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TURNIP - MOSAIC.

A VIRUS DISEASE OF CRUCIFERS.

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TURNIP-MOSAIC was first recognized in New Zealand in 1932, when it was observed on rape-plants being grown for seeding purposes at the Plant Research Station Area, Palmerston North. Since then it has become a serious disease of swedes, rape, and turnips at the Station Area, and has been found also in a number of districts throughout the Dominion.

The first accounts of turnip-mosaic are from North America, where it was recorded simultaneously by Gardner and Kendrick (1921) and Schultz (1921). It has also been recorded from Denmark (Gram and Rostrup, 1924), Germany (Pape, 1935), England (Smith, 1935), and Australia (Samuel, 1931).

SYMPTOMS.

On swedes the characteristic symptom of the disease is a mottling and crinkling of the leaves. The mottling is diffuse, the difference between the light and the dark areas being slight (Fig. 1). Less commonly, it occurs as dark-green blistered areas. Symptoms appear only on those leaves which develop after infection has taken place. Infected plants soon become stunted in appearance (Fig. 2), and the "bulbs" (the bulbous portion of the roots), although they continue to grow, are much smaller than those of healthy plants. The leaves of infected plants tend to die prematurely (Fig. 3), and under certain conditions the "bulbs" become susceptible to soft-rot.

In stecklings* during the winter and early spring the symptoms appear as a pronounced mottling of the leaves with little or no crinkling. Infected plants remain stunted and produce a light crop of seed.

In the glasshouse mottling and crinkling are preceded by a clearing of the veins on the developing leaves. This vein clearing, which is a loss of the green colour along the veins, is rarely seen under field conditions.

* Plants of autumn sowing used for seed-production.