ALTERNATIVE PRE-NURSERY BED TYPES FOR COCONUT POLYBAG SEEDLING PRODUCTION

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Coconut seedlings are produced either as bare-rooted or in polybags. Polybag seedlings are superior in quality. Pre-nurseries that used to produce sprouted seed nuts to transfer into polybags are usually elevated, which records lower germination percentages and field success. The current study assessed alternative pre-nursery bed types for better germination and field success of seed nuts. Four treatments; T1: raised bed, T2: sunken bed, T3: sunken bed with polythene at bottom, and T4: sunken bed with concrete at bottom were arranged in RCBD with three replicates. Coconut seed nuts of the CRIC 60 were established and managed as recommended. The days taken for germination, germination percentage, and length of sprout were recorded weekly. Temperature and the moisture content of the nursery beds were measured every three-day interval. Data were analysed using ANOVA in R statistical software. Moisture content of the nursery bed was greater in T3 followed by T4, T2, and T1. Germination percentage was not significantly different ($p>0.05$) at 100 days after sowing, however, T4 recorded a comparatively higher percentage. Sprout length was not significantly different ($p>0.05$) among treatments. Yet, T3 and T4 recorded comparatively higher sprout lengths. A significant treatment effect was not observed for the days taken for germination, yet the lowest was with T4 (54 days) and the highest was with T1 (66 days). The average cost per seedling was LKR 222 for T1 and T2 and LKR 254 and LKR 650 for T3, and T4, respectively. Since nursery beds in T3 and T4 can be used with several seed batches, cost per seedling can be reduced in the long run. Sunken pre-nursery performed comparatively better than traditional raised pre-nursery. Continuing the research over the pre-nursery period is suggested prior to a firm conclusion.

Keywords: Germination percentage, Raised bed, Sprout length, Sunken bed