

If we take the list of trees standing in the State plantations as given in "Forestry in New Zealand," we find that up to 1909 the following had been the principal trees planted: Larch, 10,989,835 trees; Austrian pine, 3,769,431; Corsican pine, 3,756,325; various Australian gums, 3,464,589; *Catalpa speciosa*, 2,196,544; English oak, 2,041,621; Norway spruce, 1,242,723; ash, 583,925; totara, 546,500; sycamore, 525,247; bull pine, 291,145; Sitka spruce, 241,623; redwood, 186,641; *Robinia*, 161,800; American white-pine, 137,125; Australian blackwood, 140,335; Bishop pine, 132,025; Monterey pine (*Pinus radiata*), 110,161; alder, 77,918.

From the above it can be seen that larch has been planted in far greater quantity than any other tree, and since that date it has continued to be planted in considerable quantities. It is, however, very questionable whether larch should be used at all for afforestation purposes in New Zealand. Previous experience with this species in all parts of New Zealand, with but few exceptions, shows that, though it may grow well at first, its growth slackens, and it does not eventually form a timber-tree of much value. Nor is this all, for in Europe larch is subject to a most destructive disease, which, if it appears here, would cause enormous loss in the plantations, and possibly lead to their having to be renewed with some other tree, which, in view of the great area under larch, would be a financial disaster. Mr. Goudie showed us a piece of the wood affected with some disease which quite possibly is the larch canker. Further, in order to guard against the disease, the trees must have all their dead branches removed so as to allow free access into the plantations, so that an examination of the plantation in quest of diseased trees is possible. A trial clearing of an acre at Rotorua cost £3, and it would take another £1 to remove the debris. Should even the cost be considerably less than the above £4, the increased expense, at compound interest, would make the planting of larch quite out of the question from the financial aspect. Under the present management of Messrs. Goudie and Robinson the planting of larch still continues, but we are glad to see that it is much less than in the past in proportion to certain valuable pines, as the following figures show: 1909-10 and 1910-11—Larch planted, 5,096,000 trees; Corsican, heavy and bull pines, 8,903,810 trees.

Besides larch, other doubtful and even useless trees have been planted in the past, not in small quantities for experiment, but in large numbers to form permanent plantations. It may be easily understood that no tree should be used, however good it be, if there is a more valuable tree to take its place, and still less (in an operation where every economy must be exercised if a profit is to result) should trees be planted which will not grow rapidly enough, or which yield a worthless timber.

The following examples of certain trees useless for New Zealand afforestation may be cited with the number planted: *Catalpa speciosa*, 2,196,544; totara, 546,500; English birch, 252,710; Norway spruce, 1,242,723; English oak, 2,041,621; sycamore, 225,247; and alder, 77,918. Of the above, the worst case is that of the *Catalpa*, a tree interesting for a botanical collection but useless for afforestation. The planting of an acre or two might be justified, but it is hard to conceive why more than two millions were planted. Some of the trees cited above, although they give valuable timber, are of too slow a growth for profit, such as oak and totara; others, such as sycamore and alder, are comparatively worthless. The present management is growing fewer of these valueless trees, but even yet some are being reared in the nurseries, and the comparatively poor Norway spruce is much more in evidence than the far more valuable Oregon pine.

Planting the wrong trees, or faulty planting, has led in some cases to its being necessary to replant the area. This is now being done, and very wisely in our opinion, by Mr. Robinson at Conical Hills and elsewhere. Errors of this nature are just as costly to the State as destructive fires.

In some cases the trees, though suitable enough in all other respects, have been planted in the wrong position. Thus certain dry slopes at Conical Hills are planted with larch, but the Austrian pine would have been more suitable in the same plantation for such a position.