Effect of different media combination on growth and biomass production of oil palm (Elaeis. guineensis) seedlings

ABSTRACT

The study evaluates the effect of different media on growth and vegetative traits of oil palm seedlings. The treatments were T1 Control, T2 100% coco peat, T3 20% soil + 80% coco peat, T4 40% soil + 60% coco peat, T5 60% soil + 40% coco peat. Oxisol soil used for plantation crops was designated as a control evaluation. The new media were filled in polybag size 38cm x 57cm before transplanting the seedlings. The seedlings used were from Calix 600 series (D x P oil palm seeds). The newly produced growth media combination had the equal potential as standard media for oil palm nursery. The treatment (T4) which contained 60% coco peat and soil noticeably, enhanced growth of the seedling like plant height. Root dry weight (g) of seedlings grown in this planting medium greatly impacted plant root. This could have been due to the presence of silica content in the coco-peat which provided good aeration in the medium and indirectly stimulated root expansion. Increased in shoot dry weight of the seedlings grown in T4 was recorded compared to the plants grown in other media. The results obtained generally indicated that compost- based planting medium has the potential to influence seedling as an alternative growth medium.

Keyword: Coco peat; Oil palm seedling; Media; Biomass; Elaeis. Guineensis