Integrated Pest Management Program
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UConn Extension

Greenhouse Pest Message March 1, 2024
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The early Easter is making spring growing challenging. However, now is a good time to plan on preventing issues with **aphids** and **broad mites** as the season progresses.

Preventing Aphids on Calibrachoa (Million Bells)

Figure 1: White shed skins are signs of aphids feeding upon calibrachoa. Photos by L. Pundt, UConn

After my last pest message of **February 22,** regarding releasing lacewing larvae in propagation houses, especially houses with vegetable transplants, I received a few questions on whether lacewings might also work on aphids on calibrachoa (million bells).

I have worked with growers who are very dedicated to using biological control agents (BCA's), who have tried releasing various BCA's including lacewing larvae and adults. The calibrachoa plants are just so sticky that it is very hard for the natural enemies to effectively search for aphids. The small parasitic wasps (*Aphidius sp.*) tend to spend all their time cleaning themselves and not searching for aphids.

Unfortunately, I have just never heard of BCA's working well against aphids on calibrachoa. Controlling aphids is especially challenging with calibrachoa hanging baskets, with warmer temperatures and faster pest development time at hanging basket compared to bench levels, aphids easily avoid detection, and it's hard to obtain uniform spray coverage.

So, it's best to apply drenches as close to the time that the baskets will be hung up. Some options that are generally compatible with BCA's with good plant safety include Endeavor (9B) or Mainspring (28).

Retailers may be able to find those isolated fuchsia hanging baskets with foxglove aphids, and just take the few infested plants outside of the retail area and use a forceful jet of water to host off the aphids.

See Managing Aphids in the Greenhouse and Biological Control of Aphids

Identifying and Preventing Broad Mites and their Damage

Broad mites are very small and are best seen with a 15 - 20x hand lens or dissecting microscope. **Broad mite eggs are covered by small whitish bumps that look like a row of diamonds. (see photo below).**

Broad mite injury can be confused with plant growth regulator overdoses, herbicide spray drift or nutritional imbalances. Look for their eggs on the underside of the leaves with a dissecting microscope.

Figure 2: Broad mite injury on dahlia on left compared to healthy plants surrounding them and closeup of broad mite eggs. Photos by L. Pundt, UConn.

Broad mites can be easily spread to healthy plants by workers and infested hanging plants may infest plants below.

Predatory mites, *Neoseiulus (=Amblyseius) cucumeris,* have been used to suppress broad mites. It is best to apply predatory mites early in the crop production cycle before broad mites become established

Growers using predatory mites may also treat incoming susceptible crops with horticultural oil (SuffOil-X) and once dried, begin releases of N. *cucumeris* on broad mite susceptible crops such as **New Guinea impatiens, garden impatiens, gerbera daisy, dahlia, peppers.** Note that the effects of broad mite feeding may persist long after the mites have been eradicated. Repeated applications of beneficials or spray applications may be needed before one sees new growth developing normally.

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Figure 3: Use of *N. cucumeris* mini-sachets to help prevent broad mites on New Guinea impatiens.

See Link to Video below from the UConn The Greenhouse Channel showing broad mites and their damage.

This video also shows the broad mite males carrying females, which might be confused with predation. The males account for much of the dispersal of a broad mite population in their frenzy to carry the female (in-active immature) larvae to youngest leaves.

Identifying Broad Mites and Their Damage
https://www.youtube.com/watch?v=NFAOpecX0oc
Identificacion de Acaros Blancos y Su Dano
https://www.youtube.com/watch?v=ycmtdX1UVT0&t=0s

If using chemical controls, translaminar miticides against broad mites work best. Repeated applications are needed**.** Not all the miticides labeled for spider mites are labeled for broad mites.
See the **New England Floriculture Guide** for additional miticides. Available online at https://greenhouseguide.cahnr.uconn.edu/

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