

e-GRO Alert

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Aphids in Hanging Baskets

“There are also unknown unknowns - the ones we don’t know we don’t know ... that tend to be the difficult ones.”

- D. Rumsfeld

The expression ‘out of sight, out of mind’ dates back to at least 1562, according to one source, but still applies today. Aphid infestations in hanging baskets continue to unpleasantly surprise growers. The rise of vegetative propagation may have something to do with it - aphids aren’t seed-borne as far as anyone’s been able to prove - though other sources of infestation in or around the greenhouse can also be involved. Use of neonicotinoid insecticides, once widely used preventively, is being questioned and some operations are asking about alternatives particularly where overhead crops are difficult to treat and receive little attention after hanging. Following are some suggestions for dealing with the situation.

Know your aphids. ‘Aphids’ are often dismissed as just a single pest - until we discover there are important differences among the species. Biological controls, like parasitoid wasps and some ladybeetles, don’t control them equally well and have decided preferences for some over others. Bean aphid, for example, is not very amenable to biological control, while melon and

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Green peach aphids hiding behind an impatiens flower

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green peach tend to be. Some aphids - or 'strains' of a species - are less susceptible to insecticides than others. Foxglove aphid prefers cooler conditions of early spring or late winter while melon aphid thrives in heat. Green peach aphid enjoys many greenhouse crops while the eponymous cabbage and chrysanthemum aphids are much more fastidious. These, with potato aphid, are the main species we encounter. Others I have seen on greenhouse crops over the years include tobacco (which may be a variant of green peach aphid), cowpea, and leaf-curling plum aphids. It isn't too difficult to distinguish among the five or so most common species with a bit of practice. There are photos on-line, some helpful print references, or check with a diagnostic lab if unsure. Identifying aphids informs most pest management choices and can make a big difference.

Know where they lurk. Aphids (and some other pests) can be on the weeds under the bench, suggesting one strategy for management. Stock plants and pet plants are usually suspect, carrying pests and pathogens over from one crop to another or into the greenhouse when brought in for winter. Vegetative cuttings offer another route of introduction. In warmer climates or seasons aphids can migrate in from outdoors. Scout for aphids by scanning new growth for shiny honeydew, white cast skins, and the



Chrysanthemum aphids can be easy to spot against stems



Distortion of new growth in these Calibrachoa are signs of foxglove aphid infestation (Nora Catlin photo)

aphids themselves. Aphids can be well-camouflaged. Turn over leaves, tap terminals on a white surface, look behind flowers, check stems - spend most time on likeliest sources and less on seed-grown crops. Yellow sticky cards will trap flying aphids, but they are not the more reliable way of early detection. However, they are still useful and will trap pests like thrips and whiteflies, so include them in your monitoring plan.

Have a low tolerance early in the crop. Under ideal conditions a single melon aphid can produce 70 - 80 more over a period of about 15 days. This suggests a low tolerance is necessary early in production, particularly if scouting won't get done after hanging or where labor is limited. When using biological control, such as parasitoid wasps, start releases even before aphids are detected.

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Treat before sticking? It might make sense to treat the crop just before sticking but while still in transplant trays using a product highly effective against aphids - a more conservative way that uses less insecticide. Insecticidal soap or horticultural oil works on contact but will need very thorough coverage. Some plants are sensitive and repeat applications may increase chance of injury. In one trial here on poinsettia I found an overhead rinse with clear water within 20 minutes after a 2% M-Pede spray sacrificed little in control but significantly reduced leaf burn. We have not yet tried this on bedding plants. Products for *foliar* application with more residual activity include Aria (not for pansy or viola), Endeavor, or Kontos (note sensitive species). Avid (or generic, or the combination product Sirocco) at the high label rate can be fairly effective and of



Bean aphids on nasturtium. This species tends to be refractory to biological control.



Camouflaged and unexpected: foxglove aphids are hard to spot on plants and will feed on zonal geranium - not a usual host for aphids.

course has activity against the range of mite pests, including broad mite, which we are seeing more often on vegetatively propagated plants, and twospotted spider mites. If neonics are not out of the question at this stage or for a particular crop TriStar (some sensitivity in certain verbena cultivars), Flagship, Safari, and various imidacloprid products (Marathon, Discus N/G, generics) may be spray options (note restrictions on Flagship and Safari for NY), though I have seen some reduced sensitivity in tobacco aphid with imidacloprid. Growers using biological control should check on compatibility.

Care after planting. For out-of-sight hanging baskets, some growers will still want to use a preventive systemic treatment especially for the more troublesome crops. Excluding the neonics, options include Kontos (note sensitive species) and

Mainspring. Distribute the drench where all plants in the pot receive some; don't apply to a single small spot. I have drenched Mainspring on even sale-ready infested 10" basket Calibrachoa with surprisingly good results, but found the recommended label drench volume a bit lean on so chased it with light watering after application to move material into the root zone. While it is more work, I suggest drenching is best after plugs are well-rooted and able to take up material, so if possible try to schedule hanging after this treatment, or find another way to get the job done. Do not use the same material pre-and post-planting and take special care not to overwater (or

sub-irrigate) for a week or more which could leach the product from the pot. If the aphid control elsewhere in the greenhouse is very good, instead of the more expensive drench growers may elect for a final foliar spray immediately prior to hanging for some crops. Whichever, I still recommend spot-checks weekly or so after hanging to watch for pest, disease and cultural issues. Select plants randomly across varieties for inspection, or consciously bias sampling where appropriate. For example, Calibrachoa may need more attention than some other crops. The only surprises at sale should be pleasant ones!