

THE EFFECT OF APPLYING GOLDEN SNAIL (POMACEA CANALICULATA) LIQUID ORGANIC FERTILIZER ON THE GROWTH AND PRODUCTION OF *Glycine max* (L.) SOYBEAN

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ABSTRACT

Soybeans are the third most important food crop after rice and corn, so the need for soybeans continues to increase, but soybean production in Indonesia has not been able to meet this need. The average national demand for soybeans reaches 3.4-3.6 million tons per year, while production is only 20%-30% of this need. Based on this, efforts are needed to increase soybean production, namely by providing POC for golden snails. This research aims to examine the effect of a combination of inorganic fertilizer and golden snail POC on the growth and yield of soybean plants. This research used a non-factorial Randomized Block Design (RBD) consisting of 7 treatments, namely without POC (100% inorganic fertilizer), POC concentration 250 ml/l water + 50% inorganic, 300 ml/l water + 50% inorganic, 350 ml /l water + 50% inorganic, 400 ml/l water + 50% inorganic, 450 ml/l water + 50% inorganic and 500 ml /l water + 50% inorganic. A total of 4 repetitions. The results showed that a POC concentration of 500 ml/l + 50% inorganic showed the highest results in plant height (55.17 cm), number of productive branches (7.75 branches), soybean plant biomass weight (145.39 grams) number of pods per sample (52.07 pieces), fresh weight of sample pods (69.94 grams), dry weight of sample pods (49.71 grams) and dry weight of sample seeds (34.07 grams). It is suspected that reducing the 50% inorganic dose can reduce soil damage and the addition of 500 ml/l POC by spraying is very effective because it can be absorbed by the leaf stomata, so that photosynthetic activity can be maximized in increasing the growth and yield of soybean plants.

Keywords: *Plant Nutrients; Organic fertilizer; POC Golden Snail*