

Pengaruh Pemberian PGPR (*Plant Growth Promoting Rhizobacteria*) Dan Jarak Tanam Terhadap Produksi Dan Mutu Benih Kacang Tanah (*Arachis Hypogaea L.*). *Effect of PGPR (Plant Growth Promoting Rhizobacteria) and spacing on peanut seed production and quality (Arachis hypogaea L.)*. Supervisor : Dr. Ir. Nurul Sjamsijah MP.

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ABSTRACT

*Peanut (*Arachis hypogaea L.*) is one of the plant sources of protein in the diet of the Indonesian population. Increasing the production and quality of peanut seeds can be done through business by providing PGPR and planting distance. This study aims to determine the effect of PGPR and Planting Distance on the production and quality of Peanut (*Arachis hypogaea L.*) seeds and to determine the interaction between the two factors. This research was conducted from September 2022 - December 2022 in Maron Kidul Village, Maron District, Probolinggo Regency. The experimental design used was a factorial randomized block design (RBD). The first factor is PGPR administration consisting of three levels: control 0 ml/L, 12.5 ml/L, and 17.5 ml/L. The second factor is the planting distance which consists of three levels: 40x20 cm, 40x30 cm and 40x40 cm. There were nine treatment combinations and each treatment combination was replication three times, resulting in 27 experimental plots. Data were analyzed using ANOVA, if the results showed a significant or very significant difference then proceed with the 5% DMRT test. The results showed that the treatment with PGPR had a very significant effect on the parameters of pod fresh weight, pod production per ha, 100 grain weight, germination rate, growth speed, and significantly different effect on plant height parameters 60 hst. Meanwhile, spacing treatment had a very significant effect on pod wet weight, germination rate, growth rate, and had a significantly different effect on the plant height parameter at 60 hst. The interaction between the administration of PGPR with a concentration of 17.5 ml/l with a spacing of 40 x 30 cm had a significant effect on the parameter weight of 100 seeds.*

Keywords: *peanuts, seed quality, giving PGPR, planting distance.*