

INTRASPECIFIC INTERACTIONS OF *MELOIDOGYNE* *JAVANICA* AND RACES OF *M. INCOGNITA*

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Abstract

The intraspecific interactions (competition among the individuals in the same species/race) of *Meloidogyne javanica* and races of *M. incognita* were examined separately in pot experiments to understand their significance in co-existence of the species/races of *Meloidogyne* in mixed populations in crop fields. The intraspecific interaction in all the nematodes was intense and similar in trend. A step wise increase in the initial population level (P_1) progressively caused greater suppression of plant growth parameters. Number of females and eggs, and total population (P_f) of the nematodes increased with an increase in P_1 . An increase in reproduction factor (R_f) also occurred but it declined when P_1 was increased from 1,000 to 10,000 J_2 . Split inoculation of P_1 10,000 J_2 in two installments indicated competition between the individuals of the nematodes. Reductions in plant growth, number of females and eggs, P_f and R_f were greater in split-inoculations than non-split inoculation of P_1 10,000 J_2 . Greater number of mature females and eggs, and higher P_f and R_f were obtained with 2,500 + 7,500 J_2 than with 5,000 + 5,000 J_2 or 7,500 + 2,500 J_2 . This trend was consistent for all the nematodes. The intense intraspecific interactions (competition between the individuals of two different species) to ensure their mixed occurrence in agricultural soils.