Pak. J. Nematol., 8 (2): 95-100, 1990.

EFFICACY OF *PAECILOMYCES LILACINUS* FOR CONTROLLING *MELOIDOGYNE JAVANICA* ON TOMATO IN GREENHOUSE IN INDIA

M. WAJID KHAN AND MEHDI NASR ESFAHANI

Plant Pathology and Plant Nematology Laboratories,
Department of Botany, Aligarh Muslim University, Aligarh-202002, India.

Abstract

Efficacy of a soil hyphomycete, *Paecilomyces lilacinus*, an opportunistic bicontrol agent, in controlling root-knot nematode *Meloidogyne javanica* on tomato in greenhouse was investigated. *P. lilacinus* effectively promoted growth of plants inoculated with *M. javanica* by suppressing its pathogenesis as plant growth parameters did not differ significantly from nematode inoculated control plants. Root galling by the nematode and eggmass production were greatly reduced. The fungus was greatly effective when the fungus and the nematode were inoculated simultaneously or the fungus preceded the nematode in sequential inoculation. Conversely, when the nematode preceded the fungus, the improvement in plant growth and reduction in root galling and eggmass production were not substantial. A great number of nematode eggs were infected by *P. lilacinus*, inhibiting juvenile development. Interior of eggs, were devoid of juveniles and filled by the fungus mycelium. Developed juveniles were found attacked, killed and showed mycelial growth over their bodies. Simultaneous inoculation or sequential inoculation in which the fungus was added prior to the nematode were more effective in controlling the nematode than when nematodes preceded the fungus. *P. lilacinus* was, therefore, effective in controlling the root-knot nematode on tomato and suppressing its population growth, which may be determinant for the productivity of the ensuing crop.