

TAPANUI NURSERY.

(Area, 120 acres; altitude, 500 ft.)

Rain fell on 141 days, with a total precipitation of 31·67 in., the maximum monthly fall being 4·40 in., in October. The highest shade temperature recorded was 95°, on the 23rd December, and the lowest 21°, on the 1st June.

Although successful results have been achieved in tree-raising, the season has been one of the most distinctly trying yet experienced. A mild winter, permitting good headway to be made with tree-lifting, was succeeded by a perfect spring, and whilst lining-out was in progress copious rains fell at desired intervals. The summer, however, proved to be one of the driest yet recorded in the district, and only by intense cultivation have the trees been able to withstand the drought. Creeks in the locality that have hitherto been fed constantly by springs completely dried up, and well-sinking was generally resorted to by those who were thus affected.

Seed-sowing was conducted under favourable conditions during the second week in October, and, although the expenditure attached to the purchase of seeds this year was £20 below that of the previous season, 140,000 more plants have been realised.

An excellent crop of 1,800,000 *Pinus Laricio* resulted from 150 lb. of seed, but the plants are scarcely up to the average standard. *Larix europæa* germinated thinly, although the seedlings have developed into fine sturdy plants, all of which will require to be transplanted into lines during the coming season. *Pinus ponderosa* and *Pinus muricata* are both satisfactory crops, and the remainder of varieties, as detailed on Schedule 1, are also about the average. A trial sowing was made of *Tsuga canadensis*, *Liquidambar styracifera*, *Thuja canadensis*, *Taxodium distichum*, *Gymnocladus dioica*, and *Tilia americana*, but only the two first named varieties have succeeded.

During a favourable season fair results might be anticipated in dealing with these seeds, but past experience tends to show the folly in attempting to raise any but the hardier trees in the district.

It may be interesting to mention that, notwithstanding the lack of rain, no artificial watering of seed-beds was attempted, but a departure from our usual custom was made in allowing the scrim to remain on frames throughout the whole summer, and only removing the covering in time to allow the tender plants to "harden off" before the advent of the cold weather.

There were 1,466,250 seedlings transferred to nursery lines, at 1s. 9d. per thousand. The grass grubs were quickly in evidence, and severe losses were anticipated through their ravages. The combined agencies of constant tillage and dry weather, however, speedily reduced their number, and only a trifling amount of damage eventuated.

An approximate 1,600,000 trees have developed into a desirable size for transference to plantations during the approaching winter. This estimated output, however, may be somewhat modified to meet plantation requirements, as it is doubtful if sufficient number of pits will be in readiness for their reception.

Tree-growth generally is about the average, although since the late rains several "breaks" of larch have made unprecedented headway, necessitating the wrenching of same, to check any further progress.

Buildings, Improvements.—It is satisfactory to record that all improvements effected were carried out by employees. A convenient office of small dimensions was erected some distance from the workshop, and much advantage is derived by being able to conduct the clerical work in quietness.

Additions were made to the iron sizing-shed, which in its enlarged state permits of our winter work being undertaken with greater facility. The benches attached to the walls of the shed were also replaced by a long table that occupies the centre of the room, and more space is now available for the storage of trees.

A concrete culvert on the main roadway was substituted in place of the fast-decaying wooden structure, and substantial flood-gates on Whisky Creek are now in course of construction.

The combined shelter and ornamental plantations have made such rapid progress as to prohibit any further attempt at cultivating between the trees. The area was accordingly sown down in grass, and further maintenance work in connection with same will be a small item.

There were 5,500 *Larix europæa* used in planting a triangular block of ground within the nursery enclosure. The close-planting method was adopted, and the conversion of another small area not used for grazing purposes into an ash compartment, to be worked under the coppice system, will be undertaken during the forthcoming year.

An area of about 20 acres was sown down in permanent grasses, and should provide the much-needed early spring pasture for our stock.

Two more well-bred foals were added to our live-stock register, and it is now possible to transfer two of the older animals to the plantations, where the presence of serviceable horses is greatly needed for packing and sundry work.

Fencing.—Forty-five chains of fencing was erected, thus completing the required subdivision of paddocks.

The sum of £10 17s. 3d. was expended in improving the water-service, but further efficiency is being aimed at by a proposal to extend the pipes some 50 yards from the present source to a spring on the hillside.

The oat, rye, clover, and carrot crops were successfully harvested, and abundant horse-feed is in stock to meet the forthcoming local requirements for the year.

The annual expenditure amounted to £1,801 5s. 2d., giving employment to 10·3 men.

All shoeing and repairs connected with local stations were carefully executed by our blacksmith during unfavourable weather for outdoor work. Several of the employees are fortunately proficient also in carpentry, saddlery, &c., and needless to say a great saving of time is realised by being able to place all general repairs in their hands.