

**RESPONSE OF GIVING *Trichoderma sp.* AND REDUCING NPK
FERTILIZER DOSES ON THE GROWTH AND YIELD OF TOMATO
PLANTS (*Solanum lycopersicum* L.)**

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ABSTRACT

The increasing demand for tomatoes has driven the use of chemical fertilizers such as NPK, which poses the risk of accelerating land degradation. To prevent soil quality decline, reducing chemical fertilizers and incorporating biofertilizers like *Trichoderma sp.* is necessary. This study aimed to determine the appropriate dosage of *Trichoderma* and NPK reduction for optimal growth and yield of tomato plants. The research was conducted at the Agricultural Faculty Practice Garden in Sempu Hamlet, Wedomartani Village, Ngemplak Subdistrict, Sleman Regency. The experimental design was a factorial Randomized Complete Block Design (RCBD) with three replications. The first factor was *Trichoderma sp.* dosage with three treatment levels: 10 g/plant, 20 g/plant, and 30 g/plant. The second factor was NPK reduction with three levels of 25%, 50%, and 75% reduction from the recommended dose. Data were analyzed using *Analysis of Variance* (ANOVA), followed by *Duncan's Multiple Range Test* (DMRT) at a 5% significance level. A *Trichoderma sp.* dosage of 30 g/plant resulted in the best outcomes for fruit diameter and fruit weight per fruit, while a 25% NPK reduction yielded the sweetest fruit.

Keywords: *Tomato, Dosage, Trichoderma sp., NPK Fertilizer*