

6. In beech forests (*Nothofagus* spp.) the prospects of obtaining natural regeneration in good mast years are assured, but the question of the best preparatory measures for securing regeneration under varying conditions is under investigation. Seeding fellings of varying intensity are being made in silver and red beech stands in several conservancies. Deer are such a menace to the young growth, however, that failing their near extermination which seems impracticable, it is likely that protection of beech stands will entail heavy expenditure on deer-proof fences. In mixed podocarp forests the problem of natural regeneration is much more complicated, owing to the diversity of species present and the parent trees being dioecious—*i.e.*, male and female flowers are on different trees.

The working plan for Pouakani State Forest prescribes the conservation of 5 acres of bush in every 100 acres opened to milling; and the stocking of young podocarps in the surrounding milled land resulting from the seed-trees in the reserved areas will be watched. Needless to say, all advance growth of indigenous forest trees is guarded, and where it occurs in timber-sale areas it is made the subject of special conditions in sawmilling licences.

7. *Interplanting*.—The area of land on which interplanting took place during the year amounted to 562 acres as against 344 acres the previous year. The species used were in the main Japanese cedar, western red cedar, Douglas fir, insignis pine, southern pines, and kauri. The types of stand interplanted were logged podocarp forest, heavily thinned larch, and other exotics. An investigation of the results of interplanting, mentioned in last year's report, has been completed, and the report of the investigation is receiving careful study, as it will form the basis of a policy directive. The practice of using young pine stands as "nurses" for kauri plantings was continued in the Auckland Conservancy.

8. *Afforestation*.—A summary of planting, blanking, and replanting in the past four years is given below; details of the areas concerned are given in Appendix II.

Year.			Planted.	Blanked.	Replanted.
1946-47	..	..	834	685	925
1947-48	..	..	2,819	956	883
1948-49	..	..	4,568*	1,334	832
1949-50	..	..	4,879	1,135	535

* Error in last year's report—see Appendix II.

During 1949-50, in addition to the above, direct sowing was carried out with lodge-pole pine over 40 acres at Karioi and with Douglas fir and *Eucalyptus gigantea* over 7 acres at Alton in Southland. The Douglas fir has struck well, but it is as yet too early to estimate the success of the other sowings. A survey of the 1948 direct sowing of insignis-pine seed over 873 acres at Kaingaroa has shown that results were fairly successful on land of site qualities I and II, but these sites represented only about 20 per cent. of the area sown and poor germination and insufficient survival resulted on land of site quality III.

9. *Seed*.—The total quantities of seed collected in the last four years were:—

	Lb.			
1946-47	..	..	..	3,284
1947-48	..	..	..	3,120
1948-49	..	..	..	2,591
1949-50	..	..	..	1,934

The year just past was not a heavy seeding year for exotic species, but the reserves of seed held against this contingency enabled a full sowing programme to be carried out. Orders from overseas forest authorities were fulfilled by making special collections to a total amount of 481 lb., the major portion of which was supplied to Rhodesia.