

Aplikasi Kascing dan Pupuk Organik Cair terhadap Pertumbuhan dan Produksi Benih Kedelai (*Glycine max* L.). *Application of Vermicompost and Liquid Organic Fertilizer to The Growth and Production of Soybean Seed (*Glycine max* L.).* Supervised by: Leli Kurniasari, SP., M.Si, Sri Ayu Dwi Lestari, SP., M.Si.

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ABSTRACT

*Soybean demand is increasing in line with the increase of population but is not supported by existing production, so efforts are needed to increase soybean seed production to meet these needs. the research aims to determine the effect of vermicompost application and liquid organic fertilizer on the growth and production of soybean seed. This research was conducted from October 2021 to January 2022 at the Agricultural Technology Research and Assessment Installation Land Muneng Probolinggo, Jl. Sukapura, Muneng Kidul, Sumberasih, Probolinggo, East Java 67251. The experimental design used was a Randomized Block Design factorial with 2 factors and 3 replications. The first factor was the dose of vermicompost fertilizer consisting of 4 levels, namely K0 (control), K1 (dose 6,4 tons/ha), K2 (dose 12,4 tons/ha), and K3 (dose 19,2 tons/ha). The second factor is the concentration of liquid organic fertilizer consisting of 4 levels, namely P0 (control), P1 (concentration 3 ml/liter), P2 (concentration 6 ml/liter), and P3 (concentration 9 ml/liter). The data were analyzed using ANOVA test and followed by Duncan Test. The results showed that the treatment dose of vermicompost fertilizer effect is not significant (ns) on all parameters of observation. The treatment of liquid organic fertilizer concentration had a very significant (**) effect on the parameters of plant height of 30 hst (55.47 cm), parameters the number of pods per plant (38 pods), the number of seeds per plant (90 seeds), the weight of seeds per plant (22.04 grams), seed production per hectare (2.94 tons/ha), and of weight 1000 grains (238.22 grams). The interaction between the two treatments had not significant (ns) on all observation parameters.*

Key words: *soybean, vermicompost fertilizer, liquid organic fertilizer*