

Distribution and incidence of root-knot nematode associated with tomato in Varanasi district of Uttar Pradesh

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ABSTRACT : A survey was conducted in the month of October to November 2015, 30 (Thirty) different locations in and around Varanasi district were selected to assess the incidence of root-knot disease on tomato crop. The parameters of tomato plants were analyzed based on *Meloidogyne* species, variety of tomato, resistant level and root-gall determined on the basis of disease incidence, gall index (GI) and egg mass index (EMI). The root samples of tomato plants collected different places were analyzed for the presence of root knot nematode. *Meloidogyne incognita* and *M. javanica*, the two species of root-knot nematodes were identified on the basis of perennial pattern for causing infection on tomato plants. The maximum susceptible tomato fields were identified in Gahura village followed by Bhoranpur, Bahupur, Bandepur, Kurhua, Parmandapur villages and the fields of other eleven locations were found having the less severity of root knot disease severity as compared to Gahura village. The tomato fields of other nine locations were showing slightly resistant against root-knot disease while the moderately resistant tomato fields were observed in Kaneri, Sihorva, Kaparphorvan and Sajai villages. Among all the surveyed tomato fields, species of *M. incognita* were found more prone compare to *M. javanica*.

Key Words : Tomato (*Lycopersicon esculentum*), root-knot disease, *M. incognita*, *M. javanica*, gall index (GI), egg mass index (EMI).