Q BIOTYPE WHITEFLIES FACT SHEET

Background

Bemisia tabaci, the sweetpotato whitefly, was first reported in Florida in 1900 but did not become a serious pest until the state was invaded by a new species or subspecies known as the "B biotype " also known as the silverleaf whitefly. It spread rapidly to many broadleaf food and ornamental crops causing direct damage, physiological disorders such as squash silverleaf and tomato irregular ripening, and spread of viruses in tomato, cucurbits and beans.

A second biotype, known as the Q biotype, was first detected in ornamental greenhouses in 2005 and has now been detected in the landscape in Palm Beach County and from nurseries in a number of Florida counties. Thus there is now more than one biotype of the whitefly which may complicate management for nurseries, vegetable growers and homeowners. To the unaided eye, the Q biotype is identical to the B biotype and can only be identified using genetic markers that require laboratory testing.

The Q Biotype

The Q biotype is likely to have been introduced into Florida multiple times since it was first detected on perennial plants in the landscape. As a consequence, there is cause for increased vigilance both in ornamental nurseries and commercial vegetables where it potentially could cause significant economic loss. It should be noted that the Q biotype has yet to become a serious pest of agricultural crops anywhere in the U.S., and its potential to affect Florida agriculture remains uncertain.

The Q biotype whitefly has become an important pest around the world because of its propensity to develop high levels of resistance to a number of insecticides representing different insecticide classes. Nevertheless, there are still products available to manage this pest, but they must be evaluated under Florida conditions and in Florida crops and ornamental plants. It is also important to remember that not all of the insecticides available to control whiteflies in ornamentals are available for the vegetable market.

Insecticide Use

Other than soaps and oils, there are few if any products available at local retail nurseries that we would recommend to homeowners for managing whiteflies. Professional pest control companies do have access to insecticides that have activity against whiteflies. However, it should be noted that insecticide use can lead to worsened whitefly problems because of their potential to adversely affect natural enemies. It is important to use insecticides judiciously to minimize effects on natural enemies as well as to minimize selective pressures that can lead to resistance.

Cooperative Response

Because the Q biotype may adapt differently to Florida's unique environments, scientists with UF IFAS, USDA-ARS, USDA-APHIS and FDACS-DPI have initiated a cooperative effort to manage this pest. Scientists will continue ongoing efforts in the following critical areas:

- Detection and Survey
- Chemical and Biological Control
- Potential for Disease Transmission
- Resistance Detection and Management
- Outreach

Biotyping will be available by two laboratories in Florida.

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Additional information can be obtained at **www.flwhitefly.org** or **http://mrec.ifas.ufl.edu/lso/bemisia/bemisia.htm**