

***Combination of Use Pseudomonas fluorescens and Liquid Organic Fertilizer
on Growth and Production of Peanut (Arachis hypogaea L.)***

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ABSTRACT

Excessive and continuous use of synthetic chemicals results in a decrease in soil fertility, thereby reducing peanut production. Minimizing the use of synthetic chemicals can be done through the application of liquid organic fertilizers. This study aims to examine the use of Pseudomonas fluorescens and liquid organic fertilizer in the growth and production of peanuts (Arachis hypogaea L.). This research uses a factorial RAK with two factors. The first factor was the concentration of P. fluorescens, which consisted of 0 ml.l⁻¹, 10 ml.l⁻¹, 15 ml.l⁻¹, and 20 ml.l⁻¹. The second factor was the concentration of liquid organic fertilizer, consisting of 0 ml.l⁻¹, 100 ml.l⁻¹, and 250 ml.l⁻¹. The results showed that the P. fluorescens 15 ml.l⁻¹ treatment showed significant results in stem diameter (6.03 mm), number of root nodules (141.83), fresh biomass weight (355.97 g), dry biomass weight (75.87 g), fresh pod weight (62.39 g), dry pod weight (37.00 g), total number of pods (25.30), and number of pithy pods (20.51). In the treatment of liquid organic fertilizer, 100 ml.l⁻¹ showed significant results in fresh biomass weight (315.69 g), dry biomass weight (66.97 g), fresh pod weight (55.21 g), dry pod weight (32.82 g), number of pithy pods (17.60), and seed weight per sample with an average production yield of 17.01 g/sample (2.7 tons/ha). The use of P. fluorescens and liquid organic fertilizer simultaneously showed no interaction with all observation variables.

Keywords : *concentration, Pseudomonas fluorescens, liquid organic fertilizer*