yield and hence reduced sawing costs.

At least as important, the series of studies which have appeared in print take no account of the carrying capacity of sites. The maximum basal area of radiata pine stands in the pumice country lies between 60 and 70 m^2/ha. Stands of the same species in Southland and coastal Otago can attain basal areas in excess of 90 to 100 m^2/ha. This has a profound effect on the level of optimum stocking.

It serves no useful purpose to carry out such studies as that in the paper. What we need to know is the optimum stocking for various sites. Thus we need comparative studies of various final crop stockings (100, 150, 200, 250, 300, 350 stems/ha), with the optimum planting density and rotation for each. However, in all cases, pruning and thinning should be undertaken at the same crop height so as not to give a bias to the results.

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Rotorua

I. D. Whiteside and W. R. J. Sutton reply:

Sir,— We welcome the opportunity to reply to Mr Chavasse's comment on our paper but we cannot accept his claim that our figures are "rigged" or that our claims are misleading.

The object of our paper was to explain the background to the development of SILMOD and to give a summary of the main conclusions especially as they affect forestry profitability.

In the two years since we wrote that paper a great deal more work has been done. Although we can now better qualify them, the major influences we list on pages 303-5 of our paper are still as we gave them. Comparisons of the range of stockings for a wide range of silviculture treatments on a wide range of sites have consistently demonstrated that the profitability increases as final crop stocking decreases down to 200 stems/ha. Comparisons below 200 stems/ha are difficult because our currently available yield prediction models have not been adequately validated for such low stocking levels.

As we clearly state in our paper, the higher final crop regime (Regime B) was typical of many stands that have been treated in Southland Conservancy over the last 30 years, and indeed as late as 1979 (see Williams, 1982).* Regime A, by contrast, is

*Williams, F. J. N., 1982. Review of 1979 New Zealand radiata pine management practices. *N.Z. For. Serv., For. Res. Inst. Bull. No. 11*: 22pp,