Disease Notes

First Report of Brown Rot Caused by *Monilinia fructicola* on Stored Apple in Serbia

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Abstract

Monilinia fructicola (G. Winter) Honey is a causal agent of brown rot of stone fruits, occasionally affecting pome fruits as well. The pathogen is commonly present in North and South America, Oceania, and Asia, but listed as a quarantine organism in Europe (4). After its first discovery in France in 2001, its occurrence has been reported in Germany, Hungary, Italy, Poland, Romania, Slovenia, Spain, Switzerland, Austria, and the Slovak Republic (1). In February 2011, during a survey for fungal postharvest pathogens in cold storage conditions, apple fruits (*Malus domestica* Borkh.) grown and stored in the Grocka Region, Serbia, were collected. All pathogens from symptomatic fruits were isolated on potato dextrose agar (PDA). One isolate from apple fruit cv. Golden Delicious with brown rot symptoms was identified as *M. fructicola* based on morphological and molecular characters. Colonies cultivated on PDA at 22°C in darkness were colorless, but later became grayish, developing mass of

spores in concentric rings. Colony margins were even. Conidia were one-celled, limoniform, hyaline, measured 12.19 to 17.37 (mean 13.8) × 8.62 to 11.43 µm (mean 9.9), and were produced in branched monilioid chains (3). Morphological identification was confirmed by PCR (2) using genomic DNA extracted from the mycelium of pure culture, and an amplified product of 535 bp, specific for the sp *M. fructicola*, was obtained. Sequence of the ribosomal (internal transcribed spac ITS1-5.8S-ITS2 region was obtained using primers ITS1 and ITS4 and deposited i GenBank (Accession No. JN176564). Control fruits were inoculated with sterile PDA plugs. After 3 days of incubation in plastic containers with high humidity at room temperature, typical symptoms of brown rot developed on inoculated fruits, while control fruits remained symptomless. The isolate recovered from symptomatic fruits showed the same morphological and molecular features of the original isolate. To our knowledge, this is the first report of *M. fructicola* in Serbia. Further studies are necessary for estimation of economic importance and geographic distribution of this quarantine organism in Serbia.

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