

## ABSTRACT

Oil palm (*Elaeis guineensis* Jacq.) is Indonesia's main plantation commodity that plays an important role in increasing the country's foreign exchange as the largest and most efficient producer of vegetable oil, used for the food industry and biodiesel fuel. Therefore, palm oil production must be available in large quantities every day. Nurseries, as the initial stage of cultivation, greatly determine the production results. One way to obtain quality seeds is to improve nursery techniques using media that is in accordance with the needs and process of seed development. The appropriate nursery medium for the growth of oil palm seedlings is to add chicken manure and phosphate fertilizer at the right dose. This study was conducted to determine the effect of the application of chicken manure and phosphate fertilizer on the growth of oil palm seedlings in *pre-nursery*. This research used the Randomized Block Design (RBD) method with three replicates. The first factor is chicken manure (K) which consists of 3 levels, namely: K0 (0 g/polybag), K1 (75 g/polybag), K2 (100 g/polybag). The second factor is phosphate fertilizer (P) which consists of 4 levels, namely: P0 (0 g/polybag), P1 (2.5 g/polybag), P2 (5 g/polybag), P3 (7.5 g/polybag). The results showed that the treatment of chicken manure had an effect on the changes in the number of leaves, leaf area, stem diameter, leaf chlorophyll, root length, root volume, and fresh weight. Treatment of 100 g/polybag (K2) of chicken manure is the best treatment. The phosphate fertilizer treatment had an effect on the leaf area variable, with the best results found in the P2 treatment (5 g/polybag). There was an interaction between the treatment of chicken manure and phosphate fertilizer on the stem diameter and leaf chlorophyll variables. The best treatment was found in chicken manure 75 g/polybag + phosphate fertilizer 2.5 g/polybag (K1P1).

Keywords: Seeds, *Nursery*, Organic, Polybags, Dosage