

Pre-plant treatments in the control of rhizome rot disease of ginger in Jamaica

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[Abstract]

Ginger (*Zingiber officinale* Rosc) is a crop of great potential to have. However, the production is affected by a number of constraints, which have resulted in a production decline. A disease of complex aetiology known as rhizome rot disease has, within the last six years, become a limiting factor in its production. The disease is manifested under extremes of dry and wet field conditions. Several known rhizome rot inducing organisms have been isolated from affected rhizome. Of these *Fusarium oxysporum*, *F. solani* and *Meloidgyne* sp have been repeatedly isolated from affected material and are considered of economic importance because of their potential to cause great losses to ginger production. Hence, investigation were carried out to determine the role of these organisms in the etiology of the disease and to assess the efficacy of three pre-plant treatments in controlling the disease. Three treatments were evaluated on two locally grown ginger varieties, Jamaica Yellow and Jamaica Blue Ginger. The treatments were 0.1% Topsin M® (thiophanate-methyl ethyl), hot water treatment at 510C for 20 min and a combination of the hot water treatment followed by the fungicidal treatment. Under field conditions the Hot Water +Topsin M treatments resulted in the highest yields but there was no significant difference within treatments. The treatments however had an effect on plant stand counts and this has a positive correlation with the yield/plot. The results obtained indicate an interaction between environmental factors and the performance of the treatments.