

## Basal Stem Rot/Ganoderma Butt Rot of Palms

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**Symptoms:** Wilt symptoms are caused by the fungus rotting the xylem and other tissues (lignin and cellulose) in the lower 4 feet of the trunk. Initially, the lower fronds turn light green/gray, droop, and eventually the bud dies. The outside of the lower trunk may be stained a rusty-brown as the inside tissues disintegrate. The symptoms progress upwards to younger fronds until the entire crown collapses. The presence of large fruiting bodies termed conks or bracket fungi, or shelf fungi, close to the base of the stem is characteristic of this disease. However, sometimes the palm may die before the conks appear. The conk starts out as a 1 to 2 inch marshmallow-like structure and develops into a woody shelf fungus. These conks will start to disseminate spores into the air when young, still white and continue as they turn reddish brown. Butt rot is a disease of mature palms.

**Cause:** This disease is caused by the fungus, *Ganoderma zonationum*. It is now believed that wounds are not likely a factor in disease occurrence. The fungus may grow internally for 3 years or more before symptoms are observed. Landscape practices, such as too much mulch against the trunk, irrigation striking the trunk, flower or shrubs planted too close to the trunk, have not been associated with this disease. It has been observed on palms that are nutritionally maintained as well as those that are severely stressed by nutrient deficiencies. *Ganoderma* has been found on palms in well-drained and soggy soil locations as well as

palms in silica, calcareous, peat soils and limestone rock. Palms in natural settings have been killed by this disease as well. The contributing factors to this disease remain elusive. Observations to date indicate that the fungus probably enters palm trunks by way of dead roots or palm stumps if it is a clump-type palm.



Conks start out resembling marshmallow blobs.

**What to Do:** Some homeowners associations have “conk patrols” that look for wilting palm fronds and conks. Fungicides are not effective against this disease. Keep the tree healthy and prevent root wounding. Remove infected palms as soon as possible, this means removing the stump and as much of the root ball as possible. Remove any conks on palms that cannot be removed immediately. I recommend that as soon as conks are removed, spray the underside (white side) with WD-40 in an effort to stop spore release or development and then carefully place them in a plastic bag as

soon as possible to avoid spreading spores to nearby palms. Do not replant with another palm because this disease infects all palms. Possible exceptions may be *Sabal minor* which does not have the woody stem tissue that this pathogen attacks.

A general reminder, trimming of the fronds should be done with a ladder or a bucket truck. Do not use climbing spikes on living trees or palms. Spiking trees damages vascular tissues and may serve as entry sites for certain pathogens and is aesthetically unacceptable.