

ABSTRACT

Oil palm is a plantation crop and one of the plantation commodities which has quite an important role in economic activities in Indonesia. In the last 5 years, the area of oil palm plantations has increased. This expansion has an impact on increasing demand for quality seeds. One effort to improve seed quality can be done by maintaining pre-seedlings and main nurseries. The aim of this research is to see the growth response of oil palm seedlings due to NPK fertilizer and the composition of the planting media. The research was carried out at the experimental field method and Agroecotechnology Laboratory, Faculty of Agriculture, Universitas Malikussaleh, located in Muara Batu District, North Aceh Regency. This research was conducted from August to November 2023. This research used a factorial Randomized Block Design (RBD) with 3 replications, consisting of two factors, namely the first factor NPK fertilizer consisting of N0: control (without NPK fertilizer), N1: 2 g /plant, N2: 4 g/plant. The second factor is the composition of the planting medium (K) which consists of K0: Control (clay 1: cow manure 0: sand 1), K1: (clay 1: cow manure 1: sand 1), K2: (clay 1: cow manure 2: sand 1). The parameters observed are: Observation parameters: plant height, number of leaves, leaf chlorophyll, stem diameter, root length, wet weight and dry weight. NPK (N) fertilizer treatment affected plant height at 8 and 12 WAP, number of leaves at 8-12 WAP, leaf chlorophyll at 12 WAP, stem diameter at 10-12 WAP, root length, fresh weight and dry weight. The composition of the planting medium (K) affects plant height, leaf chlorophyll and stem diameter at 10-12 WAP, leaf chlorophyll at 6-12 WAP, root length, fresh weight and dry weight.

Keywords: Oil palm, fertilizer NPK, clay, sand, cow manure.