

**INFLUENCE OF LIQUID ORGANIC FERTILIZER (POC)
MULTITONIC AND GOAT MANURE ON GROWTH AND YIELD OF LETTUCE
(*Lactuca sativa* L.)**

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ABSTRACT

The research's purpose are: 1.To determine the dosage of multitoic liquid organic fertilizer on the growth and yield of lettuce plants. 2.To find out the concentration of goat manure on the growth and yield of lettuce plants. 3. To determine the interaction of a combination of multitonic fertilizer and goat manure on the growth and yield of lettuce plants. This research began in June–July 2022 at the PUSPURA Page of Darul'Ulum University, Jombang, East Java. The research location is located at an altitude of + 44 m above sea level, with a pH of 6.5. This research was carried out using a factorial experiment arranged in a Completely Randomized Design (CRD), consisting of two factors and three replications. The first factor is the application of multitonic liquid organic fertilizer (T) consisting of: T0 As a control or without treatment T1 Multitonic POC dose plus 50 ml/ liter T2 Multitonic POC dose plus 100 ml/ liter The second factor is the dose of goat manure (K) consisting of from: K0 soil 100% (as control) K1 soil 75% + manure 25% K2 soil 50% + manure 50% K3 soil 25% + manure 75% From the two factors above, 12 treatment combinations were obtained. Results from the research had an influence on the administration of multitonic POC doses and goat manure on the growth and yield of lettuce plants (*Lactuca sativa* L.) which occurred on the parameters of observing the number of leaves with a combination of treatment doses of multitonic POC and goat manure (T2K2), namely 100 ml/liter and 50% Soil media + 50% goat manure shows interaction and gives the best results. In the parameters of securing leaf area with the treatment of giving multitonic POC doses and goat manure (T2K2), namely 100 ml/liter and 50% soil media + 50% goat manure, it shows that there is an interaction and gives the best results. In terms of parameters of securing the diameter of Panjag roots by administering a dose of Poc multitoic and goat manure (T2K2), namely 100 ml/liter and 50% soil media + 50% goat manure, it shows that there is an interaction and gives the best results. In terms of parameters for securing the weight of stover with the treatment of giving multitoic poc doses and goat manure (T2K2), namely 100 ml/liter and 50% soil media + 50% goat manure, it shows that there is an interaction and gives the best results. The effect of giving a poc dose multitonic on the growth of lettuce plants (*Lactuca sativa* L.). There was no significant effect at age 21, on the parameters Number of leaves, Leaf area, Plant height. Meanwhile, plants had a significant effect at the age of 35 HST, on the parameters Root length and Planting Weight Goat manure on the growth of lettuce plants (*Lactuca sativa* L.). had no significant effect at age 21, on the parameters Number of leaves, Leaf Area, Plant Height. Meanwhile, plants had a significant effect at age 35 HST, on the parameters Root length and weight From the results and analysis of the experiment, it can be concluded that: a. The interaction effect between the treatment of planting media composition and POC dosage occurred on the parameters of leaf number at 21 DAP, planting length at 21 DAT, leaf area at 21 DAP, root length at 35 DAP, stover weight at 35 DAP. b. POC treatment with a dose of 50% soil + 50% manure at a dose of 100ml/liter can increase lettuce production and produce a wet stover weight of 53.67 gr. c. The planting media treatment gave the highest value in the analysis of variations in number of leaves, plant length, leaf area, plant root length and stover in a ratio of 50%: 50% with the composition of the soil planting media and goat manure.

Keywords : liquid organic fertiziler (poc) multitonic,manure goat, yield of lettuce