



Greenhouse Pest Message, February 9, 2024

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Alarming Aphids With the warmer temperatures this week, I have been seeing alarming numbers of aphids in my travels.

Inspect incoming plant material for signs of aphids. Many aphid outbreaks occur when herbaceous perennials are introduced into the greenhouse from overwintering cold frames. Aphids may also be carried inside on worker's clothing or blown into the greenhouse through doors or vents. Aphid-infested weeds under the benches are frequently a source of recurring aphid problems.

Regular, weekly scouting is needed to detect aphids early before populations explode. Focus on random plant inspections to detect wingless aphid nymphs.

Look on the leaf undersides and buds of aphid-susceptible crops such as: Ageratum, alyssum, basil, begonia, calibrachoa, Cole crops, celosia, dahlia, dianthus, geraniums (ivy and zonal), gerbera daisy, herbs (many), fuchsia, garden impatiens, *Ipomoea*, leafy greens, marigold, pansy, portulaca, primula, salvia, snapdragon, verbena, zinnia, etc.

Many herbaceous perennials can also be affected including: *Acanthus*, *Achillea*, *Alcea*, *Asclepias*, *Aster*, *Bellis*, *Dianthus*, *Digitalis*, *Heuchera*, *Helianthus*, *Helleborus*, *Hibiscus*, *Monarda*, *Papaver*, *Oleander*, *Phlox*, *Primula*, *Rudbeckia*, *Salvia*, *Sedum*, *Sempervivum*, *Veronica*, and *Viola*. There may also be specific varieties that you have had aphid issues within the past that you need to closely monitor.

Three of the most common species found in greenhouses include the green peach aphid, the melon or cotton aphid and the foxglove aphid.



Figures 1 &2: Close-up of green peach aphid. Cornicles are approximately length of their body and are slightly darkened at their tip (left) and have pronounced indentation between the bases of their antennae with protrusions that aim toward each other. Photos by L. Pundt

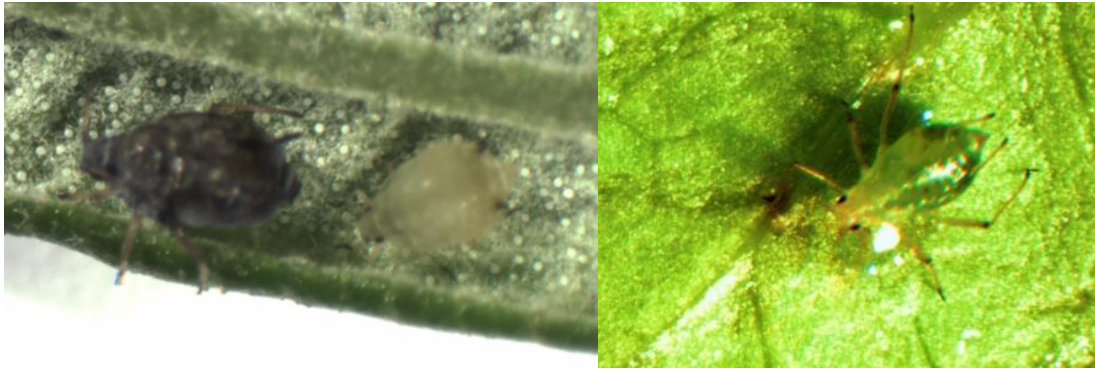


Figure 3&4: Melon aphids vary in color from yellow to black with distinctive white patches on their abdomen and short black cornicles (on left); pale green shiny foxglove aphid with large dark-green spots at the base of their cornicles and black markings on legs and antennae (on right). Photos by L. Pundt

- Green peach aphids tend to be spread more evenly throughout the crop whereas melon aphids tend to be found in isolated hot spots.
- Melon aphids are also less likely to form winged adults and usually stay on the lower leaves and along the plant stem. I also tend to see melon aphids more so in the fall).
- Foxglove aphids inject toxic saliva as they feed leading to curled and distorted leaves, and early leaf drop. Foxglove aphids also tend to drop off the leaves so may be hard to find. Because foxglove aphids reproduce faster at 50° to 60° F than at 77°, F they are more of a problem when spring crops are grown cool.

Yellow sticky cards will only attract winged aphids that have entered the greenhouse from outdoors. They may also indicate an aphid infestation within the greenhouse that resulted in winged aphids.

Aphids are difficult to control with insecticides for several reasons. Aphids may be difficult to reach if they are on the underside of the lowest leaves. Thorough coverage of the underside of leaves is needed for contact materials. Two applications of contact sprays may be more effective than one treatment. Systemic materials may be more effective because aphids tend to ingest large quantities of plant sap, especially if applied before plants are in flower. So, growers may apply long lasting systemic drenches to hanging baskets such as Endeavor (9B), Mainspring (28), or Kontos (23) (be sure to read label carefully regarding plant safety information). (Grower feedback seems to indicate that the 4A such as Marathon or Safari are not working as well as in the past.)

For growers using BCA's for thrips and spider mites, aphid control is especially challenging because the BCA compatible materials such as Rycar (9B), Ventigra (9D), Endeavor (9B) and Aria (29) are all selective feeding blockers. Aria was moved to group 29 due to differences in binding to specific receptor sites. They also act on the stretch receptor (chordotonal) and sensory organs responsible for hearing, motor coordination and perception of gravity. The

MOA of selective feeding blockers is less prone to insects developing resistance, but only in the short term. Continued use may be an issue, and cross resistance may develop with 4A resistant insects. For more: [Selective Feeding Blockers: Mode of Action Groups 9 and 29:](#)

More on Mites Spider mites may be coming in on incoming plugs such as Ageratum, celosia, dahlia, dracaena (spike), English ivy, fuchsia, gerbera daisy, geraniums (especially ivy), herbs (many especially lemon balm, lemon verbena, etc.), hibiscus, *Ipomoea*, impatiens, lantana, lobelia, marigolds, New Guinea impatiens, portulaca, primrose, salvia, scaevola, Thunbergia, verbena, and vinca vine.

Many herbaceous perennials can also become infested including: *Alcea*, *Aquilegia*, *Baptisia*, *Buddleia*, *Campanula*, *Delphinium*, *Filpendula*, *Gaillardia*, *Hemerocallis*, *Hydrangea*, *Iris*, *Lamium*, *Lavatera*, *Monarda*, *Nepeta*, *Papaver*, *Phlox*, *Potentilla*, *Primula*, *Rudbeckia*, *Scabiosa*, *Thalictrum*, *Verbena*, and *Viola*.

Predatory mites work well against spider mites. If ordering *P. persimilis*, be sure that your supplier is shipping them overnight from an insectary in California as they are shipped without a food source. Before releasing BCA's, also be sure that there are no long- lasting toxic pesticide residues on the incoming plants. See [Biological Control of Spider Mites](#) for more information.

Feisty **Fungus Gnat Larvae** may be girdling plant stems, and tender young roots. January was very cloudy and overcast which they love. Damp greenhouse floors or areas with standing water, also encourage fungus gnats.



Figure 5: Fungus gnat larvae girdling plant stem. Photo by L. Pundt

Inspect incoming plugs for fungus gnat larvae or their feeding damage. Fungus gnats may be introduced into a greenhouse from soilless media or on rooted plant plugs.

Adults are attracted to mixes with high microbial activity, or with high amounts of peat moss, compost, or composted hardwood bark. Avoid using mixes with immature composts less than one year old. However, no potting mix is immune to fungus gnat infestations. Adult females prefer to lay their eggs in protected, humid crevices in the media. How the media is handled and stored may be more important than the type of growing media used. If the growing media is stored outside and stays moist, it may support more fungus gnat activity. Tears or openings in the bags enable native fungus gnats to enter the media bags. Store the media so that it stays dry.

Beneficial nematodes are working well with repeated applications during cloudy, overcast weather. For more see [Beneficial Nematodes](#), factsheet on the UConn Greenhouse IPM website.

There are also many insect growth regulators that can be used. See [the New York and New England Management Guidelines for Greenhouse Floriculture and Herbaceous Ornamentals](#) for more information.

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