

ABSTRACT

Growing media play an important role in determining the success of seed germination and early plant growth. The utilization of organic waste materials as alternative growing media needs to be evaluated to improve efficiency and sustainability in plant cultivation. This study aimed to evaluate the effect of different growing media on germination percentage, plant height, and fresh weight of plants. The experiment was conducted using a non-factorial Completely Randomized Design (CRD) consisting of four growing media treatments, namely cocopeat, rice husk charcoal, oil palm empty fruit bunch (EFB) waste, and oil palm fiber waste. Each treatment was replicated five times, resulting in 20 experimental units. Data were analyzed using analysis of variance (ANOVA), followed by Duncan's Multiple Range Test (DMRT) at the 5% significance level.

The results showed that growing media had a highly significant effect on germination percentage, plant height, and fresh weight. Cocopeat produced the highest values for all observed parameters, followed by rice husk charcoal, EFB waste, and oil palm fiber waste. Duncan's test indicated that all growing media treatments were significantly different from each other. It can be concluded that cocopeat is the most suitable growing media for supporting seed germination and early plant growth.

Keywords: growing media, cocopeat, germination, early growth, oil palm wa