

ABSTRACT

Tomato (*Solanum lycopersicum* L.) are horticultural crops classified as shrub-shaped annuals and belong to the Solanaceae family. Eco farming is able to convert organic matter in a very fast time. Biochar is the result of burning rice husk before it is burned. This study aims to determine the effect of eco farming fertilizer and biochar and the interaction between the two on the growth and yield of tomato plants. This research was conducted in the experimental garden of the Faculty of Agriculture and the Laboratory of the Faculty of Agriculture, Universitas Malikussaleh. This research was conducted for 3 months, from March to May 2024. This research was conducted using a factorial two-factor blok random consisting of 2 factors. The main factor is the concentration of Eco Farming consisting of 3 types of administration consist are E0 (0 ml/l), E1 (5 ml/l) and E2 (7 ml/l). The subplot factor is the provision of rice husk biochar consisting of 3 types of provision, consist are : B0 (0 g/polybag), B1 (75 g/polybag) and B2 (100 g/polybag). The eco farming treatment affects the growth and yield of tomato plants on the variables of plant height, stem diameter 21-42 days after planting (DAP), chlorophyll content, number of fruits per plant, fruit weight per plant, fruit diameter and fruit length. The best treatment was the concentration of 7 ml/L. The provision of biochar was affects the growth and yield of tomato plants on the variables of plant height, stem diameter 21-42 days after planting (DAP), chlorophyll content 14 days after planting (DAP), number of fruits per plant, fruit weight per plant, fruit diameter and fruit length. The best biochar dose is 100 g/polybag (20 tons/ha). There was no interaction between eco farming and biochar treatments on the growth and yield of tomato plants.

Keywords: *Organic fertilizer, soil improver, servo fl variety*