

Genotypic Variation in the Banana Response to the Fungal Pathogen *Mycosphaerella fijiensis*

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Mycosphaerella fijiensis is a hemibiotrophic ascomycete causing the black leaf streak disease (BLS) of banana that is commonly called Black Sigatoka disease. After a period of epiphytic growth on the leaf surface, fungal hyphae penetrate the leaf through the stomata. The fungus grows then in the mesophyll intercellular space, without penetrating leaf cells. This biotrophic phase can last for a few weeks before the appearance of the first symptoms of the necrotic phase. Despite the economical importance of the BLS disease, little is known on the physiological events occurring during the pathogen life cycle in the plant. To learn more about these physiological events, we established a bioassay based on detached leaves maintained *in vitro*, associated to phenotyping with an image analysis software package (Visilog® Noesis) that allows monitoring of the reaction of banana cultivars to *M. fijiensis* strains. In a preliminary experiment, we also analysed transcriptome changes in three accessions showing contrasted reactions to *M. fijiensis*, using gene expression profiling by RNASeq. First results of this analysis will be presented.