

THESIS
**EFFECT OF MUSHROOM *TRICHODERMA SP* AND PGPR ON THE
GROWTH AND YIELD OF TOMATO CROPS**
(*Lycopersicum esculantum*)

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ABSTRACT

The purpose of this study was to determine the combination of *treatment between Trichoderma sp* and PGPR, determine the dose of *Trichoderma sp administration* and determine the concentration of appropriate PGPR administration to the growth and yield of tomato crops. This research was conducted in Wedomartani experimental garden, Ngemplak, Sleman, Yogyakarta owned by UPN "Veteran" Yogyakarta Faculty of Agriculture which will be held in March to June 2020. This study used a 2 factorial field experiment in (RAL) with additional factorial+treatment (control). The experiment consisted of 2 factors with the addition of controls. P0 : without rooting (control), the first *factor trichoderma sp* consists of 3 level dai namely 30 ml / polybag, 40 ml / polybag and 50 ml / polybag. While the second factor of PGPR consists of 3 level namely 2,500 ppm, 5,000 ppm and 7,500 ppm. The data obtained was analyzed using diversity analysis (Anova) at a rate of 5%. Additional analysis is used to test factorials with controls using orthogal kontras, if there is a significant difference followed by a DMRT test at a test level of 5%. From the research done, it can be concluded that the provision of a combination of *Trichoderma sp* and PGPR gives the same results both to the growth and yield of plants, the *administration of Trichoderma sp* 40 ml / polybag gives the best results to the weight of the crop, and 40 ml / polybag and 50ml / polybag also gives good results to the total weight of the plant fruit. The provision of PGPR 5,000 ppm provides the best results for the number of crops and the provision of PGPR 7,500 ppm provides the best results against the weight of the crop fruit.

Keywords: Tomato, Mushroom *Trichoderma sp* and PGPR.