

***Application PGPR (Plant Growth Promoting Rhizobacteria) and respon the growth of cowpea plant (Vigna unguiculata)***  
*Supervised By Ir. Liliek Dwi Soelaksini , M.P.*

**Falahudin Zamzami**

*Study Program of Food Crop Production Technology  
Majoring of Agriculture Production*

**ABSTRACT**

*Cowpea is a food crop that contains quite high vegetable protein, but its production is not sufficient. Besides that, the problem is also decreased soil productivity. Therefore, cowpea cultivation by applying PGPR as a soil enhancer through the activity of microorganisms needs to be applied. This study aims to examine the response of cowpea growth to the application of PGPR. This study used a non-factorial Randomized Block Design (RBD) with 6 treatments and 4 replications. The treatment was in the form of PGPR concentrations of 0,75%, 0,9%, 1,2%, 1,4% and 1,7% and without PGPR administration. Observational variables consist of stem diameter, plant height and productive branches. The results of the study proved that the concentration of PGPR (1,7%) have given significant results on plant height (97 cm) and number of productive branches (14 pods). It is presumably because PGPR acts as a biofertilizer which can fix N in free air and can dissolve phosphorus nutrients in the soil. Besides that, the other role is as a biostimulant which is able to stimulate growth hormones in plants. Therefore PGPR provides a good response for the growth of cowpea.*

***Keywords : biofertilizer, biostimulant, cowpea, PGPR***