

## HANMER SPRINGS PLANTATION, CANTERBURY.

(Area, 3,668 acres ; altitude, 1,225 ft. ; commenced operations, 1901.)

In giving an account of the past year's operations it may be mentioned that it is the first time since the inception of afforestation-work in this district that the work has been wholly conducted by free labour, and under this new regime it is pleasing to report a successful season. The weather-conditions, which are usually very severe during the winter months at this station, were, on the whole, good, there being little cessation of work from that cause.

*Tree-growth.*—The prevalence of heavy north-west gales during November and December had a retarding influence on tree-growth, and also did some damage to the shelter-belts of *Pinus radiata* and *P. muricata*, many of the trees being blown over or broken off a few feet above the ground. Species more susceptible to the baneful effects than others were considerably damaged thereby in October—namely, larch, Douglas fir, and Tideland spruce. In the succeeding months, however, they made a good recovery. All pines have made good headway, those especially noticeable being *Pinus Laricio* and *P. ponderosa*. Tree-planting was commenced on the 13th May, and was completed on the 30th September, the total number of trees planted for the season being 866,435, at an average cost of 8s. 3d. per thousand. An additional 5,175 trees were utilized for replacing failures in areas previously planted. The area planted during the year was 318½ acres, making a total of 2,531½ acres to date, containing 6,891,711 trees. An excellent "take" resulted in almost all varieties, and the growth has been quite equal to that of previous years. A trial lot of seedling *Pinus radiata* was not a success, but the failure could be largely attributed to a continued spell of dry weather immediately following the planting. These conditions affected the *Sequoia gigantea*, which were almost a failure.

*Fencing.*—The fencing of the new area was completed during the year, the total length being approximately four miles, the work being carried out at a labour-cost of 8s. 1d. per chain, including cartage of material from Culverden and distribution and clearing of fence-line. A length of about 20 chains of barbed wire was erected along top of the boundary-fence adjoining Fowler's property, to prevent stock from gaining access to the planted areas.

*Clearing.*—An area of about 200 acres was cleared of scrub at a cost of £1 2s. 1d. per acre, the heavy timber being set aside for fuel for the use of the camp and nursery. This was sledged to convenient spots for cartage.

*Pitting.*—Pits to the number of 782,809 were prepared for the reception of trees during the season, at an average cost of 17s. 9d. per thousand. The pits now available for the ensuing season's planting are 203,441.

*Fire-preventive Measures.*—These measures were carried out as usual, and all fire-breaks were kept in an effective state, the total length receiving attention being about twenty-two miles. To reduce expenditure in this item in future it is intended to graze sheep extensively, which it is anticipated will assist effectively in keeping down growth, and which eventually will do away with the necessity of ploughing, and should prove a profitable investment for the Department.

*Checking Noxious Weeds and other Pests.*—This branch of work also received due attention throughout the year, poison being laid for rabbits with effective results, and hares being destroyed with guns and dogs. A certain amount of pruning and cutting-out of double leaders was done in pine areas. It is anticipated that this work will require a good deal of attention throughout the whole area in future.

It is anticipated that about 1,000,000 trees will be planted during the coming season, preparations for which are now well in hand. This will complete the planting of the area now enclosed. Additional ground will therefore be required for further operations at this station. There is, however, a small area of about 60 acres adjoining Jollie's Pass which was recently set aside for afforestation purposes, and still requires fencing and clearing. Swamp ground in the enclosed areas might also be planted out with suitable trees, such as poplar, &c.; and areas under spruce on No. 1 plantation which have proved a failure will require replanting with trees more suitable to the situation. The thinning of *Pinus radiata* plantations was taken in hand during March, and it is proposed to sell the trees cut out as fuel, the prospects of a profitable return from which may be expected. It is also proposed to deal with the alder and birch plantations, which are sufficiently forward to necessitate attention in this respect.

The total expenditure for the year amounts to £2,311 14s., the expenditure to date being £22,611 0s. 2d.

The daily average of men employed throughout the year was 13.26.

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Plantation Foreman.