PRESENT AND FUTURE PROSPECTS FOR FORESTRY IN THE CENTRAL PUMICE REGION

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Summary

The region contains half the area of exotic forest in New Zealand and the major industries dependent thereon. Both are expanding rapidly to meet promising export markets. Local conditions are particularly favourable for this form of primary production and continued expansion is expected.

THE Central Pumice Region, or just pumice country to foresters, lies to the west of the Urewera and north of Tongariro National Park. It includes the Upper Waikato Valley, the Mamaku Plateau and extends to the hills behind the Bay of Plenty littoral.

The region is blessed with a generous, well-distributed rainfall, abundant sunshine, and low average wind velocity. The soils, which are covered in more detail elsewhere, generally have deep, freely drained profiles and an adequate supply of the mineral nutrients essential for healthy tree growth. The fact that they are not particularly fertile is an advantage in some respects. In addition, the soils have sufficient cohesion to form satisfactory road surfaces for summer use in some areas, so road formation is relatively cheap. The free-draining nature of the profile throughout most of the region allows for all phases of production forestry work to be carried out on a continuous year-round basis.

The soils suffer from a cobalt deficiency which, although easily corrected today, was a powerful restraint on pastoral development 40 to 50 years ago. As a result, large areas of land within this region were considered unsuitable for pastoral use and were secured for forestry.

Some fifty years ago, it was predicted that internal demand for sawn timber would exceed 700 million board feet per annum by 1970. (This prediction proved to be remarkably accurate.) On the basis of this forecast and the limited and intractable nature of the indigenous timber species, Government accepted the need to create new forests of fast growing exotic trees to augment and conserve the indigenous forests. Economic depressions between

the wars made labour available for large-scale tree planting operations by both afforestation companies and the State, thus creating the major part of the large exotic forest areas now in the region,

The combination of deep soil profiles and favourable climatic conditions for certain exotic softwoods makes this region pre-eminent in terms of forest growth or increment. Indeed, New Zealand may well have the greatest concentration of annual wood increment in the world at 60 million cubic feet within 20 miles of one major industrial complex, as well as the largest man-made forest, namely, Kaingaroa State Forest (310,000 acres).

The total area of exotic production forest in the region exceeds 650,000 acres or approximately half the total area of exotic species planted throughout New Zealand. The bulk of this resource was established between 1925 and 1935 and provides the raw material for complex, integrated forest industries such as New Zealand Forest Products Ltd, Tasman Pulp and Paper Company Ltd and several smaller enterprises. A wide selection of products is manufactured ranging from tissues to turpentine and cardboard to chemicals, including a variety of papers, panel products and pulp as well as large volumes of sawn timber. The gross sales value of production from these industries is around $160 million per annum. The major industries have announced expansion plans to utilize more fully the wood available to them. This will increase gross sales value by some $100 million by 1975, most of it from exports.

There is a bright future for forest products in the export market not only in the Pacific Basin but beyond; in fact, the Forestry Development Conference concluded in 1969 that we would run out of wood before exhausting market opportunities. Conference recommended a national planting target of 57,000 acres and laid down certain priority areas. This region is top priority by virtue of the advanced state of utilization development and the favourable conditions for forest extension and growth.

In 1970 some 56,500 acres of new country were planted including 24,500 acres in this region. This rate of development is expected to continue and probably increase, hand in hand with the felling and re-establishment of existing stands. It is of interest to note that the major wood-using industries now carry the main burden of new planting in this region and are expected to plant over 20,000 acres in 197 1.

For many years forestry has played a secondary role to agriculture in land use decisions but this attitude has changed quite

markedly in recent years, It is generally recognized now that production forestry, based on fast growing exotic softwoods, can be at least as profitable as pastoral farming in many parts of New Zealand including substantial areas in this region. For example, a comprehensive economic analysis, carried out by the Agricultural Economics Research Unit of Lincoln College in 1965, indicated an internal rate of return of 6% for forestry and 5½% for pastoral farming on the same piece of pumice land. A revision of this study, carried out by the Department of Agriculture based on 1967-8 values, indicated that the margin had increased to 6½% versus 4½% in favour of forestry. A more notable example can be found in the Tarawera Ash soils south of Mount Edgecumbe where the profitability of forestry is markedly superior, owing to the difficulty in establishing and maintaining pasture on these hill soils.

The existence within the region of several large and successful forest industries which are entirely dependent on locally grown raw material for continued expansion and diversification is a powerful argument in favour of more land being devoted to forestry rather than to farming, irrespective of the relative economics of these primary phases of production. The economies of scale are all-important to the highly capitalized pulp and paper industries competing on world markets and it is highly advantageous to these industries to have large concentrations of forest increment as close to their factories as possible. This suggests that any such idle land should be devoted to forestry, even if it is a viable proposition for pastoral farming. It is of interest to note that some developed or partly developed grassland has already been acquired for afforestation and more will undoubtedly follow.

Quite recently people have started to voice their concern over the deterioration of our environment. This has reached quite hysterical proportions in the United States and there is some danger that we in New Zealand may follow suit and overreact. This concern is timely, however, as it is not too late to achieve the right balance between the standard of living and quality of the environment we desire in New Zealand.

It is gratifying to note that Taupo County took the initiative in 1965 in seeking positive action to protect the lake and its fisheries which incidentally produce 1,250,000 lb of trout annually, and generate overseas funds as well as electricity in the process. As a direct result of the County's initiative, several government departments, local bodies and major land-owners meet

regularly to discuss and initiate action towards the protection of the lake from accelerated enrichment.

Although there is no quantitative evidence available to define the relative magnitude and significance of the various causes of lake enrichment, there can be no doubt that farm run-off carries more nutrients and unpleasant organisms than water from forested catchments. This indicates that stream channels should be protected from stock and the immediate encroachment of improved grassland and that forestry is the preferred land use within the basin. It is, therefore, particularly gratifying to those who are concerned with the protection of the lake to note that the major land-owners in the basin, the Tuwharetoa Maori people, have decided to devote some of their land to forestry and have in fact leased 78,000 acres to the Minister of Forests for this purpose. The owners are considering an extension of this arrangement to an even larger area within the basin.

At present less than 20% of the Taupo basin has been developed as farmland or residential areas and this proportion is unlikely to be surpassed. On the other hand, and by contrast, little more than 5% of the basin has been planted in exotic forest but this proportion is likely to increase to 25% during the next 20 to 25 years at the expense of undeveloped scrub land. The present 30% in alpine grassland and indigenous forest will remain under forest cover.

On the face of it, there is and will be a healthy proportion of forest, native scrub and grassland within the Lake Taupo basin. The distribution is not ideal, however, in that farmland tends to be concentrated in the north and west and exotic forests in the south and east, reflecting land ownership patterns rather than land use decisions. A more judicious blend of forests and farmland might achieve better protection of the lake waters as well as creating more interesting scenery. In addition, such a blend could be of mutual advantage to both forms of land use and this may well take place in future in the north and west of the basin.

It is concluded that the large areas of exotic production forest within the region by virtue of their very existence and outstanding productivity suggest further expansion. The success and magnitude of the industries dependent on these forests and the promising export market opportunities available demand and justify future expansion of these forest resources.