

Effect of Intercultivation on Production of Arecanut *Areca catechu* L.

A. K. Sadanandan*, C. K. George**, A. Muralidharan***
and K. J. Abraham****

Abstract

Effect of intercultivation in areca garden (digging with mammutty once in a year, digging with mammutty twice a year, digging with mammutty once in two years and no digging) was studied for six years (1969-1975) in the alluvial soils of CPCRI Research Centre, Peechi on the productivity of arecanut. Pooled data for six years showed that intercultivation in areca garden did not significantly increase the production of fruit or fruit weight.

Introduction

Cultural practices are adopted invariably in all the areca gardens but differ from tract to tract. After a survey of the arecanut growing tracts, Nambiar(1949) reported that intercultivation increased the production of arecanut by 10 - 20 per cent. However, information on the requirement of optimum cultural practices in areca garden for augmenting yield was not available. This information will help to reduce the cost of cultivation as intercultivation operations are labour intensive and the cost of labour is increasing steadily. An attempt has therefore been made to investigate the effect of different intervals of intercultivation on the productivity of areca palms in

central Kerala which is an important tract for this crop. The area receives an annual rainfall of 2592 mm distributed over 123 days. The minimum and maximum temperatures were 17.5°C (December) and 39.5°C (April) respectively.

Materials and Methods

A field experiment was conducted for six years (1969 - '75) in the alluvial sandy loam soil (pH 5.4, 0.53% C, 0.09% N, 12 ppm of Bray P and 125 ppm K) of the erstwhile Regional Arecanut Research Station, Peechi (Central Kerala) presently Research Centre of CPCRI. The treatments were (1) no intercultivation, (2) digging with spade once a year, (3) digging with spade twice a year and (4) digging with spade once in two years.

The weed growth in the control plot was regulated by scything grass at ground level and spreading over the plot. Other plots were dug to a depth of 15 - 20 cm with the use of spade during October and April

*Central Plantation Crops Research Institute, Regional Station, Calicut 673 012, Kerala.

**Directorate of Cocoa, Arecanut and Spices Development, Calicut 673 005, Kerala.

***CPCRI Regional Station, Kayangulam, Krishnapuram 690 533, Kerala.

****CPCRI Research Centre, Palode, Pacha 695 562, Trivandrum District, Kerala.

depending upon the treatments. The number and weight of arecanuts harvested per palm were recorded. The data for six years were pooled and subjected to statistical analysis.

Results and Discussion

The results showed no significant difference between the treatments in the production of arecanut (Table 1). The number of nuts per palm averaged over the years ranged from 321 (digging once/twice in a year) to 374 (no intercultivation). Likewise the weight of nuts per palm averaged over the years ranged from 8.5 kg (digging once/twice a year) to 9.8 kg

(no intercultivation). These findings are contrary to that of Krishna Marar et al., (1959) in coconut and Sannamarappa et al., (1976) in arecanut. Under Karnataka conditions digging arecanut garden twice a year (June and December) gave the highest yield. The reasons for no response for intercultivation in the present study may be attributed to the better fertility status and the improved structural condition of the alluvial soil.

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Table 1. Effect of intercultivation on production of arecanut palm (pooled analysis 1969 - '75)

Treatment	Year													
	1969 - '70		1970 - '71		1971 - '72		1972 - '73		1973 - '74		1974 - '75		Mean	
	No.	Wt. (kg)	No.	Wt. (kg)	No.	Wt. (kg)	No.	Wt. (kg)	No.	Wt. (kg)	No.	Wt. (kg)	No.	Wt. (kg)
No intercultivation	287	7.4	396	9.4	477	13.0	366	10.1	373	9.8	344	8.9	374	9.8
Digging once a year	224	6.1	289	7.2	419	11.4	329	9.6	330	9.2	337	7.7	321	8.5
Digging twice a yr	240	6.5	271	6.8	420	11.4	333	8.6	359	9.7	301	8.2	321	8.5
Digging once in 2 years	249	6.7	330	8.6	320	13.0	320	9.2	428	11.9	278	7.9	321	9.6
Mean	250	6.7	322	8.0	409	12.2	337	9.4	372	10.2	315	8.2	334	9.1
						No.	Wt.							
						SE for treatment	33.6	0.81						
						SE for year	14.2	1.09						
						SE for interaction	28.2	0.79						

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