

USES *Trichoderma* sp. WITH VARIOUS ORGANIC MATERIALS TO CONTROL FUSARIUM WILTING IN CHILI PLANTS

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ABSTRACT

This research was conducted to determine the dose of *Trichoderma* sp. and the most effective organic fertilizer for controlling fusarium wilt in chili plants and providing the best growth and yields of chili plants. The method was prepared using a single factor Complete Randomized Block Design (RAKL). The treatment consisted of 2 controls inoculated and not inoculated with *Fusarium* sp., Compost Fertilizer 35 g/polybag, Compost Fertilizer 70g/polybag, Compost Fertilizer 105g/polybag, Cow Manure 35g/polybag, Cow Manure 70g/polybag, Cow Manure 105 g/ polybag, Goat Manure 35 g/ polybag, Goat Manure 70 g/ polybag, and Goat Manure 105 g/ polybag all treatments except the control added *Trichoderma* sp. 20 g/poly bag. Data were analyzed for diversity (ANOVA) ($\alpha = 5\%$), followed by the Duncan Multiple Range Test (DMRT) ($\alpha = 5\%$). The results showed that the treatment of *Trichoderma* sp. 20 g + Cow Manure 105 g/ polybag and *Trichoderma* sp. 20 g + 105 g goat manure/polybag is most effective in suppressing fusarium disease seen from the parameters of disease incidence, disease attack intensity, AUDPC, and infection rate. Treatment of *Trichoderma* sp. 20 g + 105 g compost manure/polybag provides the best growth and results seen from the parameters of chili plant height (cm), number of fruit/plant, fruit weight per fruit, and fruit weight per plant.

Keywords: *Trichoderma* sp., *Fusarium* sp., organic fertilizer