

Genebank

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India is the seventh-largest country by geographical area and the second-most populous. Bounded by the Indian Ocean on the south, the Arabian Sea on the west, and the Bay of Bengal on the east, India has a coastline of 7517 kilometers. It is bordered by Pakistan to the west, China, Nepal, and Bhutan to the north; and Bangladesh and Myanmar to the east.

With a crop area of almost 1.9 million hectares, India is the world's third largest coconut producer, growing the crop in 4 of its southern states: Kerala, Tamil Nadu, Karnataka and Andhra Pradesh. Crop management varies from monocropping with sophisticated drip irrigation, to mixed gardening in home gardens to wild stands in uninhabited islands. Planting densities vary from wide spacing of 150 palms per ha in some parts of Karnataka to high-density stands of nearly 400 palms per ha in the Lakshadweep islands.

The country's coconut industry suffers from two main problems: Root (wilt) disease (in Kerala) and drought, as the crop is mainly grown as a rain-fed crop or with limited irrigation. In addition, Eriophyid mite has become a serious threat to coconut cultivation in recent years. Price fluctuation for coconut and its products is also another threat to coconut farmers.

India has a relatively well-developed coconut Research and Development network (Rajagopal et al. 2005). The Central Plantations Crops Research Institute (CPCRI) and many state agricultural universities concentrate on research at the national and regional levels. An All India Coordinated Research Project on Palms (AICRPP) plays a crucial role in networking these organizations. The Coconut Development Coir Board helps in implementing developmental programmes on coconut and coir, in collaboration with the state departments of agriculture, horticulture and oilseeds. Genetic enhancement for crop productivity is an important activity of the concerned research organizations, particularly by the CPCRI, which spearheads coconut research and development in the country. The new field genebank in Kidu Farm, Karnataka, which became the International Coconut Genebank for South Asia, is supported technically by the laboratory facilities at CPCRI, Kasaragod (Rajagopal et al. 2005).

Reference

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Andaman Giant Tall (AGT) in Côte d'Ivoire

Bourdeix R, Konan JL

Conservation

According to the 2002 Coconut Genetic Resources Database, Andaman Giant Tall (AGT) is represented worldwide by four accessions with 171 living palms in the field. It was introduced into the state of Kerala, on the Indian mainland, in the 1940s. Seeds were then disseminated from the Kasaragod Research Station throughout India, and then to Africa. The 25 coconut palms planted in Côte d'Ivoire were used to establish a population of 150 palms by controlled crossing in 1982.

History

The Indian archipelago of the Andaman Islands is a cluster of around 200 islands, the summits of an underwater mountain range crossing the Bay of Bengal. Only 32 of the islands are inhabited on a permanent basis. Most of the islanders are settlers from India, Burma, Malaysia, and more recently, from Sri Lanka. This variety was originally named 'Gigantea' by the Indian researchers who discovered palms with considerable dimensions at the survey site. The dominant green fruits are voluminous but contain a large proportion of husk (37% to 41%). Their weight varies from 1194g to 1478g, depending on the country. The inner nut is round and weighs from 693 to 877g.

Identification

The Andaman Islands are nearer to Thailand and Burma than they are to the Indian subcontinent. Their geographical position provides a possible point of contact between two major coconut groups: the Indo-Atlantic type varieties, bearing small elongated husk-rich fruits with a triangular cross-section, and the Asian type varieties, bearing large round fruits with a thin husk. The fruits of the Andaman Giant Tall (AGT) are intermediate: seen from the side, the fruits are large and almost round, but from above they are triangular with thick husk. Some Cambodian varieties bear fruits of similar shape. As in some Asian varieties, the fruits of the AGT germinate very rapidly.

Yield and production

In Côte d'Ivoire, this variety starts bearing six years after planting and does not exceed 30 fruits per palm before the 9th year. Yields fluctuate between 32 to 51 fruits per palm per year up to the 15th year. In India, flowering occurs about 8 years after planting; yields vary from 58 to 110 fruits (80 on average) per palm per year, although this estimate was probably made on older palms.

Other information

A comparison of AGT measurements with those of other varieties holds a few surprises. For instance, in the Indian collections, AGT fronds measure 5.1 m in length and have 235 leaflets measuring 121 cm in length. In Côte d'Ivoire, they are 6.1 m long with 240 leaflets measuring 127 cm in length. Yet other palms produce fronds that are more than 7 m long, or have more than 250 leaflets; the longest leaflets exceed 140 cm. These figures show that the AGT is not particularly gigantic. Neither the stem, nor the fronds, nor the fruits have particularly extra-sized measurements compared to the other varieties existing elsewhere in the world.

References

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Bourdeix R, Konan JL, N'Cho YP. 2005. Coconut. A guide to traditional and improved varieties. Editions Diversiflora, Montpellier, France.

Andaman Giant Tall (AGT)



Big



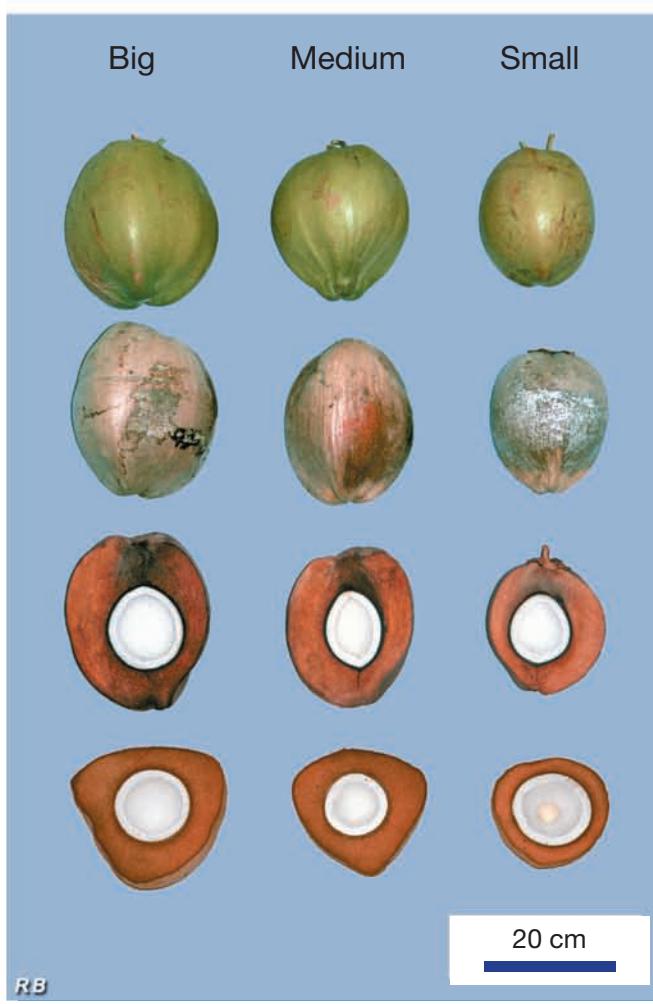
Medium



Small



20 cm



Andaman Giant Tall (AGT) in India

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

Conservation

Andaman Giant Tall (AGT) is present at the Central Plantation Crops Research Institute (CPCRI) in Kasaragod (Kerala); at the Seed Farm in Kidu (Karnataka); at the National Research Centre for Cashew in Puttur (Karnataka); and in different states under the All India Coordinated Research Project on Palms (AICRPP).

History

Andaman Giant Tall is extensively grown in the Andaman and Nicobar Islands in the Bay of Bengal about 1200 km from the mainland of India. This cultivar is also called ‘gigantea’. This cultivar was introduced to the mainland in 1940. Open-pollinated as well as selfed progenies were planted in CPCRI, Kasaragod, at the CPCRI Seed Farm in Kidu, the National Research Centre for Cashew at Puttur (Karnataka) and at various centres in different states under the AICRPP.

Identification

The palm is very robust and exhibits gigantic morphological features. The palm grows to 12 m with about 34 leaves on the crown. The leaves are 5.1 m long. The leaf has 235 leaflets, which are 121 cm long and 6.4 cm wide. The stem girth is 95 cm and has a distinct bole. The palm produces 8-13 inflorescences per year. The palms are highly heterozygous due to their cross-pollinating nature. The fruit is very large, oval in shape and green in colour. Due to its large nut size, the variety is referred to as Andaman Giant.

Yield and production

Stable yield is achieved on the 12th year when the palm becomes a regular bearer. The fruit weighs around 1200g; the nut around 693g. Copra content is 194g per nut with 66% oil. Annual yield varies from 58 to 110 nuts per palm under rain-fed conditions with an average of 80 nuts per palm. The average copra yield is 2.8 t per ha and oil yield is 1.8 t per ha. In Ratnagiri (Maharashtra), this cultivar produced 61 nuts per palm; in Veppangulam, 72 nuts with 7.5 kg of copra. This cultivar is tolerant to drought and highly susceptible to stem bleeding caused by the fungus *Thielaviopsis paradoxa*. Due to its high copra content, this variety is popular among farmers. Currently, it is used for the production of Tall x Tall hybrids.

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Andaman Giant Tall (AGT)
photographed in Côte d'Ivoire



Big

Medium

Small



20 cm

RB

