



Greenhouse TPM/IPM Weekly Report
University of Maryland Cooperative Extension
Central Maryland Research and Education Center

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Cut Flower Short Course
February 26- 29, 2008
Brookside Gardens, Wheaton, MD

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Mealybugs

IPM scouts are reporting high populations of mealybug on rosemary this week- not only on the plants, but inside the rims of the pots as well. Upon further investigation, they noticed that only the plants on the front of the bench were affected. They knew that the adjacent bench had had infested plants on it last summer-fall that were treated for mealybugs. It turned out that there was a large trash can right in front of the rosemary bench with trimmings from last year's succulents inside. The trash can was loaded, and so was the mat underneath the plants, the cinderblocks underneath the bench, and even the brick holding the door open! This is just another example of the importance of good sanitation practices in greenhouse production.

Aphids

We are seeing aphids this week on dahlias and snapdragons. Photo shows sticky honeydew coating the foliage. This sugary substance provides the perfect growing media for sooty mold.

Some controls include: Orthene (acephate), Azatin (azadirachtin), BotaniGard (*Beauveria bassiana*), Tristar (actemiprid), Talstar (bifenthrin), Safari (dinotefuran), Marathon (imidacloprid), Endeavor (pymetrozine), Astro (permethrin)



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Easter Lily Update

By February 17th the buds should be measuring 0.5- 1 inch long.

Powdery Mildew

We are seeing powdery mildew on ranunculus. We visited a grower last week who's using a sulfur vaporizer. They had experienced persistent problems with powdery mildew on their gerberas in the past, but now they're very pleased with the level of control. The sulfur lowers the pH of the leaf surface, making it unsuitable for fungal growth. One unit is capable of treating up to 1,000 ft² of greenhouse space.



Mites

We are seeing two-spotted spider mites on newly transplanted thunbergia hanging baskets. Note the stippling visible on the upper surface of the leaf.

Control: Growers could try using a foliar systemic miticide such as Judo (spiromesifen). A good rotation of contact miticides that would have to be directed to the undersides of the foliage would include Floramite (bifenazate), Akari (fenpyroximate), Avid (abamectin), and Pylon (chlorfenapyr)



Thrips

We are seeing large thrips populations on dahlias this week. They use their piercing mouthpart to pierce the plant tissue and extract plant sap.

Monitoring: Flower thrips tend to feed out in the open whereas the western flower thrips tend to be more cryptic and can be found in unopened flowers, in leaf axils and small crevices. Examine the flowers of the plants since the larvae and adults thrips will feed on flower pollen. Check the plants for stippling damage and put out sticky cards.

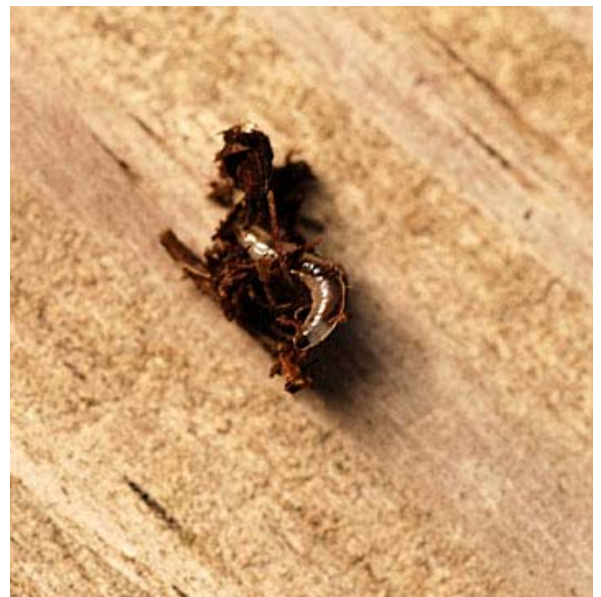
Some controls include: Conserve (spinosad), Mesurol (methiocarb), Pedestal (novaluron)



Fungus Gnats

We are continuing to see problems with fungus gnats on pansy crops. Monitor for larvae with potato wedges on the soil surface and with sticky cards for adults. Growers often have a hard time telling shoreflies and fungus gnats apart. Shoreflies are more of a nuisance pest that feeds on algae, while fungus gnat larvae actually feed on plant roots and tunnel into the stems. They wound the roots, creating entry sites for disease infection. Fungus gnats have slender bodies and a Y-shaped pattern on their wings. A fungus gnat larva has a black head capsule; shore fly larvae do not. Shorefly adults have more robust bodies and white spots on their wings.

Some controls include: Nemasys (*Steinernema feltiae*), Distance (pyriproxyfen), Adept (diflubenzuron), Gnatrol (*Bacillus thuringiensis*)



Stocks

The color variation in this picture looks like it could be due to a fertility problem. However, the grower explained that the yellow looking stocks are actually the more desirable double flower type, while the darker green ones are the singles.



Botrytis

We are seeing *Botrytis* on pansy, cyclamen, and primrose this week. These photos show the early stages of infection on the left and advanced symptoms on the right. *Botrytis* can invade the plant directly through unwounded plant parts, especially flowers or through wounds such as the stubs left when plants are pinched. Any areas of damaged tissue can be easily invaded by *Botrytis*. You can see where the grower had removed the first flush of spent flowers but the developing buds still became infected and will not open.

The *Botrytis* fungus requires a film of water on plant surfaces to germinate and infect the plant. This film of water must remain on the plant surface for several hours. Any cultural practice that prevents continuous periods of leaf wetness will help prevent *Botrytis* infection. Proper spacing and sanitation, periodic venting, horizontal airflow fans, and watering early in the day.

Some controls include: Decree (fenhexamid), Zerotel (hydrogen peroxide), Spectro (chlorothalonil), Protect T/O (mancozeb)



Mice

We visited a grower last week who was having problems with mice in the greenhouse feeding on newly planted seeds. Keep an eye on your sunflower crops in particular.

