

*Palms*, 43(2), 1999, pp. 88–90

# Palms in Subtropical Climates

KATHERINE MAIDMAN

*Fairchild Tropical Garden, 10901 Old Cutler Road, Miami, FL 33156 USA*

In the transition zone between the tropics and the temperate zones are conditions for growing an amazing diversity of palms. This zone of mild climates, the subtropics, extends north from the Tropic of Cancer and south from the Tropic of Capricorn with varying outer limits between 30° and 40° latitudes around the world. This temperature range and seasonal rainfall pattern define palm growing in the subtropics. This discussion focuses on the humid parts of these middle latitudes that are characterized by long, warm to hot summers and mild winters. The humid subtrop-

ics experience rainfall throughout the year, but they are distinctly seasonal with a moist, humid summer and a comparatively dry winter. Summer high temperatures at 29–35°C (85–95°F) and winter low temperatures of 2–10°C (35–50°F) are typical. Parts of the subtropics also experience infrequent freezes. This climate does, however, allow for an unusually wide range of palms from equatorial to temperate regions. The species that do not thrive in this range are typi-



1. A new planting with mulch to conserve soil moisture and suppress weeds.



2. Cold sensitive palms are grown in the subtropics by taking advantage of microclimates. *Gulubia costata* survived winter lows to -3°C (27°F) in an area at Fairchild Tropical Garden sheltered from wind by tall trees and dense shrubbery.

*Outstanding Palms for the Subtropical Landscape.*

All tolerate full-sun and a range of cultural conditions, with special needs and exceptions as noted: AD-deficiencies in alkaline soil, AL-best in alkaline soil, C-cold tender, M-requires ample moisture, sh-shade before establishment, SH-prefers/requires some shade. An asterisk (\*) indicates that other species within the genus are also recommended.

Name	Ornamental Considerations
<i>Archontophoenix purpurea</i> * AD	reddish-purple crownshaft
<i>Balaka seemannii</i> SH	small specimen plant
<i>Beccariophoenix madagascariensis</i> AD	long, bold leaves
<i>Bismarckia nobilis</i>	bold form and color
<i>Borassus aethiopum</i> M	large and stately
<i>Carpentaria acuminata</i> M	attractive red fruit
<i>Chambeyronia macrocarpa</i> M	red new leaves
<i>Chamaedorea ernesti-augusti</i> * SH	small-scale specimen
<i>Chuniophoenix hainanensis</i> SH	small, fan-leaved clumping
<i>Coccothrinax crinita</i> ssp. <i>crinita</i> *	long fibers on trunk
<i>Copernicia baileyana</i> *	strong form
<i>Cocos nucifera</i> C	for warmest subtropics
<i>Dictyosperma album</i>	for tropical effect
<i>Drymophloeus beguinii</i> M,SH	bold leaf texture
<i>Euterpe edulis</i> sh	drooping leaflets
<i>Dypsis decaryi</i> *	unusual crown form
<i>Gastrococos crispa</i>	strong form
<i>Guihaia argyrata</i> SH	short; clumping
<i>Heterospatha elata</i> C	graceful spreading leaves
<i>Howea forsteriana</i> sh	for cool subtropics
<i>Hyophorbe lagenicaulis</i>	bottle-shaped trunk
<i>Kentiopsis oliviformis</i>	elegant form
<i>Kerriodoxa elegans</i>	grand palmate leaves
<i>Licuala grandis</i> * SH	undivided round leaves
<i>Lytocaryum wedellianum</i> SH	fine texture pinnate
<i>Pinanga coronata</i> M,SH	pinnate-leaved; clumping
<i>Pseudophoenix vinifera</i> * AL	bottle-shaped trunk
<i>Ptychosperma elegans</i> *	very adaptable
<i>Raphis excelsa</i>	fan-leaved; clumping
<i>Roystonea regia</i> *	large and stately
<i>Satakentia liukuensis</i> C	burgundy crownshaft
<i>Schippia concolor</i> AL	large white fruits
<i>Siphokentia beguinii</i> SH	irregularly divided leaves
<i>Syagrus amara</i> *	for tropical effect
<i>Thrinax morrisii</i> AL	silver leaf underside
<i>Veitchia arecina</i> C	striking in groups
<i>Washingtonia robusta</i>	tall and stately
<i>Zombia antillarum</i>	unusual spiny sheaths

cally palms of the deep tropics and the cool high altitude rainforest and temperate regions.

The subtropics are often termed mild in climate but the temperature range can affect the placement and care of palms in the landscape. Planting for example is commonly done in the spring so that the plants are established during the summer heat and rain before the winter low temperatures. A sheltered position is required for the most tropical palms such as *Marojejya*,

*Cyrtostachys*, and *Pigafetta*, which are marginal palms for the subtropics. As in temperate climates, palms are covered with burlap or other temporary shelters during extreme winter temperatures. The effects of summer temperatures are dealt with in the placement of palms and attention to water needs.

Water is one of the most important concerns in the subtropics. While there are palms that tolerate dry periods with no help once they are estab-

lished in the landscape, most perform better with supplementary watering, and many palms require it. Palm growers consider the natural environment of a species for guidelines. Palms of the deep tropics and shade-loving palms of forest understories such as *Geonoma*, *Clinostigma*, and *Pinanga* often need regular irrigation in the subtropics. In general, tropical palms will respond to watering with faster growth rates. Mulching is also beneficial as a means of conserving water. Mulching around palms contributes to soil moisture, aids in water penetration, and helps moderate soil temperature.

Many palms of typically dry habitats can be grown well in the subtropics. Examples are *Chamaedorea* (Mexican species), *Coccothrinax*, and *Gaussia*. The exceptions, while difficult to generalize, are palms intolerant of both the heat and moist conditions. In Miami, Florida, *Jubaea*, *Trithrinax*, and *Trachycarpus* are examples of palms that do not thrive because of this combination.

Fertilizing helps maintain the health and vigor of palms that must adapt to different climates and soils. In particular well-fertilized palms are better able to combat the effects of winter low temperatures that weaken many

palms, making them more susceptible to disease and pest problems. The range of fertilizers and practices defies generalizations, but regular application of a balanced complete fertilizer is recommended as a basic program. Local growers and agricultural agencies can provide the fertilizer recommendations for your specific soils.

Palms have few pest and disease problems in the subtropics. Common insect pests of palms such as scale insects, mealy bugs, palm aphids, banana moths, and other Lepidoptera species can be controlled and do not seriously harm the plants. A few pests and diseases are chronic problems and cause fatalities. Lethal yellowing and ganoderma are incurable and spreadable diseases that have resulted in tremendous losses in ornamental palms. In areas where they occur growers should avoid using susceptible palms in the landscape. Native palms offer resistance to pests and disease as well as tolerance of less than desirable temperature, water, and soil conditions. A recommendation for minimizing losses is aiming for diversity. Native species can be the staple landscape plants that require little care and free a palm grower to experiment with riskier introduced species.

