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GUEST EDITORIAL

This issue of the New Zealand Journal of Forestry Science reports the third meeting of the I.U.F.R.O. Project Working Group 4-02, whose interest is Economics and Harvesting of Thinnings, and whose activity under Chairman Horst Kramer has been reflected already in the excellent proceedings of the Stockholm and Edinburgh meetings in 1969 and 1974 respectively.

This third meeting in Australia and New Zealand, the most significant with respect to thinning so far held in this region, set out to review the role of thinning in the future management of plantations of *Pinus radiata*. This restriction of review and discussion to a single species was the unusual feature of the meeting, and perhaps a major reason for its evident success. It enabled a progression and steady build-up, from historical background through biological, resource and marketing constraints to harvesting technology and the economics of thinnings and their harvesting.

From the outset, the meeting endeavoured to relate its discussions to *thinning objectives*, and so avoided futile arguments about thinning *methods* instead of fruitful consideration of methods in relation to *objectives*.

Allied to this was the effort to avoid the equally futile discussion which can arise out of talking about a method used at one place in terms of the forest extant at another, since even if the objectives are the same it does not necessarily follow that the best means of achieving those objectives in one place would be the best means of achieving them in another.

With two countries in which the variety of forest conditions is matched only by the almost incredible flexibility to management in plantation of the species which was the subject of the meeting, I believe that little in common could have been achieved had not participants kept these futilities in mind.

There can surely have been no factor of any significance which did not come up for some scrutiny at some stage. It would be difficult to point to any features of overriding importance *per se*; unless they were, firstly, how rarely there are two situations very much alike, and secondly, that the best forest is likely to be one flexible enough to accommodate changes in direction of both silviculture and harvesting from time to time.

Even within the one district or region, there seems likely to be a growing need for different thinning regimes and different operational methods, even in pursuit of the same produce and flexibility objectives. Of all the variables bearing upon thinning

which were brought to the attention of the meeting few have any degree of constancy. It is unlikely that any thinning regime begun tomorrow will be pursued to its end without change. Yet every thinning in a stand leaves its mark, a residual effect which subsequent thinnings may overshadow but rarely erase. Once again, it appears that what will be needed is forest flexible enough to absorb silvicultural and operational changes not foreseeable today.

Whether this is best achieved by silvicultural means — ranging from wide initial (or very early) espacement and no thinning at one extreme, to closer initial espacement and multiple thinning (non-commercial or productive) at the other — then depends clearly upon local, regional, and perhaps even national, circumstance.

Both approaches were among those offered to the meeting as solutions in different circumstances. Perhaps the discussion had most useful bearing on their actual application when posing the question of what happens if such relatively inflexible approaches do not work out. What happens if too wide an application of too narrow a silviculture results in inability to adapt to meet some change in log products the future may require?

Expectably, the material presented separated to some degree into —

- (a) Silviculture — whether, or which trees, to thin;
- and (b) Harvesting — how best to log these trees.

It is neither sensible nor practical for either line to develop separately; nor does there seem need to do so, since discussion brought out clearly that there is as yet more than adequate meeting ground upon which the objectives of both can be reconciled by compromise into effective agreement.

It was evident from discussions that within the constraints of the forest grower on the one hand, and those of the log buyer on the other there is a very considerable range of machinery and mechanised method available to do what has to be done.

Some of it is reasonably well-tryed. Some is barely beyond the prototype stage. But the potentialities and possibilities are obviously very far from having been fully tested yet; and there would not appear to be any great difficulties in finding the machine to meet the silviculture if silviculture can be clear what it wants to do, and what variation about its aims can be accommodated. The point was well made in discussion that the most effective way to operate is to provide the maximum possible flexibility in short-term choice of operations which will not compromise the long-term silvicultural objectives.

If, in the process of achieving such compromise, some long-standing silvicultural objectives are reviewed, and some immediate costs of single operations viewed more widely in the perspective of rotational economics, then plantation forestry will have been well served. I believe the need to do so in respect of *Pinus radiata* plantation forests in Australia and New Zealand became very evident during the meeting, and since this state of affairs is by no means confined to those countries, it is to be hoped that the point emerges equally clearly for others from the proceedings of our meeting as published here.

For the rest, participants are indebted indeed to the organisers of the meeting and its associated tours in both Australia and New Zealand; and to the forest services and private industry which contributed so readily. Indebted too must be the entire membership of the Project Group, participant in the meeting or not, to the Forest Research Institute of the New Zealand Forest Service for undertaking the publication of the proceedings in this Journal.

N. B. Lewis
Chairman,
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