The Effect Of The Concentration *Trichoderma harzianum* Rifai. On The Growth Of The Pathogen *Sclerotium Rolfsii* Sacc. In Vitro

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ABSTRACT

Sclerotium rolfsii is a soil-borne pathogen that causes stem rot in various types of plants. Biological control can be a solution, namely by utilizing microbes that are antagonistic to the fungus *Sclerotium rolfsii*. One of the antagonistic fungi that can be used is *Trichoderma harzianum*. This study aims to determine the inhibitory power of *Trichoderma harzianum* against *Sclerotium rolfsii* in vitro. This study was conducted from September 2022 to December 2022 at the Jember State Polytechnic Plant Protection Laboratory using a non-factorial Complete Randomized Design (CRD). Treatment includes: T0: 0% (Aquades), T1: 4,835 × 10^9 cfu/ml, T2: 8,007 × 10^9 cfu/ml, T3: 9,685 × 10^9 cfu/ml, T4: 1,142 × 10^{10} cfu/ml, T5: 1,544 × 10^{10}. Each treatment was repeated 3 times. Furthermore, the data were analyzed using anova, if it was significantly different, it was followed by a 5% LSD Test. The results of the percentage of inhibitory power in each treatment are, T0 = 25,20%, T1 = 45,00%, T2 = 45,20%, T3 = 50,00%, T 4= 66,00%, T5= 66,73%.

Keywords: *Antagonist*, *Sclerotium rolfsii, Trichoderma harzianum*