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RESPONSE OF FOUR TOMATO CULTIVARS TO *MELOIDOGYNE INCOGNITA* INFECTION AND ITS CHEMICAL MANAGEMENT

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Abstract

Experiments were carried out in the green house at 30 ± 4° C to study the effects of *Meloidogyne incognita* infection on growth of four tomato cultivars and nematode reproduction. In another experiment the effects of four chemicals viz., chlorpyrephos, talstar, abamectin and emamectine on growth of tomato cv. UC-134 and nematode reproduction were observed. Fifteen-day-old seedling of Money Maker, Roma, 88572, and UC-134 tomato (*Lycopersicon esculentum* Mill.) cultivars were planted in 15-cm-diam pots filled with autoclaved soil. Seven days after transplantation the plants were inoculated with freshly hatched J_2 of *M. incognita.* Two thousands J_2 suspended in 10 ml of water were pipetted into three equidistant 3 cm deep holes surrounding the root zone of each plant. Money Maker was kept as susceptible check for comparison. Tomato cv. UC-134 Js inoculated plants were treated with Chlorpyrephos, Talstar, Abamectin, and Emamectin @ of 10 ml per pot. Nontreated nematode inoculated plants were kept as control. Rate of reproduction of nematode on roots of Roma, 88572, and Money Maker was same but significantly greater than that of UC-134. The root gall formation pattern was very much same as the rate of reproduction among cultivars. The shoot growth of UC-134 was better compared to other three cultivars. The performance of chlorpyrephos and Talstar was better in suppressing the rate of reproduction and improving the plant growth. Results showed that tomato cultivars varied in level of resistance against *M. incognita* and the impact of nematodes on plants can be reduced by applying these chemicals.