



First report of *Lasiodiplodia theobromae* causing canker and shoot blight of fig in Turkey

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There are over 10 million fig (*Ficus carica*) trees in Turkey (Anonymous, 2009). The majority of these trees are grown in the Aydın and Izmir Provinces of the Aegean region, although there are fig plantations in northern areas of Turkey as well. In the summer of 2008, an unusual, severe dieback of shoots and branches was observed only in fig trees cv. Beyaz orak in an orchard of Aydın Province. Isolations from the margins of cankers were made by plating small pieces (5 x 5 x 5 mm) of plant tissue on potato dextrose agar (PDA). The petri dishes were incubated at 25°C for seven days. Fungal colonies developed from 85% of the plated plant tissues. Fungal colonies had copious, white, aerial mycelia that turned grey to black with age and formed black pycnidia (Fig. 1). Pycnidiospores were oval, greenish brown, with one septum in the middle, dimensions 20.9-27.5 x 11.0-15.4 µm (Fig. 2). The fungus was identified as *Lasiodiplodia theobromae* (Pat.) Griffon & Maubl. (syn = *Botryodiplodia theobromae*), the anamorph of *Botryosphaeria rhodina* Berk. & Curt. Arx., based on colony characteristics and the unique morphological features of the pycnidiospores (Punithalingam, 1976). The teleomorph stage was not observed. Two isolates were stored at the University of California-Davis/Kearney fungal collection as #5L-48 and #5L-54.

Pathogenicity tests were performed on shoots of figs using mycelial disks obtained from a seven-day-old culture of an isolate recovered from a diseased fig tree in October 2008. Six current-season shoots on two 20-year-old fig trees (cv. Sarlop) were wounded with a 5-mm-diameter cork borer. A mycelial plug of a seven-day-old culture of *L. theobromae* was inserted in each wound and wrapped with Parafilm to prevent desiccation of the inoculum. Six similar shoots were inoculated with only agar plugs that served as negative controls. Wilting of leaves of all the inoculated shoots started within five to seven days after inoculation causing typical shoot blight symptoms (Figs. 3, 4). *Lasiodiplodia theobromae* was re-isolated from all inoculated shoots, but not from the negative controls.

Beyaz orak is one of the early season cultivars that are marketed for fresh figs in Turkey; therefore, it is considered an important fig cultivar for the

Turkish economy. To date, the disease has not been observed to be widespread and only occurs naturally on this cultivar. However, preliminary pathogenicity studies showed that *L. theobromae* also caused shoot blight on cv. Sarlop, which is cultivated extensively in Turkey. This pathogen is also known to cause cankers and dieback on grapevine in Italy, on mango in Sindh Pakistan, on kumquat in Taiwan, and on cacao in Cameroon (Khanzada *et al.*, 2004; Ko *et al.*, 2004; Burruano *et al.*, 2008; Mbenoun *et al.*, 2008). To our knowledge, this is the first report worldwide of *L. theobromae* causing a canker and shoot blight disease of fig.

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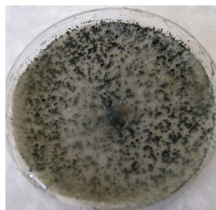


Figure 1



Figure 2



Figure 3



Figure 4

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