

**HERLAMBANG IRAWAN. Effect of Seed Soaking Old And Frequency Giving PGPR (*Plant Growth Promoting Rhizobacteria*) on Growth and Crop cayenne (*Capsicum frutescens* L.) . Guidance : Ir. Ellen Rosyelina Sasmita, MP and Ir. Sugeng Priyanto, MP.**

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## **ABSTRACT**

*Cayenne pepper is one of vegetables that have high economic value because it is almost always used in all kinds of dishes. Problems often encountered in the production of chili pepper cultivation is low because cultivation techniques have not been applied correctly. Strategy to increase growth and yield of pepper plants using PGPR. The purpose of the research is to determine the best time effect of soaking seeds chili by using PGPR, to determine the best frequency of PGPR, to determine the interaction of seed soaking time and frequency of PGPR on the growth and yield of cayenne pepper. The research was conducted in the Barang village, District Jumo, Temanggung on June to December 2014. The method used in this research is field trials method with complete randomized block design (RAKL) consisting of two factors and one control (Soaked in water for 1 hour). The first factor (L) seed soaking period consisting of three levels, namely L1 = 2 hours, 4 hours and L2 = L3 = 6 hours. A second factor (F) frequency of PGPR which consists of three levels of F1 = one week, F2 = two weeks and F3 = three weeks, with 9 combination treatment was repeated 3 times. The interaction on plant height parameters age 42 days after planting, the total weight of fruits per plant sample and the total weight of fruits per plot harvest. Combination treatment of soaking seeds with a frequency of PGPR give the best results at the age of 42 days after planting are height number of total fruit crop samples, the total weight of fruits per plant sample and the total weight of fruits per plot harvest. 6 hours of soaking seeds are best to influence germination, speed of germination, plant height age (12, 28, 42 days after planting), the number of branches of age (28, 42, 56 days after planting), fresh weight stover, stover dry weight and root dry weight .*

*Keywords : Cayenne pepper, seed soaking period, the frequency of PGPR.*