

**The Effect Of PGPR (*Plant Growth Promoting Rhizobacteria*) Concentrations
Of Sugarcane Roots And Seedlings From Various Parts Of The Stem On
growthVegetative sugarcane plant (*Saccharum officinarum* L.)
Bululawang Varieties**

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ABSTRACT

*Sugarcane (*Saccharum officinarum* L.) is one of the sugar-producing plantation crops in the world. However, the high level of consumption of sugar has not been offset by domestic sugar production so that it is still fulfilled from imports. One of the efforts to increase sugarcane productivity is by providing quality plant seeds. Good seeds will have a big role in increasing sugar production. Good sugarcane seedlings have a growth rate, resistance to pest and disease attacks and high sugar yield. This study was conducted to determine how the PGPR concentration of sugarcane roots and seedlings from various parts of the stem on the growth of vegetative vase of sugarcane plants of the Bululawang variety. This research was conducted from January to May 2023 at Jember State Polytechnic. The experimental design used is a Factorial Complete Randomized Design consisting of 2 factors and 3 repeats. The first factor is PGPR with concentrations of K0 (0ml), K1 (50ml), K2 (100ml), K3 (150ml). The second factor is seedlings from various parts of the stem, namely B1 (scion), B2 (middle stem), and B3 (rootstock). The parameters observed were plant height, number of leaves, stem diameter, number of tillers, root volume, and colony of PGPR bacteria. The data were analyzed with various fingerprints, the real different treatment was continued using the BNJ follow-up test level of 5%. The results showed that PGPR had a very noticeable effect on stem height parameters, number of leaves (16MST), number of saplings (8 MST-16 MST), and root volume. The treatment of seedlings from different parts of the stem has a very noticeable effect on the parameters of the number of saplings. There is no effect of interaction between PGPR concentration treatment and seedlings from different parts of the stem on all parameters.*

Keywords: *Sugarcane, PGPR, Stem part, Bululawang Variety*