



First morphogenetic identification of the fungal pathogen *Colletotrichum musae* (Phyllachoraceae) from imported bananas in Saudi Arabia

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ABSTRACT. *Colletotrichum musae* is the causal agent of anthracnose in banana fruits; infection by this fungal pathogen results in severe post-harvest losses. Eleven *C. musae* isolates were obtained from infected imported banana fruit samples with anthracnose lesions collected from different markets in Riyadh, Saudi Arabia. The pathogenic, morphological, cultural, and molecular characteristics of these *C. musae* isolates were evaluated. The cultures had characteristic fast-growing sparse aerial mycelia that were white, with copious cinnamon conidial masses, conidia usually elliptical, and setae absent. An inoculation test was used to determine whether isolates could cause anthracnose symptoms on banana fruits. Necrotic lesions developed and orange-colored spore structures were later observed on these lesions. Microsatellite-primed PCR (MP-PCR) was used to identify genetic variation among the *C. musae*

isolates. The dendrogram obtained from cluster analysis of the MP-PCR fingerprints revealed a great deal of homogeneity among the isolates, shown by the formation of two clusters. Intraspecific similarity among the *C. musae* isolates ranged from 83 to 100%. This is the first report demonstrating morphological and genetic variation within a population of *C. musae* in Saudi Arabia.

Key words: *Colletotrichum musae*; Morphogenetic identification; MP-PCR marker; Banana