

**EVALUATION OF DIFFERENT *Trichoderma* ISOLATES FOR  
CONTROLLING *Agroathelia rolfii* (Sacc.) CAUSING  
GROUNDNUT STEM ROT DISEASE**



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## ABSTRACT

The use of biological control agents, particularly *Trichoderma* species, presents a sustainable alternative to chemical pesticides in managing plant diseases. While chemical treatments, such as the fungicide Homai, are commonly used to control pathogens like *Agroathelia rolfsii*, they pose environmental risks and can lead to the development of resistant pathogen strains. This study evaluates the antagonistic efficacy of five *Trichoderma* isolates (*Trichoderma viride* 1, *Trichoderma viride* 2, *Trichoderma asperellum* 1, *Trichoderma asperellum* 2, and *Trichoderma harzianum*) against a target pathogen *A. rolfsii* using dual culture technique on Potato Dextrose Agar (PDA) plates. The research was conducted at the Regional Agriculture Research and Development Centre (RARDC), Kilinochchi, and arranged in Completely Randomized Design (CRD). Inhibition percentages were recorded at 24, 48, 72, and 96 hours. Statistical analysis revealed significant differences among treatments and over time. *T. harzianum* showed the highest inhibition at all-time points, reaching 79% at 96 hours, significantly higher than the other isolates. This study underscores the potential of *T. harzianum* as an effective biocontrol agent, suggesting its practical application in agriculture to reduce dependency on chemical pesticides. The methodologies for pathogen isolation, PDA media preparation, and re-inoculation of *Trichoderma* are detailed to ensure reproducibility. This research contributes to the field of biological control and highlights the importance of *Trichoderma* in sustainable agricultural practices.

**Keywords:** *Agroathelia rolfsii*, Biocontrol, Dual culture, *Trichoderma asperellum*, *Trichoderma harzianum*, *Trichoderma* species, *Trichoderma viride*.

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