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ROOT LESION EELWORM (Pratylenchus penetrans) IN VEGETABLES

The root lesion eelworm is much less widely known than the root knot eelworm, but can damage crops and reduce yields. Preliminary tests indicate that soil fumigation may give good control.

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ROOT lesion nematodes (Pratylenchus penetrans) have been found in many market gardens in the Balcatta-Osborne Park and Spearwood areas, associated with such crops as carrots, parsnips, swedes, lettuce, celery and rhubarb.

These worms are often recovered in considerable numbers from sections of crops showing stunted growth or where poor quality root crops are being harvested.

Damage caused by this eelworm does not result in galling, as occurs with the root knot eelworm. Rather, Pratylenchus causes root injuries which facilitate the entry of secondary rotting organisms. As a result, the feeder or absorbing root system is seriously depleted and the large bulbous roots in contact with the soil are often extensively rotted or malformed.

In carrots and parsnips, a marked forking has been observed where counts of Pratylenchus have been high.

For a number of years, a severe cankering and russetting of swedes was noted in the Mandogalup area, the cause of which was unknown (see Figs. 1 and 2).
Previous investigations had shown that this condition could not be attributed to nutritional defects or fungal disease attack. Recently root lesion eelworms were found in high numbers both in the soil from which cankered swedes were being harvested, and in the cankers themselves.

An exploratory pre-planting fumigation trial with DD or EDB was therefore suggested to the grower, who carried out small scale tests with both materials at rates varying from 15 to 30 gallons per acre.

The results obtained are of considerable interest. Soil fumigation with each material greatly reduced canker development, particularly at the higher rates of 20 to 30 gallons an acre (see Fig. 3). Reduction in disease incidence was also correlated with reduction in Pratylenchus numbers. Each pound of soil fumigated at 25 and 30 gallons an acre contained from 0 to 20 eelworms, whereas control plots gave 350 to 400 a pound of soil.

An experiment to assess the importance of this eelworm in swedes is planned for next season.