New Velifer Uses, the New Basin Insecticide and More



Research and News on the latest pest management techniques

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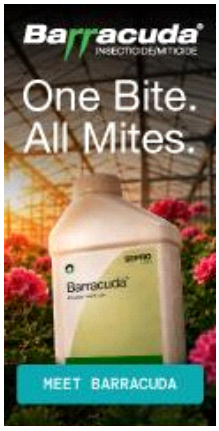


Pest Talks

COMING UP THIS WEEK:

Velifer Label Expanded
BASIN Approved
Ann Chase on Bacillus
Certis Gets Biofungicides
Gloeckner Joins AFE
Insect & Disease Guides
Online Green Training









NGMA
National Greenhouse Manufacturers Association

New Uses of Velifer Approved

BASF's Velifer expands its label to include additional application methods and crops.

Velifer contains the entomopathogenic fungus *Beauveria bassiana* strain PPRI 5339. Dip-and-dench methods have been added, so Velifer can now be used for foliar sprays, soil-directed sprays, dips and drenches in greenhouses. In addition to ornamental plants, Velifer can also be used for fruit and nut trees, vines, brambles, bushberries, fruits, vegetables, herbs, and spices. (It's important to note that application to fruit and nut trees, vines, brambles and bushberries isn't currently allowed in California.) Velifer has a 12-hour REI and zero-day PHI.

Velifer®

Bioinsecticide/Miticide

All application methods are used at 3 to 13 fl. oz. per 100 gallons. For soil-direct sprays, you'll apply Velifer to the soil or media surface, and then irrigate with enough water to move the products into the root zone. For drench applications, on the other hand, you'll apply enough solution to thoroughly soak the media. These two application methods may be most useful when dealing with root-inhabiting insects, such as root aphids and root mealybugs.

Rooted and unrooted cuttings may be dipped in a Velifer solution. In my previous research, cutting dip with Velifer was a great way to reduce the initial population of whiteflies in a poinsettia crop. With Velifer

being compatible to biological control agents, cuttings dipped with Velifer can receive predatory mites or parasitoids soon after the application.

Although Velifer is an oil suspension formulation, it seems to be safe for many plant species. I didn't observe any damage to poinsettia cuttings after direct dip. It's still advisable to do a little phytotoxicity testing on your own.

GO HERE for the press release and go HERE for more information on Velifer.



EPA Approved Vestaron's New Insecticide

Vestaron received EPA approval for its new BASIN insecticide, which contains a new active ingredient. Now, if y'all think pesticide chemical names are a mouthful, try the active ingredient of the new BASIN insecticide, U1-AGTX-Ta1b-QA.

The origin of this new active ingredient is also very interesting. Similar to the active ingredient of SPEAR (GS-omega/kappa-Hxtx-Hv1a), also by Vestaron, U1-AGTX-Ta1b-QA is a peptide derived from spider venom and works by targeting insect nervous systems. It's grouped in IRAC Group 32.

I first heard about BASIN in 2021 when a registration was submitted to EPA for approval. Although registration has been approved, it's not clear when a product will be available for purchase. Based on the information I have from 2021, BASIN will be registered for ornamental plants grown in greenhouses and nurseries, as well as vegetables, herbs, hemp, hops, tobacco, fruits, nuts, forests and various field crops. Crops and uses will be described on the final label, which is to come.

Go HERE for more information on the new BASIN insecticide.



Ann Chase Talks Bacillus Biofungicides

I want to draw your attention to an article Ann Chase contributed to the April issue of *GrowerTalks*. In this article, Ann summarizes the Bacillus species and strains in currently available biofungicides and their modes of action.

We've come quite some way since the first Bacillus biofungicide Rhapsody (now Cease). Ann counted nine Bacillus biofungicides, including the newest Amyloshield and Companion Maxx, that have four-hour or 12-hour REI and are OMRI-listed. Some of these are *Bacillus subtilis*, whereas others are *Bacillus amyloliquifaciens* (see table below).

Ann noted, "Not all *Bacillus amyloliquifaciens/subtilis* are the same." So understand these products (from manufacturers' literature or experts like Ann) and make the best decisions on incorporating them in your disease-management program.

Table 1. Some Bacillus products with known strain identification.

Product	Active agent	Manufacturer
AmyloShield (12 hr REI)	*Bacillus amyloliquifaciens* strain PTA-4838	Mycorrhizal Applications
Cease	*Bacillus subtilis* QRD 713	BioWorks Inc.
Companion Maxx (Bacillus A)	*Bacillus amyloliquifaciens* strain ENV503	Harrell's (DHB Biologicals)
Companion	*Bacillus subtilis* strain GB03	Growth Products
Serenade ASO (Landscape use only)	*Bacillus subtilis* QRD 713	ENVU (Bayer)
Stargus	*Bacillus amyloliquifaciens* strain F727	Marrone Bio Innovations
Subtilex NG, Serifel NG	*Bacillus subtilis* strain MBI 600	BASF Corp.
Taegro 2	*Bacillus subtilis* var. *amyloliquefaciens* strain FZB24	Novozymes
Triathlon BA	*Bacillus amyloliquifaciens* strain D747	OHP (Certis)

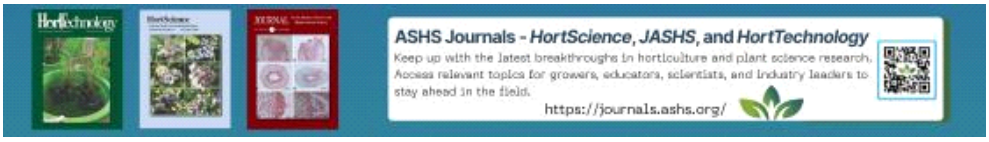
Ann's list of Bacillus-based fungicides. (Source: *GrowerTalks*.)

Bacillus biofungicides generally work through:

- Antibiosis, where Bacillus bacteria create anti-fungal metabolites that can directly damage pathogens
- Competition, where Bacillus bacteria crowd out the pathogens
- Induced resistance, where Bacillus bacteria stimulate the plant's defense system

The multiple modes of action of Bacillus biofungicides make them excellent rotation partners with other biopesticides or conventional fungicides. Y'all need to remember that these biofungicides are living organisms, so they should be stored and used in the most optimal manner or conditions (such as pH and temperature). These conditions may be different from conventional products, so familiarize yourself with them.

Ann also shared her summaries of the efficacies of these Bacillus biofungicides against various foliar and soil-borne diseases. Go HERE to read this article.



Certis Acquires AgBiome's Biofungicides

Speaking of biofungicides …

Certis Biological announced last month that it's acquiring part of AgBiome's assets, including the biofungicides Howler (*Pseudomonas chlororaphis* strain AF50) and Theia (*Bacillus subtilis* strain AFS032321). If y'all haven't heard of AgBiome, it's a North Carolina-based company that works on isolating and commercializing microbes for crop protection, health and industrial uses. This company made news in October 2023 after announcing massive layoffs due to funding difficulties.

Never heard of Howler and Theia either? Well, that's understandable because they're mainly registered for vegetables, fruits, nuts and other specialty crops. They're both OMRI-listed, four-hour REI and zero-day PHI.

Gloeckner Foundation Joins with AFE

The American Floral Endowment (AFE) and the Fred C. Gloeckner Foundation are merging. The Fred C. Gloeckner Foundation will become a new fund within AFE called the Fred C. Gloeckner Research Fund. The transition should be completed by the end of the year.

Both AFE and Gloeckner Foundation have shared the same vision and mission in supporting the growth of the floricultural industry through providing industry information and funding for research and education. The merger not only provides the Gloeckner Foundation with a home within AFE, but it also promises greater achievement and efficiency.



I've professionally benefited from both AFE and Gloeckner Foundation via their respective research grant programs, which I truly appreciate. Both organizations aren't neglecting their missions while the transition happens. The application for the Gloeckner Foundation's funding remains open. The application deadline has been extended to April 30. Go HERE to find more information on the funding program.

MSU Insect and Disease Guides

Michigan State University Extension has updated its Greenhouse Disease Management and Greenhouse Insect Pest Management guides. These guides will prove to be very useful for your operations in the 2024 growing season.

The Greenhouse Disease Management guide, authored by Mary Hausbeck, lists fungicides based on their efficacies against various diseases, such as Botrytis, downy mildew and bacterial diseases. The fungicides are grouped in Teams—A and B—based on data from Mary's trials. Team A are products that provide a high level of disease control. Products in Team B are lower in efficacy, but are still good and worth incorporating in a rotation program. Trade names, active ingredient names and FRAC Group numbers are provided. This year, the guide is updated with new information on Botrytis and downy mildew.

The Greenhouse Insect Pest Management guide is compiled by Jeremy Jubenville. Jeremy discusses the importance of starting clean and staying clean, the benefits of cutting dips, resistance management, phytotoxicity, and other topics. Jeremy also lists insecticides by their target pests, trade names, active ingredients, IRAC Group numbers and REI.

UF's Online Greenhouse Training

I want to put in a plug for a new round of the University of Florida's Greenhouse Training Online Course, which is to start with Greenhouse 101 on June 3. Y'all heard me talk about this course in the past. I do think this is one of the best developed courses for folks interested in getting training in floriculture, whether they're just starting a new career in floriculture or have been around for a while, but want to continue their education. The courses are offered in English and Spanish, and you can take the courses in more or less your own pace.

There are a few new courses. Carrie Harmon will provide two training courses on field diagnosis and management of plant diseases. Claudio Carlos Pasian will train you on working successfully with your Latino workforce.

Go HERE to find more information about courses from the Greenhouse Training Online program.

See y'all next time!

JC Chong
Technical Development Manager at SePRO
Adjunct Professor at Clemson University

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