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## Questions surround data about Q-biotype whitefly

Lately I've seen a number of articles on the new Q-biotype sweet potato whitefly that's sweeping through greenhouses in this country.

A bit of confusion has been created by some of these articles, so I thought I'd jump from the frying pan into the fire and add my own comments. These points have arisen from closely reading articles and from calls from growers to me and entomologists.

First, let's look at what we're dealing with. There's no doubt that this is a sweet potato whitefly type, as opposed to a greenhouse whitefly. Many of you will recall that this whitefly was originally called the "poinsettia whitefly" because it's commonly found on poinsettias. However, it has a wide host range.

There's also no doubt that this whitefly type resembles a whitefly that has caused trouble in Europe for some time. In Europe, it's called *Bemisia tabaci*. It was first noted in the United States in 2004.

Actually, it's not clear if our new biotype actually came from Europe. But this isn't an important point. However, it does enter into the naming controversy for this pest.

### What's in a name?

U.S. entomologists have called it the Q-biotype of *B. argentifolii*, as opposed to the "old" *B. argentifolii* variety, B-biotype. This nomenclature implies that many believe this is not related to *B. tabaci* at all.

If that's the case, did it really come

from Europe?

The latest thinking is that it should be called *B. tabaci* here as well. I think we spend too much energy pondering this point. The university folks will figure this out with proper crossbreeding work some day.

Although many feel that the pest is new here, there are no regional quarantines in place. It's difficult to tell which biotype is present where.

There are a few labs that will run genetic tests on your insect samples. However, growers probably don't need to do this.

### Why it's a concern

I think where it originally showed up in this country and how it's spreading are primarily just academic concerns. Plainly stated, all growers who produce crops susceptible to whitefly need to watch for this pest.

The new biotype is notable for one main trait. It generally has a high degree of resistance to the commonly used pesticides Distance, Marathon and Marathon II.

Keep on using Distance or the Marathons for now, if you wish. Your

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records of how your controls are doing will tell you if you've had a recent biotype change. Scout and keep record of changes in card counts. If you detect a change in control, you'll have to change control strategies.

Here's another point that confused me at first. In my examination of the control data using many products, Distance and Marathon occasionally worked pretty well. This work has been done and is continuing in New York, Florida, Georgia and California.

Why did this variation in performance take place? It's because there are many minor variations in the Q-biotypes present. Obviously, this says that the mutations are complicated and involve more than one or even a few genes. The bottom line is that Distance or the Marathons can suddenly stop working as well.

#### Rotate products

The Q-biotype and B-biotype are easy to control with product rotations.

The recommendations of the entomologists are still evolving. However, here is a summary. Sanmite, Judo, Avid, Safari, Flagship, TriStar and Celero are often mentioned as desired products to rotate.

My recommendations beyond the research are to add organophosphates and pyrethroids in as a tank mix to disturb the whiteflies and increase the effectiveness of the sprays. Follow labeled directions, especially regarding the intervals between sprayings.

Unfortunately, this aid is often not given on insecticide labels. The total-release aerosols Orthene/Tame and DuraPlex TR may be particularly good, but do not show up in the research trials.

Some researchers mention that growers can consult the mode of action class to derive their rotations. My examination of that approach is that it must be done carefully. For instance, Marathon and Safari both have Class 4 modes of action.

This leads to one final note. Rotation is the way to go when combating any strain of whitefly. I generally say that growers can keep Marathon in the rotation, but watch out for a change in the control level. If you drench with it, watch that it does not stop its control after only four or five weeks.

For more information on this developing situation, visit the Web site [www.mrec.ifas.ufl.edu/LSO/bemisia/bemisia.htm](http://www.mrec.ifas.ufl.edu/LSO/bemisia/bemisia.htm).



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