

## STANDARDISATION OF LAYERING MEDIUM, PLANTING MEDIUM AND CONTAINERS FOR CASHEW AIR LAYERS

Air layering in cashew still continues to be the simplest and cheapest method of vegetative propagation. The common rooting media used is saw dust and sand in equal proportions. Air layers after separation from the mother tree; are generally potted in polybags using the potting mixture consisting of top soil, sand and powdered cowdung or compost. The difficulties and limitations experienced are that though a fairly high percentage of rooted air layers can be successfully separated from the mother trees, there is considerable mortality before they successfully get established under potted conditions.

With a view to ascertain whether any media other than the commonly used saw dust-sand medium could promote higher percentage of rooting of air layers and to ascertain whether the high percentage of post-separation mortality of air layers can be minimised by changing the potting media and containers, a trial was undertaken at the Cashew Research Station, Madakkathara during two successive years in 1980 and 1981.

The following media were tried.

- 1 Sand plus saw dust in equal proportions
- 2 Sphagnum moss
- 3 Wood shavings
- 4 Wood shavings enriched with rock phosphate
- 5 Sand plus saw dust enriched with rock phosphate

The experiment was carried out during the month of March (the optimum time for air layering at this station) with ten air layers in each treatment with four replications. Trees of same age and type were used and all the treatments of a replication were accommodated in a single tree.

The combined data for the two years are presented in Table 1.

Table 1

Number of layers fit for separation (out of 20 numbers for two years)

Treatment	Replications				Mean	Percentage of rooted layers
	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	R <sub>4</sub>		
T <sub>1</sub>	7	1	4	6	6.25	31.25
T <sub>2</sub>	4	7	4	9	6.00	30.00
T <sub>3</sub>	5	11	5	11	8.00	40.00
T <sub>4</sub>	3	3	6	3	3.75	18.75
T <sub>5</sub>	5	2	3	8	4.50	22.50

F (0.05) = 3.26 NS

The data revealed that wood shavings can also be used as a good medium for air layers in cashew besides the commonly used, medium of sand saw dust and also that enriching the media with rock phosphate does not have any beneficial effect in promoting rooting of air layers.

In the experiment to compare the different rooting media and containers, the following treatments were used.

- 1 Coconut pith in polythene bags
- 2 Wood shavings in polythene bags
- 3 Ordinary potting mixture in polythene bags
- 4 Coconut pith in coconut husk fibre container
- 5 Wood shavings in coconut husk fibre container
- 6 Ordinary potting mixture in coconut husk fibre container
- 7 Coconut pith in paddy straw container
- 8 Wood shavings in paddy straw container
- 9 Ordinary potting mixture in paddy straw container.

This experiment was laid out planting five layers in each treatment with four replications. Layers of same cashew type were used. Number of initially established layers was recorded thirty days after potting. The combined data for the two years are presented in Table 2.

Table 2  
Numbers of layers established in the nursery  
(out of ten layers planted during two years)

Treatment	Replications				Mean	Percentage of establishment
	1	2	3	4		
1	4	6	5	6	5.25	52.5
2	7	8	8	7	7.50	75.0
3	9	8	9	7	8.25	82.5
4	8	7	6	8	7.25	72.5
5	8	10	8	7	8.25	82.5
6	8	9	9	7	8.25	82.5
7	7	9	7	9	8.00	80.0
8	5	8	8	6	6.75	67.5
9	8	9	9	9	8.75	87.5

C. D. (0.05) = 1.395

The results indicate that treatment 9 (ordinary potting mixture in paddy straw container) is significantly superior to treatments 1,4, and 8. Treatments 3, 5 and 6 are significantly superior to treatments 1 and 8. There is no significant difference between treatments 3,5,6,7 and 9. The economics of the different treatments are presented in Table 3.

**Table 3**  
 Cost of container with medium

Treatments	Cost {Paise/unit}
1	30
2	35
3	25
4	90
5	95
6	85
7	80
8	85
9	75

It may be seen from the above that treatment No. 3 (ordinary potting mixture in polythene bags) is the cheapest. Considering the fact that the percentage of establishment of layers in the above treatment is on par with treatment 9, the use of polythene containers with ordinary potting mixture is recommended for large scale production of air layers on economic basis.

സംഗ്രഹം

കശുമാവിൽ വായവപതി വെക്കുന്നതിനുള്ള മാട്രധമങ്ങളിൽ ഏറ്റവും മികച്ചതും മരത്തുള്ളികളാണെന്നും വേരുപിടിച്ച വായവപതികൾ മുറിച്ചുനടുന്നതിന് മികച്ചതും ചില വ്യക്തമായ കാരണങ്ങൾ സാധാരണ പോട്ടിംഗ് മിശ്രിതം നിറച്ച പോളിത്തിൽ ഉറകളിൽ നടുന്നതാണെന്നും മാട്രക്കത്തരയിലെ കശുമാവ് ഗവേഷണ കേന്ദ്രത്തിൽ നടത്തിയ പരീക്ഷണങ്ങൾ വ്യക്തമാക്കുകയുണ്ടായി.

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