

Research note :

Inflorescence and nut characters of dwarf cultivars in coconut (*Cocos nucifera* Linn.)

A.THANGA HEMAVATHY^{1*}, AND K.BALAJI²

¹ Central Plant Molecular Biology, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA

² Department of Agricultural Entomology, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA

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Coconut (*Cocos nucifera* (Linn.)) is a multipurpose crop on commercial importance. Coconut grown in an area of 1.84 million hectares in India with annual production of 125.97 million nuts, Tamil Nadu with an area of 3.24 lakhs hectares holds the third position in the country with an annual production of 3.158 million nuts. Though India is in the fore front in coconut production in the world, the productivity is as low as 40 nuts per palm per year. There is an immense need to identify cultivars and hybrids suitable for manufacturing various industrial products such as coconut oil, desiccated coconut, shell charcoal, coir and coir products etc. Information on yield potentiality and nut characters of various tall and dwarf cultivars grown particularly in India will help growers to select appropriate cultivar according to the demand of local market as well as the demand of the coconut based industries. Systematic study for identification of suitable cultivars was initiated in Tamil Nadu at Coconut Research Station, Veppankulam during 1958, but the research related to this field is still meager. Therefore, the present study was carried out to study the production potentialities and morphological characters of nut and inflorescence of some tall and dwarf cultivars grown in Veppankulam.

Eight dwarf cultivars of coconut (*Cocos nucifera* L.) are maintained at Coconut Research Station, Veppankulam, Tamil Nadu, India, formed the materials for this study. The palms were planted in 1985 and the experiment was conducted in a Randomized Block Design with two replications. Observations were recorded from four plants representing each genotype in each replication. The mean data of the four palms were subjected to statistical analysis. For studying the nut characters, two nuts of 12 months maturity were

collected from each of the four palms at harvest.

Varieties used :

Dwarf varieties :

- 1.AOD (Andaman Ordinary Giant)
- 2.CGD (Chowchat Giant Dwarf)
- 3.COD (Chowchat Orange Dwarf)
- 4.GBD
- 5.MGD (Malayan Giant Dwarf)
- 6.MOD (Malayan Orange Dwarf)
- 7.MYD (Malayan Yellow Dwarf)
- 8.Ayiramkachi

Characters studied :

- | | |
|-----------------------------|----------------------------|
| 1. No. of spikelets | 6. Nut breadth (cm) |
| 2. No. of female flowers | 7. Whole nut weight (g) |
| 3. Bunches with button | 8. Dehusked nut weight(g) |
| 4. No. of functional leaves | 9. Copra content(g/nut) |
| 5. Nut length (cm) | 10. Copra yield(Kg/Plants) |

Among the eight dwarf cultivars under study showed distinct variation in their inflorescence and nut characters (Table 1). Andaman Ordinary Dwarf performed well for whole nut weight, Dehusked nut weight and copra content. N'cho et al. (1993) and Pillai et al. (1988) reported that the coconut cultivars would be characterized and classified successfully based on inflorescence and nut characters. No. of female flowers was highly reported in Chowchat Orange Dwarf (59.06) and Malayan Yellow Dwarf recorded high number of spikelets (45.5). Followed by MYD the cultivar named Gangabandan also had more number of spikelets (41.5).

In the present study Andaman Ordinary Dwarf is a best one for production of nut characters. Ayiramkachi is also a best one for production of female

Table 1. Morphological and nut characters of dwarf varieties in coconut

Dwarf types	No. of spikelets	No. of female flowers	No. of bunches with button	No. of functional leaves	Nut length	Nut Breadth	Whole nut weight	Dehusked nut weight	Copra content g/nut	Copra yield kg/palm
AOD	38.00	27.77	4.5	22.73	28.50	17.00	1162	697.5	336.74	4.1
CGD	27.00	24.05	5.0	24.00	19.15	15.70	995	455	105.87	3.45
COD	34.50	59.06	4.0	26.26	19.00	13.25	544.5	642.5	110.96	4.6
GBD	41.50	24.99	5.0	30.87	19.00	13.25	505	342.5	81.93	4.55
MGD	39.50	20.20	5.0	27.77	20.25	14.00	1035.5	400	118.19	7.2
MOD	37.50	12.27	5.0	28.20	18.47	11.50	497.5	285	91.29	3.5
MYD	45.50	33.69	4.0	28.29	20.25	13.75	1124.5	400	64.55	6.85
Ayiramkachi	32.50	51.87	4.0	24.47	16.01	9.25	357.5	200	85.92	8.25

production which can be recommended for hybridization programme with tall varieties, since Ayiramkachi is a intermediate between tall and dwarf types. (Ramachandran *et al.*, 1977). Even though compare to tall and dwarf types separately the superiority of all characters is expressed in T x D hybrids has subsequently been confirmed by many workers (Satyabalan *et al.*, 1970), Bavappa *et al.* (1973), Kannan and Nambiar (1974)).

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Cultivar Ayiramkachi have high female flowers production (51.87) which can be exploited for breeding work, the same report was reported by Ramachandran *et al.* (1977).