

**THE EFFECT OF APPLYING PALM ROOT PGPR AND
TRICHODERMA SP. ON THE GROWTH OF OIL PALM SEEDLINGS
(*Elaeis guineensis* Jacq.) OF THE DXP SIMALUNGUN VARIETY AT THE
START OF THE MAIN NURSERY**

Guided by: Ir. TRiono Bambang Irawan, MP

Rafly Dimas Sandy

Cultivation of Plantation Crop Study Program
Agricultural Production Department

ABSTRACT

Good oil palm seed management is by fulfilling the availability of nutrients and water for the metabolism of growth and development of oil palm. PGPR stimulates plant growth because it has bacteria that colonize roots by synthesizing plant growth regulator substances. *Trichoderma* sp. is beneficial as a potential microorganism is antagonistic besides that it is also known as a soil biological fertilizer and plant growth stimulator. This study used a non-factorial randomized block design (RBD) consisting of 4 treatments. As for each treatment, P0: without the application of PGPR and *Trichoderma* sp. P1 : application of PGPR (density 10^5 CFU) P2 : application of *Trichoderma* sp. (density 10^8 spores/ml) P3 : PGPR application (density 10^5 CFU) + *Trichoderma* sp. (density 10^8 spores/ml). Observational data were analyzed using analysis of variance (ANOVA), then it was tested further with LSD (Lessest Significant Difference) 5%. he results of this study were PGPR application + *Trichoderma* sp. very significant effect on the parameters of the number of oil palm seed fronds observed main nursery at 14 WAP, and 16 WAP, and had a very significant effect on root volume at 17 WAP. As for the parameters of plant height and stem diameter of oil palm seedlings main nursery unreal effect.

Keywords: PGPR, *Trichoderma* sp.