Bartlett Tree Research Laboratories

PLANT HEALTH CARE REPORT

Queen Palm in Arizona

Queen palm (*Syagrus romanzoffiana*) is widely planted in Arizona landscapes where a lush, tropical effect is desired. This plant is widely used as a specimen planting or can be massed together in groups. Queen palm can grow to a height of more than 40 feet producing light-green, feathery fronds that are up to 15 feet long. The stem is attractive with its smooth, gray bark and prominent rings.

A native of South America, queen palm thrives in moist soils. In desert climates, regular irrigation is essential. Queen palm should be irrigated deeply every three days in summer but less frequently when temperatures moderate in other seasons. It should be planted in protected locations to avoid foliage desiccation which can occur on hot, exposed sites.

Gray bark with rings

Queen palm responds well to regular applications of high nitrogen, slow-release fertilizer that includes micronutrients. In alkaline soils, manganese deficiency may develop and cause foliage distortion, browning, and even death of the plant. Only remove dead fronds when pruning because removing live fronds can weaken the plant and lead to sunscald and disease.

In Arizona, decline of queen palm is common due to manganese deficiency and other environmental factors. Affected palms exhibit poor growth, sparse, stunted foliage

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and, ultimately, wilting and death of the crown. Environmental factors such as high temperatures and drying winds contribute to the decline. Recently, root knot nematodes have been implicated as a possible factor in the decline of queen palm. Nematodes are microscopic, worm-like organisms that feed on root tissue creating swollen galls. Root damage reduces water and nutrient absorption resulting in a slow decline in plant health.

"Frizzletop" symptoms of manganese deficiency

The fungus *Ganoderma* can infect the lower stem and root system and cause failure of the plant. *Ganoderma* infects through wounds, including those caused by climbing spikes worn by some workers when pruning palms. Climbing spurs should not be worn when maintaining live palms; they are only appropriate for removals. Avoid damage to the lower stem when using mowers and string trimmers. Phytophthora bud rot has been reported on queen palm, but this disease is rare in dry climates such as Arizona.

Spider mites can cause foliage browning, especially in summer.

Monitoring and Treatment Considerations for Queen Palm in Arizona

Winter

Remove dead fronds. Sample soil for nutrient and pH levels. Sample for soil nematodes.

Spring

Fertilize, adjust pH, and amend soil according to soil analysis. Apply soil treatment of manganese chelate based on nutrient analysis and deficiency symptoms. Monitor irrigation and soil moisture to minimize water stress. Additional irrigation may be necessary if nematodes are present.

Summer

Monitor for spider mites; treat as needed. Apply foliage treatment of manganese if deficiency symptoms are evident. Monitor irrigation and soil moisture to minimize water stress.

Fall

Fertilize, adjust pH, and amend soil according to soil analysis.