

EFFICACY OF *Trichoderma virens* ISOLATE AGAINST *Sphaerulina oryzae* AND ON PLANT GROWTH PROMOTION IN CULTIVATED RICE (*Oryza sativa* L.)

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Trichoderma virens has demonstrated effective in enhancing rice plant growth and inhibition due to Narrow Brown Leaf Spot (NBLS) disease caused by *Sphaerulina oryzae*. This study aimed to evaluate the influence of *T. virens* on rice plant growth and its suppressive effect on *S. oryzae*. The pathogen was isolated from symptomatic rice plants at the Faculty of Agriculture, Rajarata University of Sri Lanka and confirmed based on the morphological and microscopic observations. In dual culture plate assay, *Trichoderma virens* exhibited a 43% inhibition of mycelial growth of *S. oryzae*. Pathogenicity was confirmed by Koch's postulates. The efficacy of the *T. virens* was tested in a pot trial with eight treatments: T₁: only soil, T₂: NBLS and soil, T₃: NBLS and *T. virens*, T₄: NBLS and full Department of Agriculture (DOA) recommendation, T₅: NBLS, full DOA recommendation and *T. virens*, T₆: NBLS and half DOA recommendation, T₇: NBLS and *T. virens* with half DOA recommendation, and T₈: NBLS and carbendazim 500 g. *Trichoderma virens* was applied with the initial dose (2.5×10^6 spores mL⁻¹) of a capsule form. Plant growth parameters were analyzed by using repeated mixed effect model in SAS statistical software. In case of plant growth parameters plant height and leaf number was counted. Plant height was improved significantly compared to untreated control (T₁), while the leaf number remained not significant. Further, *T. virens* spores were viable and multiplied throughout the experimental period with zero disease progression even in plants inoculated with the pathogen. In conclusion, *T. virens* is a promising alternative to chemical fungicides for managing NBLS in rice plants and offers plant height increasement.

Keywords: Disease suppression, Height increasement, Mycelial growth