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Identifying the causal agent of the rotten rhizome syndrome in Achira (Canna edulis)

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Canna edulis (family Cannaceae, order Zingiberales, monocot) which common name is sagú or achira is a crop innate to the South American Andes, grown in Colombia, Peru, Ecuador, Bolivia, Venezuela, Brazil, the Antilles, some Asian countries and Australia. A closed related species Canna indica is an important flower crop for several developed countries such as the United States, Canada and the Netherlands. In Colombia the cultivating of this crop is typically done by small farmers, whom see the plant as food source (they harvest the rhizomes and extract the starch from them) but more importantly as the reserve bank for their economies. Achira is a very resilient crop thought to withstand pests and diseases to the point that some people will characterize the cropping system as organic given the lack of sanitary / cautionary applications. Nonetheless in recent years, an increase in the number of diseased rhizomes has been noted, and this increase has been correlated with yield losses. Our research points to the presence of Fusarium oxysporum as the agent causing the so-called Rotten Rhizome Syndrome. In here we present some of the results that lead to this conclusion and the steps that will be taken to reduce the spread of the disease and the pathogen.

Biography

Biologist by training with doctorate in Plant Pathology from TAMU, my research tries to understand the interactions between hosts and soil borne plant pathogens (Oomycetes and Deuteromycetes) and provide management solutions to plant diseases caused by these. Some commodities I work with, include achira (Canna edulis), potatoes (Solanum tuberosum, S. phureja) and peas (Pisum sativum).

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