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DISEASE NOTES

# First Report of *Diplodia seriata* Causing Postharvest Rot of Quince Fruit in Serbia

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*Diplodia seriata* De Not. is a wide host range fungal pathogen having more than 34 different hosts. In Serbia, it has been previously described on apple fruit (Stojanovic et al. 2003) and ornamental trees (Zlatkovic et al. 2016). *D. seriata* causes frog eye leaf spot, canker, shoot dieback, and black rot of pome fruits (Phillips et al. 2007). It has been reported as a pathogen of quince (*Cydonia oblonga* M.) in Canada, Greece, New Zealand, South Africa, and Spain (Farr and Rossman 2017). In September 2015, rot symptoms occurred on organically grown quince fruit cv. Leskovacka, in Bavaniste, Serbia, in storage. Disease incidence was low but the symptoms were severe. Affected fruit had large, decayed, brown areas with a concentric band toward the lesion margin. A fungus was isolated from the internal tissue of one surface sanitized fruit on potato dextrose agar (PDA). Fungal colonies on PDA were initially white, but turned gray after 5 to 6 days and the growth rate was 14.7 mm/day. Pycnidia were produced after 30 days incubation on 2% water agar (with pine needles), which contained ellipsoid, brown, mostly aseptate conidia, occasionally with one central transverse septum. Conidia measured 17.5-(22.9)-30.9 × 8.7-(10.6)-13.7 μm (*n* = 50). Morphological characteristics were consistent with *D. seriata* (Phillips et al. 2007), which was confirmed by molecular

identification. Genomic DNA was isolated from fungal mycelium, ITS1/ITS4 PCR product was amplified, and MegaBLAST analysis of the 2× consensus 541-bp sequence (GenBank accession no. KY680283) was identical to several sequences of *D. seriata* deposited in GenBank (i.e., AY259094, KF574997). Pathogenicity was tested on mature quince fruit cv Leskovacka, apple fruit cv. Idared, and pear fruit cv. Williams. Three fruit each were surface sanitized and wound inoculated with mycelial plugs (5 mm in diameter) from 7-day-old cultures grown on PDA. Three control fruit each were inoculated with uncolonized PDA plugs. After 7 days incubation in plastic containers (RH 90 to 95%) at room temperature (25°C), brown lesions developed on inoculated fruit, while wounded, uninoculated, control fruit remained symptomless. Mean lesion diameter was  $24.7 \pm 5.23$  mm on quince,  $26.7 \pm 4.23$  mm on apple, and  $53.3 \pm 7.26$  mm on pear fruit. The isolate recovered from symptomatic quince fruit, showed identical morphological features, to the original isolate. This is the initial finding and characterization of *D. seriata* causing diplodia rot on quince fruit in Serbia. Results from this study indicate that the production of quince, a fragrant, nutritionally rich fruit with pharmacological attributes of economic value for Serbia, may be threatened by *D. seriata*. Presence of the pathogen in storage and orchards necessitates further research, as diplodia rot may cause future outbreaks on quince and serve as an inoculum source for other pome fruits grown in Serbia.

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