

# VietNam

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VietNam is the easternmost country on the Indochina Peninsula in Southeast Asia. It is bordered by China to the north, Laos to the northwest and Cambodia to the southwest, and South China Sea to the east. With a population of over 86 million inhabitants, VietNam is the 13th most populous country in the world.

Coconut is considered the most important perennial oil crop in VietNam, with an estimated total cultivated land area of 250,000 ha. Coconuts provide the primary source of income to the thousands of farmers, especially those living in the Mekong River Delta in the south and along the coastal areas in the Central region where coconut planting started several years back. An average coconut holding in VietNam is relatively small: 0.2 – 0.3 ha. Coconut yields, as well as nut prices, are also quite low. Little attention is given to coconut as most of the coconut farmers prefer intensive farming involving other commodities (i.e. fish, shrimps, swine, fruit crops, etc.) (Long 1994). Coconut is widely used for culinary purposes and some of it is converted into copra and oil for industrial use while the rest is exported.

Coconut research activities in VietNam were officially initiated in 1980 (Carpio et al. 2005) with the establishment of the Institute for Research on Oils and Oil Plants, now known as the Oil Plants Institute of VietNam (OPI). Coconut germplasm were planted in OPI's Dong Go Station, in Ben Tre Province and in Trang Bang Station in Tay Ninh Province. The field genebank in Trang Bang Station was closed in 1994 due to budgetary constraints. Coconut germplasm collecting is a continuous activity of OPI as it aims to collect all possible types of coconut. Wide genetic diversity can be observed in the country. The Tall types consist of Ta, Dau, Giay and Bi or Bung varieties while the Dwarf types include Ea, Xiem and Tam Quan. Cultivars with special characters were also classified according to their distinct feature (Long 2005) such as Sap (Makapuno), Ngot (sweet) Dua (aromatic) and Soc (stripe).

## References

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## Cochin China Tall (CCNT)

Ratnambal MJ, Niral V, Krishnan M

### Conservation

Cochin China Tall (CCNT) is conserved at the Central Plantation Crops Research Institute in Kasaragod (Kerala), at the centres under the All India Coordinated Research Project on Palms, and at the research stations of Kerala Agricultural University, India.

### History

Cochin China Tall, a cultivar from VietNam, was introduced into the germplasm collection at CPCRI, Kasaragod, in 1940.

### Identification

Cochin China is a Tall cultivar with medium-sized bole. The crown is circular with about 32-36 leaves. The palm produces about 14 leaves annually. The palm attains a height of approximately 9.3 m at 25 years of age. The leaves are long with strong petioles. It takes around 86 months to produce flowers. The inflorescence is medium-sized with a strong stalk. There are 35 to 44 spikelets per inflorescence; however, the number of female flowers per spikelet is low (0.3-0.5). The fruit set percentage is also not high, just around 25%. The mode of reproduction is predominantly allogamous with distinct male and female phases. The female phase lasts for four days and commences about two days after the end of the male phase. However, a small percentage of inter-spadix overlapping of male and female phases occurs. The fruits are large with thick husk. The colour of the fruit varies from green to brown. The fruit is round to spheroid in shape. The husked nut is round with thick kernel and strong shell.

### Yield and production

The palm starts bearing around 7-11 years after planting. It is a regular bearer. However, Balakrishnan et al. (1991) reported biennial bearing in this cultivar. The fruits are large, weighing about 1175g with about 30% of husk. The nut weighs about 249g, has a copra content of 220-230g with an oil content of 66-67%. An adult palm, on reaching stabilized bearing, produces about 10-12 bunches annually. Ratnambal et al. (2000), reported an average annual nut yield of 72.4 fruits per palm, with a copra yield of 2.8 t per ha and an oil yield of 1.9 t per ha under rain-fed conditions. However, a wide variation in nut yield, from 17-190 fruits per palm per year, has been observed in this cultivar. John (1952) reported an annual nut yield of 90 fruits per palm.

### Other information

This variety is tolerant to drought but slightly susceptible to nut damage caused by the eriophyid mite *Aceria guerreronis*. The variety and its hybrid, CCNT x GBGD (Gangabondam Green Dwarf), are slightly susceptible to stem bleeding caused by *Theilaviopsis (Ceratocystis) paradoxa*. There was less intensity of root (wilt) and leaf rot in root (wilt) disease-affected palms. The tender nut water is sweet and plentiful. Therefore, this cultivar can also be utilized for tender nut purposes. The hybrid CCNT x MGD (Malayan Green Dwarf) was found to be vigorous in early growth performance. Positive heterosis for seedling height and collar girth was reported in this hybrid. CCNT X COD (Chowghat Orange Dwarf) recorded high value for weight of husked nut (851g) and had a thick shell. CCNT has also been crossed with WCT (Indian West Coast Tall).

### References

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