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Coconut Research Institute

HAND-POLLINATED COCONUT SEEDLINGS

Leaflet No. 44

1. The Coconut Research Institute issues a large number of selected seedlings each year, raised from open-pollinated seednuts of selected palms. Recently, the Institute has developed two strains of coconuts by hand-pollination, *i.e.* by controlling both the male and female parents. Largescale field trials of this material in the different coconut growing districts have not been undertaken yet, and until this work is completed **recommendations given herein are only provisional.** Since the experimental material has given high yields of copra, the Institute is issuing to the growers a limited quantity of hand-pollinated seedlings each year. The two strains developed are:

CRIC 60: Tall in habit, late flowering and high-yielding. Flowering-period varies between 5 to 8 years depending on soil fertility and management. Suitable for planting in all the coconut growing districts in the island.

CRIC 65: Tall in habit, early flowering and high-yielding. Flowering-period 3 to 4 years in new-clearings and 4 to 5 years in under-plantings depending on soil fertility and management. Suitable for planting only in the Chilaw district and the wet areas of the Kurunegala district.

CRIC 65 young palm, 7 years old.

2. In a three-acre new clearing planted at Rathmalagara Estate (Chilaw district) with CRIC 65 and ordinary selected seedlings, 87 percent of the former type and 19 percent of the latter were in flower when the palms were 42 months old. The yield potential of both strains appears to be high 12 to 15 year old palms of CRIC 65 **experimental material** have given a mean yield of 160 nuts per palm per year, with an out-turn of 1100 nuts per candy of copra.

3. It is not possible to produce clonal material in coconuts, hence there will be variation in yield between palms in each strain, some may be even low yielders which will have to be thinned

out; but the overall mean yield per acre will be superior to that from selected open-pollinated seedlings.

4. Planting distances, method of planting and management are same as for the ordinary selected seedlings — *see* C.R.I.. Leaflet No. 4. If optimum yields are to be obtained from these hybrid strains, it is absolutely essential to manure them regularly. Their performance will be poor, if they are neglected and not manured as necessary. Notes on manuring are given below.

MANURIAL RECOMMENDATIONS.

5. CRI General mixture for young palms.

Sulphate of Ammonia	(20.6%N)	— 4 parts by weight.
Saphos Phosphate	(27.5%P_2O_5)	— 3 parts by weight.
Muriate of Potash	(60%K_2O)	— 2 parts by weight.

6. Apply the above mixture for young palms at the rates given below:

Fertilizer per palm per year

Age after transplanting	New clearings		Second plantations	
	CRIC 60	CRIC 65	CRIC 60	CRIC 65
1 year	1 lb.	2 lb.	3 lb.	4 lbs.
2 years	2 lb.	3 lb.	3 lb.	4 lb.
3 years	3 lb.	5 lb.*	4 lb.	5 lb.
4 years	4 lb.		5 lb.	6 lb.*
5 years	5 lb.*		6 lb.*	

* continue at this rate until bearing.

On bearing, apply CRI mixtures for adult palms as recommended in Leaflet No. 36 (at 8 lb. per palm per annum,) on both new and second plantations, but for CRIC 60 and CRIC 65 palms increase the rate by 2 lb. each subsequent year up to a maximum of 12 lb. per palm per annum.

7. Until bearing, the annual dosage should be applied in at **least** two split doses. On sandy soils subject to both monsoons, application in four split doses is preferable (apply at the beginning and towards end of each monsoon).

8. It will not be possible for the Institute to supply all the hand-pollinated seedlings required by the Industry each year. The larger estate owners should organise their own controlled pollination unit on the estate, and raise the quantity of seedlings that they require. The Institute will provide them with the necessary technical advice and assistance, including selection of palms, training of pollinators and supply of pollen. Details regarding controlled pollination are given in Leaflet No. 47.

9. **CRIC 65 is a hybrid strain and nuts should not be taken from these palms for seed purposes, even if they are exceptionally good. If seedlings are raised from them there will be segregation, and a large number may be unproductive.**

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