



First report of *Fusarium avenaceum* causing branch canker on pear in Turkey

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Pear (*Pyrus communis*) is an important fruit crop in Turkey. In May 2021, canker lesions were observed in pruning wounds on approximately 70% of the pear trees cultivar Deveci in a five-year-old orchard in Bursa province, Turkey. Disease symptoms were twig blight, brownish bark and branch canker. Twenty small pieces from branch lesions were surface disinfected with 1% NaOCl solution for 3 min and placed on potato dextrose agar. Petri dishes were incubated for 10 days at 23 °C. All colonies were *Fusarium*-like with the production of a yellow to rose pigment and a dark pink to red reverse with abundant white aerial mycelium. Macroconidia formed on sporodochia were slender, slightly curved, usually 3 to 5 septate, with a tapering apical cell and a foot-shaped basal cell and measured 40–80 × 3.5–5.5 µm (n = 30). Microconidia and chlamydospores were not observed. The pathogen was identified as *Fusarium* spp. (Leslie and Summerell 2006). For further identification, EF1α and RPB2 genes of the isolate Fav2 were sequenced with primers EF1/EF2 and RPB1/RPB2 (O'Donnell et al. 2010; Staats et al. 2005) and deposited in GenBank (EF1α: MZ821072, RPB2: MZ821073). Blastn analysis suggested 99.38–100% similarity to *F. avenaceum* strain NRRL 25,128 (EF1α: MH582378, RPB2: MH582355). Phylogenetic analysis showed the close genetic relationship among *F. avenaceum*. To confirm Koch's postulates, four mm plugs of the pathogen culture were applied to the same size bark wounds on the middle point of six branches. The inoculated branches

were sealed with Parafilm and incubated for three weeks at 25 °C in moist chambers. All the inoculated branches showed dark-brown necrotic lesions on inoculation point. The fungus was re-isolated from the lesions and confirmed to be *F. avenaceum*. Control plants inoculated with PDA plugs remained symptomless. To our knowledge, this is the first report of branch canker caused by *F. avenaceum* on pear in Turkey.

Declarations

Ethical statement 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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