

**USE OF REFUSED TEA AS A HYDROPONICS
GROWING MEDIUM FOR LETTUCE
(*Lactuca sativa*)**

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ABSTRACT

After going through several manufacturing processes, the finest black tea is extracted, whereas the left over brown tea will be rejected as refused tea. Therefore, a considerable amount of refused tea is produced annually (10%) as a byproduct of tea manufacturing. A little amount of this is used for several purposes and the majority is exported illegally going beyond the Tea control Act No 51 of 1957. Refused tea is abundantly available in upcountry tea growing areas where growing plants under hydroponics is also common. Coir dust is used prominently as the hydroponics growing medium in Sri Lanka. As coir dust is considerably expensive and not easily available in up country, use of coir dust for commercial hydroponics increases the cost of production. As refused tea is rich in favorable physical and chemical properties, it can be used as an alternative growing medium for hydroponics cultivation. So, aresearch was conducted to evaluate the performance of refused tea as a growing medium for hydroponically grown lettuce. There were five treatments with different combinations of coir dust and one year old refused tea. Refused tea only (T1), Coir dust only (T2), Refused tea and Coir dust mixed in the ratios of 1:1 (T3), 1:2 (T4) and 2:1 (T5). CRD was the experimental design with three replicates. Performance of lettuce variety 'Grand Rapid' was tested under these five treatment levels, in non-circulating root dipping method of hydroponics. The obtained results reveal that, the plants grown under five different growing media have not shown significant differences on the total shoot weight and the plant height at harvest at 5% significant level. Therefore, refused tea can be used as an alternative hydroponics growing medium to cultivate lettuce.

Key words: Growing medium, Refused tea, Coir Dust, Hydroponics, Lettuce