

Efficacy of bio-agents against damping off in solanaceous crops under nursery conditions

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ABSTRACT

The study was conducted to assess efficacy of *Trichoderma harzianum* and *Pseudomonas fluorescens* against damping off in tomato and brinjal seedlings during Kharif season. The investigation was performed as on farm trials on farmers' field over three years viz., 2013-14, 2014-15 and 2015-16. *T. harzianum* and *P. fluorescens* were applied in combination of soil+seed treatment. Talc based formulation of both bio control agents were used @ 10 g kg⁻¹ in seed treatment and 100 g m⁻² in soil treatment. Results indicated that the combination of soil+seed treatment with *T. harzianum* was gives maximum seedling stands (84.15%) with minimum mortality (15.85%) in brinjal followed by soil+seed treatment with mixture of *T. harzianum* and *P. fluorescens* (78.30%) and soil+seed treatment with *P. fluorescens* alone (69.68%) whereas, in control plot treated with Carbendazim 50 WP (soil+seed) recorded less seedling stand (41.50%). In case of tomato, application of *T. harzianum* as soil+seed gave the maximum seedling stand (80.32%) followed by soil+seed treatment with combination of *T. harzianum* and *P. fluorescens* (73.45%) and *P. fluorescens* alone (58.64%) while seed+soil treatment with Carbendazim 50 WP given minimum seedling stand (42.01%). Consortium of *T. harzianum* and *P. fluorescens* significantly increased the growth and yield attributes of brinjal and tomato crops i.e. plant height, number of branches plant⁻¹, number of fruit plant⁻¹ and fruit yield ha⁻¹ followed by along *Trichoderma* and *Pseudomonas*. The study showed that *T. harzianum* and *P. fluorescens* are the potential bio control agents as compare to Carbendazim 50 WP and can be used effectively for the management of damping off in seedlings in nursery.

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