

## ABSTRAK

Oil palm (*Elaeis guineensis* Jacq) is a leading commodity that plays an important role in contributing non-oil and gas foreign exchange for Indonesia. This study aims to examine the effect of NPK fertilizer and coconut water liquid organic fertilizer on the growth of oil palm seedlings. The research was conducted at the Experimental Farm and Agricultural Laboratory of Malikussaleh University, North Aceh, from December 2024 to February 2025, using a factorial Randomized Blok Design (RBD) with 3 replications. The factors tested were NPK fertilizer dosage (0, 2, and 3 grams/polybag) and coconut water POC concentration (0, 100, and 200 ml/liter of water). The observed variables included plant height, stem diameter, number of leaves, leaf chlorophyll, root length and volume, and plant fresh weight. The results showed that NPK fertilizer had no effect on plant height at all pengatan, while for stem diameter it had a real effect at 30 HST, the number of leaves had a real effect at 75 HST, leaf chlorophyll had a real effect at 8-10 MST and a real effect at 12 MST, root length, root volume and fresh weight had a very real effect at 90 HST. The treatment of Coconut Water liquid organic fertilizer on the observation of plant height, stem diameter, number of leaves, leaf chlorophyll and root volume showed no effect, while the observation of root length and fresh weight gave a real effect at the age of 90 HST. There is an interaction between the treatment of NPK fertilizer and kelpa water liquid organic fertilizer on plant height at the age of 30-90 HST, stem diameter 60-75 HST, the number of leaves is very real at 75 HST and leaf chlorophyll at 8 and 12 MST.

Keywords: Oil Palm, NPK Fertilizer, Coconut Water Liquid Organic Fertilizer