

footing. This institute might well be attached to one of the other colleges of the Dominion. Meantime the central organization should forthwith appoint committees of similar constitution to study the existing provision for work in these fields, to encourage and develop it along lines conformable to the ultimate plan, and to facilitate co-operation with the corresponding organizations at Home. In particular, the problems of fruit transport and the related problems in the orchard need bringing into a well-conceived attack, and here again the Fruit Control Board and the Meat Producers Board would be ready, I understand, to assist financially and in other ways.

In preparation for this work I suggest an able and well-trained young man should be sent to England by the new central organization and attached to the staff of the Low Temperature Research Station at Cambridge, in accordance with the invitation extended through me by the British Government. (For a diagrammatic representation of the new organization see Appendix B.)

Forestry and Forest Products Institute.

30. There remains the problem of research in forestry and forest products. For this, too, a special institute should, in my opinion, be established in close relation to the Agricultural College and upon the same site. The need for economy both in expenditure and men calls urgently for this solution of a pressing and most important national problem. At present there is no institution in New Zealand devoted to the study of silviculture in its two phases of (i) the life-history, regeneration, and economic exploitations of the native bush, both trees, bushes, and creepers; and (ii) the afforestation of exotic trees. Work on forest products is being done for the forestry authority at Auckland University College and at Canterbury College, Christchurch, but the Director of Forestry has earnestly recommended the Government to authorize the establishment of a forest-products laboratory and a forest experimental station in the North Island (*cf.* First Quinquennial Review of the Department of Forestry, 1925, page 8). For exactly the same reasons as those that apply to a Dairy Institute, forest-product research should be related to the new University College and financed by contributions from the timber-milling industry and by grants from the central research organization. The expense of establishing a self-contained institute to deal with these matters is shown by the experience of the Indian Government at Dehra Dun. Botanists, bacteriologists, chemists, physicists, engineers, statisticians, and economists are all needed for an effective institution, and the support a University can offer, especially if it is engaged in training the higher grade of forest officers as it should be, is obvious. The new Forestry Institute at Home has been located at Oxford, where the training is done, and the new forest-products laboratory is but an hour's distance away. It would have been brought right into its neighbourhood could a suitable site have been found.

A Forest Policy.

31. The question of forestry is referred to as a pressing and most important national problem. It is more than this: it is pressing and important for the Empire as a whole. The best authorities anticipate a serious world shortage of softwoods within the next twenty years, and Great Britain, which to-day is spending at least £40,000,000 a year on imported timbers, needs the help of the dominions and her colonies in substituting an imperial for a foreign trade in this vital necessity of man. Substitutes for the present softwoods will have to be found and the present supplies greatly increased. Unless it can become entirely self-sufficing, rising prices will affect the Dominion equally with the Mother-country, and if prices are high, why should New Zealand neglect the development of a new and profitable market overseas? Moreover, effective forestry, if it can be pursued as it is now pursued in France, Germany, Norway, and Sweden, means, in the opinion of competent judges, a new and large population on the land, much greater in numbers to a given area than can be the case with the pastoral industry or farming on a large scale. There are undoubted difficulties in the formulation of a forest policy on a big scale, but the promise and possibilities appear to me to be so great, while there are so many difficulties to be considered, that I venture to trespass to this extent beyond the strict terms of my order of reference, and to recommend that the Government should invite the best forester they can secure to visit New Zealand, to survey the whole present position both as regards the native bush and the planted areas, including State and private enterprise, and to report upon the possibilities of a big forward movement. Should he recommend modification in the present policy I suggest that the Government should then appoint a strong committee, including the Director of Forestry, to prepare a plan of forest development and to consult with the British Government for the initiation of a forest settlement scheme. It should be observed that forestry is able to absorb usefully healthy men of greater age than agriculture can, unless they have already been used to country life.*

Proposed Committee on Forestry and Forest-products Research.

32. Be this as it may, however, there remains the need, in consonance with the present scope of the work, for the early establishment of a Forestry and Forest Products Institute. The Professor of Forestry at Auckland would naturally be connected with the Institute, while the work being done at Christchurch would be brought into the scheme from the beginning. To this end I recommend that the central organization for research should establish a committee of University representatives, the State Forest Service, and timber-millers to work out a programme of work and estimates of cost. The Director of the Forest Service would naturally be the chairman of the committee, and it would be found possible, I think, from conversations I have had with timber-millers, to secure their support for a levy on the amount of timber felled or produced.

* I have discussed this matter with Professor Condliffe, who agrees that the only way of increasing the present immigration ratio is to find new avenues of employment.