

***EFFECT OF PGPR (Plant Growth Promoting) Concentration
Rhizobacteria) SUGAR CANE ROOTS ON GROWTH
THE BEGINNING OF SOME VARIETY OF PLANT
SEEDS SUGAR CANE (Saccharum officinarum L.)***

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ABSTRACT

Seasonal plantation crops have several commodities that are very influential on the economy in Indonesia, one of which is sugarcane (Saccharum officinarum L.). The demand for granulated sugar always increases every year, both domestic and foreign demand. There are problems found, especially in sugarcane plantations, namely the low productivity of sugarcane, this is due to the long-term use of chemical fertilizers, which reduces fertility in the soil. Therefore, a solution is needed to increase sugarcane productivity, one of which is by giving PGPR. This study aims to determine "the effect of the concentration of PGPR (Plant Growth Promoting Rhizobacteria) sugarcane roots on the early growth of several varieties of sugarcane seedlings (Saccharum officinarum L.)". This research was conducted in February – May 2022, located in Kalibaru District, Banyuwangi Regency. This study used a factorial randomized block design (RAKF) consisting of 12 treatments, including 4 levels of PGPR concentration (0 ml/liter, 50 ml/liter, 100 ml/liter, 150 ml/liter) and 3 levels of sugarcane varieties (V1 = PS 862, V2 = VMC 76-16, V3 = Bululawang). Each treatment consisted of 3 replications, with a total of 36 units and each unit consisted of 5 plants. So there are 180 experimental plant units. Data analysis using ANOVA followed by a 5% BNJ follow-up test. The results showed that the treatment of several varieties was significantly different in the number of leaves, stem diameter, number of tillers, and root volume. There was an interaction between PGPR treatment and various varieties on the parameters of root volume at 90 DAP. The best variety for PGPR application is PS 862 with a concentration of 150 ml/liter.

Keywords: *PGPR Concentration, Early Growth of Sugar Cane, Several Varieties.*