SUBSTITUTE FOR COIR DUST IN THE POTTING MIXTURE OF COCONUT (*Cocos nucifera* L.) POLYBAG SEEDLINGS

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Quality of seedlings is vital for the expansion of productive coconut cultivations in Sri Lanka. Coconut polybag seedlings which are superior in quality than conventional bare rooted seedlings. Usually, the potting mixture of coconut polybag seedling consist with soil: cow dung: coir dust in the ratio of 1:2:3, in which high amount of coir dust is included. Coir dust is having a greater export demand, making it a limited and scare resource in Sri Lanka. Hence, present study evaluated freely available, alternative materials as a substitute for coir dust in the potting mixture of coconut polybag seedlings. Three-month old coconut seedlings of variety CRIC 60 with similar sprout length were transplanted into polybags filled with five different media namely; T1: coir dust, T2: sawdust, T3: half burned paddy husk, T4: paddy husk and T5: paddy straw in combination with soil: cow dung in 3:1:2 ratios. The experiment was laid out in a Randomized Complete Block Design with five treatments and three replicates with total of 90 polybags. Number of days for the emergence of first leaf, morphological characters of seedlings, chlorophyll content of leaves and soil properties were recorded. Data were analyzed using ANOVA procedure in R software. Stem girth, seedling height, length and width of leaves and chlorophyll content of leaves were not significantly ($p>0.05$) different among treatments at two months after transplanting. It confirms that sawdust, half burned paddy husk, paddy husk and paddy straw are comparable alternatives to substitute the coir dust portion in potting mixture. Both pH and electrical conductivity of potting mixtures was in desirable range in all treatments. In conclusion, freely available sawdust, paddy straw and paddy husk can effectively be incorporated into the potting mixture of coconut polybag seedling as a low-cost substitute for coir dust. However, paddy straw causes additional cost for refilling due to its higher rate of decomposition than coir dust. It is suggested to reconfirm the research for better conclusion.

Keywords: Coconut seedlings, Paddy husk, Paddy straw, Saw dust