ABSTRACT

Cocoa is a plantation crop and one of the plantation commodities which has quite an important role in economic activities in Indonesia. In the last 3 years, cocoa production has experienced instability caused by the use of seeds that have not been optimal and of good quality. Efforts to increase good and quality seeds can be done by using planting media and NPK fertilizer in nurseries. The aim of this research was to determine the response of cocoa seedling growth to varying doses of planting media and NPK fertilizer. This research was carried out in the experimental garden of the agricultural faculty and the laboratory of the agricultural faculty of Malikussaleh University. This research was carried out for 3 months, from March to May 2024. The method used in this research was a 2 factorial Randomized Block Design (RAK) with 3 replications. The variation factor in planting media (M) consists of 3 levels, namely: M1 = (soil 1 : cocopeat 1), M2 = (soil 1 : cocopeat 2), and M3 = (soil 1 : cocopeat 3). The NPK (N) fertilizer factor consists of 3 levels, namely: N0 (0 g/polybag), N1 (4 g/polybag), and N2 (6 g/polybag). The results of the research showed that the treatment with variations in dosage of planting media influenced plant height by 12 WAT, stem diameter by 12 WAT, number of leaves by 8-12 WAT, leaf chlorophyll by 12 WAT, root length, plant fresh weight, plant dry weight, fresh root weight, dry root weight. The results showed that NPK fertilizer treatment affected plant height 8-12 WAT, stem diameter 8-12 WAT, number of leaves 6, 10, and 12 WAT, leaf chlorophyll 10-12 WAT, root length, plant fresh weight, plant dry weight, weight fresh plant roots, dry root weight. There was an interaction in the treatment of variations in planting media and NPK fertilizer on plant height of 12 WAT.

Keywords: cocoa, planting media, NPK fertilizer