

## West African Tall Akabo (WAT03)

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### Conservation

Selected West African Tall Akabo (WAT03) palms are conserved only in Côte d'Ivoire. Since 1960, West African Tall seednuts – resulting from the mix of Akabo, Mensah and Ouidah origins – have been exported to at least 10 germplasm banks worldwide, including Brazil, India, Indonesia, Papua New Guinea, the Philippines, Tanzania and Vanuatu.

### History

WAT was probably introduced in West Africa by Portuguese travellers coming from east Africa at the beginning of the 16th century. At the end of the 19th century, it was moved from Benin to Côte d'Ivoire. From 1951 to 1954, three accessions of WAT were surveyed from two plantations located in Côte d'Ivoire (Mensah and Akabo) and from one plantation located in Benin at Ouidah City. The Jacques Akabo plantation is located between Abidjan and Grand Bassam, close to the village of Azuretti, on a narrow band of land between the sea and a lagoon. It was planted in 1930 from second generation palms imported from Benin. In 1951, about 97 palms were pre-selected among several thousand. The selection criteria were the presence of at least 90 formed fruits and a visually acceptable meat thickness. Then these trees were individually preserved for four years. Only the best 20 palms were finally retained to constitute, by open pollination, the accession described here.

### Identification

It is difficult to make a visual distinction among the three populations Akabo, Mensah and Ouidah of the WAT variety. Their fruit shape is long, angulated and medium-pointed to oblong. The husk ratio is high at about 40%. The fruit epidermis often bears folds or puckers, creating a kind of typical equatorial belt around the fruit. The nut inside is oblong with a solid shell and thick kernel. Breeders classified three populations from WAT mainly because they originate from different locations and because they selected using different criteria.

### Yield and production

Fruit production generally begins 6-7 years after field planting. The number of bunches ranges from 11 to 14 per palm per year with the number of fruits ranging from 40-90 per palm per year, depending on the environmental factors. Fruits of the WAT from Benin are heavier than those found in Côte d'Ivoire (1170g and 1040g, respectively). They also have a higher husk weight ratio (43% and 38%, respectively). The weight of copra per fruit is similar in both countries and ranges from 190-245g.

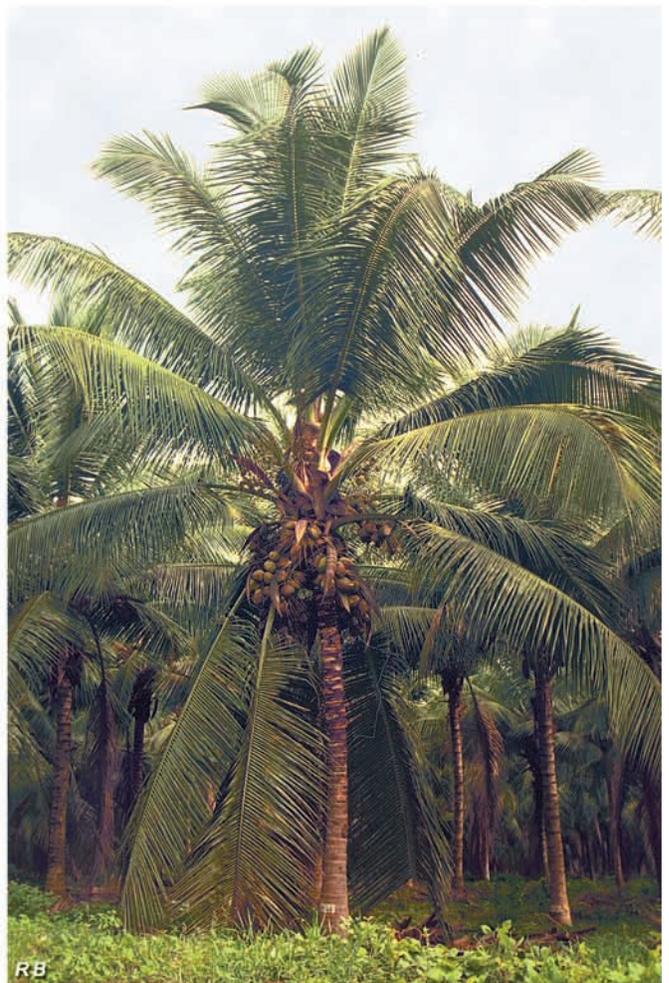
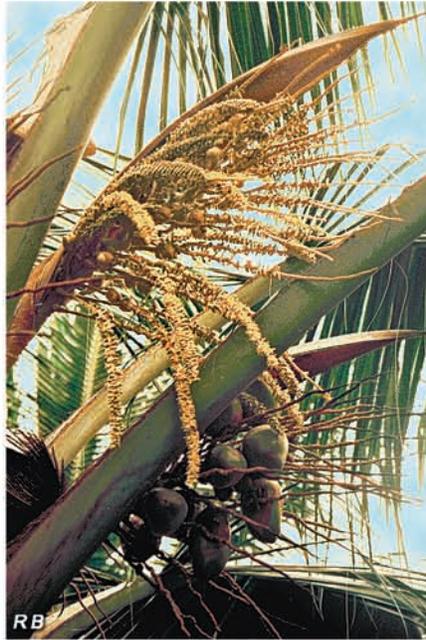
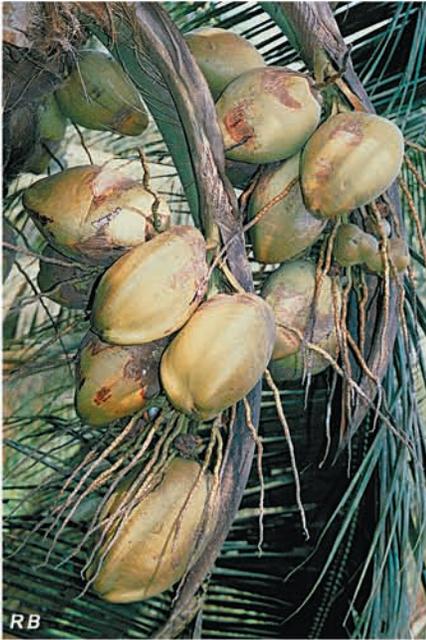
### Other information

WAT is widely used as a parent material in coconut breeding programmes. The hybrid between WAT and the Malayan Yellow Dwarf, known as PB121 or MAWA, and the hybrid between WAT and Cameroon Red Dwarf (CAMWA) have been distributed worldwide. In Côte d'Ivoire, all the newly introduced Tall cultivars have been systematically crossed with WAT and the Rennell Island Tall. The hybrids from WAT crossed with Malayan Red Dwarf and Maphrao Thailand Tall have been distributed in Thailand. In the Philippines, WAT was included as a parent material for their coconut synthetic variety project.

### References

- de Nucé de Lamothe M, Wuidart W. 1979. Coconut varieties of Tall type at Port Bouët (Côte d'Ivoire). I. West African Tall, Mozambique Tall, Polynesia Tall, Malayan Tall. *Oléagineux* 34:339-349.
- Bourdeix R, N'Cho YP, Sangare A, Baudouin L, de Nucé de Lamothe M. 1992. L'hybride de cocotier PB121 amélioré, croisement de Nain Jaune Malaisie et de géniteurs Grand Ouest-Africain améliorés. *Oléagineux* 47:619-633.

# West African Tall Akabo (WAT03)



## West African Tall Mensah (WAT04)

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### Conservation

Selected West African Tall Mensah (WAT04) palms are conserved only in Côte d'Ivoire. Since 1960, West African Tall seednuts – resulting from a mix of Akabo, Mensah and Ouidah origins – have been exported to at least 10 coconut germplasm banks worldwide.

### History

From 1951 to 1954, three accessions of West African Tall were identified from two plantations located in Côte d'Ivoire (Mensah and Akabo) and from one plantation located in Benin. The Mensah plantation is located 1500 m east of the old site of the Marc Delorme Coconut Research Centre. In 1951, 600 palms were randomly selected between the main coastal road and the sea. These palms were individually observed for three years for fruit and bunch production and other morphological traits. Several successive selections of parent palms were carried out. The catalogue of the parent palms at the Marc Delorme Centre makes it possible to establish a precise assessment. A total of 1812 palms resulting from 92 original palms from the Mensah plantation were used to carry out crossings. The 92 original parents were exploited unequally (31 of them correspond to 90% of the materials used in the breeding programme conducted in Côte d'Ivoire).

### Identification

WAT04 morphological characteristics are very similar to those of the West African Tall Akabo (WAT03). The production and weight of WAT04 fruits are slightly lower than those observed for the WAT03, and plant growth is a little faster. However, these observed differences are not statistically significant. The stem of WAT populations, rather thin for a Tall type, is quite often curved. The stem height varies from 4.5 to 6.5 m on the 10th year. The leaves are quite short but have a high number of broad leaflets. Inflorescences are medium-sized, with a short female phase beginning after all the male flowers have already dropped. The mode of reproduction is predominantly allogamous. Fruits are usually green to yellowish green, with the occasional greenish brown to brown.

### Yield and production

Fruit production generally begins six to seven years after field planting. The number of bunches ranges from 11 to 14 per palm per year with the number of fruits ranging from 40 to 90 per palm per year depending on the environmental factors. The weight of copra per fruit ranges from 190g to 245g. Data from Côte d'Ivoire allowed the comparison of 4000 ha of WAT with 12 500 ha of hybrids (MYD x WAT or PB121). From 1985 to 1990, the hybrids have produced 2.4 t of copra per ha per year whereas the WAT yielded only 1.5 t.

### Other information

WAT coconuts are preferred by the exporters for the European fruit markets. The slow germination of the fruits and the thick and solid shell reduce the losses caused by packaging and shipment. WAT is widely used as parent material in coconut breeding programmes.

### References

- de Nuce de Lamothe M, Wuidart W. 1979. Coconut varieties of Tall type at Port Bouët (Côte d'Ivoire). I. West African Tall, Mozambique Tall, Polynesia Tall, Malayan Tall. *Oléagineux* 34:339-349.
- Bourdeix R, N'Cho YP, Sangare A, Baudouin L, de Nuce de Lamothe M. 1992. L'hybride de cocotier PB121 amélioré, croisement de Nain Jaune Malaisie et de géniteurs Grand Ouest-Africain améliorés. *Oléagineux* 47:619-633.

# West African Tall Mensah (WAT04)

