ABSTRACT

Sweet corn (*Zea mays saccharata Sturt* L.) is an agricultural commodity that is favored by the public because it tastes sweeter than ordinary corn and has a high selling value compared to other corns. Sweet corn growth and yield quality are influenced by environmental factors and soil fertility. Efforts to increase corn production in Indonesia include using rice husk biochar and arbuscular mycorrhiza. The purpose of this study was to determine the effect of a combination of rice husk biochar and arbuscular mycorrhiza and to determine the interaction between the two on the growth and production of sweet corn. This research was conducted from July to September at the Experimental Farm and Agroecotechnology Laboratory, Faculty of Agriculture, Malikussaleh University. This study used a non-factorial Randomized Group Design (RAK) consisting of 3 replicates and there were 5 treatments namely B0 (0 kg / bed Biochar + 0 g Mikoriza), B1 (3.4 kg / bed Biochar + 11g Mikoriza), B2 (3.4 kg/bed of Biochar + 16g Mycorrhiza), B3 (5.1 kg/bed of Biochar + 11g Mycorrhiza) B4 (3.4 kg/bed of Biochar + 16g Mycorrhiza) so that there are 15 experimental units and each bed has 16 plants The results showed that the application of a combination of rice husk biochar and arbuscular mycorrhiza treatment B2 (3.4 kg/bed of biochar + 16 g of mycorrhiza) produced the highest average values for the plant height observation parameter (34.76-168.53 cm), number of leaves (4.86-12.16 leaves), stem diameter at age (7.46-26.43 mm), number of leaves (4.86-12.16 leaves), stem diameter at age (7.46-26.43 mm), female flowering age (17.43), weight of cob with cob (352.46), weight of cob without cob (293.23), length of cob with cob (28.10), length of cob without cob (22.23), number of seed rows per cob (17.43), yield tons/ha (14.04 tons/ha) and soluble solids 15.63).

Keywords : ameliorant, sweet corn, mycorrhiza