

Inspector Barron reports: The land was in fair order to receive the seed, but required more cultivation for an ideal seed-bed for a root crop. The weather during period of growth was changeable, rain and high winds predominating. Little inter-cultivation could be given the crop owing to land being too wet.

## TAPANUI DISTRICT.

*Manurial and Variety Tests, conducted by Alexander Ferguson, Kelso.*

The land selected was a clayey loam on a clay subsoil, and has been in cultivation for the last thirty-six years. In 1903 was in turnips with 1½ cwt. manure; 1904 in oats; 1905 in oats with 1½ cwt. manure; 1906 in turnips with 2¼ cwt. manure; 1907 in oats; 1908 fallowed; 1909 to 1911 in pasture. Digger-ploughed to 9 in. for this experiment in August, 1911; deeply cultivated with cultivator six times, October to December, 1911; harrowed to fine tilth and rolled immediately before sowing, December, 1911. In the manurial test the area was divided into seven manurial plots and one unmanured as a test plot. Plots one-tenth acre each. The fertilizers applied were according to a scheme designed by the Chief Agricultural Chemist. The variety of seed sown was Fosterton Hybrid. In the variety test 2½ cwt. Challenge special turnip-manure was applied per acre. The seeds and fertilizers were sown on 18th December, 1911, in drills 26 in. apart. The roots were pulled and weighed on 14th May, 1912. Results:—

## MANURIAL TEST.

Plot.	Manures per Acre.	Cost per Acre.	Weight of Crop per Acre.		Effect of Manuring.	
			Roots.	Tops.	Roots.	Tops.
1	Superphosphate, 1½ cwt. ..	£ s. d. 0 7 2	Tons. 28·02	Tons. 5·71	Gain,	Tons. 3·00
2	Superphosphate, 3 cwt. ..	0 14 3	23·12	5·16	Loss,	1·90
3	Superphosphate, 2 cwt.; bone-dust, ¾ cwt. ..	0 14 0	29·11	5·98	Gain,	4·09
4	No manure .. ..	..	25·02	4·62	..	..
5	Same as No. 3 mixture; sulphate of potash, 28 lb. ..	0 17 9	29·65	5·44	Gain,	4·63
6	No. 5 mixture, 1½ cwt. ..	0 8 11	25·30	4·61	..	0·28
7	Same as No. 6 mixture; salt, 14 lb. ..	0 9 2	24·21	4·61	Loss,	0·81
8	Albatross guano, 2 cwt. ..	0 10 0	25·57	5·16	Gain,	0·55

## VARIETY TEST.

Plot.	Variety.	Crop per Acre.	
		Roots.	Tops.
	Yellow-fleshed—		
1	Garton's Green-top Scotch .. ..	Tons. 23·66	Tons. 5·71
2	„ Purple-top Scotch .. ..	23·66	5·44
3	„ Inche's Bronze-top .. ..	17·95	3·53
4	„ Old Meldrum .. ..	27·20	6·52
5	„ Stobo, Blue .. ..	19·86	4·61
6	Challenge—Waite's Eclipse .. ..	31·55	6·52
7	„ Dale's Hybrid .. ..	27·20	6·25
8	Sutton's All the Year Round .. ..	18·77	2·44
9	„ Centenary .. ..	30·19	3·80
10	„ Early Sheepfold .. ..	23·66	3·26
11	„ Favourite Purple-top .. ..	26·65	4·35
12	„ Perfection Green-top .. ..	21·49	2·44
13	„ Romney Marsh .. ..	24·75	2·99