THE EFFECT OF NPK FERTILIZER DOSAGE ON THE GROWTH OF TWO LINDAK COCOA CLONES (Theobroma cacao L.)

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ABSTRACT

Fertilization is a process of adding nutrients in the soil. As a result of less than optimal fertilization can affect growth in the nursery and production phases. In order to determine the optimal fertilization, fertilization is necessary based on the appropriate dose of fertilizer. The implementation of this research was carried out at the Wire House at the Jember State Polytechnic which took place from October 2020 to April 2021. This study used a Factorial Randomized Block Design (RAKF) using 2 factors. The first factor is D (dose of NPK fertilizer), 4 levels of D are D0 = 0 grams/polybag, D1 = 1.6 grams/polybag, D2 = 3.2 grams/polybag, D3 = 4.8 grams/polybag. The second factor was K (lindak cocoa clone), namely K1 = ICCRI 03 and K2 = MCC 01. The parameters observed were seedling diameter (mm), seedling height (cm), number of leaves (strands), root length (cm), wet weight of seeds (grams), dry weight of seeds (grams). The results of the study showed that the optimal dose of NPK fertilizer for the growth of cocoa seedlings was D2 (3.2 grams/polybag) and had a significant effect on seedling diameter, seedling height, number of leaves and root length. The lindak cocoa clone that had the best growth was MCC 01 which had a significant effect on all observation parameters. While the interaction between the dose of NPK fertilizer and cocoa lindak clones had a significant effect on seedling diameter at the age of 60 DAP.

Keywords: Fertilization, Nurseries, Cocoa Clones.