

# Technical Advisory Committee of the Q-Biotype Whitefly Taskforce: A Rapid Response to an Emerging Pest

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## A NEW BIOTYPE OF WHITEFLY (*BEMISIA TABACI*) IN THE U.S.

In 2005, the Q-biotype of the sweet potato whitefly, *Bemisia tabaci*, was identified in the United States for the first time by a team of cooperating scientists at the University of Arizona and University of California. This isolated population was found to have had reduced susceptibility to pyriproxyfen, acetamiprid, buprofezin, imidacloprid, and thiamethoxam relative to susceptible or resistant U.S. populations of the silverleaf whitefly (B-biotype).



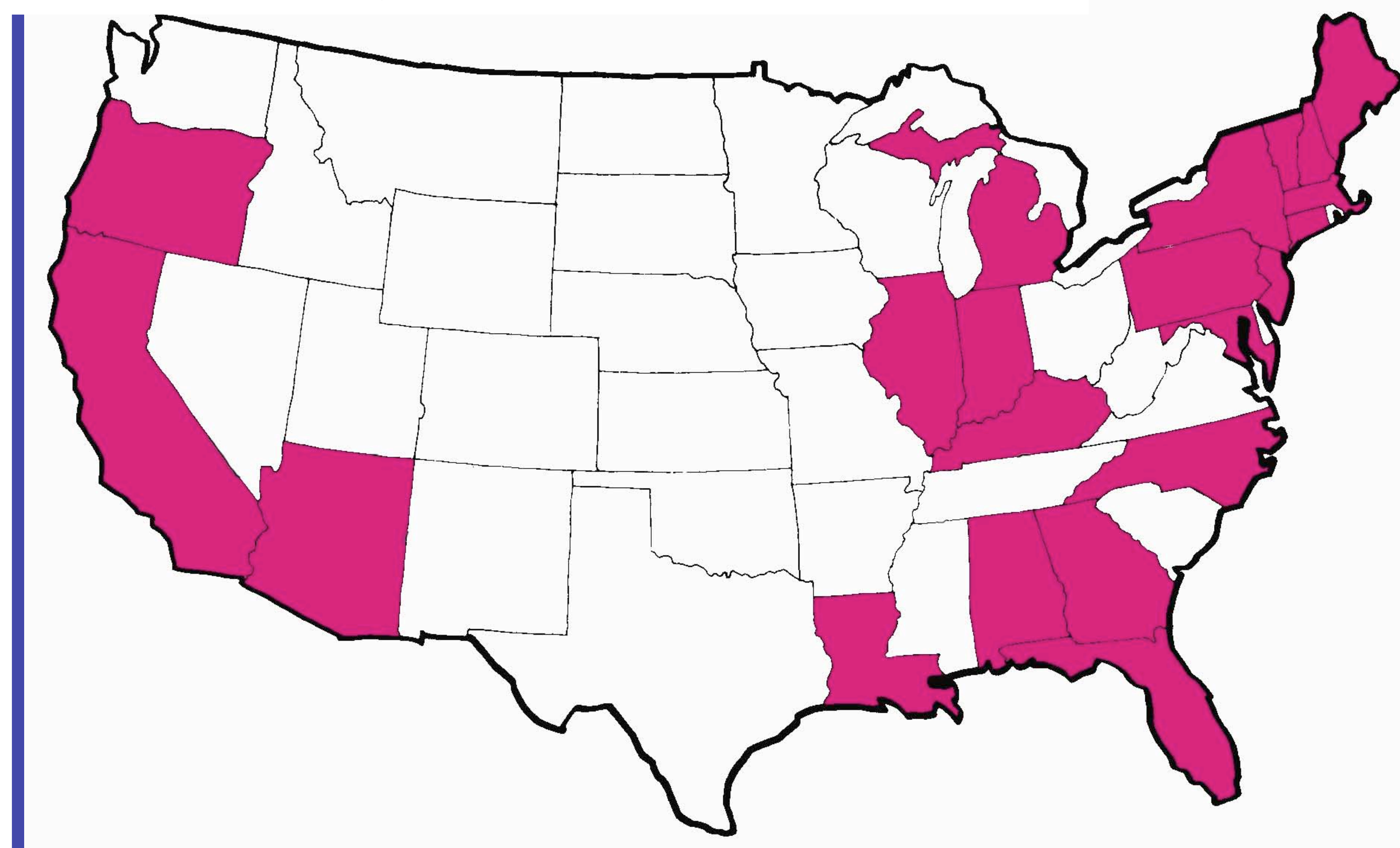
## THE AGRICULTURAL INDUSTRY'S RESPONSE

The Ad Hoc Q-Biotype Whitefly Task Force was established in the spring of 2005. This taskforce includes representatives from the cotton, vegetable and ornamentals industries as well as regulators and scientists.

The USDA and university personnel on the Task Force are members of the Technical Advisory Committee. They work together to provide the technical information necessary to meet the goals and objectives of the taskforce. The technical committee is working to:

- Assess and validate information concerning the Q-Biotype of *Bemisia tabaci* in the United States and elsewhere;
- Develop and recommend the most technologically feasible means to prevent/limit the spread of the whitefly and minimize economic losses to U. S. agriculture that may result from the Q-Biotype

## WHERE HAVE Q-BIOTYPE BEEN DETECTED?



## WHO MIGHT BE AFFECTED

The ornamental industry was the first agricultural commodity to be impacted by this biotype in 2005. Fortunately, the Q-biotype can be managed with tools currently available in the US.

There is concern that the cotton and vegetable industries may be impacted if the whitefly becomes established outside of the greenhouse environment.

## DETECTIONS

In addition to working with individual state Departments of Agriculture, a program was developed that allowed growers to submit anonymous samples for identification. Twenty-one states have been identified as positive for the Q-biotype whitefly (March 2006).

All the whitefly finds occurred on greenhouse grown ornamentals or spearmint.

## WHERE DID Q-BIOTYPE COME FROM

Q-biotype upsurged in greenhouses in Spain after resistance was developed to the major classes of insecticides used for whitefly control.

The Q-biotype has since spread to Europe, the Mediterranean region, China, and portions of Central and North America.



Plastic houses in Almeria, Spain cover over 40,000 ha. This forms the largest concentration of greenhouses in the world.

## HOW ARE WE RESPONDING

Since the initial detection on Q-biotype in the U.S., researcher have conducted efficacy trials on greenhouse ornamentals in New York, Georgia, and California.

A set of guidelines, "Management Program for Whiteflies on Propagated Ornamentals with an Emphasis on the Q-biotype" was developed for and is being distributed throughout the ornamental industry.

Whitefly management information is being presented at major industry meetings and published in most trade publications.

A website (<http://www.mrec.ifas.ufl.edu/LSO/bemisia/bemisia.htm>) was developed as a means of quashing rumors and disseminating information as it becomes available.