



First report of *Neocosmospora solani* causing stem canker on *Juglans regia* in Turkey

Zühtü Polat¹ · Mehmet Akif Gültekin¹ · Gülsüm Palacıoğlu² · Harun Bayraktar² · Nuray Özer³ · Selahattin Yılmaz⁴

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English walnut (*Juglans regia* L.) has considerable economic importance in Turkey. In May 2019, stem cankers were observed in a recently established orchard with walnut cv. Chandler in Bursa province, Turkey. Approximately, 70% of grafted seedlings died due to canker lesions occurring at grafting site. Diseased trees showed symptoms of stem canker, branch dieback, vascular discolouration and death. Necrotic tissues were surface-disinfected in 2% NaOCl for 2 min and placed on potato dextrose agar (PDA). Isolated fungal colonies were identified as *Neocosmospora solani* (Mart.) L. Lombard & Crous (syn. *Fusarium solani* (Mart.) Sacc.) (Leslie and Summerell 2006; Lombard et al. 2015). Fungal colonies were white to pale cream with sparse mycelium. Microconidia were produced in false heads on long monophialides, hyaline, fusiform to ovoid, 0–1 septate and 3.3 to 9.2 × 1.6 to 2.7 μm. Macroconidia were slightly curved with blunt and rounded apical cells, and rounded or foot-shaped basal cells, 5 to 7 septate and 14.6–34.7 × 2.4–3.7 μm. ITS nrDNA and EF1-α regions of the isolate Jfs-2 were sequenced with ITS1/ITS4 and EF1/EF2 primers (ITS: MT002830, EF1-α: MN911287). BLASTn showed 100% sequence identity with *F. solani* strain CBS117481 (ITS: JX435205) and FRC S958 (EF1-α: DQ247429). The isolate

Jfs-2 was deposited in Ankara University Culture Collection with accession number AUZF-1034. To confirm pathogenicity, a 5 mm mycelial plug of *N. solani* was inserted into the center of 30 cm long-branch segments wounded with a cork borer. The inoculated branches were sealed with parafilm and incubated for 21 days. All inoculated branches exhibited necrotic lesions with a mean length of 7.8 cm and no lesions developed in the control plants. Koch's postulates were confirmed by consistently reisolating *N. solani* from inoculated branches. To our knowledge, this is the first report of *N. solani* associated with stem canker on walnut in Turkey (Farr and Rossman 2020).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Research involving human participants and/or animals The authors declare that no human participants and animals were involved in this study.

Informed consent This manuscript is new and not being considered elsewhere. All authors have approved the submission of this manuscript.

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✉ Harun Bayraktar
bayrakta@agri.ankara.edu.tr

¹ Atatürk Central Horticultural Research Institute, 77102 Yalova, Turkey

² Department of Plant Protection, Faculty of Agriculture, Ankara University, 06110 Ankara, Turkey

³ Department of Plant Protection, Faculty of Agriculture, Namık Kemal University, 59030 Tekirdağ, Turkey

⁴ Bursa Directorate of Provincial Agriculture and Forestry, Bursa, Turkey