THE EFFECT CONCENTRATION OF PGPR (*Plant Growth Promoting rhizobacteria*) SUGARCANE ROOT AND THE POSITION OF BUD CHIP ORIGIN ON THE GROWTH SUGARCANE PLANT (*Saccharum officinarum* L.) VARIETIES BULULAWANG

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ABSTRACK

This research was conducted with the aim of knowing how the effect of concentration of PGPR sugarcane root and bud chip position on the growth of sugarcane plant varieties bululawang. This research was conducted from December 2021 to April 2022 at the Jember State Polytechnic. This study used a Factorial Randomized Design with 2 factors. The first factor consists of 4 levels and the second factor consists of 3 levels. In each combination of treatments repeated 3 times. The first factor is the concentration of sugarcane root PGPR (P), namely P0 (concentration of 0 ml/L), P1 (concentration of 50 ml/L), P2 (concentration of 100 ml/L), P3 (concentration of 150 ml/L). The second factor is the position of the bud chip (B), namely B1 (rootstock), B2 (middle stem), B3 (scion). The observation parameters are plant height (cm), stem diameter (mm), number of leaves (sheet), number of tillers and root volume (ml). The research data were analyzed using anova with 5% levels. If it showed a significant difference, a further test will be carried out using BNT (Least Significant Difference). This research gave significantly difference results on the parameters of observing plant height and number of leaves on the P factor aged 30 days after planting, but gave no significant difference in plants aged 44 days after planting to 86 days after planting. While in factor B and the interaction between factors P and B gives no significant difference in all observation parameters.

Keywords: *Sugarcane, PGPR concentration, bud chip position, Bululawang variety*