

***The Effect of Applying Fruit Waste Liquid Organic Fertilizer  
on the Growth of Cowpea (*Vigna unguiculata*)***

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**ABSTRACT**

*Cowpea is one type of legume that can replace the role of soybeans, but in its cultivation it is less desirable because it is wrong that there is no cultivation technology that is in accordance with the farmers' abilities. Therefore, cowpea cultivation technology is needed, one of which is through fertilization using liquid organic fertilizer from fruit waste. This study aims to examine the effect of giving liquid organic fertilizer from fruit waste and using the right concentration for cowpea. This experiment was carried out in Klonceng Hamlet, Patemon Village, Pakusari District, Jember Regency from November to January 2023. The experimental design used a Non-Factorial Randomized Block Design with 6 concentration levels of fruit waste liquid organic fertilizer, namely 0 ml.L<sup>-1</sup>, 15 ml.L<sup>-1</sup>, 30 ml.L<sup>-1</sup>, 45 ml.L<sup>-1</sup>, 60 ml.L<sup>-1</sup>, and 75 ml.L<sup>-1</sup>. To see the effect of treatment on the observed variables, an ANOVA test and a BNJ follow-up test were carried out. The application of fruit waste liquid organic fertilizer showed a very significant the variables of plant height, number of productive branches, dry weight of pods.sample<sup>-1</sup>, dry weight of seeds.sample<sup>-1</sup>, weight of dry pods.plot<sup>1</sup>, weight of dry seeds.plot<sup>1</sup>, and weight of 100 seeds.plot<sup>1</sup>. Thus, significantly the concentration of 75 ml.L<sup>-1</sup> was the best concentration with plant height of 63.67 cm, number of productive branches 10.13 branches, dry pod weight.sample<sup>-1</sup> 83.66 g, seed dry weight/sample 65.25 g, dry pod weight.plot<sup>1</sup> 756.66 g, dry seed weight.plot<sup>1</sup> 592.14 g, and 100 seeds.plot<sup>1</sup> weight 11.57 g.*

**Keywords:** *Cowpea, liquid organic fertilizer, fruit waste*