

## Pest Management Suggestions for Cycad Aulacaspis Scale in Landscapes

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A new pest, the cycad aulacaspis scale is threatening cycads in the landscape in South Texas. Heavy infestations of cycad aulacaspis scale can cause plant mortality in new as well as established sago palms (*Cycas* spp.). Successful pest management of scales requires a consistent effort and the integration of control tactics. No single control alternative is likely to provide acceptable levels of control. Visually inspect plants frequently (weekly or every other week); small populations are always easier to control than large ones. Cycad aulacaspis scale has overlapping generations and populations can increase rapidly. Act quickly and use effective control tools (see below). Continue to monitor populations after treatment to determine if your action was effective.



Cycad aulacaspis scale infestation

*Photo: C. Bográn*



Cycad aulacaspis scale damage

*Photo: B. Castro*

**Cultural control:** Check new plants before purchase to make sure they are not infested with pests. Look for infestation symptoms and for scale crawlers on the whole plant, especially on leaf undersides. Since crawlers are difficult to see, use a 10× magnification lens. Avoid plant crowding to reduce movement of scale crawlers from infested to healthy plants and to facilitate spray treatments, if needed. Clean out the worst part of the infestation. Prune those plants or plant parts covered with scales or damaged beyond tolerable levels. Collect and destroy infested material or discard in sealed bags to avoid re-colonization. Clean off pruning tools before working on non-infested sagos. Use high pressure water sprays to dislodge old scale covers and clean the surface of the plant. Let the plant dry before any other spray treatment.

**Chemical control:** several insecticides are available to control scale insects and many are registered for use in ornamental plants in Texas. Check the pesticide label to make sure the product is registered for the particular use site (outdoor nursery production) and to select the right formulation.

- 1) **Frequent applications of horticultural oil and/or insecticidal soap** (including neem oil) alone or mixed with contact insecticides (see below). At least two to three applications, 5-10 days apart are usually required. Cover all plant surfaces until run-off.



Apply oil in the morning or evening when temperatures are below 85°F degrees to reduce risk of plant injury.

- 2) **Systemic insecticide- drench treatment** facilitates uptake by plant roots and re-distribution of the active ingredients. Application rates may vary with plant size and type of soil; always read and follow label directions.
  - *Home landscapes:* Products containing acephate (Orthene®) are registered for use in Texas and available at retail outlets.
  - *Commercial landscapes:* Products containing dinotefuran (Safari™) or dimethoate (various brand names) are registered for use in Texas and available to licensed applicators. These products have proven effective in Florida trials. Dimethoate may injure young plant tissues.
- 3) **Contact insecticide- foliar spray treatment.** Since the scale can be found anywhere on the plant, contact sprays require complete coverage of all plant surfaces, especially leaf undersides.
  - *Home landscapes:* products containing carbaryl (such as Sevin and other products), acephate, pyrethrin, permethrin (various brand names) are available at retail outlets and registered for home-owner use.
  - *Commercial landscapes:* Products containing pyriproxyfen (Distance®) or dimethoate (various brand names) are registered for use in Texas and available to licensed applicators. Other contact sprays containing bifenthrin or other pyrethroids may also be effective (check product label for ornamental registration).

For more information on Texas insects and Entomology, see <http://insects.tamu.edu>.

The information listed is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas Cooperative Extension is implied.

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