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Fusarium Wilt (*Fusarium Oxysporum* F. Sp. cubense) in Gros Michel (AAA) Bananas, the Incidence at Smallholder Level of Nicaragua

PAULO DOS SANTOS FARIA LICHTENBERG LICHTENBERG¹, LUIS POCASANGRE², CHARLES STAYER³, CHRISTIAN DOLD⁴, RICHARD A. SIKORA⁵

¹ *University of Bonn, Phytopathology and Nematology in Soil Ecosystems, Institute for Crop Science and Resource Conservation, Germany*

² *Bioversity International, Costa Rica*

³ *CGIAR, Bioversity International, France*

⁴ *University of Bonn, Germany*

⁵ *University of Bonn, Institute of Crop Science and Resource Conservation (INRES), Germany*

Abstract

Fusarium oxysporum f. sp. cubense (Foc), the causal agent of Fusarium Wilt is an important disease for the growers of ‘Gros Michel’ dessert bananas throughout the world. ‘Gros Michel’ bananas in Nicaragua are grown primarily in agroforestry systems, often with coffee, for home consumption and the national market. Little research has been done on ‘Gros Michel’ in this smallholder production system, where the problems with Fusarium Wilt potentially could occur. In this study the occurrence and incidence of Fusarium Wilt was evaluated and grower knowledge and management of the disease were characterised. A survey of 30 farms was conducted in two zones of northern Nicaragua, Monterrey in Jinotega and Yasica Sur, in San Ramón. In Jinotega 47 % of farms were contaminated with 2.24 % of Foc plant incidence while in Yasica Sur no diseased plants with Foc were found, representing a good opportunity as banana seed provider. Poor training on banana disease and production were significantly correlated to Foc contamination in Nicaragua. In the 30 interviews performed: 90 % of the growers did not know the disease, 3 % described correctly the plant symptoms of disease and only 6.6 % had some disease control methods in place. This study demonstrated that Fusarium Wilt is affecting ‘Gros Michel’ in small holding farms in northern Nicaragua and that occurrence and incidence is influenced by farm management. It seems that distribution of infested planting material and the high proximity between farms allows the rapid dissemination of the disease in the region. Additionally 18 isolates of *Fusarium* sp. were recovered from diseased plants and pathogenic test will be carried out during this year.

Keywords: Agroforestry System, banana, fusarium Wilt, Smallholders