



General Care and Maintenance of Palms

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Care and maintenance practices of landscape palms are relatively easy and simple. Only occasional pruning to remove dead leaves and/or fruit stalks to prevent dangerous or messy litter, regular irrigation, and one or two, annual applications of a "palm-special" fertilizer are necessary.

Fertilization:

Palms are sensitive to deficiencies in nitrogen (N), potassium (K), and magnesium (Mg). Fertilize according to label directions with a "palm special" fertilizer, one that has high N, K, and Mg with micronutrients. Nitrogen deficiency shows as a generally yellowing of all leaves. Potassium and magnesium deficiencies appear on older leaves and are characterized by yellow or orange flecking and yellowing along the outside of the leaf.

A micronutrient deficiency can occur with improper soil pH or when root activity is low, which can be due to a number of factors, including low temperatures, mechanical damage,

disease, and too much water/poor drainage/lack of oxygen. Its symptoms appear on the newest leaves and include interveinal chlorosis and/or stunting.

Irrigation:

Irrigate established palms at about 100% of evapotranspiration at the site. In coastal southern California this averages about 30-44 inches of water annually. Palm roots need lots of oxygen, so well drained soil is critical. Poor drainage and/or too much water keep soils constantly wet and are bad for palms, especially those that have been recently planted and are in the establishment phase.

Establish an irrigation regime based on soil moisture levels, not a calendar or clock. Irrigate large, established landscape palms when the soil two inches deep becomes dry. If the soil at that depth is moist, do not irrigate. At each irrigation apply enough water evenly over the root zone to moisten the soil to about one foot deep. This is about 1.5 to 2 inches on sandy or light soils and about 2 to 2.5 inches on clay or heavy soils. If necessary, divide each irrigation into several shorter irrigations to avoid run off.

Mulch:

Remove all groundcovers and shrubs within two feet of the palm trunk. Apply a mulch of organic matter about three inches deep around the base of each palm.

Pruning and Sanitation:

Over zealous leaf removal and trunk skinning with a chain saw can leave gaping wounds through which diseases can enter the trunk and cause decay. Be conservative when pruning and refrain from using a chain saw. Prune out only dead leaves or, at the most, leaves up to the horizontal (an imaginary line through the middle of the crown, from 3 to 9 o'clock). Avoid removing leaves above the horizontal. Although sometimes esthetically pleasing, refrain from excessive trunk skinning and ball shaping since they can create large wounds. Unpruned trees never have *Fusarium* or *Thielaviopsis* diseases (see

below). Prevention through sanitation and more conservative leaf pruning and trunk skinning is the only way to control these diseases.



Correctly pruned *Washingtonia robusta*

Photo by Don Hodel



Improperly and excessively pruned *Phoenix canariensis*

Photo by Don Hodel

Disease Problems:

Two deadly fungal diseases of Canary Island date palm (CIDP) are linked to pruning. Pruning tools spread *Fusarium* wilt (FW), which causes a decay of the vascular system. The first symptom of FW is the leaves dying in the lower part of the crown first and then progressively moving up to the top of the. A leaf just turning from green to brown that has green leaflets on one side of the frond and brown leaflets on the opposite side is diagnostic for this disease.

This disease is the A.I.D.S. of these palms. There is no cure and it is 100% fatal but nearly 100% preventable through safe and sanitary pruning practices. Disinfect all tools before pruning each tree by soaking them for five minutes in household bleach or sterilizing the blade with a blow torch for 5 seconds per side. Prune these palms with a straight-edged saw rather than a chain saw. The former can be thoroughly disinfected before pruning a tree while it is nearly impossible to clean a chain saw.

Do not replant with a CIDP at a location where a palm with FW was removed because the disease survives in the soil and it can be taken up by the roots of the newly planted palm. In deed, it is probably most prudent not to replant with any palm because host range susceptibility to FW has not been fully established. Although never observed in a landscape situation, FW was successfully passed to a California fan palm (*Washingtonia filifera*) using FW-contaminated soil from a date palm with FW in an experiment at the University of California, Riverside.

The second disease is *Thielaviopsis*, which causes interior, wet or dry trunk decay. Coined "sudden crown drop" (SCD), this decay cannot be detected visually from the outside bark, which appears normal. Sufficient healthy tissue remains inside the trunk to maintain a normal-appearing crown of

leaves. However, this amount of healthy tissue is insufficient to maintain the structural stability of the tree. Eventually, and without warning, the immense weight of the crown of leaves and/or excessive wind load snap the trunk, bringing down the potentially destructive and deadly crown and upper part of the trunk. Like FW, there is no cure or treatment for this disease. The use of a heavy rubber mallet to pound and sound systematically for hidden decay in the upper part of the trunk can be useful in detecting SCD.

A third disease, called “pink rot,” commonly accompanies these two diseases. The fungus *Gliocladium* causes pink rot. It is an opportunistic and weak pathogen. It cannot infect and kill healthy, vigorously growing palms. It can only infect and kill wounded and/or stressed palms, and as such, frequently accompanies FW or Sudden Crown Drop. Indeed, it may be pink rot that actually kills the palm before the FW can kill it. Fungicides, such as Cleary's and Mancozeb, can temporarily control pink rot; however, unless the disease and/or environmental conditions stressing the palm are corrected, pink rot will continue to be a problem.

Additional Resources:

<http://www.ipm.ucdavis.edu/PMG/GARDEN/PLANTS/palm.html>



Special thanks to Don Hodel, Cooperative Extension Environmental Horticulturist
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