**Screening of Antagonistic Fungi against Causative Agent of White Root Disease in Cinnamon**

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White root disease is caused by the Telluric fungus *Rigidoporus microporus* in cinnamon (*Cinnamomum zeylanicum* Blume), the most valuable spice crop in Sri Lanka. The white root disease pathogen has the ability to degrade wood by decomposing lignified cell walls using hydrolytic and oxidative enzymes. Despite the significant economic loss caused by white root disease, sufficient and thorough studies have not yet been conducted. Control of the disease by applying systemic fungicides is expensive, pollutes the environment and causes health hazards. This study was conducted to identify the morphology of *R. microporus* and *in vitro* screening and evaluation of effective *Trichoderma* spp. for bio control of the causative agent of white root disease in cinnamon. The pathogen was isolated from the infected roots of cinnamon. Isolated fungus was cultured on Potato Dextrose Agar at 28±20C and the morphological characters were observed after 7 days of incubation. Two *Trichoderma* species were isolated from the forest soils by serial dilution method and the old culture obtained from the soil division at National Cinnamon Research & Training Center then, subjected to antagonisms assay againstthe two strains of *R. microporus.* White color fibrous fungal mycelium was observed with many branching like structures. A thread- like network was observed under the compound microscope, with hyaline septate hyphae and no clamp connections. Both *Trichoderma* spp. showed the antagonistic activity against the two strains of *R.microporus* while Trichoderma strain 2 showed the highest growth inhibition actively against *R. microporus* strain 1 (79.58%) followed by *R.microporus* strain 2 (76.08%) respectively. Further research is needed to evaluate the effectiveness of antagonistic *Trichoderma* against the causal organism of white root disease in field conditions.

**Key words:** *Antagonistic, Cinnamon, Rigidoporus microporus, Trichoderma, White root disease*