ALTERNATIVE PRE-NURSERY BED TYPES FOR COCONUT SEEDLING PRODUCTION

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Quality seedlings are vital to improve the coconut production in Sri Lanka. Coconut seedlings are produced either as bare rooted or poly bagged. In polybag seedling production, pre-nurseries are used to obtain uniform seedlings to transfer into the polybags. Conventionally, pre-nursery beds are raised beds, which record a less field success. The present research evaluated alternative pre-nursery bed types for an improved germination. The experiment was laid out in a randomized complete block design with four treatments; T1: Raised bed, T2: Sunken bed, T3: Sunken bed with a polythene layer at bottom and T4: Sunken bed with concrete floor. Each treatment were replicated thrice. A total of 120 coconut seed nuts of variety CRIC 60 was used for the experiment and recommended management practices were followed similarly for all treatments. Days taken to germination, germination percentage, and sprout length of each seedling were recorded and the cost per seedling was calculated. The days taken to germination was significantly ($p<0.05$) influenced by treatments. Seed nuts in both T3 and T4 were germinated at 81 days after sowing, while T1 and T2 took 87 days. Germination percentage was not significantly different ($p>0.05$) among treatments at 100 days. However, a higher germination percentage was recorded in T3 and T4. Sprout length was significantly different ($p<0.05$) among treatments, where T3 (3.73 cm) and T4 (3.52 cm) recorded the highest mean sprout length than T1 (2.56 cm) and T2 (2.83 cm). The average cost per seedling was Rs.97.00, Rs.97.00, Rs.115.00 and Rs.184.00 for T1, T2, T3, and T4, respectively. The higher cost for T3 and T4 can be compensated by repeating several batches of seed nuts on these beds In conclusion, sunken pre-nursery bed with a polythene layer at bottom and sunken per-nursery with concrete floor performed better than traditional pre-nursery techniques. Continuing the research for another two months period is suggested for better conclusion.

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