Whitefly Management

- A contact insecticide, applied thoroughly to the leaves, may also be used for a quick knock-down. Generally, foliar contact insecticides are active for a few weeks and require more than one application.
- The site and method of application must be on the insecticide label. Always follow pesticide label directions.
- If it is necessary to apply several applications of insecticides, it is recommended to rotate among different chemical classes.

Resources

The UF/IFAS Florida whitefly website (www.flwhitefly.org) provides the latest information on whitefly management and includes a directory of trained professionals.

Plant damage. Photo: H. Glenn, UF/IFAS Tropical Research & Education Center.

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Solutions for Your Life

Adult rugose spiraling whitefly. Photo: H. Glenn, UF/IFAS Tropical Research & Education Center

Rugose Spiraling Whitefly :

Identification and Management in the Landscape

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Rugose Spiraling Whitefly: Identification and Management in the Landscape

The rugose spiraling whitefly (*Aleurodicus rugioperculatus*) was first documented in Martin County in April 2012. This whitefly is believed to originate from Central America and first appeared on the U.S. continent in 2009, when it was collected from gumbo limo in Miami-Dade County.

Host Plants

The rugose spiraling whitefly has a broad host range of almost 100 species, including trees, palms, shrubs, and vines. Research is on-going to document the full host range of this species. The most heavily infested hosts observed thus far are often gumbo limbo (*Bursera simaruba*), coconut palm (*Cocos nucifera*), and white bird of paradise (*Strelitzia nicolai*).

Rugose spiraling whitefly eggs. Photo: H. Glenn, UF/IFAS Tropical Research & Education Center

Biology

Rugose nymphs. Photo: H. Glenn, UF/IFAS Tropical Research & Education Center

Adult whiteflies feed and reproduce on the undersides of leaves. Females lay their eggs in a spiral pattern on the leaves and deposit a white, waxy substance on the eggs. From the eggs, the crawler stage emerges and feeds with needle-like mouthparts. This stage is small and difficult to see. The crawler molts and develops through immature stages that are oval and initially flat, then becoming more convex. Some of the immature stages will secrete long white filaments of wax.

Plant Damage

This species of whitefly is known for its copious production of a white, waxy substance. Like other similar insects, the whitefly also produces honeydew, a sticky, clear substance, which drips onto plants and other surfaces below affected vegetation. Sooty mold in turn grows on the honeydew, turning vegetation and other surfaces black. While affected vegetation is stressed by the whiteflies, sometimes causing defoliation and branch die-back, it does not appear that the whiteflies are causing affected vegetation to die.

Management

- Monitoring is key to proper treatment. Use a hand lens to make sure that immature stages of the whitefly are present before treating.
- By not over-utilizing pesticides, harm to populations of beneficial insects can be minimized, allowing the beneficials to aid in long-term control of the pest.
- For small plants or small infestations, spray a strong stream of water, to wash off the sooty mold, honeydew, wax, eggs, and larvae/nymphs.
- Horticultural oils or insecticidal soaps can also help to control this pest. Thoroughly drench the infested leaves; the soaps/oils must come into contact with the pest to be effective. Typically, several applications 7-10 days apart will be required. Use caution when applying these products under high temperatures, to avoid plant damage.
- For large infestations, a systemic insecticide applied to the infested plant or soil will be the best for longer-term control.