

**THE EFFECT OF PGPR (*Plant Growth Promoting Rhizobacteria*) ON THE
GROWTH OF TOBACCO (*Nicotiana tabacum* L.) WHITE BURLEY
LUMAJANG TN 90 VARIETY**

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ABSTRACT

*Tobacco (*Nicotiana tabacum* L.) is one of the many plantation crop commodities that have an important role for the Indonesian state. Tobacco plant production has a considerable contribution, one of which is to increase excise and foreign exchange, so that it becomes a source of income for the state. There are problems, especially in the process of cultivating tobacco plants, not a few farmers still use chemical (inorganic) materials or fertilizers which cause soil quality to become acidic. An alternative solution to the use of chemical fertilizers is one of them by giving PGPR (*Plant Growth Promoting Rhizobacteria*). This study aims to determine the effect of PGPR (*Plant Growth Promoting Rhizobacteria*) on the growth of tobacco plants (*Nicotiana tabacum* L.) White Burley Lumajang TN 90 Variety. This research was conducted in April-June 2023 in Rice Fields Rambak Pakis hamlet Jokarto Village Tempeh District Lumajang Regency. The research method used was Non Factorial Randomized Group Design (RAKNF) using 4 treatments, including (control using NPK, ZA and KNO₃ fertilizers, PGPR concentration of 30 ml/l, PGPR concentration of 60 ml/l, PGPR concentration of 90 ml/l). Data analysis using ANOVA followed by further test BNT 5%. The results showed that the treatment with various concentrations was not significantly different from the observation parameters of plant height, stem diameter, number of leaves, lower and middle leaf area. While the parameter of upper leaf area gives a real influence on the growth of White Burley tobacco plants TN 90 variety. The concentration of 90 ml/L PGPR gave better results on the upper leaf area which amounted to 1357 cm², but was not significantly different from the P2 treatment of 1346 cm² and the P1 treatment of 1335 cm².*

Key words : PGPR, growth, Tobacco, White Burley Lumajang TN 90 Variety