

# WHITEFLY UPDATE: Q-BIOTYPE CONTROL IN THE LANDSCAPE

**Safari**<sup>®</sup>  
20 SG INSECTICIDE

**TriStar**<sup>®</sup> 8.5 SL

**Distance**<sup>®</sup>  
INSECT GROWTH  
REGULATOR

An important insect pest of the green industry is back in the news again. The Q-biotype whitefly (*Bemisia tabaci*) is making additional headlines after being identified at several landscape sites in Palm Beach county, southern Florida. Long troubled with invasive whitefly pests like the recent Spiral and Giant whitefly, this becomes the first evidence of an established Q-biotype whitefly population in landscape settings, outside of a greenhouse or nursery since its first identification in 2004, and initiates major concerns for nearby vegetable production.

Revised efforts by researchers from the University of Florida, USDA-ARS, and IR-4 have been initiated to determine how this pest has developed and to provide best management practices for its management in the landscape. Numerous questions are being evaluated, including the potential for newly developed resistance to current control products, or a change in landscape plant preferences and management practices that have altered the environment in favor of this biotype survival.

Research has been conducted to identify effective management products and outlined several BMP's (Best Management Practices) to guide the user. The list included key Nufarm products such as Minx™ (abamectin), Distance® (pyriproxifen), Safari® (dinotefuran), and TriStar® (acetamiprid). Additional information can be reviewed below:

## OPTIONS FOR MANAGING WHITEFLIES IN THE LANDSCAPE (5-25-2016)

TRADE NAMES (ACTIVE INGR.)	IRAC CLASS	KNOCK DOWN	RESIDUAL CONTROL (DAYS)**	REI	B-BIOTYPE EFFICACY	Q-BIOTYPE EFFICACY	IMMAT.	PUPAE	ADULTS	SAFETY TO BIOLOG.
Aria® (flonicamid)	9C	M	7-14	12h	F	P-E	X	?	X	Yes
Avid® EC, MINX™ (abamectin)	6	F	Contact - 7	12h	P-E	G-E	X	?	X	Yes**
Azatin® XL, Ornazin® (azadirachtin)	UN	S	7	4h	E	P	X	?	?	Yes
BotaniGard®, Mycotrol O® (Beauveria bassiana)	M	M	3	4h	P-G	P-E	X	X	X	Yes*
<b>DISTANCE</b> ® (pyriproxifen)	7D	S	?	12h	E	P-E	X	X	?	Yes
Meridian® 25 WG (thiamethoxam)	4A	F	7-14	12h	G-E	P-E	X	?	X	No
Forbid® 4F (spiromesifen)	23	M	7	12h	G-E	G-E	X	?	X	?
Mainspring® GNL (cyantraniliprole)	28	M	7-14	4h	G-E	G-E	X	?	?	Yes
Marathon®, <b>MALLET</b> ® (imidacloprid)	4A	M	5-7	12h	F-E	P-E	X	?	X	No
M-Pede®, Safe® Soap (potassium salts of fatty acids)	?	F	Contact	12h	E	F-E	X	?	?	Yes**
NOFLY™ WP, Preferal™ (Isaria fumosorosea)	?	M	3	4h	F-E	F-E	X	X	X	Yes
<b>SAFARI</b> ® 20 SG (dinotefuran)	4A	M	7	12h	E	G-E	X	?	X	?
Sanmite® (pyridaben)	21	M	Contact	12h	P	G-E	X	?	X	No
Talus® 70DF (buprofezin)	16	S	14	12h	E	P	X	?	?	Yes
<b>TRISTAR</b> ® (acetamiprid)	4A	F	7	12h	E	E	X	?	X	No
Ultra-Pure® Oil, SuffOil-X®	?	F	Contact	4h	E	G	X	X	X	Yes**

### TABLE NOTES

**KNOCKDOWN:** Fast (<1 day), Medium (1-7 days), Slow (>7 days).

**EFFICACY:** P = Poor (<70% control);

F = Fair (70% to 85% control);

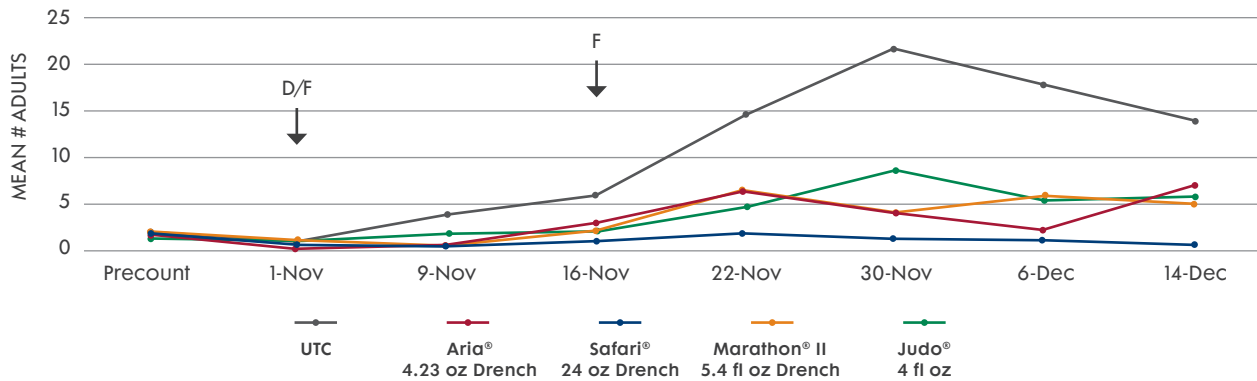
G = Good (85% to 95% control),

E = Excellent (>95% control) on immatures and/or adults 1 to 3 weeks after first app.

## CONTROL RESULTS ON Q-BIOTYPE WHITEFLIES

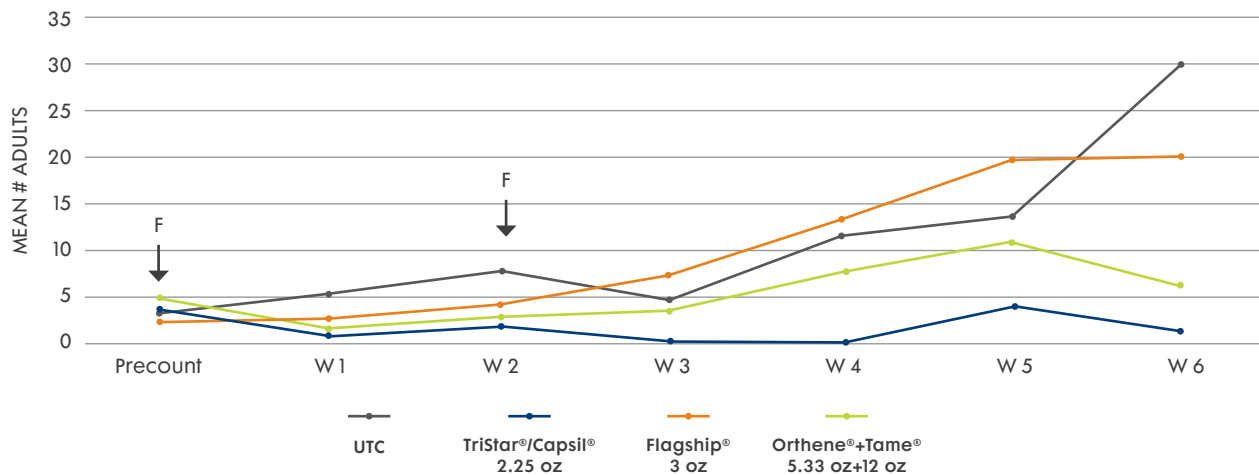
### EFFICACY OF INSECTICIDES AGAINST ADULT Q-BIOTYPE

Foliar Treatments applied 2 times as indicated.  
R. Oetting, Georgia 2005, GSL WF05-14



### EFFICACY OF INSECTICIDES AGAINST ADULT Q-BIOTYPE

2 Foliar applications made Nov 9 and Nov 22.  
R. Oetting, Georgia 2005, GSL WF05-15



#### TABLE NOTES (Cont. from side 1)

Residual Control take from product technical and label info, recommendations on earliest application intervals; Whitefly Efficacy taken from the latest IR-4 efficacy summary draft; Effect on biological control agents for whiteflies taken from Koppert, Biobest and some extension publications/recommendations. YES simply means there is some potential of integrating the compound with biological control agents.

\* Results of efficacy trials have been variable for entomopathogens and impact on beneficial organisms is presumed to be less than that of traditional pesticide chemistries but the data is sparse.

\*\* This insecticide is toxic to many BCA's but has a short residual and may be suitable for treating hot spots and re-introducing BCA's soon thereafter. Drenches of some products are typically less problematic than foliar applications and can be used in a maintenance program if additional releases are made.

\*\*\* Residual control is influenced by many factors including weather, adjuvants, and method of application (foliar or trunk spray, soil drench...). This is especially true for systemic neonicotinoids. Foliar sprays will typically last 7-14 days on leaves that are treated (new growth that emerges after application may not be protected). Soil drenches will last several weeks or even months.

THIS TABLE WAS EDITED BY L.S. OSBORNE FROM IR-4 DATA: Orn. Horticulture Program Project Sheet Whitefly Efficacy, <http://ir4.rutgers.edu/Ornamental/ornamentalProjectInformationSheets.cfm>

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## NUFARM PROVIDES MULTIPLE SOLUTIONS

**SAFARI<sup>®</sup> 20 SG:** Safari 20 SG is a super-systemic insecticide with quick uptake and knockdown. It controls a broad spectrum of invasive pests including Q- and B-biotype whiteflies, emerald ash borers, mealybugs, leafhoppers, leafminers, and armored and soft scales — some of the most costly pests that affect trees, shrubs and herbaceous ornamentals in the production ornamental market.

- Super-systemic: fast uptake, increased concentration in leaves
- Broad-spectrum control, including Q- and B-biotype whiteflies
- Unsurpassed residual control

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**TRISTAR<sup>®</sup> 8.5 SL:** Achieve quick knockdown and long-lasting residual control of a wide range of pests with TriStar 8.5 SL insecticide. The odorless, water-based formulation mixes easily and works with contact, systemic and translaminar activity to protect valuable plants. Plus, TriStar 8.5 SL is EPA classified as a reduced risk insecticide, is compatible with many fungicides and miticides, and can be used as an effective resistance management tool.

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**DISTANCE<sup>®</sup> IGR:** For long-term results, an insect control program should do more than attack the adults — it should break the life cycle. Distance IGR controls whiteflies, fungus gnats, scales and other insects by preventing eggs, larvae and pupae from maturing into adults. Its unique, targeted mode of action makes Distance Insect Growth Regulator a natural for integrated pest management (IPM) or insect resistance management (IRM) programs.

- Translaminar control to break the life cycle
- Targeted mode of action
- Prevents eggs, larvae and pupae from maturing into breeding adults
- Excellent choice for integrated pest management (IPM) or insect resistance management (IRM) programs



### REMEMBER THERE ARE NO VISIBLE DIFFERENCES TO ALLOW YOU TO DETERMINE EITHER THE B- OR Q-BIOTYPE.

If you are uncertain as to whether your whitefly population is B- or Q-biotype, free diagnostic tests are available at numerous University and Government locations and should be conducted prior to treatment.

Landscape managers should educate themselves on the various product MOA (modes of action) and available efficacy research to help themselves choose and properly apply effective Q-biotype control products.

[nufarm.com/usturf](https://www.nufarm.com/usturf)

For specific application rates, directions, mixing instructions and precautions, read the product label. Please visit [www.nufarm.com/usturf](https://www.nufarm.com/usturf) to download a full label.



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