

ABSTRACT

SCREENING FOR SOIL ANTAGONISTS TO *FUSARIUM OXYSPORUM* F. SP. *CUBENSE* IN BANANAS IN TRINIDAD

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The fungus *Fusarium oxysporum* f. sp. *cubense* causes Panama wilt disease of bananas, which is responsible for economic losses in banana-producing countries of the Caribbean and other parts of the world.

This fungus can exist as a saprophyte in the soil before it infects the plant. Therefore, it may be possible to reduce disease incidence by encouraging soil antagonists to *Fusarium oxysporum* f. sp. *cubense* that already exist in that area. The concept is that there are existing antagonists to the pathogen in certain soils, making the soil suppressive to the disease.

In this study, an investigation was done to screen the soil in a banana plantation in Chickland, Trinidad, where different areas within the same plantation displayed low disease incidence, while others were seriously affected.

The suppressive and the conducive soils were acidic. Therefore pH was not a factor contributing to suppressiveness. Conducive soils were found to have relatively high clay content. Twenty-eight antagonists were found in the soils collected from 83 isolated organisms and very antagonistic isolates were found in both suppressive and conducive soils.

Keywords: suppressive soil; antagonist