Tacunan Green Dwarf (TACD)

_Bourdeix R, Santos G, Rivera RL_

**Conservation**
According to the 2002 Coconut Genetic Resources Database, 636 Tacunan Green Dwarfs (TACD) are conserved in various collections throughout the world. First collected in the Philippines, this variety was exchanged with Côte d’Ivoire and Vanuatu in the 1980s and was subsequently sent to Malaysia. From Côte d’Ivoire, this Dwarf was then introduced into Ghana and Tanzania to test its resistance to lethal yellowing type diseases.

**History**
The Tacunan Green Dwarf was introduced into Africa and the Pacific in the 1980s from the Philippines, at the same time as the Pilipog and Catigan Green Dwarfs. It grows slowly. By the 10th year on the sandy soils of Côte d’Ivoire, it does not exceed a height of 1.2 m on average (measured from the ground to the base of the oldest living frond). The stem, which is powerful for a Dwarf, broadens out at the base, where its diameter can exceed 45 cm. In Côte d’Ivoire, it is this Dwarf that has the largest number of leaflets per frond, apart from the very special Niu Leka Dwarf from the Fiji Islands. Very young fruits of the TACD appear more elongated than those of its cousin, the CATD. This difference fades as the fruit ripens.

**Identification**
The fruits of the Tacunan Green Dwarf are smaller than and not as round as those of the CATD, but they have a better composition, with a thinner husk. The fruits are also heavier. The absence of a nipple at the tip of the fruit is no doubt the best way to distinguish a TACD from a CATD. The inflorescence of the TACD has a very typical cone shape, which makes the variety easier to identify. The spikelets are shorter at the tip of the inflorescence than at its base. Other Green Dwarfs described in this catalogue can hardly be confused with the Tacunan, since they generally have a thinner stem and fruits of a different shape and size.

**Yield and production**
This Dwarf usually starts bearing four years after planting. It produces 30-50 fruits per palm per year under conditions at the Marc Delorme Station in Côte d’Ivoire. This quite low production can be explained by bug and mite attacks, causing a proportion of the fruits to abort. Yields of more than 70 fruits per palm per year have been obtained in the Philippines. In Côte d’Ivoire, the TACD is the only true Dwarf whose fruit weight reaches a kilogramme. In the Philippines, the fruit weight observed in 2 plots varies from 1124 to 1350g on average. In Vanuatu, on a rich, well watered volcanic soil, the fruit weight even exceeds 1500g. The average nut weight varies from 668g in Côte d’Ivoire to 1028g in Vanuatu.

**Other information**
In the Philippines, crosses between the TACD and the Bago Oshiro Tall (hybrid PCA15-8) or the Tagnanan Tall (hybrid PCA15-9) are recommended as planting material. These two hybrids are resistant to bud-rot and relatively tolerant to adverse environments. The fronds of the TACD are susceptible to insect attacks.

**References**

Tacunan Green Dwarf (TACD)
Tagnanan Tall (TAGT)
Bourdeix R, Santos GA, Rivera RL

Conservation
Tagnanan Tall (TAGT) is conserved in the germplasm collections in the Philippines as well as in Côte d’Ivoire, Ghana, Malaysia, Tanzania and Vanuatu. According to the 2002 Coconut Genetic Resources Database, there are 12 accessions in total with almost 3000 living palms. However, in the Tagnanan Estate, Philippines, more than 10,000 coconut palms were felled and replaced with banana in the 1990s.

History
The coconut plantations of the Philippines owe much to a royal edict from the court of Madrid which, in 1798, required each adult to plant 200 sq ft (18.5 m²) of land with coconut palms. This variety was collected in the 1940s from the Tagnanan Estate Farm, a plantation of abacas, a plant similar to banana whose fibre is used to make ropes and fabrics. At the end of the Second World War, after a virus decimated the abacas, the land was converted into coconut plantation. The seednuts were taken from coconut palms on the seashore next to the plantation. According to some inhabitants, the original palms were brought from Indonesia by an American settler. Later, the plantation was divided among more than 300 farmers.

Identification
Tagnanan Tall is a large palm which starts flowering quite late. Its massive stem rises very straight from a marked bole. The fronds are long and the inflorescences large; the large round fruits contain a large proportion of water and have a thin husk. The vertical growth of TAGT is quite heterogeneous and stronger than that of African Talls. The fruits are rounded, often wider than long, and rich in free water. They vary in colour from green to reddish-brown, but the latter seems to be the most frequent. They often have a short, pointed distal nipple. With a thin husk and quite thick meat, fruit composition is excellent, even more so since parents for reproduction were chosen for that criterion. The inner nut is very rounded and wider than long. It differs from that of the Malayan and Panama Talls, for example, in which the proximal pointed part of the nut forms an angle at the germination ‘eyes’.

Yield and production
Measurements of TAGT yield taken in the Tagnanan Estate indicate a fruit weighing 1929g and containing 310g of copra. In the best plots, the number of fruits produced reaches 94 per palm per year. Seednuts harvested at the plantation have been planted at the Zamboanga Research Station in the Philippines and exported to Côte d’Ivoire. In Zamboanga, the palms produce 68 fruits per year, with a fruit weight of 328g. In African soils, this variety performs much less; the 400 palms planted in 1974 produce an average of 46 fruits per adult palm per year. The second introduction was carried out by selecting parents with a high meat weight per fruit.

Other information
Tagnanan Tall has good tolerance of nut fall and bud rot caused by Phytophthora fungi. After 15 years of crop improvement research studies at the Zamboanga Research Centre, 9 locally-produced coconut hybrids and 1 local Tall were selected from the collection and a pool of 67 hybrids established in 11 genetic trials by the Philippine Coconut Authority. The hybrid released to farmers under the commercial name PCA 15-2 is a cross between the MRD and TAGT. PCA 15-4 is another hybrid between the CGD and TAGT.

Reference
Tagnanan Tall (TAGT)