

**Title** First report of *Aspergillus niger* causing postharvest fruit rot of cherry in the prefectures of Imathia and Pella, Northern Greece

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### **Abstract**

In June 2011, symptoms of postharvest rot were observed on about 3% of all cherries collected from commercial orchards of cultivars “Lapen” and “Ferrovia” in the Prefectures Imathia and Pella (northern Greece). Fruit were harvested in a timely manner to avoid overripe fruit. No wounds or other predisposing injuries were observed on the infected fruits. Lesions enlarged rapidly and separated easily from healthy tissue when pressure was applied. Infected tissues were pale and water-soaked, and the associated fungal spores were dark and powdery, easily liberated when matured. The fungus grew rapidly and produced black colonies on acidified PDA (2.5 ml 85% lactic acid per L nutrient medium) after 5 days at 24°C. Identification of the pathogen was based on morphological characteristics (1). The conidial head was radiate, vesicles were nearly spherical and covered with metulae and phialides (biseriate). Conidia were globose (3 to 5 µm in diameter) and usually very rough with irregular ridges, bars, and verrucae. Koch’s postulates were completed in the laboratory by inoculating mature cherry fruits (cv Lapen). The fruits were surface-sterilized by dipping in 10% chloride bleach solution, allowed to dry in a laminar flow hood, and wounded with a sharp glass rod 2 mm in diameter. A 40-µl drop of a suspension containing 20,000 conidia per ml water was placed on each wound. There were 20 inoculated and 20 control fruits (similarly wounded and inoculated with a 40-µl drop of sterile distilled water) in a randomized design and incubated at 24-26°C for 6 days. Koch’s postulates were satisfied after re-isolating the fungus from inoculated fruit that developed symptoms similar to those observed on fruit collected from orchards. Control fruits did not show any symptom of the disease. This is the first report of the occurrence of *Aspergillus niger* as causal agent of postharvest rots of cherries in Greece. Postharvest fruit rots caused by *A. niger* have been reported in cherry orchards of other countries around the world (2). Because this disease caused postharvest rots of cherry fruits, measures may need to be implemented to manage this pathogen.