

Dusky Hill Plantation.—It will be necessary to replant a small area here with suitable trees, as those already occupying the ground are apparently not finding the conditions favourable for their development. The total expenditure anticipated will not exceed £380, and the greater proportion of this amount will be allocated to the "General upkeep" item.

Waitahuna Plantation.—Should the *Piceas* not make a fair recovery this season, they will be replanted with pines during the ensuing year.

Naseby Plantation.—The acquirement and enclosing of an additional planting-area will be undertaken, and about 650,000 trees operated with. Such works as tree-pruning, rabbiting, and keeping the fire-lines in an efficient state will also be attended to.

Gimmerburn Plantation.—As certain varieties originally planted here are succeeding, an effort will be made to utilize 50,000 pines in filling up the large spaces rendered vacant through failure attending efforts of some years ago. In addition, the idea of producing horse-feed for local nursery requirements will be continued.

Hammer Springs Plantation.—Should no difficulty be experienced in securing the necessary free labour, probably over a million trees will be planted out at this station during the year. The early acquirement of a further planting-area is also desirable here.

Selwyn Plantations.—Every effort will be made to put out 100,000 pines on the Hororata and Chaney's Reserves, and marram-grass planting on a reduced scale will also be undertaken on the sand areas.

Mackenzie County.—In pursuance of an agreement made two years ago, this Council will be supplied with some 40,000 larch for extending its reserves and distributing to local settlers.

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TAPANUI NURSERY, OTAGO.

(Area, 173 acres; altitude, 500 ft.; established, 1897.)

For the third year in succession the climatic conditions experienced here have made successful tree-raising an exceedingly difficult matter. The annual rainfall, amounting to 47.80 in. on 203 days, exceeded that of the previous year by over 4 in., and, unfortunately, the precipitations and cold sunless days were most frequent from September to December—a period over which warmth is not only essential for favourable germination of tree-seeds, but for systematic tillage and the development of sturdy, fibrous-rooted stock. Nothing abnormal occurred with regard to atmospheric temperature, as 24° in July constituted the lowest register, and 90° in the screen in February the maximum year's temperature.

Raising of Seedlings.—Almost immediately prior to the actual sowing of seeds, heavy rains caused a partial inundation of the area reserved for the seed-beds, and in consequence a good deal of labour had to be expended in replacing the removed soil.

Seed-sowing was carried on under fair conditions in October, but poor germination and weakly plants were the outcome, particularly in the *Pinus Laricio* beds. To overcome what appeared to be a partial failure, a second sowing was resorted to, and over a million of *Pinus radiata* seedlings were raised from about 1 cwt. of seed. These plants have attained the desired size for transplanting, for, by having removed the protecting frames early, the drawn-up state so characteristic of the Remarkable pine has been avoided. From 100 lb. of seed 420,000 *Pinus ponderosa* were raised, and the young plants, although scarcely as well forward as in former years, are a fine sturdy lot. Small quantities of the Japanese and European larch were sown with the usual success, although a comparatively small number of these plants only are required for replanting purposes. An excellent crop of *Pseudo-tsuga taxifolia* eventuated from 14 lb. of well-bodied seed, and a large proportion of the 40,000 young Oregon pines are sufficiently strong for removal to lines next planting season. A fair measure of success was attained with sowings of *Pinus Benthamiana*, *P. austriaca*, *P. muricata*, *P. scopulorum*, *P. densiflora*, and *Cupressus macrocarpa*, although the latter seedlings appear to have offered most attraction to the grass-grub. Some eighteen species of *Eucalypti* were experimented with, and the propagation of two or three of the hardier gums will be more extensively carried on next year.

The estimated number of yearlings in stock is 2,342,400, which are valued at £2,343 16s. as per Schedule V. An expenditure of £325 2s. 8d. was incurred in the preparation of the ground, purchase of seed, sowing, and subsequent labour in connection with the raising of the seedling crop.

Transplanted Trees.—An unusually good growing percentage resulted from the season's lining-out; but again the presence of grass-grubs accounted for the speedy death of fair numbers of pines and larch.

Although tree-growth generally was backward up to midsummer, weed-growth was also similarly affected. Since Christmas, however, vigorous headway has been made in all classes of trees, and the quality of stock should be much superior to that of the past two seasons. An excellent strain of *Pinus ponderosa* seed was secured last year, and the 120,000 seedlings, on being transferred to lines, have now developed into fine sturdy trees of sufficient strength for permanent planting, even on the most exposed positions. The 600,000 *Pinus Laricio* in seed-beds, although not so tall as in previous years, are undoubtedly equally as sturdy, and should transplant well. It is not possible to count so favourably on the lined-out Corsican pines, which are evidently not partial to a moist, cold spring. Very encouraging results have been attained with *Pinus Taeda*, *P. sylvestris*, *P. patula*, *P. Banksiana*, *P. Montezumae*, and their future progress on the plantation will be carefully watched. Previous attempts to raise the Scotch fir ended in the young plants becoming literally smothered with aphids; but we have now evidently secured a better type, which will be given an opportunity to succeed at a high elevation. Some 3,000 *Populus deltoides* cuttings were prepared, and nearly 100-per-cent. "strike" eventuated. A glance at the associated schedules will disclose all details relative to the trees in stock, and brief comments on the various crops.