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DISEASE NOTE

First report of *Macrophomina phaseolina* causing crown and root rot on *Pistacia vera* trees in Turkey

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Pistachio (*Pistacia vera* L.) is one of the most popular nuts for human consumption worldwide. Turkey is among the leading pistachio producing countries. In the summer of 2022, symptoms of wilting, crown and root rot with black discolorations, decline and death were observed on about 6% of pistachio trees in a newly planted commercial orchard in Diyarbakır province (38°00′12.2"N, 40°50′17.5"E), Turkey. Symptomatic bark and root tissues were collected and dissected into small pieces (3–5 mm), surface-sterilized in 1% sodium hypochlorite, rinsed in sterile water, placed on potato dextrose agar (PDA). The Petri dishes were incubated in dark at 23 °C for 7 days. The fungal colonies were initially hyaline and turned from gray to dark with age and had abundant microsclerotia, which were dark, oblong, smooth, and measured 118 × 62 µm (n = 30). For further identification, the internal transcribed spacer (ITS) and β-tubulin DNA regions of a representative isolate were sequenced using the primer pairs ITS1/4 and Bt2a/Bt2b (White et al. 1990; Glass and Donaldson 1995) and deposited in GenBank (Accession Nos. OP955944 for ITS, OP994345 for β-tubulin). The sequences showed 100% sequence similarity to that of *Macrophomina phaseolina* strain CBS 205.47 (ITS: KF951622, TUB2: MW592323). Phylogenetic analysis based on Neighbor-Joining method showed the close genetic relationship among the representative isolate and reference *M. phaseolina* isolates. Based on morphological characteristics and molecular identification, the pathogen was identified as *Macrophomina phaseolina*. Pathogenicity tests were performed by inserting 5-mm-diameter agar plug taken from an actively growing fungus colony into 2-year-old pistacia branches wounded with a cork borer 5 mm. Steril agar plugs were used as control. The inoculated six branches were sealed with Parafilm and incubated at 25 °C in moist chambers for 2-months. The pathogen caused black lesions on inoculation point of all branch segments, whereas no symptoms were observed in the control branches. The pathogen was re-isolated successfully from lesions, thus fulfilling Koch's postulates. To our knowledge, this is the first record of *Macrophomina phaseolina* on *Pistacia vera* in Turkey (Farr and Rossman 2022).

Declarations

Ethical approval This article does not contain any studies with human participants or animals.

Conflict of interest All authors declare that they have no conflict of interests.

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