

***Mycosphaerella fijiensis*, causal agent of black sigatoka of *Musa* spp., found in Puerto Rico and identified by Polymerase Chain Reaction.**

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Black sigatoka, also known as black leaf streak, is caused by *Mycosphaerella fijiensis* Morelet with the anamorph *Pseudocercospora fijiensis* (Morelet) Deighton. It is the most significant disease of bananas and plantains (*Musa* spp.), as most of the economically important cultivars of exported and staple commodities are highly susceptible. The Caribbean is one of the few regions of the world where black sigatoka is not widespread. Black sigatoka has been reported in the Bahamas, Cuba, Hispaniola and Jamaica (1). Yellow sigatoka, caused by *M. musicola* Leach with the anamorph *P. musae* (Zimm.) Deighton has been recognized in Puerto Rico since 1938-1939 (2). In August 2004, symptoms resembling black sigatoka were first observed in Añasco, Puerto Rico by Extension personnel from the University of Puerto Rico. Since black and yellow sigatoka produce similar disease symptoms, a survey was conducted in the western banana and plantain production region of Puerto Rico to confirm the presence of black sigatoka. Leaf samples were collected from production fields near the towns of Las Marias, Maricao, and Añasco. Single-ascospore isolates were recovered using the discharge technique from moistened pseudothecia in necrotic lesions that were inverted over water agar and ascospores were transferred to Potato Dextrose Agar (PDA). The isolates were sub-cultured in PD broth for mycelium production. DNA was isolated from mycelium with the FastDNA® kit (Q-Biogen, Irvine, CA) for 19 isolates. Internal Transcribed Spacer (ITS) as well as the 5.8s rDNA regions were PCR amplified with primers specific to *M. fijiensis* or *M. musicola* (3). Amplification products (~1100 bp) were observed for 18 of the 19 isolates, six of which were *M. fijiensis* and the remaining 12 were *M. musicola*, while the positive controls for both species were also amplified with the respective primer pairs. *M. fijiensis* was recovered from production fields close to all three towns. The source of *M. fijiensis* in Puerto Rico is unclear, but it may have originated from introduced leaf material and/or wind dispersed ascospores from neighboring countries. The presence of black sigatoka in Puerto Rico will most likely increase production costs, where fungicide applications will be needed in order to maintain yields. The USDA-ARS, Tropical Agriculture Research Station is the official *Musa* spp. germplasm repository for the National Plant Germplasm System. As such, efforts are underway to introduce and evaluate black sigatoka disease-resistant clones that can satisfy local and export market criteria.

References: (1) R.C. Ploetz. 2004. Plant Dis. 88:772. (2) R.H. Stover. 1962. Trop. Agric., Trinidad. 39:327. (3) A. Johnsen. 1997. Chatman, U.K: Natural Resource Institute.