

AN INTEGRATED APPROACH TO THE MANAGEMENT OF RICE ROOT KNOT NEMATODE, *MELOIDOGYNE GRAMINICOLA* IN SRI LANKA

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ABSTRACT

This study was carried out to design tools for integrated management of root knot nematode, *Meloidogyne graminicola*, in rice in Sri Lanka. Rice varieties namely, At5, At353, Bg304, Bg305, Bg359, Bg450, Bg94-1, Bg379-2, Ld355 and Ld356 were tested for their reactions against *M. graminicola*. Effect of poultry manure, cow-dung and paddy husk with or without cinnamon-leaf oil in reducing *M. graminicola* was studied.

It was revealed that rice varieties At5, At353, Bg304, Bg305, Bg450, Bg379-2, and Ld356 were tolerant to *M. graminicola* as compared to Bg94-1 which is highly susceptible with high rate of reproduction. Plants treated with poultry manure had significantly low nematode population. Plants grown in poultry manure enriched soil had lower yellow and dead leaves as compared to other plants. Addition of cinnamon-leaf oil improved the nematode control. This study concludes that rice varieties namely At353, Ld356, Bg304, At5, Bg305, Bg450 and Bg379-2 can be used for fields that are prone to *M. graminicola* infestation while poultry manure can be utilized at least occasionally as a nematicide cum fertilizer to reduce nematode infestation level in rice plants and to improve soil fertility.

Key words: cinnamon-leaf oil, soil amendments, rice variety, root knot nematode