

Queen Palms in Arizona - Problems and Solutions

John Eisenhower, ISA Certified Arborist WE-5213A
Integrity Tree Service, Inc. 602-788-0005 www.itreeservice.com

Queen palms (*Arecastrum romanzoffianum*), are beautiful and elegant tropical palms native to Brazil. They are popular and widely-used in southwest landscapes, especially in patio settings and around swimming pools. Although they are sold as being adaptable to all soil types and full sun conditions, they have a list of deficiencies that can lead to health problems if planted in the desert. Among those problems are the following:

Problem #1:

Queen palms don't handle well the weather extremes of the Sonoran desert. Exposure to wind, extreme heat in summer and freezing temperatures in winter cause browning of the fronds (leaves) which then need to be removed. The palms are slow to recover from this severe pruning and about the time they establish new leaves, more hot or cold weather arrives! Also the loss of foliage, the tree's source of energy, further compromises the health of the tree.

Solution:

First, consider planting a better-adapted tree! Queen palms can survive, but often don't thrive in the desert. They actually can do quite well when they're young, but create some maintenance headaches as they mature. If you do choose to plant a queen palm, minimize your problems by choosing a protected environment near a building or among other trees and shrubs. Second, avoid heavy pruning. To be healthy, the palms need all the photosynthesizing leaf surface they can keep! If only the end of a frond is brown, cut off just the end. Leave as many green leaves as you can.

Problem #2:

Queen palms enjoy fertile, well-drained soil. Much of our soil in the low desert is high pH (alkaline), high clay content, and poorly-drained. The soil also lacks organic matter and due to the high pH, many micronutrients required by queen palms are chemically tied up in the soil and unavailable to the trees. Add to that the problem of soil compaction and queen palms can be in a world of hurt.

Solution:

The single most effective step in assuring queen palm health is to improve the planting site conditions, that is, soil fertility, soil drainage and irrigation practices. Regarding soil fertility, queen palms enjoy regular fertilizing. They require micronutrients such as iron, zinc, magnesium and manganese. These are available in fertilizers specially formulated for palms and other tropical plants. We recommend a quarterly application.

Regarding drainage, plant trees in well-drained areas if possible. Drainage on established trees can sometimes be mechanically improved by augering or drilling with a 2-4 inch bit to a depth of at least 12 inches. The use of gypsum can be helpful to improve water penetration.

For established trees, you can accomplish both the above objectives by a process called vertical mulching. Once holes have been drilled around your palm, you can backfill them with a mixture of fertilizer and gypsum combined with pea gravel, sand or perlite. The filled holes aerate the soil, improve drainage, and deliver nutrients via the fertilizer. Soil sulfur can also be added to the mix to help lower pH. An organic mulch can be used instead of the gravel, etc. but it will eventually break down. The gravel, sand or perlite will keep the augered holes open longer

Regarding irrigation, avoid under-watering but especially overwatering. As with all trees, queen palms should be watered deeply and only as frequently as needed to prevent dehydration.

Problem #3:

Queen palms are occasionally subject to an air-borne fungus that attacks the growth bud of the palm. The resulting condition is called Palm Bud Rot or Palm Crown Rot. A queen palm's growth bud is located at the top and center of the queen palm just below where new leaves emerge. The fungus causes damage to this bud leading to the collapse of the new growth. This collapse of the top fronds is the most common symptom of fungal activity. The damage can be extensive and if the tree doesn't die, recovery is slow, requiring a season or two for the tree to replace the lost foliage.

Solution:

The solution to fungus problems begins with positive identification of active fungus. Micronutrient deficiencies can mimic fungus symptoms, so you need to investigate carefully before undertaking a treatment plan and unnecessarily applying toxic and expensive fungicides. (A deficiency of manganese, for example, is responsible for a condition called Frizzle Top. Frizzle Top causes fronds to be dwarfed or deformed when they unfurl from the central growth spire at the top of the palm.)

First, if fungus is present and active, it is usually evident at times of high humidity during the summer, often after summer rains. If from June through September you notice the new growth on your queen palm is dead or dying, you can check for fungus by doing the following: From the top of the palm, pull the damaged fronds up and out from their point of attachment. If fungus is there, the fronds will pull out easily and fungus will be seen at the decayed base of the fronds and also at the top of the growth bud where the fronds were attached. Palm Bud Rot is a yellow custard-looking gunk. The fungus will also be identifiable by a stench that may knock you off your ladder! Be careful.

Treatment of Palm Bud Rot involves three steps: First, remove the damaged fronds, cut away affected areas and scoop out any remaining fungus. Second, apply a crown drench of fungicide to the affected area. Fungicide can also be applied to the root zone by soil drench or deep root injection. Finally, fertilize the trees as prescribed under Solution #2. Healthy, vigorous palms are the best line of defense against fungus. They are less susceptible to infection and more likely to recover if infected. Fertilizer and fungicide can also be applied together using one of the methods above.

A final word of advice: Before beginning a treatment plan for your queen palm, be sure the tree is viable and worth your time and expense to treat. In many cases, the growth bud is so damaged that full recovery to a vigorous crown of foliage is unlikely. Consult with an experienced arborist who can determine if removal and replacement is a better choice.

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