GEOGRAPHICAL DISTRIBUTION OF ROOT-KNOT NEMATODES (*MELOIDOGYNE* SPP.) IN THE PUNJAB PROVINCE OF PAKISTAN

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Abstract

In Pakistan, the root-knot nematode problem is more serious than in the developed countries and information on the host range and damage of crops by root-knot nematodes (Meloidogyne spp.) is meager. Therefore, a survey on the occurrence and geographical distribution of this nematode was conducted in the province of Punjab. For this purpose a total of 1217 soil and root samples were collected from herbaceous annual and perennial plants from 34 districts of the Punjab province. Out of 1217 samples of 47 plant species collected from 346 villages, only 498 (40.92 %) were found to be infested by *Meloidogyne* spp. Maximum infection (76 %) was recorded in district Faisalabad while minimum (9 %) was observed in district Attock. Root-knot infection was above 50 % in 4 districts (50-76 %), above 40 % in 3 districts (40-48 %), above 30 % in 14 districts (30-38 %), above 2 % in 9 districts (20-29 %) while other 4 districts showed 9-15 % infection. Out of 47 hosts of Meloidogyne spp., maximum infection was recorded on tomato (81 %) followed by okra (78 %), egg plant (70 %) and cucumber (52 %) and infestation was high on these hosts. The frequency of occurrence of *Meloidogyne incognita* was 85.1 % as it was detected from 40 host plants. M. javanica gave a frequency of 53.19 % while *M. hapla* and unidentified species of *Meloidogyne* showed frequencies 2.12 % and 12.7 % respectively.