



Cochliobolus lunatus hypersensitivity in Mahogany leaves and its response to fungicide and biocontrol agent

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Abstract:

Cochliobolus lunatus a severe foliar pathogen hypersensitivity activity was tested in Mahogany leaves and was analysed for their activity in response to preventative and curative treatments. Bio-agent *Trichoderma harzianum* spore suspension 2×10^6 and fungicide Dithane M-45 at 100ppm concentration was checked for its activity against the pathogen. Ten mycelia discs (5 mm) of the pathogen were placed to observe the hypersensitive activity. Control resulted in 100% infection by the pathogen. In curative treatment i.e. Pathogen application followed by the test agents, none of the treatments were found to control activity of the pathogen but for preventative treatment i.e. Test agents application followed by the pathogen, up to 50% management was observed for *Trichoderma harzianum* treated leaf samples and a 100% management was seen for chemical application. Leaf clearing technique displayed entry of the pathogen via stomata openings and severe tissue destruction. Preventative treatment revealed a surface competition between the antagonist and the pathogen resulting in the decrease in the incidence of the disease where as in response to fungicide treatment, a coating of fungicide was found to be clearly inhibiting the pathogen. Further study is needed to understand if any variations among the beneficial microbes in response to the bio-gent and fungicide are happening similarly an altered strategy by modifying bio-agent concentrations could replace chemical agents thereby enhancing bio-agents application.

Biography:

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