
PRELIMINARY OBSERVATIONS ON A VARIANT FORM OF COCONUT CULTIVAR LAKSHADWEEP MICRO

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Lakshadweep Micro is a valuable genetic material because of its highest oil content of 75 per cent as against 65 to 72 per cent present in other tall cultivars and 60 to 65 per cent in dwarf cultivars. It has been the traditional source of good quality special grade ball copra which fetches a premium price. However, there has been a sharp decline in the L. Micro population in its place of origin. L. Micro palms are distributed among the dominant Lakshadweep Ordinary (Chandrakalpa) palms which allow free outcrossing resulting in intermediate forms. Low germination (49 per cent) under field conditions, the lack of interest by the islanders to propagate the L. Micro palms, discontinuation of the practice of ball copra production in the island etc. contribute to the gradual decline in its population. In the absence of any concerted efforts to conserve, maintain and multiply the L. Micro population (about 100 palms, Jacob and Krishnamoorthy, 1981), the search for an alternate and better source material for ball copra production assumes greater significance.

A survey undertaken (1979 to 1982) to locate the available L. Micro palms in Androth, Agatti, Kavaratti, Kalpeni and Minicoy Islands in Lakshadweep identified certain other palms, producing small ball-shaped nuts, distinct from L. Micro. The morphological and reproductive characters were recorded from 10 palms using the IBPGR descriptor for the cataloguing of coconut germplasm.

These variant palms are tall and resemble Lakshadweep Ordinary and L. Micro in gross morphology. Their distribution is highly scattered like that of L. Micro and maximum population was recorded in the Androth Island. The palm height varies from 4.5 to 12.5 m with a spherical to hemispherical canopy. The leaf production was comparatively higher (35 to 40) which is generally associated with the high yielders. The palm produces on an average 13 bunches

annually, yielding 195 nuts. The female flower production is in the range of 32 to 118 per inflorescence as against 400 to 500 in *L. Micro* (Table 9.1). The peduncle and the inflorescence length are relatively low resulting in the bunches being supported by the subtending petioles. There is a remarkable difference in the female flower distribution in the variant form where 50 per cent of the rachillae are having only one female flower each as against 5 to 10 per cent in *L. Micro* (Table 9.2). The palm bears regularly and produces only a very few barren nuts, unlike the *L. Micro* which has an irregular bearing habit combined with the tendency to produce barren nuts in large numbers.

The age of the palms (40 years approximately) suggests that this could be a variant form of *L. Micro* evolved in recent times probably due to introgression with *L. Ordinary*. The nuts of the variant are more or less uniform in size which is a preferred character in the production of better quality ball copra.

Table 9.1: Vegetative and reproductive characters of variant form of *L. Micro*

<i>Character</i>	<i>Mean</i>	<i>Range</i>
Height of the palm (m)	8.8	4.5-12.5
Crown shape	Spherical to hemispherical	—
Girth (cm)	93.7	72-108
No. of leaf scars in 1 m length	16.5	11-24
No. of leaves on the crown	37.4	30-45
Length of the inflorescence (cm)	83	58-99
Length of the peduncle (cm)	33	18-46
Length of the rachilla (cm)	38.6	33-49
No. of rachillae/inflorescence	39.7	32-44
No. of female flowers/inflorescence	57.9	32-118
Female flower distribution	1.3	0-4
Setting percentage	42	32-55
No. of bunches produced/year	13	12-16
No. of nuts/bunch	19.6	12-30
Annual yield of nuts/palm	195	128-290

Table 9.2: Pattern of female flower distribution in the variant form

<i>Female flower distribution</i>	<i>Mean</i>	<i>Range</i>	<i>%</i>
No. of rachillae with 0 button	7.4	0-15	18.7
No. of rachillae with 1 button	20	7-33	50.4
No. of rachillae with 2 buttons	6	1-12	15.1
No. of rachillae with 3 or more buttons	6.3	1-18	15.8

It is necessary that a detailed survey of the Lakshadweep Islands is undertaken to identify, conserve, catalogue and maintain the other probable variant forms that could be utilised in the crop improvement programme of coconut.

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REFERENCE

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