

LEAF GROWTH IN RELATION TO AGE AND THE BEARING STATUS OF COCONUT PALMS

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A study was carried out recently to determine (a) the leaf growth (or size) in relation to age, and (b) the relation between leaf size and bearing status of coconut palms (*Typica* variety).

METHODS AND MATERIALS

Coconut palms from five age-groups were selected for this study. They were, 5, 10, 20, 30 and over 50 year old palms. For each age-group a uniform block was selected and from each such block 30 healthy-looking palms were chosen for recording of measurements. Ideally all categories should satisfy the following requirements:—

- (a) Be from the same agro-climatic region.
- (b) Receive identical manurial and cultural treatments.
- (c) Be of the same type and distance of planting.

It was not possible to select the different categories in the same agro-climatic region. However, the blocks selected were from areas which had well drained sandy-loams, and displayed similar soil physical structures. The manurial treatments and cultural practices, on these blocks could be considered effectively uniform. The type and distance of planting in the different categories are shown in the schedule below:—

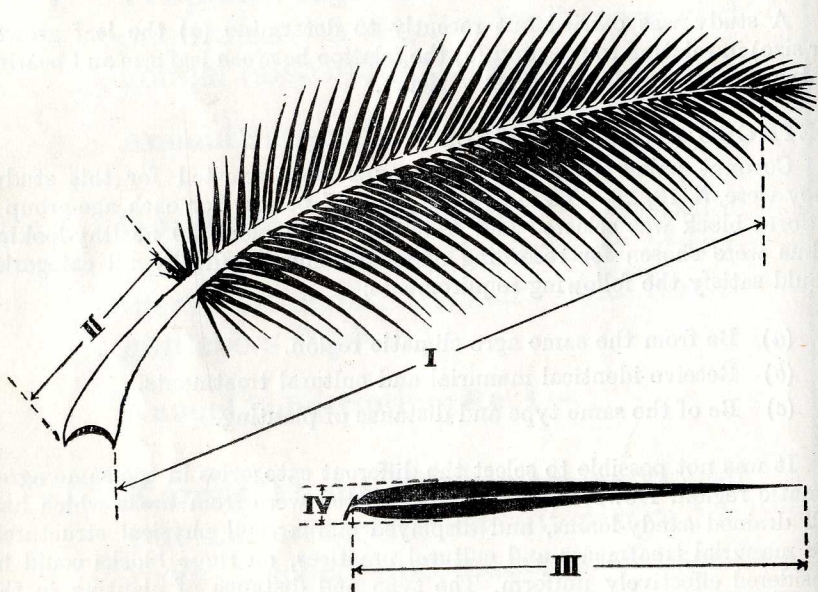
Age of palms (years)	Location*	Type of planting	Planting distances
5	Pothukulama	Rectangular	26' × 24'
10	Bandirippuwa	Triangular	26' × 26'
20	Walpita	Square	24' × 24'
30	Ratmalagara	Triangular	26' × 26'
Over 50	Bandirippuwa	Square	26' × 26'

* Following experiments are in progress at these locations: Pothukulama—Diallel crosses, Bandirippuwa—Progeny Trial, Walpita—Progeny Trial, Ratmalagara—Latin square, Bandirippuwa—Observation.

In the case of the two younger categories, bearing and non-bearing were studied separately.

In all age categories the following measurements (Figure I) were recorded in the most mature and healthy green frond of each palm.

1. Total length of frond.
2. Length of petiole.
3. Length of the longest leaflet.
4. Breadth of the longest leaflet.
5. Total number of leaflets.



(FIGURE I)

Leaf Measurements;

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|-----------------------|------------------------|
| I Length of Frond. | III Length of Leaflet. |
| II Length of Petiole. | IV Breadth of Leaflet. |

RESULTS AND DISCUSSION

The results are given in Table I and are also illustrated by histograms in Figure II.

