

time is considered the texture of the leaf, a fine-textured leaf being more valuable than a heavy one.

The girls then tie the graded leaves in bundles of about sixteen to eighteen leaves. These "hands" are then packed into boxes lined with sacking for delivery to the manufacturers.

Several miles from Motueka is a station devoted to research into tobacco-growing. Controlled by the Department of Scientific and Industrial Research it was established five years ago and, in conjunction with the Cawthron Institute, Nelson, has conducted the research experiments necessary to protect the growers and ensure a healthy, economic crop.

The station covers about 17 acres, most of this area being devoted to experimental plots and seed-beds. There are thirteen experiments at present being conducted on the farm and each experiment has thirty-two plots of approximately 180 plants. These experiments are mainly concerned with the quality and type of fertilizer to be used since fertilizer can be described as the life's blood of the tobacco-plant. In the different plots varying quantities and mixtures of fertilizer are applied at different times to determine which method produces the best results. Mixtures of superphosphate, nitrogen, potash, ammonia, and blood have been found most beneficial, while, to provide humus, oats are sometimes grown after the crop is harvested and ploughed in before the next planting. This year a Canadian experiment using rye-corn instead of oats is being tested.

The station harvests and uses its own seed by bagging the heads of the plants after they have flowered.

There is also a hothouse and seed-beds for cultivation of the seedlings. Most of the laboratory work is done at the Cawthron Institute. The tobacco grown on the station is dried in three large kilns, which are heated by automatic furnaces.

Over the gate leading into one of the experiment paddocks is a notice "No Smoking." It is not intended to be humorous. The foreman, who was en-

gaged in scattering fertilizer, explained that the only disease that had troubled Nelson tobacco plants (and then not unduly) was tobacco mosaic. This virus is transferable by hand, and if it happened to be present in the tobacco a visitor was smoking and handling, and he were to touch a plant, that plant would be immediately infected with the disease.

He illustrated his argument by an experiment conducted recently by the station. Before planting an experimental plot he had deliberately handled a plant affected with mosaic. After planting one row he washed his hands and planted another row. He then handled the affected plant and planted another row before again washing his hands.

The plants in every row planted after handling the diseased plant were themselves affected. The alternate rows were strong and healthy.

The Research Officer, Mr. R. Thompson, who was trained for this work in America, confirmed this story when he was detailing the precautions that must be taken against diseases harmful to the crop. So far Motueka growers have been reasonably free from such worries and their immunity has been largely the result of painstaking experiment and gratuitous advice from the Research Station and Cawthron Institute. Though "No Smoking" may be the order of the day in some areas around Motueka, that precaution is helping to ensure an adequate supply of yellow, fragrant leaf in other parts of New Zealand and to safeguard the already promising future of the tobacco industry in the Dominion.