

***In-Vitro* Evaluation of Certain Fungicides and Biocontrol Agents against Rice Sheath Blight Pathogen, *Rhizoctonia solani* (Kuhn)**

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ABSTRACT

The present study aimed at *in vitro* screening of fungicides and the potential biocontrol agent, *Trichoderma* spp against *Rhizoctonia solani*, the rice sheath blight pathogen. All the fungicides under study viz., Carbendazim 12%+Mancozeb 63% (Companion), Trifloxystrobin 25%+Tebuconazole 50% (Nativo -75 WG), Validamycin (Sheathmar 3%L), Carboxin 37.5% + Thiram 37.5% (Vitavax power) and Hexaconazole 5%EC (Contaf) have shown more or less complete inhibition of *R. solani* both in terms of mycelial growth and in sclerotial production. All the three *Trichoderma* species viz., *T. harzianum*, *T. viride* and *T. hamatum* were found to be highly antagonistic to *R. solani* with inhibition % ranging from 63.43 (*T. hamatum*) to 76.47 (*T. harzianum*) in dual culture studies. A clear zone of inhibition as evident from yellow halo production was noticed in case of antagonistic reaction with *T. harzianum*. Further, all the three-biocontrol agents volatile and non-volatile metabolites that are antagonistic to the test pathogen.

Key words : Fungicides, Rice, Sheath blight, *Trichoderma* spp.