



Greenhouse Pest Message, July 12, 2024 Leanne Pundt, UConn Extension

With the continued periodic heat waves, continue to monitor for [spider mites](#) and [thrips](#), which may be present on older plant material and can then migrate to younger plants in your production or retail areas.

Outdoor Garden mums: with the reoccurring heavy rainfall events, be sure to supply garden mums with adequate nutrition, as heavy rains leach out nutrients, especially if you are relying on a liquid feed program. From week 3 until first color, apply 200 to 250 ppm constant liquid feed if you are just relying on WSF. Continue to monitor root health and apply fungicides as needed.

For more: Feed Me Seymour: A Modern Guide to Mum Nutrition
<https://www.growertalks.com/Article/?articleid=24220>

Tech on Demand Newsletter: New BioSolutions Guide & Podcasts, Feed Wet Mums
<https://www.growertalks.com/Newsletters/View/?article=4626>

Scarab Beetles became active in early July. According to the [UConn Home and Garden Center](#), the night feeding Asiatic Garden Beetles may be plaguing home gardeners causing extensive damage to basil and zinnia plants.

Asiatic garden beetle adults (*Maladera formosae*) are about 3/8-inch-long and cinnamon-brown in color. Asiatic garden beetles feed **at night** on *Aquilegia*, *Aster*, *Chrysanthemum*, *Dahlia*, *Delphinium*, *Helianthus*, *Heuchera*, *Phlox*, *Physostegia*, *Rosa*, *Rudbeckia*, *Salvia* and *Zinnia*. They can also feed upon basil in the garden. Their nighttime feeding causes c-shaped notches on the edges of leaves.

During the day, adults burrow into mulch or soil or under pots. Immature white grubs feed on the roots of grasses and flowering plants.

Asiatic garden beetles overwinter as grubs in the soil and adults emerge the following summer (early July to mid-August). There is one generation a year.



Figure 1: Adult Asiatic garden beetle (far left) (M. Reding and B. Anderson) USDA ARS, bugwood.org) and their feeding damage to garden mums (in middle) and basil (on right). Photos by L. Pundt

Powdery mildews Powdery mildew is often easily recognized by its white talcum-like growth. Powdery mildew colonies can vary for white and fluffy to colonies that are faint and hard to see on greenhouse tomatoes. Colonies often start on the lower part of the plant where there is less air movement. Look closely for the fungal strands to distinguish from whitish spray residue. Humid weather conditions favor powdery mildews. Although the generally look alike, there are different species of powdery mildews.

If you are growing a diverse mix of crops, it is helpful to know the possible species of powdery mildew that may be present so you can better determine the potential spread of the powdery mildew.

Some species of powdery mildew have a narrow host range and others a very wide host range. For example, *Golovinomyces cichoracearum* (formerly known as *Erysiphe cichoracearum*) has a very wide host range of over 300 hosts including cucumber, squash, pumpkin, gourds, cantaloupe, watermelon, lettuce, endive, pepper, potato, *Echinacea*, *Achillea*, *Artemisia*, *Aster*, *Begonia*, *Boltonia*, *Calendula*, *Campanula*, *Chrysanthemum*, *Clematis*, *Coreopsis*, *Cosmos*, *Dahlia*, *Delphinium*, *Eupatorium*, *Gaillardia*, Golden Glow, Goldenrod, *Helenium*, Hollyhock, Mallow, Phlox, *Rudbeckia*, Salvia, Sunflower, Stokesia and Zinnia (Westcott's Plant Disease Handbook 2001)

For a chart of the more common powdery mildews and the host plants they attack, see this Penn State factsheet, [Powdery Mildew Cross Listing](#).



Figure 2: Powdery mildew on beebalm (on left) and on a pumpkin transplant in a retail setting (on right). Photos by Leanne Pundt

Applications of **silicon** fertilization have slowed the progression of powdery mildew on **zinnia**, **phlox** and **sunflower** but did not eliminate it.

Preventive applications of biological fungicides or biorational materials are often helpful. They can be part of a rotation program with traditional chemical fungicides.

Use chemical fungicides preventively on highly susceptible crops such as fall asters.

Always rotate among fungicide classes to discourage development of resistance. Certain fungicides, especially systemic fungicides, are at risk to development of resistance if they are used continuously. The fungicide resistance action committee has developed a numbering system for fungicides with the same mode of action (FRAC Codes). Fungicides with a high risk should be used in rotation with other fungicides or mixed with fungicides with different modes of actions. Repeated applications of fungicides are often needed.

Some of the fungicides that are rated very good to excellent against the powdery mildews on ornamentals include:

- Banner Maxx (propiconazole) (Banner Maxx) (28)
- Eagle (myclobutanil) (3)
- Terraguard SC (triflumizole) (3)
- Pageant Intrinsic (boscalid & pyraclostrobin) (7 & 11)
- Palladium WDG (cyprodinil & fludioxonil) (9 & 12)
- Postiva (difenoconazole & pydiflumetofen) (3 & 7)
- Mural (azoxystrobin & benzovindiflupyr) (11 & 7)
- Broadform (fluopyram & trifloxystrobin) (7 & 11)
- Orkestra (fluxapyroxad & pyraclostrobin) (7 & 11)
- Compass (trifloxystrobin) (11)
- Potassium phosphites (Alude, Fosphite) (P07)
- Potassium bicarbonate (Milstop SP) (NC)

Sources: From Compendium of Bedding Plant Diseases and Pests. APS Press published in 2018 and Michigan State Greenhouse Disease Management 2024 by Dr. Mary Hausbeck. <https://www.canr.msu.edu/resources/greenhouse-disease-management>

See [the New York and New England Management Guidelines for Greenhouse Floriculture and Herbaceous Ornamentals](#) for more information.

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