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Fusarium Wilt (*Fusarium oxysporum* F. sp. *cubense*) in Gros Michel (AAA) Bananas: The Incidence at Smallholder Level of Nicaragua

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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 incidence of Fusarium Wilt was evaluated, additionally disease occurrence, grower perception 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. Foc was occurring in 47% of Jinotega farms with 2.24% of Foc plant incidence while in Yasica Sur no Foc diseased plants with Foc were found, representing a good opportunity as local banana seed provider. Poor training on banana disease management and the absence of control 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 banana crop 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: Banana, Fusarium wilt, smallholders