

**APPLICATION OF GOAT MANURE FERTILIZER DOSAGE AND PGPR
CONCENTRATION ON GROWTH AND YIELD OF CAYENNE PEPPER
“LALAP” (*Capsicum frutescens* L.)**

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ABSTRACT

Cayenne pepper “lalap” is a vegetable crop that has high economic value. Improvement of cultivation techniques to maintain and increase yields with the application of goat manure fertilizer and PGPR. This research was to determine the best dose of goat manure fertilizer and PGPR concentration for the growth and yield of cayenne pepper “lalap” plants. The research was carried out in the rice fields of Sidomulyo Hamlet, Trimulyo Village, Sleman District, Sleman Yogyakarta in February – May 2024. This research used a Split Plot Experimental Design. The main plot is the dose of goat manure fertilizer which consists of 3 levels: 15 tons/ha, 30 tons/ha and 45 tons/ha. The concentration of PGPR as subplots consists of 3 levels: 10 ml/l, 20 ml/l and 30 ml/l. The research results were analyzed using ANOVA at a 5% level and tested further by DMRT at a 5%. The result of the research showed that there was an interaction between the dose of goat manure fertilizer and the concentration of PGPR in the number of fruits per plot of the 1st harvest, weight of fruits per plot of the 1st and 4th harvest. The dosage of goat manure fertilizer showed no significant difference in all growth and yield observation. The PGPR concentration of 30 ml/l had a significant effect on the height of plants at 14 DAP, 21 DAP and number of leaves at 14 DAP, 21 DAP and no significant effect on the observation of yield.

Key words: *Goat manure fertilizer, PGPR, cayenne pepper “lalap”*