

**Poster**

**A SIMPLIFIED STRUCTURE (HANGING BUCKET) FOR PRE BASIC SEED PRODUCTION OF POTATO**

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**ABSTRACT**

Annual seed potato requirement in Sri Lanka is around 18,000 t/year of which 60% is produced through informal seed system by farmers although in most cases. Other than conventional seed production system practiced in Department of Agriculture (DOA) farms, recently advanced technologies such as hydroponics and aeroponics have been introduced in to the DOA seed systems. Though standard quality seeds can be produced through these technologies, there applicability in farmer level is questionable due to high initial and maintenance cost and requirement of specific technical knowledge. Therefore, an investigation was carried out to simplify the technology, maintenance its quality standards, to suite with farmer level management. Four treatments, arranged in a CRD with five replicates, was tested in top vent model poly-tunnel at the Regional Agriculture Research and Development Centre, Bandarawela during *yala* 2012 and *maha* 2012/13 seasons. Hanging buckets were designed from half inch flat iron bars with three different diameters (23, 26.5 and 30 cm) labelled as T1 to T3, respectively. Middle of the each unit, a five inch plastic net pot filed with 1:1 coir dust and partially burned rice husk mixture was placed. Each experimental unit consisted of three plants and there were 15 plants/treatment. The hanging buckets were evaluated with a conventional hydroponic unit (T4) with supplying of complete plant nutrient mixture (Albert's solution) in a farmer managed conditions. All other management practices are based on DOA recommendations. Number of stolon, tubers, and total tuber weight per each unit was recorded and analysed by using SAS package. Results revealed that T2 (medium diameter-26.5 cm) hanging bucket can be recommended for the pre basic seed potato production at farmers' level solving the problems incurred with complicated hydroponics units. The medium size new structure is low cost and easy to handle which produced significantly higher number of stolon/unit (54.2-22.6), tubers/unit (69.6-33.6), total tuber weight (193.5 g-106.6 g) and average tubers per plant (23.2-11.2). However the average tuber weight (2.92-3.20g) was not significantly different among treatments.