

**EFFECT OF VARIOUS TYPES OF ORGANIC FERTILIZERS
ENRICHED by *Trichoderma* spp. TO CONTROL *Fusarium oxysporum
lycopersicii*
ON CUNG TOMATO PLANTS (*Solanum lycopersium*)**
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ABSTRACT

The biological factor that often becomes an obstacle to tomato growth is the presence of pathogen attacks, and one of the diseases caused is *Fusarium* wilt which is caused by *Fusarium oxysporum lycopersicii*. Use of various types of organic fertilizer enriched with *Trichoderma* sp. to control *Fusarium* wilt and at the same time to increase the production of cung tomato plants. The research aims to determine the ability of *Trichoderma* spp. by using various types of organic fertilizer to control *Fusarium* wilt in cung tomatoes. The research will be carried out at the Rejo Utomo Farmers Group Garden, Blunyahrejo, RW.04, Karangwaru, Tegalrejo District, Yogyakarta City which has an altitude of 110 meters above sea level, in June – July 2023. The research is structured in a 1 factor Complete Randomized Block Design (RAKL). which was repeated 3 times. The treatments used were T0 (No organic fertilizer + no *Trichoderma*), T1 (Goat pen + *Trichoderma* 1 hp), T2 (Compost + *Trichoderma* 14 hp), T3 (Bamboo humus + *Trichoderma* 14 hp), T4 (Goat pen + *Trichoderma* 7 hp), T5 (Compost + *Trichoderma* 7 hp), T6 (Bamboo humus + *Trichoderma* 7 hp). Observation parameters include disease intensity, disease incidence, plant height, age at start of flowering, age at start of harvest, number of fruit, and root volume. Data were analyzed using analysis of variance (ANOVA) with a level of 5%. If it shows a real effect, then proceed with the Duncan Multiple Distance Test (DMRT) at 5% level. The research results showed that organic compost fertilizer incubated with *Trichoderma* sp. with an incubation period of 7 days before planting gives the best results in suppressing attacks by *Fusarium oxysporum lycopersicii* on tomato plants. The shelf life of organic fertilizers and *Trichoderma* spp had no effect on disease intensity and the incidence of *Fusarium* wilt in cung tomato plants. Treatment of goat manure and *Trichoderma* spp. 14 days of storage had an influence on plant height at 2 WAP observations and an influence on flowering time. Treatment of bamboo humus and *Trichoderma* spp. 7 days of storage has an influence on the number of fruit in the first harvest.

Key words: Cung tomatoes, *Trichoderma* spp., *Fusarium* wilt, Organic Fertilizer