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A DECLINE OF THYME ASSOCIATED WITH *ROTYLENCHULUS PARVUS* IN MAURITIUS

by

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Thyme (*Thymus vulgaris* L.) is an important aromatic herb in Mauritius. In September 1987, many unhealthy looking plants were observed in a commercial plantation at Albion. The affected plants were stunted, had yellowing foliage (Fig. 1) and senesced at an early stage of growth.



Fig. 1 - A thyme plantation in Mauritius with plants attacked by *Rotylenchulus parvus*.



Fig. 2 - Mature female of *R. parvus* attached to a thyme root.

Soil from the rhizosphere and root samples were collected both from stunted and apparently healthy plants. On roots stained with 0.1% acid fuchsin in lactophenol mature females of *Rotylenchulus parvus* (Williams) Sher (Fig. 2) were observed. The soil population of this species

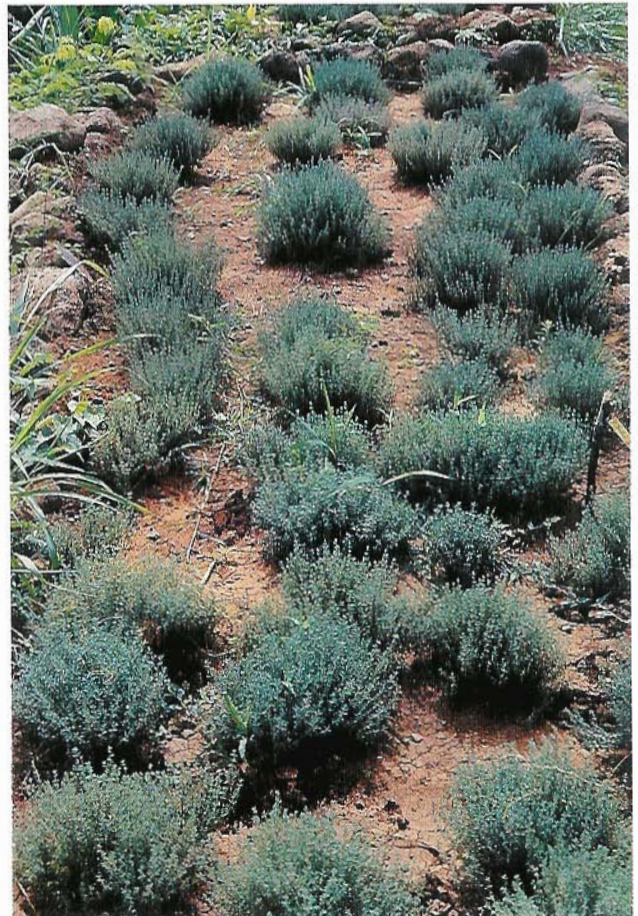


Fig. 3 - Thyme plants six weeks after treatment with carbofuran.

extracted by centrifugation from samples of 250 ml of soil averaged 290 for the stunted plants compared with 130 for the healthy ones (averages of six composite samples).

The field was divided into 12 plots 1x1m and six of them, distributed at random, were treated with carbofuran at the rate of 15 kg a.i./ha, in January 1988. The nematocide was broadcast and incorporated into the top 10 cm of soil; the other six plots were kept as controls.

Four weeks after treatment the soil population of *R. parvus* in the treated plots had decreased to an average of 30 specimens/250 ml of soil, compared with 190 nematodes in the control plots and two weeks later treated plants were completely recovered (Fig. 3).

These results strongly indicate that *R. parvus* was the most likely pathogen causing decline of thyme in Mauritius.