

**The Effect of Goat Urine-Based Liquid Organic Fertilizer on the Growth of
Arabica Coffee (*Coffea arabica* L.) Seedlings.**

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ABSTRACT

This study aimed to determine the nitrogen (N), phosphorus (P), and potassium (K) contents of goat urine liquid organic fertilizer (LOF) and its effect on the growth of Arabica coffee (*Coffea arabica* L.) seedlings. The experiment was conducted at the Teaching Factory (TEFA), Politeknik Negeri Jember, using a Randomized Complete Block Design (RCBD) with five treatments: P0 (0 mL/polybag), P1 (50 mL/polybag), P2 (100 mL/polybag), P3 (150 mL/polybag), and P4 (200 mL/polybag), each replicated six times. The observed parameters included plant height, stem diameter, number of leaves, shoot fresh weight, shoot dry weight, root fresh weight, root dry weight, and shoot-root ratio. Data were analyzed using Analysis of Variance (ANOVA) at a 5% significance level. Laboratory analysis showed that goat urine LOF contained N, P, and K, but their concentrations were relatively low. The application of goat urine LOF had no significant effect ($P>0.05$) on all growth parameters of Arabica coffee seedlings. This result was presumably due to the low nutrient content of the fertilizer and high rainfall during the experiment, which reduced nutrient uptake by the plants.

Keywords: Arabica coffee, goat urine, liquid organic fertilizer, seedling growth.