

**The Effect of Concentration PGPR(*Plant Growth Promoting Rhizobakteri*)
Root of Cacao to Plant Seeds (*Theobroma cacao L.*)
Varieties ICCRI 06)**

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ABSTRACT

This research was conducted in Politeknik Negeri Jember with height of land 546 above sea level in June 2020 to October 2020 by using Randomized Complete Block Design (RCBD) non factorial with 5 treatments and 5 replications. The treatment were P0 (0 ml/l control), P1 (concentration 50 ml/l), P2 (concentration 100 ml/l), and P3 (concentration 150 ml/l). Parameters observed were plant height, number of leaves, stem diameter, root wet weight, root length, number of roots, root volume and root dry beret of cocoa. Data were analyzed using F test (ANOVA) 1% and 5% followed by Polynomial Contrast. The results showed that givingPGPR concentration of cocoa roots had a significant effect on the growth of cocoa seedlings (plant height, number of leaves, stem diameter, root wet weight, number of roots, root volume, dry weight).PGPR concentration of cocoa roots did not significantly affect the growth of cocoa seedlings at (root length).Provision of optimal PGPR concentration of cocoa roots against root dry weight: 109 ml / l and root wet weight: 99 ml / l.

Keywords :*PGPR originating from cocoa roots, cocoa plant seeds, growth response*