

DETECTION OF THE ROOT-KNOT NEMATODE *MELOIDOGYNE JAVANICA* IN CUCUMBER HYDROPONIC CULTURE IN CRETE, GREECE

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Summary. Infestations of *Meloidogyne javanica* in roots of cucumbers grown in hydroponics are reported from Crete, Greece.

The growing of plants in soil less systems (hydroponics) has been used commercially over the last 70 years; in ideal circumstances, it prevents diseases caused by soil-borne pathogens, providing disease-free transplants are used (Zinnen, 1988).

In 2002, cucumber plants grown in soil-less system were found infected by root-knot nematodes. Samples were from two different greenhouses on Crete island, where rock-wool was the supporting medium for the plants (Fig 1). Galls were dissected under a stereomicro-

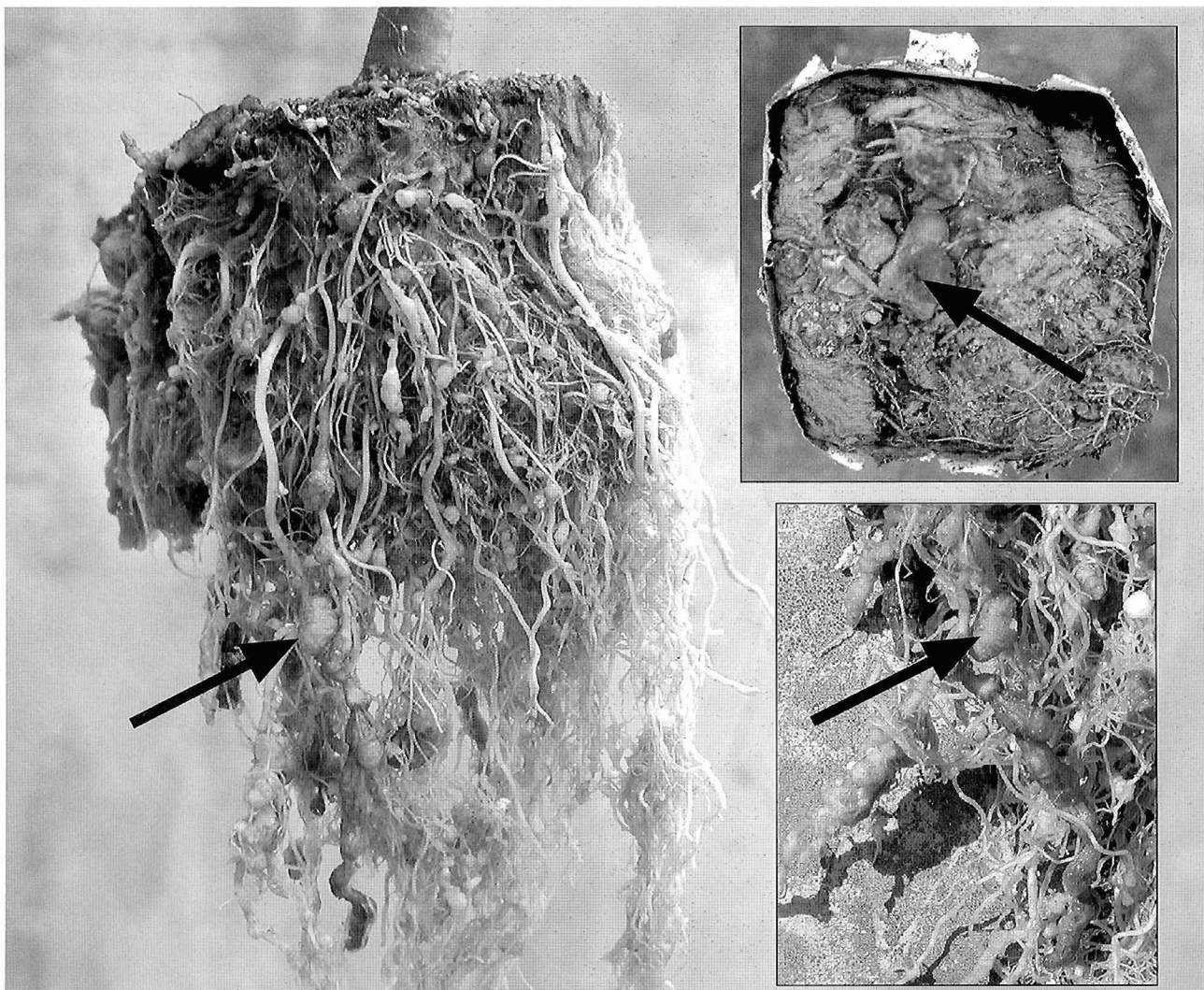


Fig. 1. Infection by *Meloidogyne javanica* in cucumber roots grown in rock-wool medium. Arrows indicate nematode galls.

scope to release females and egg masses, which were removed and placed in water to hatch. Both populations were identified as *Meloidogyne javanica* (Treub) Chitw. based on characteristics of the perineal patterns of mature females and on juvenile dimensions (Taylor, 1987).

It is hypothesized that the nematode infestations originated from the seedlings. These were probably grown in infested compost, or the nematodes migrated into the peat blocks through the drainage holes of the seedling trays placed on infested soil. While several fungal and bacterial pathogens have been detected in hydroponic crops (Zinnen, 1988), information on nematode presence is scanty. However, the occurrence of *M. incognita* and *M. arenaria* in soilless cultures of rose has been reported in Italy (d'Errico and Ingenito, 2003).

LITERATURE CITED

- D'Errico F.P. and Ingenito E., 2003. Occurrence of the root-knot nematode *Meloidogyne incognita* and *M. arenaria* in soilless cultures of rose. *Nematologia Mediterranea*, 31: 89-90.
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