

***The Effect of Dolomite and P Fertilizer on Growth and Yield of Soybean
(Glycine max (L.) Merrill)
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ABSTRACT

Efforts to increase soybean production need to be done to reduce dependence on soybean imports in Indonesia. One of them is to increase the yield potential of soybeans which can be done by adding P and dolomite fertilizer. This study aimed to determine the effect of giving dolomite, P fertilizer, and their interaction on the growth and yield of soybeans (Glycine max (L.) Merrill) that carried out in the fields of the Polytechnic of Jember starting from September to December 2021. This research was a field experiment using a factorial randomized block design consisting of two factors, namely dolomite (200 g/2 m², 600 g/2 m², 1.000 g/2 m²); and SP-36 fertilizer (30 g/2 m²; 52,5 g/2 m²; 75 g/2 m²). Data analysis used Analysis of Variance (ANOVA) and continued with Duncan's Multiple Range Test (DMRT) if there were significant or very significant differences. The results showed that the dolomite treatment of 200 g/2 m² was significantly different in plant height parameter. In SP-36 fertilization with a dose of 75 g/2 m², there were significant differences in the parameters of the plant height, weight of wet pods per sample, weight of dry pods per sample, and weight of dry seeds per sample. Meanwhile, the combination of 200 g/2 m² of dolomite and 75 g/2 m² of SP-36 fertilizer was significantly different in plant height parameter. Thus, it could be concluded that the application of dolomite and P fertilizer could increase the growth and yield of soybean plants.

Key words: dolomite, P fertilizer, soybean