

INTRODUCTION.

Perhaps the most prevalent pest of vegetable growing soils of Trinidad is the nematode Heterodera marioni. (Cornu) Goodey. or root-knot eelworm, so called because of the characteristic galling which it induces in the roots of certain plants.

For a description of the organism and its life history see T.E.Goodey - "Plant Parasitic Nematodes".

(A). Ecological Factors controlling the attack of the parasite.

According to Goodey (1) there are three main ecological factors which condition the attack of the parasite; they are:-

(a). Soil. The root-knot eelworm is essentially a parasite of the lighter soils being more abundant in sandy soils than in heavy clays. In an experiment described by Bessey (11) plants were artificially infected with eelworm and then transferred to pots containing stiff clay. The new roots which developed were found to be free from infection. In the control experiment, infected plants which remained in sandy soil produced roots which were all infected.

(b). Temperature. Godfrey (111) has shown that at temperatures below 16 degrees centigrade there is much less gall formation on the roots than at two or three degrees higher. The incidence of gall formation increases with temperature up to the highest temperature tolerated by the host. Hence it is not surprising that

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H. marioni. is a more serious pest under tropical than temperate conditions.

(c). Moisture. Godfrey (111) states that as long as the moisture content of the soil is favourable to plant growth then the degree of moisture plays no part in the development of galls. Goodey (1) reports that in the Southern United States the practice of "flooding out of the parasite" is sometimes carried out. There is no record of this having been attempted under tropical conditions. Godfrey (111) suggests that the control achieved cannot be attributed to the presence of excess moisture. It, may however, be accounted for by the fact that large amounts of water lower the soil temperature below the optimum point for the development of the parasite.