

### **Alternative pot material for budded fruit plant production**

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#### **Abstract**

Quality planting material production is the basic requirement for fruit plant production. Current conventional planting material produced by government and private sector nurseries system involves 1:1:1 topsoil: sand: compost in black polythene bags (300 gauge, 8-10 inches length, 6-8 inches diameter). In this conventional system, large pots with standard composition of growth media is cost effective.

Therefore, low cost, low weight easy transportable pots or potting materials are needed to planting material production system. Alternative pot/potting material for budded planting material production was studied at the horticulture nursery Fruit Research and Development Institute (FRDI) Kananvila, Horana during the period of 2013- 2014 with the objectives of introducing low weight, low cost, easy transportable pot for budded fruit planting material production system.

Randomize Complete Block Design with 7 treatments (3 replicates were experimented and each treatment has 30 sub units). Treatments were as follows:

T<sub>1</sub> – Compress coir dust pellet; T<sub>2</sub>- Conventional method; T<sub>3</sub>- Soil: sand: compost mixture; T<sub>4</sub>- Coir dust; T<sub>5</sub>- Half burn paddy husk ; T<sub>6</sub>- Refuse tea; T<sub>7</sub>- Soil: half burn paddy husk : coir dust : refuse tea 1:1:1

Black polythene bags with 300 gauge and 4x 6.5 inches were selected for filling above treatments. Number of germinated seeds, number of plants survived up to budding stage, success number of plants after budding, success number of plants up to 6 months and success number of plants up to one year were recorded and data was analyzed by using SAS statistical software.

The results revealed that there was no significant deference in seed germination, plant were survived up to budding stage, successful number of plants after budding, successful number of plants up to six months and success no successful number of plants up to one year period between compress coir dust pellet and conventional method. But economic comparison showed that the cost of production of conventional pots were two fold higher than compress coir dust pellet. Also comparison of the

benefits of two methods showed that compress coir dust pellet is more beneficial than conventional method. The compressed coir dust method was easy to maintain, easy to handle and transport, also the compress coir dust pots are biodegradable.

Therefore, compressed coir dust pellets can be used as an alternative potting material for fruit planting material production.

**Keywords:** Compressed coir dust pellets, planting material production, plant nurseries