

## ABSTRACT

Tomatoes (*Solanum lycopersicum* L.) are a multi-purpose vegetable and have high economic value. The lack of production of tomatoes can be due to the availability of nutrients. The need for potassium in tomatoes is insufficient because it is easy to wash. Efforts to fulfill potassium nutrients are made through the application of the KCl fertilizer. Besides nutrients, planting media also affects plant growth and production, because the planting media is a place for plants to grow and absorb nutrients. The aim of this research is to determine the effect of giving KCl fertilizer and the composition of planting media on the growth and production of tomato plants. This research was conducted from January to March 2024 at faculty of Agriculture, Universitas Malikussaleh, Lhokseumawe. This research used a two-factor randomized block design method and 3 replications. The first factor is the dose of KCl fertilizer (K0= 0 g/polybag, K1= 7 g/polybag, K2= 15 g/polybag). The second factor, namely composition of planting media (M0= top soil, M1= top soil + charcoal husk, M2= top soil +cocopeat). The results of this research showed that KCl fertilizer treatment has a very significant effect on plant height at 28-42 DAP, stem diameter at 28-42 DAP, chlorophyll content, flowering age, number of fruit per plant, fruit weight per plant, fruit weight per plot and fruit production ton/ha. The composition of the planting medium has a significant to very significant effect on plant height at 14-35 DAP, stem diameter, chlorophyll content, flowering age, number of fruit per plant, fruit weight per plant, fruit weight per plot and fruit production tons/ha.

Keywords: Charcoal Husk, Cocopeat, Potassium