

## GUEST EDITORIAL

The IUFRO Project Working Group on the Economics and Harvesting of Thinnings held a "regional" meeting in Canberra from 28 September to 2 October 1981. This was the second such meeting to be held in Canberra, and followed a previous meeting on the same subject held in 1975 (see *New Zealand Journal of Forestry Science* 6(2), 1976). Both meetings had as their focus the thinning of *Pinus radiata* D. Don plantations in Australia and New Zealand. This issue of the *New Zealand Journal of Forestry Science* contains a selection of those papers presented at the 1981 meeting which were available for publication.

Thinning practice, being a function of management, depends as much on the economic framework of a region as on silvicultural considerations to produce maximum volume or value yields. One benefit of the first regional meeting was to draw together discussion on thinning objectives and to provide examples of management practice from a wide variety of situations. It was not surprising to find that only a few regions and organisations could provide long-term practical experience of any magnitude. At that time motor-manual approaches predominated, although highly mechanised systems were widely discussed as a solution to production, cost, and labour supply problems. The meeting was a good blend of silviculturist and harvester viewpoints. There was general agreement that those who prescribe silviculture need to work extremely closely with the planners and loggers in deciding how *P. radiata* forests should be grown and marketed. Many participants at this first meeting accepted the interdependence of all silvicultural operations and the need to examine thinning in the widest possible technical and economic perspective. Thus the meeting reported in this issue had a firm basis on which to build.

In the relatively short period between the first and second regional meetings planting continued apace in both countries and the area of young plantations expanded dramatically. There were also a number of important changes and developments. In Australia, the conservative South Australian influence on commercial thinning practice became less strong. Thinning practice in some States diverged towards heavier, early treatments taking cognisance of new philosophies and in response to lack of markets for smallwood. The opportunistic thinning stance also continued in some States, but tempered by economic analysis of silvicultural options, growth in processing capacity, and the ability of new conversion facilities to absorb smallwood. Labour availability was uncertain, training of workers received emphasis, and the costs of motor-manual thinning operations rose sharply. Thinning mechanisation expanded rapidly during the period, aided by earlier experience gained with the Windsor harvester. Associated with this mechanisation were greatly increased capital inputs and extended shift working.

Developments in New Zealand over the same period included continuation of the trend towards versions of the "direct sawlog" silviculture by many organisations, a tightening pulpwood supply situation, and a concerted effort by Forest Service research and management teams to provide computer-based tools for management planning. Some innovative trials showed the considerable potential for increasing thinning production and reducing costs by planning planting and extraction as an integrated system. Equipment and methods for easy-country extraction did not change very much; but equipment for hauler thinning on steep country received a concerted development effort. In spite of this development, however, few organisations are planning wide-scale adoption of the technology. There were some pioneering efforts to fully mechanise smallwood operations but none were sustained in the face of difficulties with system availability and cost control when compared with motor-manual techniques.

Together, these changes indicate just how fluid thinning policies and practices in the region have been. They also indicate that reasonably frequent review is necessary to provide bench marks for further progress.

The high points of the 1981 regional meeting reported in this issue were too numerous to summarise in detail. The emphasis was on systems and machinery, and there was excellent documentation of current practice, methods, productivity, and costs. The experience of the larger organisations, both State and private company, was reported in commendable detail. The increasing sophistication of techniques and approaches to thinning was obvious. Also clearcut was the divergence between the highly mechanised operations of Australia and the mainly skidder-based motor-manual approaches in New Zealand. Considerable interest was created by papers which would once have been regarded as on the fringe of the meeting. These concerned training, labour supply, worker physiology, soil damage, and nutrient replacement. Manpower motivation was one of the few subjects not covered in this comprehensive review.

A workshop session invited groups to identify key problem areas associated with thinning plantations over the next few years. The six most important issues identified were:

- The need to improve the productivity of current systems by paying attention to each component of the system, especially the man;
- The need for improved planning and data collection at all levels of the industry;
- The need for better communication and dissemination of information relating to the choice of systems and machines;
- The need for comprehensive training of the logging work force;
- The need to quantify the impact of logging operations, especially highly mechanised operations, on forest soils;
- The need for compromise between growers, harvesters, and processors, to resolve diseconomies of small piece size, high capital cost of extraction equipment, and low value of the roundwood in the marketplace.

The IUFRO group concerned with Economics and Harvesting of Thinnings has a tradition of lively and topical meetings. Both of the Australasian regional meetings have been extremely successful. The regional flavour is one obvious reason for this. Restriction of the meeting to one plantation species within two countries allowed participants to diversify in other respects but always with a common focus. Another important factor is that the gatherings have not been too big, yet they contained a useful blend of researchers, economists, logging managers, foresters, equipment suppliers, and planners. The strong support of personnel from private sector forestry organisations is important, along with that from Forest Services. Finally, there is the relevance and importance of clarifying thinning objectives, practices, and operational constraints in a region which has a rapidly expanding plantation estate and a wide range of operating environments.

The participants are indebted to the organisers of the meeting, especially Messrs Kerruish and Brett and their colleagues, for the excellent arrangements at Canberra. The whole Project Group is indebted to the participants who prepared papers and to the organisations that contributed so freely with information and staff to ensure the success of the meeting. The Forest Research Institute of the New Zealand Forest Service is pleased to contribute by undertaking the publication of the papers in this Journal.

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