

## Pest Management Suggestions for Cycad Aulacaspis Scale in Nurseries

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A new pest, the cycad aulacaspis scale is threatening cycads in the landscape in South Texas. It is critical that nurseries maintain clean plant stock. Texas Department of Agriculture inspectors will issue stop sale orders if infestations are detected during regular inspections. Heavy infestations can cause plant mortality in new and established sago palms. Successful pest management 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:** Inspect all liners brought into your nursery. Look for infestation symptoms and for scale crawlers on the whole plant, especially on leaf undersides. Since crawlers are difficult to see, use a 10x magnification lens. Infested liners are a very common method for scales to infest a clean nursery. Avoid plant crowding to reduce movement of scale crawlers from infested to healthy plants and to facilitate spray treatments, if needed. Isolate infested plants from clean plants. Inspect any landscape plants around your nursery to ensure they are not infested and acting as a source of scales. 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 in ornamental plants. Check the pesticide label to make sure the product is registered for use in the particular site (outdoor nursery production) and to select the right formulation for the specific purpose.



- 1) **Horticultural oil** (including neem oil) alone or mixed with contact insecticides (see below). 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.** Products containing dinotefuran (Safari™) or dimethoate (various brand names; check label for ornamental registration) may be used as soil drench treatments. Dimethoate may injure new plant growth. Dinotefuran can also be applied as foliar spray. Application rates and drench volumes vary with plant size; always read and follow label directions.
- 3) **Contact insecticide – foliar spray treatment.** Products containing pyriproxyfen (Distance®), acephate (such as Orthene®), pyrethrin, permethrin and carbaryl (various brand names; check label for ornamental registration) may be used as sprays covering all plant surfaces. Pyriproxyfen can also be applied as soil drench to target root infestations. Always read and follow label directions.

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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