ABSTRACT

Shallots (*Allium ascalonicum* L.) is classified as horticultural crops that require a fertile soil such as Alluvial and Andosol, as well as very fertile soil, especially volcanic soil and a loose soil structure. Cultivating shallots on inseptisol soil as suboptimal land characterized by low organic matter, pH and groundwater requires input to increase the suitability of the land. The Amelioration techniques with fertilization and application of biochar can improve the characteristics of sub-optimal land. The application of vermicompost and rice husk biochar to Reuleut Inseptisol soil can increase the growth and yield of shallot shops. This research uses a two-factor Randomized Block Design with 3 replications. The first factor is vermicompost consisted of (V0) control, (V1) 14 tons/ ha, and (V2) 28 tons/ha. The alternate factor is rice husk biochar which consisted of (B0) control, (B1) 12 tons/ha, and (B2) 24 tons/ ha. The results showed that vermicompost treatment had no significant effect on all observed variables. This is thought to be caosed by the intense frequency of watering the planting media for two weeks after the usage of vermicompost. The application of biochar had a veritably significant effect on the variables of wet weight of tubers, dry weight of tubers and product of tonnes per ha. The potassium required by shallot plants was available in acceptable volume. The best treatment for cultivated shallot at the Releut Inseptisol was 12 tons/ ha rice husk biochar.

Keywords : Ameliorant, Growing media, Suboptimal land.