

QTAC Management Tools

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Management Group: Mission

The Management Group will develop research plans for the purpose of formulating production practices to control the Q biotype of *Bemisia tabaci*.

Biotype Q potentially could impact many field and greenhouse grown crops including food, fiber and ornamental horticulture plants.

This group will examine an integrated management approach using cultural, biological, and chemical/microbial treatments with the resulting program being effective, economic, and sustainable.

Overall Research Plan

- I. Screen potential treatments
 - A. Determine resistance and cross-resistance in small colonies
 - B. Determine the relative efficacy of treatments in production level testing
- IIA. Develop Integrated Crop-Specific Management Programs that Include
 1. Cultural Practices to Maximize Pest Avoidance
 2. Crop Scouting Procedures and Action Thresholds
 3. Identification and Evaluation of Control Agents and their Effects
 - a. Chemical/Microbial Treatments
 - b. Diversification of Treatments to Conserve Population Susceptibility
- IIB. Develop Specific Plans for Greenhouse Crops, Field-Grown Vegetables, Cotton
- III. Harmonize Control Practices among Commodities to Prolong the Effectiveness of Management Systems within Production Areas and Regions.

Specific Research Goals – Year 1 (2006)

- Refine production level evaluation of insecticides
 - Ornamentals – Ongoing
 - 21 actives plus 2 combinations screened at least once
 - 13 actives plus 9 combinations planned

Management Tools

Research for Ornamentals Industry So Far

For the ornamentals industry, which is the first to be impacted in the US, the Q biotype can be managed with tools currently available in the US

In a series of trials conducted by Jim Bethke, Dan Gilrein, and Ron Oetting since Poinsettia '04 was first announced last April, the following products (actives) have demonstrated at least 90% control:

Avid 0.15EC (abamectin) – 8 fl oz foliar

Avid 0.15 EC + Talstar GH (abamectin + bifenthrin) – 8 fl oz + 20 fl oz foliar

Botanigard ES (*Beauveria bassiana*) – 64 fl oz foliar

Judo 4F (spiromesifen) – 4 fl oz foliar

Safari 20SG (dinotefuron) – 8 oz foliar

Sanmite 75WP (pyridaben) – 6 oz foliar

TriStar 70WSP (acetamiprid) – 2.25 oz foliar

Specific Research Goals – Year 1 (2006)

- Refine production level evaluation of insecticides
 - Ornamentals – Ongoing
 - 21 actives plus 2 combinations screened at least once
 - 13 actives plus 9 combinations planned
 - Vegetables
 - Trial with Dave Schuster planned for 2006 (on B ...)
 - Cotton
- For closed production facilities, initiate research in biological control

Specific Research Goals – Year 5 (2006)

- Have in place specific management plans for all affected commodities
 - Ornamentals – Ongoing
 - Plan for propagated plant material (including Poinsettia) developed
 - Vegetables
 - Cotton
- Establish an operational national program to coordinate resistance management practices among commodities affected by *Bemisia*