

THE FIG WHITEFLY - A NEW PEST IN SOUTH FLORIDA

Introduction: Recently, a new pest was reported attacking ficus trees and hedges in Miami, Florida. This pest was identified as the fig whitefly, *Singhiella simplex*, and is a new US continental record. Whiteflies are small, winged insects that belong to the Order Hemiptera which also includes aphids, scales, mealybugs, and bugs. These insects typically feed on the underside of leaves with their "needle-like" mouthparts. Whiteflies can seriously injure host plants by sucking juices from them causing wilting, yellowing, stunting, leaf drop, or even death.



Description and Damage: The leaves of ficus trees infested with whiteflies begin to turn yellow before the leaves are dropped from the plant. Ficus trees without their leaves are one of the most obvious symptoms of a whitefly infestation. This whitefly has been most commonly found infesting weeping fig (*Ficus benjamina*) but has also been seen on *F. altissima*, *F. bengalensis* (also called "banyan tree"), *F. microcarpa*, and *F. maclellandii* in Miami. Weeping figs are commonly used as hedges but also grow as trees. Other hosts include the strangler fig (*F. aurea*), Cuban laurel (*F. microcarpa*), fiddle-leaf fig (*F. lyrata*) and banana-leaf fig (*F. maclellandii*). This whitefly may eventually be found on other species of ficus. Azalea has also been listed as a host plant.

If the foliage is disturbed the small, white gnat-like adult whiteflies can be seen flying from the foliage. The adult whitefly resembles a very small moth with a yellow body and white wings with a faint grey band in the middle of the wings. Immature stages (eggs and nymphs) can be found primarily on the underside of the leaves. Prior to adult emergence, the nymphs are tan to light green discs with red eyes. The underside of infested leaves look like they are dotted with small, silver or white spots which are actually the empty "skin" of the pupae after the adult emerges.

Biology: The biology of the fig whitefly is not known, however, it is probably similar to related species in Florida. Eggs which are usually laid on the underside of leaves hatch into a crawler stage. The crawler wanders around the leaf until they begin to feed. From this point until they emerge as adults, they are immobile and remain in the same place on the plant. These feeding, non-mobile stages (nymphs) are usually oval, flat, and simple in appearance.



Management: Although efforts to understand and control this pest are ongoing, there are several potential options for whitefly control. However, it is necessary to consider the site (landscape, hedge, large tree, container, production, etc), the size and number of trees, and the surrounding environment before taking steps to control this pest. For large trees, for example, a foliar spray may not be possible.

In the **landscape**, several natural enemies have been observed attacking this whitefly which can play an important role in controlling this pest. Efforts to introduce other natural enemies are being considered. Awareness of these natural enemies is very important so decisions for additional control measures can be made wisely so as not to also kill the natural enemies.

Monitor your ficus plants for early signs of an infestation because it will be easier to manage the pest before it builds to high populations and causes major damage. Also, if infested trees or hedges are trimmed, either leave the clippings on the property or if removing, bag the clippings to reduce the chance of spreading the insects. If clippings are being transported in a truck, be sure to either bag them or cover these clippings with a tarp.

Insecticidal soap or oil sprays may be an effective method of control for **homeowners**, but, thorough coverage of the undersides of the leaves is especially important. It will also be necessary to repeat these applications every 7 to 10 days. The use of other insecticides may be necessary to control this pest. However, it is important to use products that will not be detrimental to the natural enemies. Protecting natural enemies may be a critical component in the **long-term control** of this pest. Insecticides with systemic properties may be very useful in whitefly control because they can be applied as a drench to the soil and provide longer lasting control.

CONTROL IN THE LANDSCAPE: The current recommendation is to drench the soil around the base of the tree or hedge with a product that contains a neonicotinoid compound (clothianidin, dinotefuran, imidacloprid, or thiamethoxam).

Although your ficus tree or hedge may appear to be dying after losing most of its leaves, it may still be alive. If the twigs are still supple, the plant will produce new leaves in a few weeks. As soon as new growth is evident, a systemic insecticide applied to the soil may provide protection to the new growth.

For more information, contact your local Extension agent for additional information. Please visit the UF/IFAS Miami-Dade County Extension website for updates <http://miami-dade.ifas.ufl.edu> or <http://mannion.ifas.ufl.edu>

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