Palmyrah Palms in Tamil Nadu, India

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1. *Borassus flabellifer* in a dry landscape, Tamil Nadu.

India stands first in the world in terms of its wealth of palmyrah palms (*Borassus flabellifer*) with a population estimated to be nearly 102 million palms. Of this, 50% of the palms are concentrated in the southernmost state of Tamil Nadu, where palmyrah is honored as the State Tree.

In Tamil Nadu, the districts of Tuticorin, Tirunelveli, Ramnad and Kanyakumari, adjacent to the Indian Ocean, are endowed with 10 million palmyrah palms (Sankaralingam et al. 1999) (Fig.1). In these tracts the palm is cultivated and exploited in the wild, and referred to as 'The Tree of Life' with 801 uses, including food, beverage, fiber, fodder, timber and medicines. Among the various edible uses of the palm, the sweet sap tapped from the inflorescence for making palm sugar is of prime importance. The endosperm of the young fruit, like tender coconut, is a delicacy in summer. The petiole fiber and leaf blade are used to make products such as brushes and handicrafts. The tree serves as a source of raw material for several cottage industries.

Palmyrah prefers a dry climate, growing naturally in sandy plains adjacent to seashores (Fig. 2). The mean annual rainfall in this area ranges from

600–700 mm with temperatures in summer (April, May) ranging from 35–40° C. However, the palm is not suited only to dry climates. It flourishes well under wetter conditions such as on the banks of the perennial River Tambiraparani that runs through the two districts of Tirunelveli and Tuticorin. On the riverbanks in fertile soils, the groves take on the appearance of rain forest (Fig. 3). The palm is so closely woven into the lifestyles of the people of the region that palmyrah fruits are hung as decoration in marriage ceremonies as a symbol of prosperity and happiness.

Palmyrah has separate male and female trees. Sex cannot be differentiated until flowering. The palm is a slow grower compared to the coconut, which is cultivated in areas with good irrigation. The stem of palmyrah is visible only after 4–5 years. In contrast, some dwarf cultivars of the coconut begin bearing at 4–5 years. Palmyrah needs minimum care, and if protected by fencing from stray cattle feeding on its foliage, the palm can come into flower and fruit within 10–12 years. Otherwise, it may take 20–25 years for the palm to flower.

Fig. 2. Palmyrah palms flourishing on sandy soil with a female tree in the foreground.

The palmyrah stem is unbranched, usually growing to a height of 15–20 m, topped by 25–30 large fan-shaped leaves. However, there are dwarf palms that come into bearing even at a height of 4 m. The male palm produces 5–10 inflorescences each year. The male inflorescence is heavily branched with each branch having 2–3 spikes. Each spike has 800–1000 flower clusters, which in turn bear 15–20 little flowers. As a whole, a male inflorescence may have 200,000–250,000 florets. In contrast, the female inflorescence has only 2–3 branches, with each branch bearing 10–12 large, globose flowers. Normally a female palm produces 5–8 inflorescences with a total of 100–150 fruits. However, trees close to water sources may bear nearly 300–400 fruits (Fig. 4). The fruits are generally black-skinned, but red-skinned types also occur.

These palmyrah-growing tracts receive one heavy monsoon during October–November. Flowering is seasonal, and fruiting occurs in September–October. In nature, the fully-ripe, heavy fruits fall down and become buried in the soil. The rainfall received during the season facilitates germination. The fruits are normally 3-seeded and when all of them germinate from a single fruit, they give rise to three palms. Clumps of 2–3 palms are a common sight in the area.

Palmyrah is one of the major sources of palm sugar in Asian countries. The palm is planted on reservoir and lake banks to stabilize them. It is also planted on rice field margins to demarcate them. The palm does not need much water, requires very little maintenance and it is highly disease resistant. It stabilizes unproductive, erosion-prone soils. It can be planted in any type of soil to increase soil fertility and water conservation. It is used as a wind-break in sandy plains to stabilize dunes. Palmyrah is truly a multipurpose palm.

Literature Cited

Sankaralingam, A., G. Hemalatha, and A. Mohamed Ali. 1999. A treatise on palmyrah.Hameed Khan, H. (Ed). All India coordinated Research Project on Palms, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Killikulam, 628252, Tamil Nadu, India, 41 p.

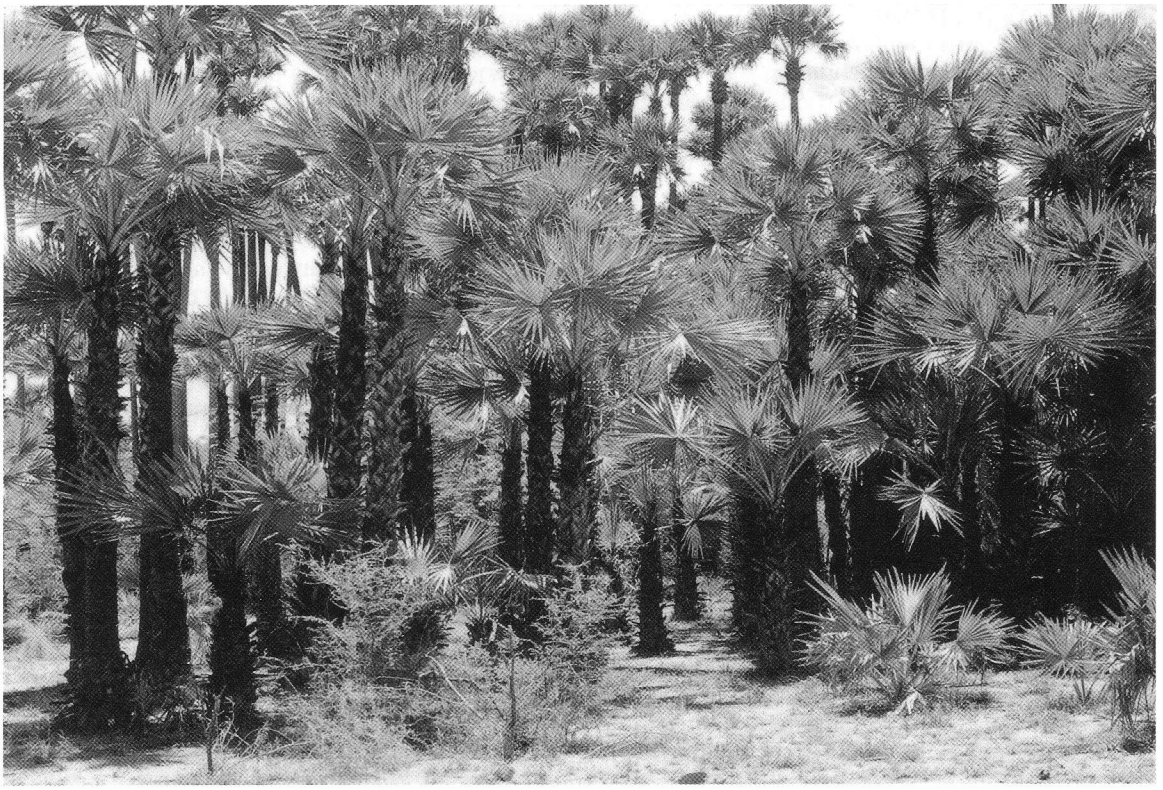

Fig. 3 (top) Palms of different ages growing wild on the banks of the River Tambiraparani. Fig. 4 (bottom). A female palm bearing 300–400 fruits at maturity.