

Honour to Dr. Cockayne.

It may not be out of place here to refer to the very distinguished scientific honour conferred upon Dr. Cockayne during the past year by the award of the Darwin Medal. This medal, the world's highest award made on behalf of biological science, was founded by the Royal Society as a memorial to the famous naturalist, and was first awarded in 1890. It is granted every two years—in reward for work of acknowledged distinction (especially in biology) in the field in which Darwin himself laboured. The award may be made either to a British subject or to a foreigner, without distinction of sex. Dr. Cockayne is the first scientist in the Southern Hemisphere to be singled out for this high honour, and when it is mentioned that on the roll of Darwin Medallists appear the names of such eminent leaders in scientific thought and research as Sir J. D. Hooker, Ernst Haeckel, T. H. Huxley, and August Weissmann—to select but a few at random—the value of this award may be seen in its true perspective.

5. EXPERIMENT STATIONS AND OTHER EXPERIMENTAL WORKS.

Rangitikei Sand-dune Station.

This station has now been placed on a maintenance basis in charge of a custodian, and consequently planting operations have been greatly curtailed. All the fixed sand-dunes were planted up in previous years, and the remaining areas considered suitable for planting—i.e., a total of 32 acres—were planted during the year with 9,500 *Pinus pinaster* and 12,500 *P. muricata* two-year-old trees. The blanking of previous areas also accounted for 102,350 trees.

The planting of marram-grass over an area of 218 acres was commenced in May and was continued at intervals till the end of August, and during most of this time, with the exception of a period towards the end of July, when a dry drift sand was encountered owing to a minimum rainfall during the previous two months, the weather conditions were favourable for practically all the work undertaken.

The experimental plantings of flax (*Phormium tenax*) carried out in previous years are surprisingly successful when it is remembered that the soil is of a light sandy nature and that drained swamp-land is best suited to this plant. Although it is yet too early to draw any definite conclusions from the interim results obtained as to the commercial success of flax-culture at the station, it is at least certain that healthy and vigorous growth has already been secured at comparatively low cost.

The tree-nursery continued to give good results, and during the past year nearly half a million trees raised there were utilized for planting in other parts of the Wellington Region.

Westland Forest Experiment Area.

Experimental planting was continued at this station, and a further 200 acres were planted with the following species: 144 acres with 97,920 *Thuja plicata*, 44 acres with 30,000 *Pinus radiata*, and 12 acres with *Eucalyptus Gunnii*; whilst blanking was carried out on 300 acres, *Cupressus Lawsoniana* being the main species used, the balance being made up with *Cryptomeria japonica* and *Thuja plicata*. As the new area planted was open country, line-cutting and planting costs were considerably reduced as compared with previous years.

Thuja plicata has again proved that it is peculiarly adapted to the climatic conditions of the West Coast, and a 98-per-cent. strike was obtained, with an average growth of 8 in. for the first year, in the plantation. The strike of *Cryptomeria japonica* was even better, but the average growth was slightly less. *Cupressus Lawsoniana* recorded a strike of 85 per cent. and *Eucalyptus Gunnii* 86 per cent., with an average growth of 4 in. and 3 in. respectively. *Pinus radiata* was not so successful, the strike being 73 per cent. and the average growth only 3 in. It is hoped that this latter species will do better when longer established. The results of the previous years' plantings, which may now be clearly seen, show that blocks of *Thuja plicata* planted in 1925–26 are over 5 ft. 6 in. in height while *Cupressus Lawsoniana* planted a year later are also doing well under all conditions. It is problematical, however, whether in later years this species will be able to withstand the competition of the faster-growing indigenous second growth. *Pinus ponderosa*, which for two years bore a stunted appearance, showed a growth of nearly 2 ft. last year, and is making splendid headway in spite of thick blackberry undergrowth.

It has been found necessary to clear away the second growth which so rapidly springs up, as otherwise in a few years the trees would probably be smothered, and to date 350 acres have been treated in this way. The most persistent weed is blackberry, which spreads so quickly and clings to the trees. This work must for some years prove the biggest obstacle in keeping down the maintenance costs of the plantation, as it is necessarily expensive to carry out.

All main creek-beds in the plantation were cleared of slash and other debris, to prevent flooding, as experience has proved that the growth on drained dry soil is much more rapid than on wet and waterlogged areas. A fire-break was laid out on the southern boundary of the plantation to minimize the fire danger from locomotive sparks.

Direct Seeding.

Experiments on a comparatively large scale have been in hand for a number of years to test the possibility of establishing plantations by direct seeding, but the results to date have not been very successful, except in certain pumice areas where the soil conditions are particularly favourable. It has, therefore, been decided to curtail future expenditure on these experiments until conclusive evidence of success is available.