

**EVALUATION OF REFUSED TEA AS AN ALTERNATIVE  
MEDIUM FOR COIR DUST IN POTTING MIXTURES USING  
HOT PEPPER (*Capsicum chinense* Jacq)**

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By

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## ABSTRACT

Coir dust is a by-product used in potting mixtures and is scarce in local market due to the high demand. Conversely, refused tea is a waste of tea industry and also a threat to the environment due to its accumulation. The objective of the present study was to evaluate refused tea as an alternative medium for coir dust in potting mixtures using hot pepper (*Capsicum chinense* Jacq). A study under polytunnel conditions was carried out at Regional Agriculture Research and Development Centre, Makandura. Complete Randomized Design was adapted assigning six treatments: T1 [soil], T2 [Soil + Compost, 1:1], T3 [Soil + Compost + Coir dust, 1:1:1], T4 [Soil + Compost + Coir dust + Refused tea, 1:1:1/2:1/2], T5 [Soil + Compost + Refused tea, 1:1:1], T6 [Soil + Compost + Refused tea, 1:1:2] with four replicates. Soil moisture content, bulk density, pH, electrical conductivity, organic C, exchangeable K, available P and total N were determined. Number of days for the first and 100% flowering, height and canopy width at the first and 100% flowering, number of primary branches, plant fresh and dry weight, shoot to root ratio and root length were also recorded. Yield parameters were recorded every week: number of pods per plant and mean weight per pod ( $\text{g pod}^{-1}$ ). All tested refused tea media showed similar physico-chemical properties to the commercially available coir dust growth media. With respect to the mean weight per pod T3, T4 and T5 showed no significant difference ( $P>0.05$ ). The findings indicate that there was no significant ( $P>0.05$ ) difference between the coir dust and refused tea media, hence; refused tea can be used as an alternative media for coir dust in the cultivation of *Capsicum chinense* Jacq.

*Keywords:* Refused tea, coir dust, *Capsicum chinense* Jacq, growing media parameters, plant growth parameters