

ABSTRACT

Tomatoes are a fruit vegetable that is classified as a seasonal plant and belongs to the Solanaceae family. The decline in tomato production is caused by several obstacles, including nutrient deficiencies and excessive use of inorganic fertilizers that can reduce soil fertility. Efforts to increase tomato production can be done by increasing nutrients. One way that can be done in increasing nutrients is by using the right planting medium for the growth of tomato plants and the use of liquid organic fertilizer from lamtoro leaves. This research was carried out in Pulo Rungkom Village, Dewantara District, North Aceh Regency Jl. KKA with a height of 17 meters above sea level and the Laboratory of the Faculty of Agriculture, Malikussaleh University. This research was carried out from December to February 2025. This research was conducted in the form of an experiment using a Randomized Block Design (RBD) with 2 factors and 3 replicates. The results of the study show that the treatment of the composition of the planting medium can increase the growth and production of tomato plants. The best treatment is obtained in M4 planting medium (soil + rice husk charcoal + cow manure) ratio of 2:1:1. Lamtoro leaf POC treatment can improve the growth and production of tomato plants. The best treatment is obtained with 15% lamtoro leaf POC recipients. There was an interaction between the treatment of the composition of the planting medium and the POC of lamtoro leaves on the growth and production of tomato plants. The best treatment was on the combination treatment of M4P3 (soil + rice husk charcoal + cow manure + 15% POC lamtoro leaves).

Keywords: *Concentration, Growing Media, Organic*