

LOCAL BODY FORESTRY IN NEW ZEALAND

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SYNOPSIS

Local authorities or their predecessors have been encouraged to plant trees since the early 1870s. They have been assisted by Crown Land vestings and special or general empowering legislation. Their efforts have been sporadic and specific, usually coinciding with other planting booms. Today they are responsible for only 5% of New Zealand's exotic forest area. Apart from spurts of activity created by enthusiastic councillors, they are unlikely to maintain a sustained effort in the future—owing to lack of interested or qualified staff, lack of finance, preoccupation with normal day-to-day council activities, and lack of incentive. Some ideas for future encouragement and expansion based on larger areas or amalgamations are discussed.

INTRODUCTION

This paper describes the part played by local authorities in the extension of forestry in New Zealand over a period of nearly one hundred years. It traces their historical development and reasons for establishing forests, the present position of their forests in New Zealand's forest estate, and the possible part they might play in the future expansion of our forest area. Local bodies administer quite large areas of land for the local community and much of it is suitable for afforestation. They could become the traditional communal forests of the Old World.

HISTORICAL

Local bodies, as we know them today, came into existence following the abolition of provincial governments in 1872. In many ways they were entrusted with the task of providing shelter and future supplies of fuel and timber in the treeless parts of New Zealand. They were encouraged to plant trees by the vesting in them of Crown Lands for plantation purposes within their boundaries, as well as by special empowering legislation resulting in incentives and wider powers. In some cases—*e.g.*, the Canterbury Plantation Board—they were administered by special organizations, but mainly they were controlled by the local Council. Since then there has been some splitting or consolidation of control—*e.g.*, the setting up of the Selwyn Plantation Board—but basically their administration has remained the same since their inception.

Naturally, the greatest afforestation activity has been in the localities with least native forest area—*e.g.*, Canterbury and Otago. In more recent times, other plantations have been established where it was realized that native timber resources were depleted and future local supplies must be safeguarded by planting—*e.g.*, North-

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land, Taranaki and Southland. Specific local bodies with interests in afforestation have come into existence for particular purposes such as river boards, catchment boards and water boards.

PAST REASONS FOR PLANTING

One has only to look through the names of some local authorities and their localities to see the various reasons for their interest in afforestation. There is no doubt that they all hoped to obtain a direct return from a timber sale sometime, but many plantations were established primarily for other reasons. These included sand use and sand-dune fixation, *e.g.*, Christchurch and Invercargill City Councils; the control of erosion and run-off in water supply catchments, *e.g.*, Auckland City Council and Wellington City Water Boards; river bank protection and control work, *e.g.*, Marlborough and North Canterbury Catchment Boards (originally Waimakariri River Trust); the utilization of otherwise unproductive land, *e.g.*, Waimea County Council; shelter from wind erosion and to supply timber and fuel, *e.g.*, Selwyn Plantation Board and the Ashburton County Council; endowment plantations for schools and fostering an interest in trees by children, *e.g.*, Education Boards; to control run-off in hydro-electricity supply catchment areas, *e.g.*, Dunedin City and New Plymouth Borough Council. From this list, it can be seen that the need for afforestation was wide and varied.

Others, of course, have planted areas for timber production only. They have seen the tree planting boom periods and have been caught up with the same enthusiasm. They have been required to find work for the unemployed, and tree planting seemed a popular outlet. In more recent times, like others, they have used tree planting as a means of controlling the advance of noxious weeds. Unwanted gravel reserves have been planted up; sections taken over in place of unpaid rates were often covered in weeds or were marginal land, and so were planted to trees. There was often little method about their afforestation activities, but they seemed a good outlet at the time. There was scant thought for future management of the resultant plantation. Most have little idea of what they should do with their plantations now. It must be demonstrated more widely that forestry is more than just planting trees.

THE PRESENT POSITION

(1) *Area*

The National Exotic Forest Survey, when considering those owners with at least 50 acre of effective exotic planting, ascertained that the gross area controlled by local bodies is 163,777 acres, of which only 44,250 acres are productive exotic forest. This is only 5% of New Zealand's exotic forest area within the same categories, not a very significant amount. The difference between the gross area and the productive area is not all plantable because much of it is native protection forest, *e.g.*, catchments belonging to the Wellington City Water Board. Extent of the balance that could be planted is not known.

(2) *Management*

The total growing stock volume is not available, so that a permissible annual cut cannot be calculated. *Pinus radiata* is the major

species used and preliminary estimates put the mean annual increment (6 in. top volume) at around 180 cu. ft. This is not high when it is considered that the average age is 25 to 30 years. The major reason for the low M.A.I. is generally lack of management since planting. The spread of age classes is very poor as there was a long period of inactivity in planting from the early 1930s until after the war (1939-45).

To make up the productive area shown above, there are 55 local authority owners, representing an average of a little over 800 acres each. Only eight owners control a productive area greater than one thousand acres, their combined holdings being 34,249 acres or 77% of the whole. Six of these owners are in South Island. The smallness of the holdings limits the importance of the forests in relation to the local body's total responsibilities. As a result they tend to be neglected. They do not justify establishment of a utilization plant or the assurance of a continued log sale to a private mill. Therefore, there can be no continuity in management plans. From time to time, some local bodies have installed milling plants to cut timber for their own needs—*e.g.*, Invercargill City Council—but these have seldom been a practical or financial success. In past years, the larger owning authorities have contributed a considerable proportion of the annual local log production—*e.g.*, Dunedin City, Christchurch City, Ashburton County, McKenzie County and the Selwyn Plantation Board; but lately the emphasis has been on log supplies from State Forests. The State provides log sales which are more attractive to the miller than small-scale stumpage sales; he can leave the more troublesome logging for others to organize. Today most of these, being in South Island, have to compete against a falling demand for timber and a sustained indigenous cut from the West Coast. This could be temporary.

(3) *Staff and Labour*

In most cases, the plantations came under the control of the Engineer or the Director of Parks and Reserves. However, because of these officials' lack of training in forest management and the emphasis on other local body work, their interests lie elsewhere and the plantations tend to be neglected. Available labour is very limited and often not always on hand to do necessary forest work. Such labour usually comprises a reserves staff of only one or two men—who look after parks, domains, monuments, street verges, plantations and cemeteries. In some catchment boards, the Soil Conservator is given the responsibility of looking after the plantations, but this is not always the case even though he would be the best qualified to do so. Usually he does administer the tree planting subsidies for farmers, who plant against various types of erosion.

It is only the larger areas of local body forest that are managed by a person trained in forestry—of these there are only five or six, excluding the catchment boards. This is inadequate but not surprising, if one considers the smallness of the areas within most ownerships. Some local bodies seek professional advice from time to time and this is probably the best that can be expected. However, if staff and finance are not available, as is often the case, the advice is not always acted upon.

Some local bodies were or are required by statute to prepare a working plan for approval by the Director General of Forests. It is not clear what action would be taken if prescriptions were not adhered to.

(4) Finance

Most local bodies are required to, and do, keep their Reserves Account separate from their General Account. However, most of the former cannot be looked upon as strictly a plantation account because lease income forms a big part of it—*e.g.*, Ashburton. By looking at some examples, one can see how varied has been their experience.

In the very beginning, the Selwyn Plantation Board began its work by financing tree planting with rent income from vested Crown Land. Expansion has been gradual, financed entirely out of income. A sound position has been reached today: the Board has substantial assets, although its liquidity has been rather restricted for a few years. Income from leases is still quite important. By insisting on full market value stumpages, it has made forestry pay. Some very satisfactory returns per acre per annum have been obtained from plantations of *Pinus radiata*, *P. larico*, and *Pseudotsuga taxifolia* (*cf.* Annual Reports of the Selwyn Plantation Board).

The Ashburton County Council's experience has not been so fortunate. For many years it was thought that the plantations were a financial success; but more recently it has been shown that income from leases had kept the account afloat. Just under half the reserves are still unplanted (4,850 out of 9,972 acres). Many farmer members of the Council are not well disposed towards the plantations, so that some are being converted to farm land after clear-felling. Some unplanted reserves are being relinquished too. There has been little or no forest management and the areas suffer from periodic wind damage and fires. Diameters are small and recent stumpages have not been high. A log sale to Japan was not a success, mainly because logs were too small.

McKenzie County Council also have a production area (708 acres) small in comparison with their total reserves (4,857 acres.) Some of their log sales, though small, have been quite remunerative. They have a small programme of establishment and silviculture, which will depend on availability of finance and labour.

The Christchurch City Council have always had a resident manager and have carried out a regular programme. Because of their proximity to markets, they have had a ready demand and favourable prices. Today an up-to-date mill is entirely dependent on their plantations for log supplies. Minor forest produce is also a feature of their cut.

The Dunedin City Council areas are similarly situated although their topography is not so favourable. They have a wide range of species, for which there is not always a market when the stand needs attention. For particular areas substantial stumpages have been obtained, *e.g.*, £746 per acre in 1947, but cannot be maintained. As a result, much of their silvicultural work has been neglected.

In North Island, there are cases of good returns (*e.g.*, Auckland and Hastings) from good land but plantations are not being re-established because of greater returns from other land use, *e.g.*, the urban sprawl. The Masterton County Council gained encouragement for forest establishment from a bequest—they are very fortunate. Others have small areas as the result of some local enthusiasm but their profitability has yet to be proved. Being small and often isolated, they are unlikely to be very attractive except for a specific local market.

THE FUTURE

The above summary has attempted to set out the past and present position. What of the future? The following comments apply to production forests only, because planting for other reasons (erosion control, weed control, etc.) is an incentive or reason in itself.

Most local bodies have difficulty financing even their essential public works. Therefore little money is available for afforestation, and if it is they want to be assured that the venture will be a financial success. Today's high establishment and treatment costs must be offset in the future by a ready demand and substantial stumpages, otherwise there is no incentive to plant. Many have had experiences that are not very encouraging, despite the cheap establishment costs of the past. This makes them unsympathetic to the idea of further planting. They must inevitably look at the future and weigh it against today's costs of establishment.

A sustained annual or periodic yield is the only attractive proposition to a utilization plant and this involves a larger area than many local bodies have envisaged previously. A minimum area of 700 to 1,000 acres in any one county would be a worthwhile target. Choose the districts with a possible unsatisfied local demand, not too close to the major timber producing areas, and there will be some hope of financial success. In turn, an area of this minimum size will justify some continuity of management. This is essential. The work can best be done in the smaller areas by an experienced roving contract team, if it does not warrant employing a permanent staff. Such teams are already being set up in parts of New Zealand and are doing good work. They could overlap into work on farm woodlots as well as local body forests.

But there must be sustained interest in forestry at council and executive level. Too often in the past there have been spurts of activity only when there has been a chairman, councillor or engineer with a particular interest in afforestation. His enthusiasm sweeps the others along. When he is no longer there, the plantations become neglected and no more planting is done. This is a pity and does not lead to any continuity in forest management. The grouping of forests belonging to adjacent counties under one control for their mutual benefit, as was done when the Selwyn Plantation Board was set up in 1910–11, would go a long way towards achieving continuity. This would be especially effective if the controlling board or committee were appointed and not elected; they would then be less vulnerable to periodic changes and local politics. Amalgamations of this type would justify the employment of trained forest staff and would leave the county engineer free to concentrate

on roads, bridges, water supply, sewerage works, etc., for which he is trained. A stronger sales policy could result too.

The earliest and the most substantial plantings by local bodies were done on Crown Land vested in councils for plantation purposes. There is no reason why this same system should not be used in the future, if the Government is keen to encourage more local body planting. This could ensure that larger areas would be available in concentrated localities where future supply was most necessary, and thus benefits accrue from all the advantages mentioned above. It would help to create local enthusiasm.

Whether loans would also be necessary would depend on the financial status of the authority concerned, but it is almost certain that some help would be required. By the time that a sustained volume yield is achieved, it is to be hoped that stumpages will allow a sustained financial yield as well. As a result of the better management made possible by bigger areas, a full range of age classes and the practicability of a sustained cut would command better stumpages. These would be present, not merely reported in isolated cases as at present. Forestry, in order to appeal to the local body as a business proposition, must be supported by attractive stumpages; it cannot survive on subsidies from rates—the ratepayers would see to that.

But against all this, remember that during 100 years local authorities have contributed only a very small percentage (5%) to our present forest estate. Take away the largest areas, which were mainly Crown Land vested for specific reasons, and there would be little left that was planted purely for timber production. That is their record in the past. Are they truly interested or equipped to contribute significantly to New Zealand's future forest estate? I shall leave you to ponder on that thought.

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