

# **Response of Groundnut (*Arachis hipogaea* L.) Production to Different Concentration of Tofu Dregs Liquid Organic Fertilizer and Plant Spacing**

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## **ABSTRACT**

Tofu dregs liquid organic fertilizer contains nutrients that are beneficial for crop production, especially peanuts. This study aims to examine the effect of the application of liquid organic fertilizer made from tofu dregs combined with different spacings on peanut crop production. The research was conducted in Bintoro Village, Patrang District, Jember Regency, East Java Province (87 m above sea level, an average temperature of 23°C-32°C, and rainfall of 1,969-3,394 mm/year). The experiment was arranged using a factorial randomized block design (RBD) within two factors. The first treatment was the concentration of tofu dregs liquid fertilizer with three levels, namely 35%, 45%, and 55%. The second factor is plant spacing with two levels, 20 cm x 20 cm and 35 cm x 20 cm. The parameters consisted of biomass weight per sample, fresh pods weight per sample, dry pods weight per sample, dry seeds weight per sample, dry seeds weight per plot, number of pods per plant, and weight of 100 grains. The data were analyzed using ANOVA and if the results of the analysis showed a very significant difference, then the DMRT test was carried out at a level of 1%. The results showed that plant spacing had a significant effect on biomass weight, fresh pod weight per sample, dry pod weight per sample, and the number of pods per plant where the 35 cm x 20 cm of plant spacing showed the best results in these parameters. Similarly, the factor of tofu dregs liquid fertilizer concentration gave a significant effect on the dry seed weight per sample and the weight of 100 grains, where the concentration of 45% showed the best results. In general, there is no significant interaction between the concentration of liquid fertilizer and plant spacing on groundnut growth and production.

**Keywords:** *Groundnuts, Liquid Organic Fertilizer, Tofu Dregs, Plant spacing*