

Growth and biomass yield of oil palm (*Elaeis guineensis*) seedlings as influenced by different rates of vermicompost

ABSTRACT

The effect of palm oil mill effluent vermicompost on growth and vegetative traits of oil palm seedlings was evaluated. Different rates of vermicompost 10 g, 20 g and 30 g and 20 g of an NPK blue fertilizer as designated control was used. The experiment was conducted over a period of 120 days. Growth and vegetative traits like plant height, girth size, total dry weight (TDW) and root: shoot ratio (RSR) and foliar nutrient data were collected. Noticeably, the vermicompost and the NPK blue fertilizer were at par in stimulating the growth of the oil as shown in the plant height and girth size. The total dry weight (TDW) and Root: shoot ratio (RSR) showed that the vermicompost especially the higher rates significantly performed equal and positively affected the plant biomass. The nitrogen content was apparent in the plants grown with the highest rate of the vermicompost 30 g and the fertilizer with a significant effect on the leaf chlorophyll content. The results showed that the vermicompost particularly the higher rates were as suitable as the fertilizer with respect to the growth and vegetative traits.

Keyword: Vermicompost; Oil palm; *Elaeis guineensis*; NPK fertilizer