

ABSTRACT

EFFECTIVENESS TEST OF ORGANONITROFOS FERTILIZER AND ITS COMBINATION WITH ANORGANIC FERTILIZER TO GROWTH AND PRODUCTION OF PEANUT PLANTS (*Arachis hypogaea* L.) ON ULTISOLS SOIL NATAR

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The problem in management of peanut plants in farmer level such is low land productivity. Agriculture intensification is one of the right way to increase yield with optimize the land management using fertilizer. Organonitrofos fertilizer is an organic fertilizer that was being developed and expected to reduce utilizing of chemical fertilizer. The objective of this research was to determine the most effective combination of Organonitrofos fertilizer with anorganic fertilizer on the growth, nutrient absorption, and production of peanut plants and the economic manner of peanut plants. This research used completely randomized design with 6 treatment and 3 repetition, so it was consist of 18 trial plots. The treatment that was used in these research were A (control), B (100 kg Urea ha⁻¹, 100 kg SP-36 ha⁻¹, 50 kg KCl ha⁻¹), C (75 kg ha⁻¹, 75 kg SP-36 ha⁻¹, 37,5 kg KCl ha⁻¹, 500 kg Organonitrofos ha⁻¹), D (50 kg urea ha⁻¹, 50 kg SP-36 ha⁻¹, 25 kg KCl ha⁻¹, 1000 kg Organonitrofos ha⁻¹), E (25 kg urea ha⁻¹, 25 kg SP-36 ha⁻¹, 12,5 kg KCl ha⁻¹), F (3.000 kg Organonitrofos ha⁻¹). The results of research explained that the

combination of Organonitrofos fertilizer with the anorganic fertilizer treatment C (75 kg ha⁻¹, 75 kg SP-36 ha⁻¹, 37,5 kg KCl ha⁻¹, 500 kg Organonitrofos ha⁻¹) was increasing the growth, NPK nutrient absorption, and production of peanut plants. While utilizing of the inorganic fertilizer treatment B (100 kg ha⁻¹ Urea ha⁻¹, 100 kg ha⁻¹ SP36, 50 kg ha⁻¹ KCl) was more effective than the others because of more profitable and require low cost production to cultivate peanut plants.

Keywords: Peanut Production, Organonitrofos Fertilizer, Effectiveness Test.