

**TESTING ORGANONITROFOS FERTILIZER OF PLANT RESPONSES  
RAMPAI TOMATO (*Lycopersicon pimpinellifolium*) IN POT (POT  
EXPERIMENT)**

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**ABSTRACT**

Rampai tomato (*Lycopersicon pimpinellifolium*) is one important vegetable in Indonesia. The production of rampai tomato increases every year, indicating a good opportunity for the tomato in market. In the process of cultivation, fertilization is a very important aspect. Advances in technology have invented some important agricultural inputs especially for chemical fertilizers such as Urea, TSP, KCl, NPK, and others. Nowadays, small scaled farmers frequently face difficulty to get chemical fertilizers on market because of either scarcity or high price. This condition needs to be well anticipated. Reducing the use of chemical fertilizers by using organic fertilizers which is produced from local and cheap natural resources is a somewhat promising solution. The organic fertilizer tested in this study is an alternative fertilizer called Organonitrofos. Organonitrofos fertilizer is made from 70-80% cow dung and 20-30% phosphate rock, in the previous research. Both the materials are locally available in Lampung. This fertilizer then needs to be tested to ensure its consistency on plant production. In this study, Organonitrofos fertilizer was tested on rampai tomato plants in pots (pot experiment). The study aimed (1) to test the Organonitrofos fertilizer on the response of rampai tomato plants in pots (2) to reduce the use of chemical fertilizers by using organic fertilizers (Organonitrofos). The pot experiment was conducted in the Integrated Field Laboratory of the Faculty of Agriculture University of Lampung on January - April 2012. The experiment used Completely Randomized Design (CR) with 7 treatment (7 combinations between chemical fertilizer and Organonitrofos), 4 replicates each. Data collected was analyzed by using ANOVA and followed by LSD. The variables observed were agronomic aspects (such as plant height, biomass, and production) and water consumption. The results showed that, based on the plant response variables such as plant height, upper and biomasses, and crop production, treatment C (100% Organonitrofos with 5000 kg/ha dose) was significantly different and better from every other treatment. Based on the water consumption (evaporation and irrigation), all the treatments were not significantly different. However, the

research showed that the use of 100% Organonitrofos fertilizer (5000 kg/ha); resulted in the highest water productivity (yield/water consumption). This research also showed that the use of chemical fertilizers be could significantly reduced by using combination between chemical fertilizers and Organonitrofos.

**Keywords:** Fertilizer, Organonitrofos, Plant Response, Rampai tomato.