Chowgat Green Dwarf (CGD)

Ratnambal MJ, Kumaran PM, Bashkara Rao EVV, Pillai RV

Conservation

Chowgat Green Dwarf (CGD) is conserved at the Central Plantation Crops Research Institute in Kasaragod (Kerala) and at research stations in Veppankulam (Tamil Nadu), Pilicode (Kerala) and Arsikere (Karnataka), India.

History

Chowgat Green Dwarf was first observed in the Chavakkad area of Trichur District of Kerala. It is known as ‘Pathinettampatti’ in Tamil Nadu as well as in Kerala, because the inflorescence emergence is generally from the 18th leaf axil. CGD is identical to the Sri Lanka Green Dwarf (Pumilla Green Dwarf). However, there are indications that their fruit characters are different, especially the proportion of husk.

Identification

CGD grows to about 4.5 m. The stem has a bole and there are 56 scars measured from 1 to 2 m above ground level. The leaves are 4 m long, with about 196 leaflets. The palms are self-pollinating; they start flowering in 3-4 years after planting. The inflorescence is short, 87 cm long. The nuts are green and oblong with a characteristic beak when they are fully matured. The shell and kernel are thin.

Yield and production

The palm produces 30 to 100 nuts per year in Kasaragod, 35 nuts with 2 kg of copra in Veppankulam (Tamil Nadu) and 3.6 kg of copra per palm in Arsikere (Karnataka). The fruits are small, weighing about 450g. The husked nut is about 190g. The husk proportion is high, making up 58% to the whole fruit weight. The copra content is low, ranging from 38 to 100g. Oil content in copra is 66%.

Other information

This variety is sensitive to drought. It has tolerance (over 90%) to root (wilt) disease. It is sensitive to stem bleeding, highly resistant to lethal yellowing and tolerant to the rhinoceros beetle. Due to its relative tolerance to root (wilt) and lethal yellowing diseases, CGD can be used extensively for the production of disease tolerant hybrids. CGD was used as a male parent for the production of WCT x WCT, WCT x CGD and CGD x WCT hybrids for distribution to farmers in the disease-endemic districts in Kerala.

References


Chowghat Green Dwarf (CGD)
Chowghat Orange Dwarf (COD)

Ratnambal MJ, Kumaran PM, Bashkara Rao EVV, Pillai RV

Conservation

Chowghat Orange Dwarf (COD) is conserved at the Central Plantation Crops Research Institute (CPCRI) in Kasaragod (Kerala); at the Regional Agricultural Research Station in Pilicode (Kerala); at the research stations in Aliyarnagar and Veppankulam (Tamil Nadu), Konark (Orissa) and Ratnagiri (Maharashtra); and at the International Coconut Genebank for South Asia at the Seed Farm in Kidu (Karnataka).

History

Chowghat Orange Dwarf seed nuts were collected from Trichur District, Kerala in 1940 and planted at CPCRI. In the west coast of India, each household plants one of two palms of this variety as an ornamental plant and for sweet tender nut water. COD is known as ‘Gowrigathram’ or ‘Chenthengu’ in some parts of Kerala and Kendali in Karnataka.

Identification

The palm grows up to 5 m. The stem girth at 1 m from the ground level is 60 cm. There are 45 leaf scars measured from 1 to 2 m above ground level. The leaves are short, about 4 m, with 200 leaflets which are 102 cm long and 4.8 cm wide. It flowers in 3.5 to 4 years after planting. Although Dwarf, it is not strictly self-pollinating as cross pollination also takes place. Fruits are mostly orange and rarely yellow in colour. The fruit is round/oval with a thin husk. It has a thin shell and a thick kernel.

Yield and production

The palm starts fruiting on its 5th year. The 7-month old tender nut water is sweet. The mean copra content ranges from 112 to 195g with 66% oil content. It produces 43 nuts with 134g copra per nut in Konark and 42 nuts with 9.3 kg of copra per palm in Veppankulam.

Other information

COD is sensitive to drought and water logging. It is also susceptible to leaf spot (gray blight) and stem bleeding disease but less susceptible to root wilt disease. Released by CPCRI for tender coconut production, it is now cultivated in large areas. The high-yielding hybrid COD x WCT (hybrid Chandrasankara) and its reciprocal (hybrid Kerasangkara) and LCT x COD (hybrid Chandralaksha) were produced and released by CPCRI. COD is recommended for use in most states of India as female parent in Dwarf x Tall hybrids as well as serving as pollen parents in Tall x Dwarf seed production.

References


Chowghat Orange Dwarf (COD)
Gangabondam Green Dwarf (GBGD)

Ratnambal MJ, Kumaran PM, Bashkara Rao EVV, Pillai RV

Conservation
Gangabondam Green Dwarf (GBGD) is conserved at the Central Plantation Crops Research Institute in Kasaragod (Kerala) and at research stations in Veppankulam and Aliyarnagar (Tamil Nadu), Konark (Orissa), Ratnagiri (Maharashtra) and Arsikere (Karnataka), India.

History
GBGD is extensively cultivated in east Godhavari district of Andhra Pradesh where it is mainly used for tender nuts.

Identification
Palm height is 405 to 538 cm with a thin stem, closely arranged leaflets and compressed internodes, producing 46 leaves per meter of stem. The palms start flowering on the 4th or 5th year after planting. The inflorescence is short, about 65 cm long. The palms are predominantly self-pollinating. The palm breeds 95% true-to-type.

Yield and production
Fruit production begins on the 6th year after planting. At Arsikere (Karnataka) the palm yields 71 nuts per year; at Ratnagiri, 112 nuts; at Kasaragod, 67 nuts; at Aliyarnagar, 46 nuts; at Konark and Veppankulam, 68 nuts. The fruits of GBDG are heavy (804g) with high nut weight (511g). The kernel is thick and on drying, it gives 184g of copra per nut and 1.6 t of copra per ha, with oil content of 64% at Kasaragod.

Other information
Gangabondam Green Dwarf is sensitive to drought, but when it is used as pollen parent with WCT, the hybrid created is tolerant to drought. GBDG is susceptible to root wilt disease of Kerala; less susceptible to stem bleeding disease; and tolerant to Tatipaka disease. The hybrid WCT x GBDG was found to be tolerant to rhinoceros beetle attack. This variety is extensively used in Andhra Pradesh for its tender nut water and can be popularized in other states of the country. GBDG is widely used as female and male parent for the production of hybrids such as Lakshaganga (LCT x GBDG), Keraganga (WCT x GBDG) and Anandaganga (ADOT x GBDG) which produced 19 to 35% more nut yield and 40 to 44% more copra yield. GBDG is recommended for use in the states of Kerala, Andhra Pradesh, Bihar, Goa, Maharashtra, Orissa, Tamil Nadu and West Bengal.

References
Gangabondam Green Dwarf (GBGD)