

# France

## (French Polynesia, Mayotte and New Caledonia)

### Genebank

No coconut genebank in French overseas territories, although some coconut varieties are conserved in seed gardens located in French Polynesia, Mayotte, New Caledonia, Guadeloupe and Guyane. A new project is starting in French Polynesia in order to create a new coconut genebank located on numerous small islands.

### Contact

Country not member of COGENT, but French international experts are frequently involved in COGENT activities  
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Although coconut palms are not growing naturally on the French mainland, France has been involved in coconut research for more than 60 years. The numerous coconut germplasm collected by French researchers, both in French territories and in the rest of the world, has been given to the International Genebank for Africa and Indian Ocean in Côte d'Ivoire (Bourdeix et al. 2005).

French tropical agricultural research was born over a hundred years ago, and really took off once the importance for the national economy of expanding tropical agriculture was acknowledged, some time during the second half of the 20th century.

The *Institut de recherches pour les huiles et oléagineux* (IRHO) was founded in 1941 to cover all the oilseed commodity chains, from planting to processing. IRHO worked on Coconut research in numerous African countries, but also in Asia, Polynesia and South America. In 1958, nine tropical agricultural research institutes, including IRHO, were brought together under an umbrella committee, the *Comité de liaison des organismes de recherches agricoles spécialisés outre-mer*. The creation of the *Groupement d'étude et de recherche pour le développement de l'agronomie tropicale* (GERDAT), an economic interests group, marked a turning point in their relations.

They were finally grouped together under the CIRAD umbrella in 1984 to form a public-sector industrial and commercial enterprise (EPIC). CIRAD is a French public establishment, placed under the joint authority of the Ministry of Higher Education and Research and the Ministry of Foreign and European Affairs. It is a cooperative research centre specializing in tropical and mediterranean agriculture. CIRAD has a staff of 1800, including 800 researchers. It works with more than 90 countries worldwide, and has regional scientific platforms in the French overseas regions.

### References

- Cirad 2009. History of Cirad. Available on line at: <http://www.cirad.fr/en/who-are-we/in-a-nutshell/our-history>  
Bourdeix R, Konan JL, N'Cho YP. 2005. Coconut. A guide to traditional and improved varieties. Editions Diversiflora, Montpellier, France.

## New Caledonia Tall (NCT)

*Labouisse JP, Bourdeix R*

### **Conservation**

Around 113 palms of New Caledonia Tall (NCT) are currently being maintained at Vanuatu Agricultural Research and Training Centre, Vanuatu.

### **History**

New Caledonia, an overseas territory of France in the southeast part of the Pacific Ocean, consists of a large island (400 km long, 50 km wide) called “La Grande Terre” and a number of smaller islands. The Loyalty Islands Province has three large islands – Maré, Lifou and Ouvéa – and numerous small islands. The population of New Caledonia Tall was collected in the island of Ouvéa (20°36’S, 166°34’E). Nuts coming from 29 farmers’ fields located in 10 villages spread on a distance of 40 km were collected in December 1986 and sent to the Saraoutou Research Station (now Vanuatu Agricultural Research and Training Centre or VARTC) for planting in the genebank.

### **Identification**

NCT is very similar to Vanuatu Tall with numerous fruits with a wide variability in shape and size. NCT has a thin and slender trunk with a medium-sized bole. It produces small to medium-sized fruits which are oblong and weighing 1012g on average but the weight is very variable. At the VARTC genebank, the fruit component analysis gives the following results: husk 346g, shell 190g, water 159g, meat 316g. These figures are not significantly different from those of Vanuatu Tall.

### **Yield and production**

At the VARTC genebank, NCT produces less fruits than the ordinary Vanuatu Tall (respectively 58 and 80 fruits per palm per year). The yield is rather low at around 1.3 t copra per year.

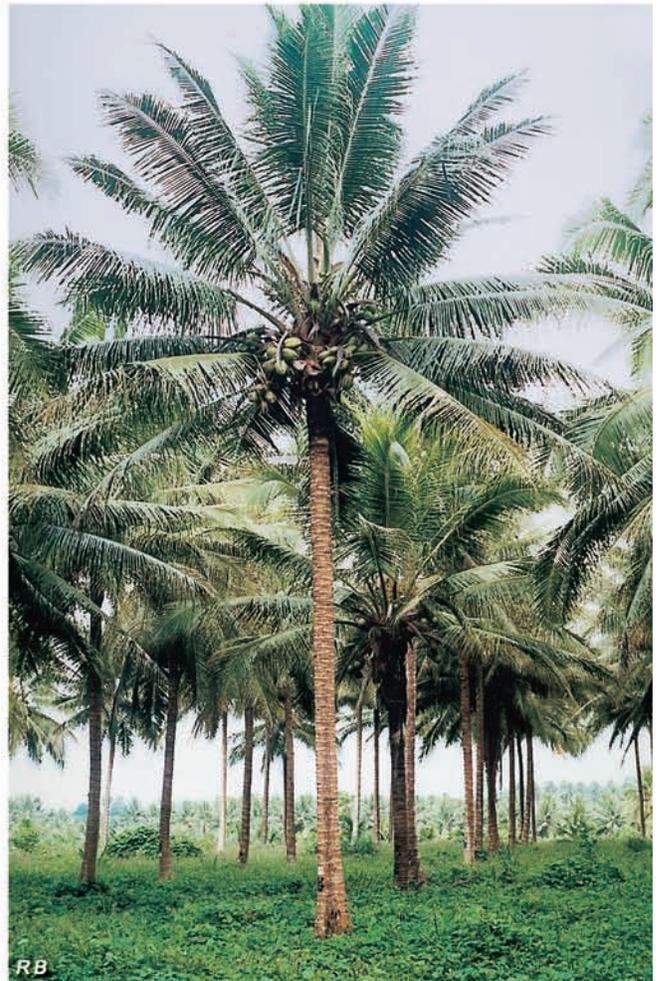
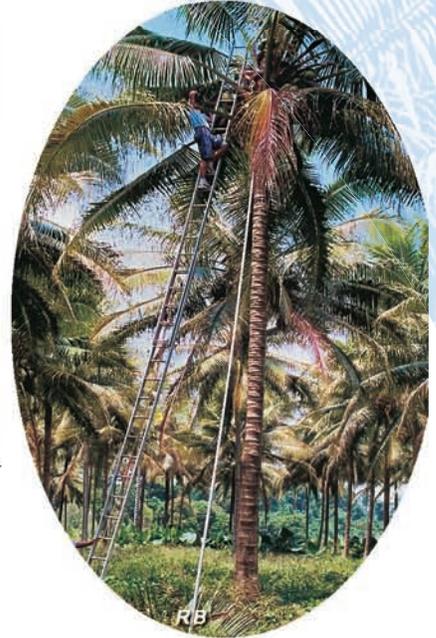
### **Other information**

In Vanuatu, 3 of 120 palms of NCT have shown slight symptoms of susceptibility to Coconut Foliar Decay (yellowish palms) but they recovered. NCT is well adapted to dry conditions and relatively low temperatures, which are common in Ouvéa Island. In Vanuatu, this variety has never been used in breeding programmes. In New Caledonia, a seed garden of Malayan Red Dwarf and Malayan Yellow Dwarf was established in the island of Lifou in order to produce hybrids with NCT starting in 2002.

### **Reference**

Labouisse JP. 1997. Expertise agronomique du champ semencier de cocotiers de Lifou. Rapport de mission 26 Septembre - 2 Octobre 1997, CP SIC 906, CIRAD, France.

# New Caledonia Tall (NCT)



## Lifou Tall (LFT)

*Ratnambal MJ, Niral V, Krishnan M*

### Conservation

Lifou Tall (LFT) is conserved at the Central Plantation Crops Research Institute (CPCRI) in Kasaragod (Kerala), India.

### History

LFT was introduced to the germplasm collection at CPCRI from Lifou Island in 1972.

### Identification

LFT attains a height of 7 m at 23 years of age. The palm has a medium-sized bole and the girth of the trunk averages 82.3 cm. The crown bears about 32-34 leaves and is circular in appearance. The leaves are large with a long petiole. The petiole is not very thick. The leaflets are medium-sized and rather thin. This cultivar starts flowering 78.5 months after planting. However, certain palms were found to flower as early as 61 months and some as late as 96 months after planting. The inflorescences are medium-sized to long and bear about 33-53 spikelets. The spikelets are not very long (35-38 cm). The average number of female flowers per spikelet is around 0.6 and therefore, the total number of female flowers in an inflorescence is only 22.5. Fruit set is also low at less than 20%. The palm is cross-pollinated as the male and female phases in a spadix are distinct. The male phase persists for 18 days, while the female phase lasts for about 4 days and starts 1-2 days after the end of the male phase. However, some self-pollination is possible due to overlapping of male and female phases of successive spadices (inter-spadix overlapping). The fruits of this cultivar are big in size, greenish-yellow in colour and oblong in shape. The nut inside is also oblong with a thick kernel.

### Yield and production

LFT starts yielding at 74-110 months of age. The palms are regular bearers and produce 10-11 bunches per year. The nut yield averages 61 fruits per palm per year, ranging from 45-76 fruits per palm per year. The fruits are large in size with about 35.5% husk. The nut inside weighs 641.4g with a copra content of 208g. The oil content of the copra is 68.3%. The estimated copra and oil yield under rain-fed conditions is 2.2 t and 1.5 t per ha per year, respectively.

### Other information

The quality of the nut water is poor and therefore, this cultivar is not suitable for commercial exploitation as a tender nut variety. Lifou Tall has been evaluated for yield in germplasm trials. However, this cultivar has not been used in hybridization programme.

### Reference

Ratnambal MJ, Niral V, Krishnan M, Ravi Kumar N. 2000. Coconut Descriptors-II, Central Plantation Crops Research Institute, Kasaragod, India.

