BASF Fungicides
IR-4 Environmental Horticulture Workshop
Renee J. Keese, Ph.D.
September 26, 2019
Serifel® NG Biological Fungicide

We create chemistry
Serifel® NG Biological Fungicide
Bacillus amyloliquefaciens strain MBI 600

• *B. amyloliquefaciens* is found globally and occurs naturally in the soil
• Manages disease via several mechanisms, formation of physical barriers, competition for nutrients, and production of –cidal metabolites
• Used to suppress root and foliar diseases caused by fungi and some bacteria, *such as*:
  • *Fusarium*
  • *Pythium*
  • *Phytophthora* *
  • *Rhizoctonia*
  • *Botrytis*
  • *Powdery Mildew*
  • *Xanthomonas* *

*Not on current Serifel NG label*
BASF has funded work towards label:
- Rates adjusted for drench applications 4-16 oz/100 gal
- Rates adjusted for foliar applications
- Adding plant dips to the label to control diseases common seen on cuttings/plugs/transplants
- Additional plant safety, plant residue data needed
- Addition of new pathogens

**BASF would support additional work on all areas listed above and provide background on rates and diseases tested to date.**
Velifer™ Fungal Contact Insecticide/Miticide

IR-4 Environmental Horticulture Workshop
Renee Keese, Ph.D.
BASF Corporation, RTP, NC
Velifer™ Fungal Contact Insecticide/Miticide

Beauveria bassiana strain PPRI 5339

New Fungal Contact Insecticide from BASF

- Strain PPRI 5339 is proprietary to BASF
- Direct contact insecticide containing fungal spores that control pest targets via direct application
- Velifer™ fungal contact insecticide/miticide manages insect organisms such as:
  - Aphids
  - Mealybugs
  - Two-spotted Spider Mites
  - Thrips
  - Whiteflies
## Velifer™ Fungal Contact Insecticide/Miticide

### Product Profile

<table>
<thead>
<tr>
<th>Active ingredient</th>
<th>Beauveria bassiana strain PPRI 5339</th>
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<tr>
<td>Mode of action</td>
<td>Contact (germination → penetration → infection)</td>
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| Formulation       | Oil Dispersion (OD) formulation (min 8 x 10^9 CFU/ml)  
|                   | Oil is plant-based, not a petroleum-distillate |
| Crops             | Ornamentals, fruits, vegetables, herbs and spices, including transplants for the home consumer market and agriculture |
| Target Pests      | Whiteflies, thrips, mites, mealybugs, aphids |
| Application rate  | 3-13 fl oz/100 gallons H₂O |
| Number of applications | 3 to 5 applications, depending on pest |
| Spray interval    | Dependent on pest pressure and thresholds  
|                   | 3-day minimum retreatment interval |
| PHI               | 0 days |
**Velifer™ Fungal Contact Insecticide/Miticide Control of Mites**

Gilrein, Cornell 2017

Treatments made on 7-day interval

C07 = 7 days after 3\textsuperscript{rd} application
D07 = 7 days after 4\textsuperscript{th} application

**Graph:**
- **Check**
- **Velifer 13**
- **Botanigard 32**

Rates fl oz/100 gal
Velifer™ Fungal Contact Insecticide/Miticide
Application Information

• 3 – 13 fl oz/100 gallons: Additional rate of 21 fl oz to be tested
• Thorough and uniform coverage of the leaf surface
• For Velifer to be most effective, apply at the first sign of insect pests and before the build-up of heavy pressure
• DO NOT use thermal application equipment, such as heated foggers
• Avoid making applications in the presence of beneficial insects, such as bumblebees and parasitoids
• **Velifer is for greenhouse use only**

• BASF has a list of plants previously tested
  • **More plant safety** trials are needed at 21 fl oz, 2x and 4x
  • **More efficacy trials** needed for spider mites and mealybugs at all rates
Ventigrā™ Insecticide

Registered Q4 2018
Launched in Q2 2019
Pending in CA

- Whitefly species
- Aphid species
- Mealybug species suspension only
- Scale species suspension only

- Growers report control with mealybug and scale species at crawler stages – early populations
- Growers have reported some control of thrips – not currently on label
- **BASF would support continued efficacy work in these areas**
BASF’s Herbicides

BASF herbicides: Preemergence= Pendulum, Tower, Freehand 1.75 G, Postemergence= Segment II (former Segment and Vantage herbicides), Basagran T & O, and Finale herbicide.

Liquid and granular choices for nursery managers and landscapes

- BASF supports work on plant tolerance to support any additional species to the labels
- BASF is providing funded work to demonstrate to growers best stewardship of our products, with other companies’ products, in rotational programs for resistance management.
- **Finale nonselective contact herbicide has been added to BASF this year.** This product can be used in specific use patterns in nurseries and landscapes. Finale can be used in greenhouse structures.

*Thank you to IR-4 for supporting work with BASF herbicides.*