

Raízes de *Musa* spp. hospedam fungos endofíticos com potencial de controle de *Fusarium oxysporum* f. sp. *cubense* / Roots of *Musa* spp. are hosts of fungal endophytes with potential to control *Fusarium oxysporum* f. sp. *cubense*. A.I. Salcedo<sup>1</sup>; A. Schily<sup>2</sup>; L. Machado<sup>3</sup>, N. Chaves<sup>4</sup>; H.S. Alves; C<sup>5</sup>. Staver<sup>6</sup>; M.A. Dita<sup>3,5</sup>. <sup>1</sup>Facultad de Ciencias Agrarias, Universidad Nacional de Colombia, Colombia. <sup>2</sup>Universidade de Hoenheim, Alemanha. <sup>3</sup>Faculdade de Biologia, PUC-Campinas, São Paulo, Brasil. <sup>4</sup>Bioversity International, Costa Rica. <sup>5</sup>Embrapa Mandioca e Fruticultura, Cruz das Almas, Bahia, Brasil. <sup>6</sup>Bioversity International, Francia.

Aiming to understand the role of root-associated endophytic fungi against *Fusarium oxysporum* f. sp. *cubense* (Foc) we screened 25 non-commercial genotypes of *Musa* spp. from field collections in Brazil and Costa Rica. Analyses of Tefa-1 $\alpha$  and/or ITS genome regions of the 150 isolates obtained revealed that most frequent genera were *Trichoderma* spp. and *F. oxysporum*. Fungi such as *Gloeotinia temulenta* and others isolates with no significant similarities to the database analysed are potentially new descriptions. Some genera were more frequent or uniquely found on certain genotypes, but endophyte-host specificity needs to be verified. Antagonism tests against Foc revealed that most *Trichoderma* isolates are better competitors than Foc *in vitro*. *T. asperellum* isolates showed the highest inhibition (> 80%) and parasitism (100%) levels. Some *T. asperellum* isolates were also able to parasitize non-pathogenic *F. oxysporum* isolates even coming from the same host. Our results revealed that *Musa* spp. roots are hosts of a high diversity of culturable fungi including potential biocontrol agents against Foc, but also indicate complex *in planta* interactions among endophytes.

**Keywords:** Panama disease; endophytes; *Musa* spp.