raised; but should the destructive work of the grass-grub continue unchecked by the series of experiments now in progress, it is doubtful if anything like this number will be realized ere the transplanting stage is reached. From 116 lb. of *Pinus Laricio* seed some 840,000 young plants were raised, and although this result cannot be termed disappointing, it was evident on applying the usual testing that the seed did not come up to the usual standard. Both *Pinus ponderosa* and *Pinus Benthamiana* came through somewhat sparsely, but evidently to their advantage, as some 183,000 plants are now sturdy enough for removal to lines. Having in view the more extensive use of *Pinus radiata*, it is gratifying to find that some 100,000 pines of this species are now available for transplantation. Experience here shows that the Monterey pine may be raised with less trouble than any other tree being operated with. A trial sowing of 2 lb. of *Pinus taeda* disclosed not only the excellent germinative capacity of the seed, but the partiality of the plant for local conditions. The usual amount of success was attained with *Pinus muricata*, *Pinus maritima*, and *Pinus Torreyana*. Perhaps the most interesting feature of the season's tree-raising, however, is the fine germinating record of *Pseudo-tsuga taxifolia*, of which 230,000 plants eventuated from 20 lb. of seed—a 300-per-cent. increase on the average issue from the Oregon pine seed since initiation. Small sowings of *Picea pinsapo* and *Picea Nordmanniana* were not attended with pronounced success, although the number raised will permit the furtherance of experimental work with the species. Contrary to expectations, the grass-grubs have shown a distinct partiality for the youthful *Cupressus macrocarpa*, *Sequoia sempervirens*, and *Sequoia gigantea*. The young plants were fairly numerous in the beds until the advent of the pest, when almost a total clearance was effected in the course of a few days. The continuation of a series of tests with the gums was undertaken. Exceedingly fine results were attained two years ago, but a partial failure must be attributed this year to the raising of *Eucalyptus Stuartiana*, *E. Gunnii*, *E. crebra*, *E. coriacea*, *E. amygdalina*, and this fact will tend to discount opinions freely expressed locally that the eucalypti may be raised quite successfully under the conditions prevailing here. As might be expected during a season when grass-grubs are numerous, the *Larix europaea* seedlings, after giving promise of great success, provided nourishment for the pest, which has probably reduced our crop by 50 per cent.

Transplanting Trees.—Notwithstanding every effort being previously made to have the area for lining-out in a free state, the heavy and prolonged rainfalls absolutely forbade the undertaking of the transplanting work on the prepared ground, which is naturally of a very heavy nature, and quickly becomes sodden. It was thus necessary as a last resource to convert one of our most suitable adjoining horse-paddocks (where the soil is of a more friable composition) into a temporary nursery, and erect a scrub breakwind for partial protection to seedlings. Although the tree-growth amongst the 1,303,576 one- and two-year-old seedlings handled is much below the usual standard, the present position of affairs justifies the temporary abandonment of the old nursery area in favour of the drier horse-paddock. It is fortunate that the greatest measure of success is associated with the *Pinus Laricio*, which are fairly well rooted both in lines and seed-beds. The 80,000 *Pinus ponderosa* were chiefly one-year-old plants when transferred to lines, and have progressed so well that a large proportion are sufficiently robust for permanent planting. Both *Pinus radiata* and *Pinus muricata* have been disappointing, and, in fact, have not developed enough to merit their shifting to any exposed situation. Experimental work with *Pinus Banksiana*, *Pinus patula*, *Pinus picea*, *Pinus Montezumae*, *Pinus Murrayana*, and *Pinus sylvestris* was persevered with, and it will be possible next year to more accurately determine the prospects of each species as a suitable addition to our present list of satisfactory growers. Very fair headway has been made with the Japanese larch—*Larix leptolepis*—which is scarcely as rapid in growth, but is apparently as alluring to the grass-grub as the European species. Some 4,000 fine three-year-old Pacific red-cedar (*Thuja plicata*) have demonstrated their suitability to the district. Although this shade-enduring tree will probably be included in the list of varieties for underplanting, its tapering habit reduces its value commercially to such an extent that extensive plantations of this cedar are not aimed at by Continental foresters, nor is it likely to attain the prominence in New Zealand of such trees as Oregon pine, redwood, &c., for the mentioned purpose. Throughout the transplanting area several "breaks" of fairly well-developed *Cupressus Lawsoniana*, *Picea sitchensis*, and *Alnus glutinosa* are evident, but in each case it will only be possible to remove to plantations about 60 to 80 per cent. of the number growing.

Soil-restoration Measures.—Special provision was made during the year to restore soil-fertility to the areas which have been cropped annually with hardly sufficient intermission during the past fifteen years. The position became more acute when an increased output was aimed at, and, as our nursery-area was not proportionately extended, much perplexity has from time to time arisen in keeping apace with the requirements without causing direct injury to the surface soil. It is pleasing, however, to refer to the recent acquirement of an additional 12 acres of land, part of which will relieve any "breaks" in future when bordering on poverty through over-cultivation.

Crops of peas, oats, clover, and sainfoin were grown, and on reaching a height of from 2 ft. to 3 ft. were ploughed under for manurial purposes. In this district, where the grass-grub abounds, experiments extending over some years have revealed the ill effects of attempting to raise trees on areas relieved of a rye and clover crop of two years standing. Such areas on being ploughed usually receive a dressing of lime, and are permitted to remain in fallow for at least twelve months, during which time frequent tillage is resorted to.

The application over certain spare "breaks" of kainit at the rate of 8 cwt. per acre having been previously found beneficial as a soil-fertilizer and also distasteful to the larvæ of *Odontria zealandica*, some 4 tons have been used during the year, from which good results are expected.