



### Greenhouse Pest Message, August 25, 2023

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**Garden mums** – with the wet summer, there may be more weeds surrounding the mum fields that may be harboring rabbits and other small animals that are chewing on irrigation lines to access the water.

In my last pest message, I mentioned to continue to monitor for **aphids** on fall crops. Managing aphids in production can be challenging. Although natural enemies help keep aphids in check in home landscapes, in ornamental greenhouse production the BCA's don't seem to work as well as they do against thrips, spider mites and fungus gnats.

So, if you are using BCA's for these pests, it's hard to develop an effective rotation program to alternate with the selective feeding blockers such as Endeavor (9B), Rycar (9B) or Ventigra (9D) that are compatible with the BCA's you are using.

One option is to consider the use of microbial insecticides or entomopathogenic fungi such as *Beauveria bassiana* (BioCeres WP, BotaniGard, Mycotrol (OMRI) or Velifer (greenhouse use only).

#### **Some of limitations of entomopathogenic fungi**

- Work by contact, so thorough coverage is needed
- As living spores, they have specific storage requirements
- Have a short shelf life compared to conventional insecticides
- Repeated applications are needed
- Most do best with refrigerated storage

#### **Tips when using entomopathogenic fungi**

- Use preventively and do not expect quick knockdown
- Look for dead & discolored pests, and reduction in pests after 2 to 3 applications
- Spray to glisten, **not** to runoff
- Spray end of day, or a rainy day (to increase fungal sporulation)
- Fungal spores are very sensitive to ultraviolet rays, so apply in late afternoon or evening or on cloudy or rainy days
- Check the date of manufacture on the container before using. Dead spores cannot infect insect pests
- Follow storage guidelines

For more: [The Use of Entomopathogenic Fungi in the Greenhouse:](#)

Tank mixing with azadirachtin (Aza-Direct, AzaGuard, AzaSol, Azatin O, Molt-X, Ornazin) helps slow down their molting. Azadirachtin may be added to every other application. Rick Yates, Technical Support Manager, GGSPro, recommends this spray program to growers for aphids, thrips, or whiteflies: Day 1: Microbial insecticide tank mixed with azadirachtin, Day 4: Microbial insecticide, Day 8: Microbial insecticide tank mixed with azadirachtin. Follow all plant safety precautions on the labels.

### **Powdery mildews**



Figures 1 & 2: Powdery Mildew on *Heuchera* (on left) and *Sedum Matrona*. Note scabby lesions just starting on the sedum, that could be confused with a leaf spot disease.

The humid weather has encouraged powdery mildews on a variety of herbaceous perennials. Growers need to be careful to rotate and avoid relying too heavily on FRAC 3 or FRAC 11 products. Many of the more effective combination fungicides also include both FRAC 11 and FRAC 7 products. Some of the fungicides that are reported to work well against powdery mildews by Dr. Mary Hausbeck Professor and Extension Specialist from Michigan State University include Eagle (3), Terraguard SC (3), Postiva (3 & 7). Others include Pageant Intrinsic (11 & 7), Palladium WDG (12 & 9), Mural (11 & 7), Orkestra (11 & 7), Broadform (7 & 11). Heritage (11), and Compass (11) can also work well.

For more: MSU: Greenhouse Disease Management 2023

[https://www.canr.msu.edu/floriculture/uploads/Ornamental%20Disease%20Management%20Recommendations%202023%20\(1\).pdf](https://www.canr.msu.edu/floriculture/uploads/Ornamental%20Disease%20Management%20Recommendations%202023%20(1).pdf)

*Consult and follow pesticide labels for registered uses. No discrimination is intended for any products not listed. If any information is inconsistent with the label, then follow the label. The label is the law!*

## Upcoming Program for You



The conference schedule is online at  
<https://www.negreenhouse.org/schedule.html>

**Registration is now open!** <https://www.negreenhouse.org/registration.html>

**Pesticide Credits Available** (more information coming soon)

The biennial Northeast Greenhouse Conference & Expo is co-sponsored by New England Floriculture, Inc. - a group of grower representatives from the Northeast, augmented by University and Cooperative Extension staff in each state who specialize in greenhouse crops and management.

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