

best specimens are allowed to remain, and, if a systematic supervision is exercised in the future, the final result will be the production of perhaps six hundred suitable milling-trees, which in forty years' time will each contain on an average 1,000 superficial feet of timber, so that the artificial forest will yield no less than 600,000 superficial feet of timber against the indigenous forest's return of from 10,000 to 20,000 superficial feet. In this comparison no account is taken of the kauri forest, which gives an exceptional yield, for, as the kauri is rapidly disappearing and only forms a small proportion of our native forests, its comparison would be somewhat misleading.

REVENUE AND EXPENDITURE.

Up to the present time the expenditure and requirements of the State nurseries and plantations has been met by the revenue derived from the sale of timber in State forests, and of these the kauri forests in the Auckland District have contributed most of the receipts. Owing to the rapid disappearance of the kauri, the State forest revenue is quickly shrinking, and it is no longer possible to maintain and develop the tree-planting operations of the Department from this source. It will consequently be necessary to draw on the Consolidated Fund for future requirements, and, although generations to come will reap a rich return from present expenditure, yet forestry operations must of necessity be unremunerative for a considerable period, though a small revenue may be derived from our plantations by the sale of "thinnings" and surplus tree-plants from time to time, and the sale of timber in State forests will still enable a portion of the required revenue to be provided for many years to come.

CONSERVATION OF "WORKED-OUT" AREAS.

With reference to the kauri forests, it may be well to mention the rule adopted when the millable timber is taken out. The greatest care is taken that no unnecessary damage is caused to the remaining trees in the forest by sawmilling operations, and as soon as the kauri has been extracted the remaining forest is protected from any further destruction and, as far as possible, allowed to reproduce itself, so that for climatic and soil-denudation purposes the land is as adequately conserved as before the kauri had been taken out. In several cases it has been found that a remarkably brief period has been sufficient to enable young growth to spring up and obliterate the ravages wrought by milling operations. Not only in the above-mentioned forests, but also in those of the Nelson, Westland, and Southland Districts, this has been found to be the case, and the officers of the Department have always received strict instructions to endeavour to insure that the millers leave untouched, as far as practicable, the non-milling trees in the forest. From even a close view it is difficult to discover after the lapse of a few years whether many of our native forests have been the subject of sawmilling operations, and the climatic effect is retained in an admirable manner.

BEST LOCALITIES FOR AFFORESTATION.

Experiments have been made to see whether it is possible to replace the gaps in the forests caused by sawmilling operations with the planting of foreign trees ultimately suitable for milling, but it is found that such a matter would be very expensive and the results hardly worth the time expended, as the rapid growth of native scrub and young trees would retard the development of exotic plants. It is therefore proposed to continue to devote the whole of the efforts of the afforestation branch to raising forest plantations in treeless localities, where land is in the hands of the Crown, and is almost wholly unfitted for agricultural or grazing purposes. Some tracts are found in the vast Kaingaroa Plains, between Rotorua and Taupo, where some 600,000 acres of Crown land are available for planting purposes, and the Waimarino Plains, to the west of Tongariro (in the North Island), which, now that the railway has been completed, can readily be supplied with plants from the central nursery at Rotorua; whilst in the South Island the chief localities needing attention are South Marlborough and North Canterbury, which can be supplied with trees from the Hanmer Springs Nursery, and South Canterbury and parts of Otago, which can be supplied from Tapanui Nursery. By acting in this manner, expenditure is lessened and forests will gradually grow in localities where they are needed for climatic purposes, and from which they can ultimately be worked at a profit owing to their easy access to the principal markets of New Zealand. In a few cases, however, it has been noticed that the unusual dryness of certain areas prevents any successful attempt at afforestation being undertaken at the present time, and consequently care has been taken to avoid all such localities in future operations.

DUTIES OF FORESTRY BRANCH.

As has been stated, there are two distinct divisions of the Forests Branch of this Department. The older or *forest-conservation* division is that whose duty it is to care for, inspect, and deal with our remaining indigenous forests. These include (a) Crown forests reserved under the Land Acts, administered under the personal direction of the Minister of Lands through the Local Commissioners of Crown Lands and their staffs of timber experts, Crown Lands Rangers, &c.; and (b) State forests reserved under "The New Zealand State Forests Act, 1885," dealt with by the Commissioner of State Forests (*i.e.*, the Minister of Lands) and Conservators of State Forests (otherwise known as Commissioners of Crown Lands) under special regulations. It may be necessary later on to appoint a special officer to supervise the cutting and milling operations in these forests somewhat after the scheme adopted in the Indian Empire, and in France and Germany, &c., where only systematic and limited cutting is sanctioned under rigid safeguards for the protection of all trees not authorised to be felled. But at the present time the system of preliminary inspection by special officers, public notification of the sale of certain specific areas of bush, and careful supervision of the milling operations, is considered to be sufficient for our requirements, and a more elaborate system of dealing with our forests may not be needed for some time to come. The second or *afforestation* division is under the charge of a superintendent of forest nurseries and plantations (designated for departmental purposes as "the Chief Forester"), assisted by a staff of assistant foresters and nurserymen, and its results are embodied in the following report.