

Most of the varieties were tested for their fibre quantity and quality. A series of six to eight tests for each variety were made, from 12 lb. to 25 lb. being used in each test. Following are the results:—

Variety.	Yield of Unscutched Fibre.	Yield of Finished Fibre.	Grade.	Disease- resistance.
	Per Cent.	Per Cent.	Points.	
1 .. .. .	16.0	12.2	70	Good.
2 .. .. .	16.1	12.2	73	Good.
3 .. .. .	14.8	11.2	69	Good.
4 .. .. .	13.8	10.7	72	Poor.
5 .. .. .	15.2	13.0	69	Medium.
6 .. .. .	17.1	13.6	70	Medium.
7 .. .. .	16.4	13.0	72	Medium.
8 .. .. .	19.0	14.2	69	Good.
9 .. .. .	14.9	12.1	70	Medium.
10 .. .. .	5.2	2.5	Reject	Good.
12 .. .. .	19.8	16.8	68	Good.
13 .. .. .	18.5	14.5	72	Good.
14 .. .. .	17.6	12.5	70	Good.
15 .. .. .	19.8	16.3	70	Good.
16 .. .. .	18.9	15.3	69	Medium.
17 .. .. .	18.0	13.3	69	Good.
Aho .. .. .	16.2	11.2	70	Medium.
Whenu .. .. .	20.5	16.8	72	Good.
Tihore .. .. .	19.4	15.4	78	..
Bronze .. .. .	22.0	18.8	69	..
Chocolate margin .. .. .	17.8	15.3	71	Medium.
Waikanae .. .. .	22.4	17.9	68	..

NOTE.—Disease-resistance is not recorded in the case of "tihore," "bronze," and "Waikanae," these plants not having been under observation while growing.

A number of plants selected for disease-resistance by Messrs. R. Waters and E. H. Atkinson, of the Biological Laboratory, Wellington, were also received, but are not yet large enough for the various tests. They will be reported on later.

A considerable proportion of the seed sown in the nursery was selected with a view to ascertaining (1) to what extent cross-pollination takes place between the different varieties; (2) whether seedling plants are more vigorous growers than plants grown by vegetative reproduction; (3) whether the seedling plants keep as healthy or healthier than the parent plants. The parent plants are all marked and kept under observation. A few of them are planted in the nursery on the slope of the terrace.

There are also planted two rows of badly diseased plants. The plants in one row were sterilized for half an hour in a corrosive sublimate solution of 1 in 800. In two rows the seed was gathered from diseased plants to ascertain if there is any difference between seed from healthy and from sick parents. An aggregate of about half an acre was sown with seed. The chief reason for sowing so much was that it is easier to find plants with the desired characters in a multitude than among a few.

#### IMPROVED METHODS OF CUTTING.

Being convinced that the common method of cutting is very bad for the phormium-plant's growth I sought to discover a better