



August 6, 2016

Q-Biotype Whitefly

- **Common names:**
 - Silverleaf whitefly
 - Sweetpotato whitefly
- **Latin name:**
Bemisia tabaci
- **Biotype:** A population of genetically identical individuals
- **Hosts:**
 - 500+ species,
 - 75 plant families,
 - food crops,
 - ornamentals
- **Concerns:**
 - feeding damage,
 - honeydew ,
 - sooty mold,
 - vectors viruses,
 - pesticide resistance
- **Pest description:**
 - tiny (< 1/25 inch),
 - yellow head/body,
 - wings pure white & angled downward to cover body sides
- **Identification:**
 - all biotypes are morphologically identical,
 - DNA analysis is required to distinguish between the biotypes
- **Scouting tips:**
 - found on the under-side of leaves,
 - fly when disturbed,
 - juveniles are light-colored & scale-like with red eyes,
 - prolonged feeding can result in the presence of honeydew and sooty mold
- **9 FL Counties:** from south to north Florida



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559 N. Military Trail, West Palm Beach, FL 33415

Master Gardener Hotline
561.233.1750

This PBC Landscape Pest is a Potential Vegetable Pest

If you have spent any time gardening in south Florida then you are familiar with the whitefly pests commonly found on our food crops and ornamentals. Some of the most economically important species in Florida are the silverleaf whitefly, fig or ficus whitefly, citrus whitefly, greenhouse whitefly, and the rugose spiraling whitefly.

Just this spring, the silverleaf Biotype-Q was identified in PBC after landscaping crews detected several residential areas with difficult to control whitefly populations.

Though initially detected in 2004 on poinsettia in AZ, the Q-biotype has since been found in 26 states and is thought to have developed under high pesticide pressure in the Mediterranean region around Spain.

The Q-biotype is fond of hibiscus, lantana, and crossandra but may also infest and feed on the leaves of tomato, pepper, melons, beans, okra, eggplant, sweet potato and more than 500 other host plants.

The concern is not so much the feeding damage caused by the pest but rather it's ability to transmit viruses and it's high propensity to develop pesticide resistance.

Though many others exist, Tomato yellow leaf curl, Bean Golden, Tomato mottle, Squash vein yellow, Tomato infectious chlorosis, and Cowpea mild mottle are all viruses capably transmitted by the Q-biotype .

Growers have found Q-biotype populations to be resistant to pyrethroids,

organophosphates, carbamates and many other chemical classes. Success has been found by rotating biologicals with several chemical classes.

Pesticide tolerance has been limited using rotational programs including: Dinotefuran, Spirotetram, Spiromesfen, Acetamiprid and other newer chemistries.

Horticultural soaps and oils are still providing results on small Q populations.

If an infestation of Q-biotype is suspected, DO NOT move plants from the property. Call the local extension service or email Dr. Cindy Mckenzie (cindy.mckenzie@ars.usda.gov) for instructions on sending samples for analysis. More information can be found at: www.flwhitefly.org/

Q biotype Whitefly—*Bemisia tabaci*



Figure 1.
Silverleaf whitefly infestation
Photo: UF/IFAS .



Figure 2.
Whitefly adults
Photo: UF/IFAS .



Figure 3.
Whitefly nymph
Photo: UF/IFAS .