Andaman Ordinary Tall (ADOT) in Côte d'Ivoire

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Conservation

According to the 2002 Coconut Genetic Resources Database, Andaman Ordinary Tall (ADOT) is represented by 5 accessions totaling 574 living palms in the germplasm collections of Côte d'Ivoire, India and Ghana.

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. ADOT was sent from the Andaman Island to Côte d'Ivoire in 1967 by the Central Plantation Crop Research Institute of India. It was then sent from Côte d'Ivoire to Ghana in 1994. In India, the Andaman Giant Tall is also maintained at Aliyarnagar, Veppankulam (Tamil Nadu), Ambajipetta (Andra Pradesh) and Ratnagiri (Maharashtra) under the All India Coordinated Research Projects on Palms.

Identification

The Andaman Ordinary Tall is clearly distinct from Andaman Giant Tall (AGT), another variety collected in the same archipelago. The predominantly green fruits are more oblong than those of the AGT, with more pronounced longitudinal ridges. The inner nut is often off-centre and is found more in the distal section. The fruits are lighter in weight than those of the AGT and have higher kernel content. The stem of the ADOT is slender for a Tall ecotype and has a discreet bole. Vertical growth is quite slow. In India, on the 34th year, the stem measured from the ground to the base of the first green frond does not exceed 11 m. In Côte d'Ivoire, the stem measures 4.1 m, on average, on the 10th year.

Yield and production

In Côte d'Ivoire, flowering begins 55 months after planting. From the 5th year onwards, 25 fruits are produced per palm per year. In India, bearing starts at about nine years after planting. The fruits weigh 878 to 1182g in Côte d'Ivoire and in Kasaragod (India), respectively. In Côte d'Ivoire, the original introduction gave fruits weighing 1004g but the succeeding plantings, which were planted on poor soil, gave fruits weighing only 878g. The inner nuts weigh 564 to 620g. The 300 to 321g kernel is heavier in Africa than in India, and gives 160 to 190g of very oil-rich copra. In India, the palm gives an average of 94 fruits, ranging from 40 to 133. In Ratnagiri, ADOT produced 59 fruits per palm (11th year average). In Veppamkulam, a 30-year-old palm produced 74 fruits per year. In Arsikere, this variety produced 86 fruits per palm, with 12.3 kg of copra per palm per year (the weight of copra per nut is smaller, at around 140g only). In Côte d'Ivoire, mature palms give very good yields for a Tall type, reaching 2.4 t of copra per ha per year, i.e. 0.8 t more than the West African Tall (WAT) planted under the same conditions.

Other information

In India, ADOT has been classified as moderately susceptible to the root wilt disease, with a disease index between 31 and 40%. Little use has been made of the variety in breeding programmes, except in India where it has been crossed with various Dwarfs and Talls. In Kerala, the hybrid between ADOT and the Gangabondam Green Dwarf (GGBD) has been disseminated under the name 'Anandaganga'. In Côte d'Ivoire, ADOT was crossed with MYD in 1996.

Reference

CPCRI. 1999. All India Coordinated Research Project on Palms (AIRCPP) Annual Report 1999. CPCRI, Kasaragod, India.

RB

RB

RB

Big
Medium
Small
20 cm
RB

RB

Andaman Ordinary Tall (ADOT) in India

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

Conservation

Andaman Ordinary Tall (ADOT) is conserved at the Central Plantation Crops Research Institute in Kasaragod (Kerala), India.

History

Extensively grown in the Andaman and Nicobar Islands, this cultivar was introduced to the Indian mainland in 1941. The *inter se*/selfed population was planted in 1972 in a replicated trial at Kasaragod. This cultivar is also maintained at Aliyarnagar, Veppankulam (Tamil Nadu); Ambajipetta (Andra Pradesh) and Ratnagiri (Maharashtra) under the All India Coordinated Research Project on Palms.

Identification

Palms of the Andaman Ordinary Tall are more vigorous than those of the local Talls. The height of the palm is about 10 m with a distinct bole. The leaves are about 5 m long with a strong petiole. The leaf has 223 leaflets, which are 12 cm long and 6.5 cm wide. It is predominantly allogamous as there is a distinct gap between the male and female phases. The fruit is oval with yellowish green or brown colour. The nut inside has a thick kernel and a thin shell.

Yield and production

Fruiting starts nine years after planting. The fruit weighs 1182g; the husk makes up 47.6% of the whole fruit weight. The copra content is 160g per nut with 66% oil. Yield ranges from 40 to 133 fruits per palm per year, yielding 59 fruits and 74 nuts per palm per year in Ratnagiri and in Veppamkulam respectively. It produces 3.4 t copra and 2.2 t oil per ha. In Arsikere (Karnataka), 86 fruits per palm produce 12.3 kg of copra per year.

Other information

Andaman Ordinary Tall is sensitive to drought; sensitive to the burrowing nematode, *Radopholus similis*; moderately tolerant to root (wilt) disease; and resistant to stem bleeding disease caused by *Thielaviopsis paradoxa*. ADOT is a popular cultivar in Andaman and Nicobar Islands because of its high yield and high copra content even under rain-fed conditions. Indian farmers plant this variety in large numbers, especially in the Maidan region of Karnataka. The palm is also a good yielder of toddy. ADOT was used as a female parent in the production of Anandaganga (ADOT x GBGD) hybrid. This variety has been recommended in different states of the country, such as Kerala, Andhra Pradesh, Tamil Nadu, Assam, Bihar, Madhya Pradesh, Maharashtra, Goa and Orissa as parent for the production of Dwarf x Tall and Tall x Dwarf hybrids and also as a Tall cultivar for cultivation.

References

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Rajagopal V, Kasturi Bai KV, Voleti SR. 1990. Screening of coconut genotype for drought tolerance. Oleagineux 45:215-223.

Sosamma VK, Koshy PK, Bhaskara Rao EVV. 1988. Response of coconut cultivars to burrowing nematode, *Radopholus similis*. Indian Journal of Nematology 18:136-1137.

RB

RB

RB

Big
Medium
Small
20 cm
RB

RB

Ayiramkachi Tall (AYRT)

Ratnambal MJ, Niral V, Krishnan M

Conservation

Ayiramkachi Tall (AYRT) is conserved at the Central Plantation Crops Research Institute (CPCRI), in Kasaragod (Kerala) and at the centres under the All India Coordinated Research Project on Palms.

History

This cultivar was collected from Tamil Nadu state and introduced into the germplasm collection at CPCRI in 1972. The local name is based on the fact that the inflorescence bears thousands of female flowers ('ayiram' meaning thousand in the Tamil language).

Identification

AYRT is a medium-sized coconut palm; the tree attains a height of 6.1 to 7.3 m at 25 years old. The stem is rather thin for a Tall cultivar, with a girth of about 73 cm and a medium-sized bole. This variety is intermediate between Talls and Dwarfs for most characters. The leaves are medium-sized with broad leaflets and strong petioles. The palm starts flowering about six years after planting. The inflorescences are not very long but have more spikelets per inflorescence. Spikelets bear at least one female flower and therefore, the number of female flowers per inflorescence is high (24-46). Fruit set is around 41%. The length of the female phase is short and starts after the end of the male phase. Reproduction is allogamous, but some amount of inter-spadix overlapping (12%) of male and female phases is observed. The colour of the fruits varies from green to greenish yellow. However, greenish brown to brown shades are also found. The fruits are small and oblong with thick kernel and shell.

Yield and production

The palm begins bearing fruit about eight years after planting. The palm produces about 10-12 bunches per year, and the yield varies from 110-176 nuts under rain-fed conditions. However, high yields of 347 fruits per palm per year have been obtained occasionally. Such high yields are followed by poor yields in the subsequent years. The average fruit weighs about 560g with a 39% husk. The average kernel content is around 201g per nut. The meat is rather thick with an oil content of 69.2%. Average annual copra yield is about 2.9 t per ha under rain-fed conditions.

Other information

This variety and its hybrid with East Coast Tall (ECT x AYRT) are susceptible to damage by rodents (*Rattus rattus wroughtoni* and *Funambulus palmarum*). It is also susceptible to nut damage caused by the Eriophyid mite *Aceria guerreronis* and to leaf blight caused by *Pestalosphaeria elaeidis* (Booth and Robertson) Van der Aa. The potassium content in the nut water of mature nuts is very high, hence this variety can be utilized by the beverage industry. This cultivar is utilized in breeding to develop hybrids/varieties with high yield, tolerance/resistance to drought, pest and diseases. It has been used as both male and female parent in crosses with ECT. The hybrid ECT x AYRT is high yielding. Ayiramkachi Tall has been evaluated in germplasm evaluation trials at CPCRI.

Reference

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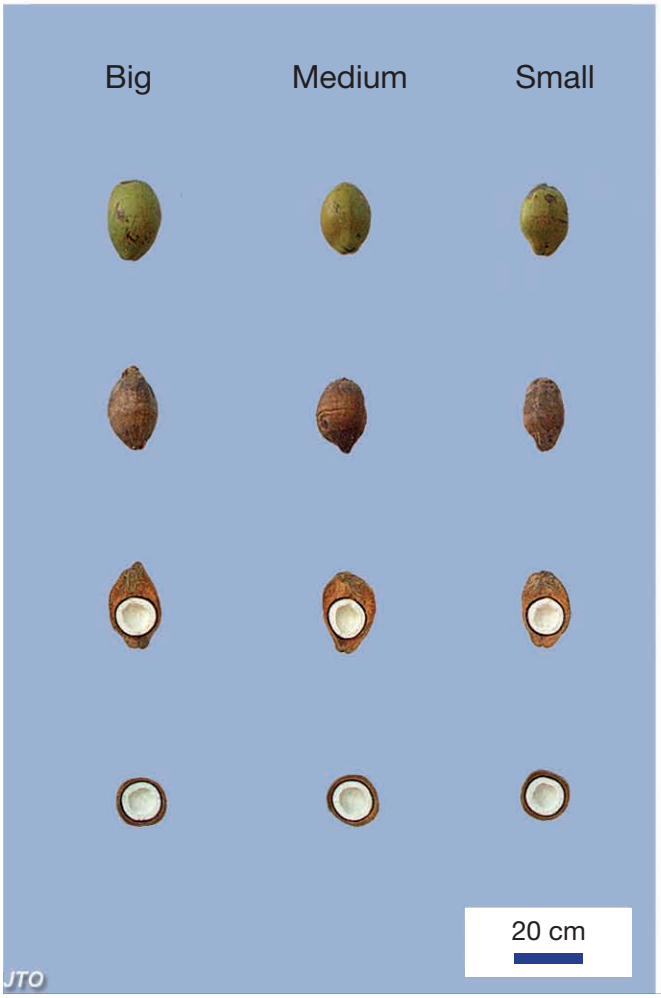
Ayiramkachi Tall (AYRT)