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Optimization Various of Liquids Organic Fertilizers towards Nodulation, Root Weight and Yield of Groundnut (*Arachis hypogaea*, Linn) Organic Farming Systems

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Abstract : Human awareness of the dangers chemical fertilizers residues and use chemical pesticides encourage some people to consume healthy foods derived from organic farming. The purpose of this study is to determine the effectiveness of Liquid Organic Fertilizers (LOF) to number of nodules, weight root and yield of groundnut in East Kutai, to determine the correlation between observation variables. We used a randomized block design (RBD) in four levels of organic liquid fertilizers with concentration of 100ml/liter.water, i.e : L0 (Without LOF), L1 (*Leucaena* leaf LOF), L2 (*Gliricidia* leaf LOF), L3 (*Musa.P* knot LOF). Observations were made on number of nodules, root weight and pod dry weight. The results showed that *Leucaena* leaf LOF 100 ml/liter.water had better effectiveness in optimizing root weight of 9,93 grams (36,70%) and increase yield of Groundnut at 3,93 ton.ha⁻¹ (21,11%) compared without no LOF. We found negative correlation between number of nodules and weight root towards dry pod weight, correlation is a very strong (0,94), together the number of nodules and weight root have effect to weight dry pod of groundnut by 89 % and 11 % influenced by other factors.

Keywords : Influence, Correlation, *Leucaena*, *Gliricidia*, *Musa.P*, *Groundnut*.

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