

HANMER SPRINGS PLANTATION, CANTERBURY.

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

In reviewing the work of the last twelve months, it may be safely said that the year's operations have been attended with success. With regard to the weather-conditions experienced throughout the year, the same remarks apply as are contained in my report on the nursery.

The withdrawal of prison labour from the station, which had been forecasted for some time, took place early in October. The action of the Justice Department in this matter is to be regretted. The work done by the prisoners was highly satisfactory, and the reforming tendency resulting from such congenial outdoor employment must have done much to minimize recidivation. The work of tree-planting having been completed, very little inconvenience was caused by this withdrawal, as arrangements were immediately made for the engagement of an additional gang of free labourers to carry on operations. To accommodate these, huts were purchased from the Prison Department, and were transferred to a central site on a new area, the camp being constructed in the form of a square. On the two sides exposed to the prevailing winds a substantial breakwind was erected for shelter purpose, and a lean-to and galley were attached to each hut for cooking purposes, thus forming most comfortable quarters for the men.

Tree-growth.—Phenomenal growth has taken place among all classes of trees, and the plantation as a whole has made highly satisfactory headway. Spring frosts, which were so prevalent and severe during past years, and which caused considerable damage to the tender leaders of larch, were very slight, and, consequently, this species had made unrestricted headway, in some case a vertical increase of 4 ft. being added. All pines have done remarkably well, more especially *Pinus Laricio* and *P. ponderosa*, which have amply demonstrated their adaptability to the soil and climatic conditions of the station. The Oregon pine continues to hold its own with its admixture of *Pinus Laricio*. The Tideland spruce, which has practically been at a standstill during previous years, has thrown off its lethargy, and made satisfactory headway.

Tree-planting.—The result of the season's planting has been most satisfactory, the death-rate being small, and chiefly confined to river-flats, where gravel is the predominating factor in the soil-formation. The growth of the young trees has been quite up to the average of that of previous years. Tree-planting was commenced on the 14th May, and was completed on the 4th September, the operation being carried out under fairly favourably conditions. Trees to the number of 900,165 were planted, a total of 221,760 being utilized for replacing failures on areas previously planted, the balance, 678,405, being planted on the new area. The area planted during the year was 249½ acres, making a total of 2,213½ acres now under forest, containing 6,025,276 trees. Planting was done by both free and prison labour, the former by contract, at a cost of 7s. 6d. per thousand.

Pitting.—This work was also carried out by free and prison labour, the former by contract, at the rate of 15s. per thousand for medium ground, and 17s. 6d. for stony ground, the total number of pits opened for the year being 581,624, costing £483 3s.

Clearing.—An area of about 350 acres was cleared of scrub and burned off, the work costing £254 16s. 2d.

Cartage of Trees.—The transfer of an approximate 900,000 trees from the nursery to the plantation cost £18 3s. 6d. The wagon utilized for this purpose at present is not suitable, being too small and light, necessitating a double journey where one would suffice with a suitable vehicle. It is desirable, therefore, that a larger and stronger vehicle be purchased for this purpose.

General Upkeep of Plantation.—Work under this heading cost £336 18s. 6d., and includes the following items: Ploughing and generally keeping clear of growth twenty-two miles of fire-breaks, varying in width from ¼ to 1½ chains; grubbing out briars, gorse, &c.; pruning and cutting-out of double leaders; trapping and shooting hares and rabbits; clearing foreign growth from around young trees.

General Repairs.—The cost of this work for the year was £12 3s. 8d., including repairs to tools, harness, fences, &c.

Horse-feed.—This work includes general harvesting operations, preparation of ground for crop, and sowing. The cost for the year amounted to £41 1s. 8d.

Fencing.—The fencing of the new area was commenced in March, the work being now well advanced. About 80 chains of the old boundary-fence was dismantled, and will be re-erected on a portion of the new boundary. The cost of this work for the year is £189 13s. 1d., including material.

Formation.—New fire-breaks were marked out and ploughed on the new area. A large area of swamp land was drained, and much work was entailed in the formation of the new camp, construction of roads and culverts, &c. The total cost of this work was £102 11s. 10d.

Buildings.—The amount of £151 2s. 3d. was spent on this work. It includes purchase of nine huts, the building of galleys to same and purchase of material, and the construction of frames for tents.

Tools and Implements.—The amount of £41 1s. 7d. was spent on the purchase of spades, slashers, &c., to replace those worn out and broken.

Prison Labour.—Afforestation-work by prison labour only covered a period of seven months, the daily average of prisoners employed being 7.95 for the period. The total value of the work done by prison labour was £468 12s. 4d., apportioned as follows: Pitting, £166 13s. 4d.; tree-planting, £130 1s. 6d.; clearing, £39 18s. 9d.; general upkeep of plantation, £106 8s. 9d.; formation, £25 10s.

The daily average of men employed (free labour) throughout the year was 7.9.

Statements of expenditure, Trees Account, Property Account, and balance-sheet are appended.