

ABSTRACT

Shallots (*Allium ascalonicum* L.) is one of the horticultural commodity whose demand is increasing. The decline in shallot production is influenced by several factors, namely the low level of soil fertility, as well as inappropriate fertilization and the use of planting media used by farmers. Efforts to increase shallot growth and production, namely by fertilizing such as applying KCl fertilizer and rice husk biochar as ameliorants. The purpose of this study was to determine the effect of KCl fertilizer and biochar on the growth and production of shallot plants. This research was conducted at the Agroecotechnology Experimental Farm of the Faculty of Agriculture, Malikussaleh University, Muara Batu District, North Aceh Regency, in December 2023 to February 2024. This study used a two-factor group randomized design treatment with three replications. The first factor was KCl Fertilizer (K) consisted of K0 = KCl 0 g/polybag, K1 = KCl 1 g/polybag, K2 = KCl 1.5 g/polybag. The second factor was rice husk biochar (B) consisting of B0 = rice husk biochar 0/polybag, B1 = rice husk biochar 50 g/polybag, B2 = rice husk biochar 100 g/polybag. The observation variables were plant height, number of leaves, number of tillers, root length, number of tubers, tuber wet weight, tuber diameter, tuber dry weight, merchantable tuber weight and ton/ha production. The results showed that KCl fertilizer treatment had a significant effect on all variables, namely plant height, number of leaves, number of tillers, root length, number of tubers, tuber wet weight, tuber diameter, tuber dry weight, marketable tuber weight and ton/ha production. Rice husk biochar has a significant effect on the number of tillers aged 2-4 days after planting, root length, number of tubers, tuber wet weight, tuber diameter, tuber dry weight, marketable tuber weight and ton/ha production. There is an interaction of KCl fertilizer and rice husk biochar on the variables of root length and tuber wet weight with the best treatment combination of KCl 1 g/polybag + biochar 100 g/polybag.

Keywords: KCl Dosage, Tuber, Ameliorant