

Plains. Had shelter-belts been previously provided a certain stand of larch at the Dusky Hill Plantation would have grown much straighter than is now the case, and a considerable waste of timber have been saved.

2. *The Planting of Larch.*

We have already in Part II, section 5, given our reasons why we consider too much larch to have been planted. Here, without going into further details, we recommend that, in view of the reasons already given, we consider the planting of larch to be risky, and that it is advisable to cease planting that tree in the State plantations until further experience as to its behaviour is gained.

3. *Other Trees recommended for Planting.*

We specially recommend the following trees for extensive planting in the State plantations: Monterey pine (*Pinus radiata*), Corsican pine (*P. Laricio*), Heavy pine (*P. ponderosa*) Oregon pine (*Pseudotsuga Douglasii*), various varieties of poplar and such Australian gums as have been proved to be the best suited to the localities to be planted. Ash (*Fraxinus excelsior*) should be grown where suitable, but it is not a tree for general planting.

With regard to the poplars, these are to serve the double purpose of acting as fire-breaks and producing timber. As for the gums suitable, there are many trees thriving in various localities in New Zealand which are obviously suited to the local conditions, and from which seed can be readily procured. Seed collected in Australia is to be distrusted for the reasons given when dealing with the procuring of seeds in general. Besides the above-mentioned pines, it is desirable to grow some that would produce fine-grained timber suitable for the finest class of work. For this purpose the Weymouth pine (*Pinus strobus*) is to be highly recommended, since it is recognized as the most valuable pine of the eastern United States. Trial plantings of this tree are doing well at Rotorua, and should they continue to give promising indications as to the suitability of the tree, we consider that it should be planted in increasing numbers. We also recommend that a trial be made of *Pinus excelsa*, which is considered to yield the most valuable timber of any of the Himalayan pines. Seed of this tree can be procured at Queenstown, Homebush (Canterbury), and Greendale (Canterbury).

As it is probable that sand-dune planting will be a feature of the future, we suggest that, in addition to the all-important *Pinus radiata*, the Austrian pine (*P. austriaca*) and the Australian blackwood (*Acacia melanoxylon*) should be made use of. We would also point out the great value of the Norfolk Island pine as a tree for planting where there is full exposure to the sea-spray.

Regarding one or two of the above trees, a few explanatory notes seem necessary.

Monterey pine (*Pinus radiata*) is the tree which has been the most widely planted in New Zealand. It thrives in every variety of soil, from that of rich alluvial valleys to stony river-bed and sand-dune. It will also grow on the steepest of dry clay hillsides. Its rapidity of growth is truly remarkable, and no difficulty would be found in discovering examples from Te Aroha to Southland of trees that had grown on an average of 4 ft. per annum. As generally seen, the trees are growing either isolated or far distant from one another, so that the lateral branches are strongly developed and a timber full of knots is produced. But in many localities the trees, though not planted nearly closely enough, have developed long clean trunks, which upon being converted into boards and scantlings have yielded material that has been somewhat extensively used for farm buildings and in some cases for dwellings, especially in Canterbury. We have examined such structures in several places, and found the timber sound and in good condition, and the buildings quite suitable for the designed purpose. We have also a good deal of evidence regarding the value of *Pinus*