

Research Article***In vitro* and *In vivo* Evaluation of Antagonistic Potential of Fungal and Bacterial Bioagents Against *Macrophomina phaseolina* Causing Dry Root Rot in Mung bean****Sangeeta Mehta and S Gangopadhyay**

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Abstract

Antagonistic potentiality of thirteen fungal and nine bacterial antagonists was evaluated against *Macrophomina phaseolina* [(Tassi.) Goid. = *Rhizoctonia bataticola* (Taub.) Butler] under laboratory conditions. Besides, the mechanism of action of bioagents in suppressing the growth of *M. phaseolina* was seen. The disease control efficacy of the bioagents used alone and in combinations as seed treatment (ST), soil application (SA) and both ST+SA against root rot in mung bean was studied under artificial soil inoculation condition in green house. The antagonists *T. harzianum* (Th-JU) and *P. fluorescens* (Pf-SIKR) significantly inhibited the mycelial growth of the pathogen under laboratory condition. The application of bioagents through seed and soil provided better control as compared to their use as either seed or soil treatment alone.

Key words: *Bacillus subtilis*, *Macrophomina phaseolina*, mung bean, *Pseudomonas fluorescens*, *Trichoderma* spp.

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