

عنوان مقاله:

Root-knot Nematodes (*Meloidogyne* spp.) Infecting Peach (*Prunus persica* L.) in the Pothwar Region of Pakistan

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خلاصه مقاله:

The aim of the present study was to determine the prevalence and severity of root-knot nematodes in peach orchards in the Pothwar Region of Pakistan. Thirty-seven peach orchards were surveyed in the region and root and soil samples were collected from 10 randomly selected plants in each orchard for analysis. In the region, an overall incidence rate of 19.8% and a prevalence rate of 65.7% of root-knot nematodes were observed. The district Attock exhibited the highest prevalence rate of 71.43% and incidence rate of 34.29%. Conversely, the district Islamabad displayed the lowest prevalence rate of 5.5% and incidence rate of 10%. The surveys encountered five distinct peach varieties, and Early Grand had the highest prevalence (85.71%) of root-knot nematodes while Local Aroo showed the lowest (5.0%). Florida Gold and Aroo-5 were not infested with root-knot nematodes. In the region, peach trees were found to be infected by two types of root-knot nematodes, namely, *Meloidogyne incognita* and *M. javanica*., which was more prevalent than *M. incognita*, and it dominated all districts, except for Attock, where *M. incognita* was dominant. *M. incognita* was not present in Islamabad district. The occurrence of *M. incognita* and *M. javanica* as single populations were observed in 26.09 and 43.48% of orchards, respectively, while mixed populations were found in 30.43% of peach orchards. The overall galling index of the root-knot nematodes was 1.33, with the highest index in Attock and the lowest in Islamabad districts. Among the different peach cultivars, the Early Grand cultivar exhibited the maximum galling index, whereas no galling index was observed in the Florida Gold and Aroo-5 cultivars. It is recommended that stringent control strategies should be adopted to prevent the spread of nematodes to new plantations and to eradicate them from established orchards.

کلمات کلیدی:

Early grand cultivar, Galling index, Incidence rate, Phytopathogenic nematodes, Prevalence rate

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