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### **Angelonia Flower Break Virus**

**Karen Rane, Director, Plant Diagnostic Lab**

The chlorotic ring spots and mild mottle on the leaves of this Angelonia plant are typical symptoms of a virus infection, but which one? This plant tested negative for the 4 most common viruses affecting greenhouse crops (Impatiens necrotic spot virus, tomato spotted wilt virus, tobacco mosaic virus, and cucumber mosaic virus), but tested positive for Angelonia Flower Break Virus (AnFBV) in serological assays. The virus also causes distinctive streaking (also called "breaking") of flower petals, which gives the virus its name. No insect vector has been reported for AnFBV, but it can be transmitted through movement of infected plant sap, and by propagation of infected stock plants. Symptomatic plants should be discarded.



**Chlorotic Ring Spots on Angelonia**  
**Photo by Karen Rane**

### **Root Aphids**

We received interesting calls concerning root aphids, *Pemphigus* spp, from two Maryland nurseries last week. They are building up on the rootballs of *Sedum* spp., *Vernonia noveboracensis*, and *Aster x dumosus* 'Wood's Pink'. We have also seen them on *Lysimachia nummularia* 'Aurea' and *Coreopsis verticillata* 'Zagreb' in previous years.

Root aphids have cornicles (tailpipes) which are reduced to small bumps on the rear of their abdomen. They produce white, woolly wax masses which can be confused with either fungal mycelium or mealybugs. These soil-dwelling aphids tend to feed on the roots toward the edge of the rootball.



Root aphids generally don't kill plants, but they can cause chlorosis and stunting. In the past we have seen large populations causing reduced growth of the plants, but often they can be at a level that is not detectable until you take the plant out of the container. The question is what is a potential biological control for this pest? I put this question out to an email listserv group. Several people suggested trying different species of entomopathogenic nematodes. In our April 1, 2005 report Carol Glenister of IPM labs also recommended drenches of beneficial nematodes to control root aphids.



**Woolly wax on rootball**

### **Scouting Reports**

Overwintering female fern scales, *Pinnaspis aspidistrae*, were found on 'Monroe White' liriopse. This armored scale is an herbaceous perennial pest that also damages fern and ophiopogon. The photo on the left shows the light brown, oyster-shaped covers of overwintering females. Males have smaller, more elongated white covers. Two generations per year are common in Maryland.

**Control:** Cut off infested foliage in early spring and remove it from the landscape. You can treat with a systemic insecticide or apply Distance and oil when the crawlers emerge.



**Overwintering females**



**Scale with cover removed**

We are seeing green peach aphids on 'May Night' salvia, portulaca, and calibrachoa this week.

**Controls include:** TriStar (actemiprid), Marathon, (imidacloprid), Endeavour (pymetrozine), Orthene (acephate), Azatin (azadirachtin), BotaniGard (*Beauveria bassiana*), Talstar (bifenthrin), and Astro (permethrin)



Leafrolling caterpillars in the family Tortricidae were seen damaging basil this week. These caterpillars web the sides of the leaf together and feed inside the shelter of the cylinder created.

**Control:** Dipel (*Bacillus thuringiensis*) on early instar larvae or Conserve (spinosad) on adults



**Tortricid damage on basil**



**Tortricid caterpillar**

### **Green Peach Aphid, *Myzus persicae*, Control on Cineraria**

We had an interesting situation with a Maryland grower who was growing cineraria. They had applied multiple, bi-weekly applications of dinotefuran (Safari) at a rate of 2 tsp/3 gal. He reported that he got good control in the first month, but that control dropped off in the second month of application and the aphid population was expanding rapidly. We examined the plants and they were loaded with green peach aphids.

Several of these plants were brought back to the Central Maryland Research and Education Center. We treated 3 of the plants with foliar applications of dinotefuran at a rate of 3 tsp/3 gal. We also drenched 3 other infested plants with dinotefuran at 3 tsp/gal. We applied 4 oz. of mixture per 6" pot. We also had untreated control plant material. We recorded the number of

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dead aphids at 3, 5 and 10 day intervals. Neither the foliar or drench applications showed much impact in the first 5 days. By day 10 however the drench provided close to 100% mortality, while the foliar treated plants had under 20% mortality. The green peach aphids were thriving on the control plants. Three weeks after treatment the control plants and foliar treated plants still had so many green peach aphids that the plants were dying. The plants that received the soil drench application of Safari were healthy and the aphid population stayed near zero.

**We contacted Joe Chamberlin of Valent for his opinion on what we were seeing with these two application methods and its impact on the green peach aphid. Here are his comments:**

“As a foliar spray, Safari is not the most consistent aphid control product. In some cases, we have had excellent control with foliar sprays, but in others we have had failures like the grower reported. On the other hand, soil drenches with Safari have provided consistent aphid control, but it can take several days before control is exhibited. They often stop feeding quite quickly, but do not die immediately and may ultimately succumb to desiccation or starvation. I do not suggest Safari as a stand alone foliar spray for aphids. Most growers apply it as a drench instead. Another alternative is the Safari 2G that has just been registered and can be sprinkled dry on the soil surface.”

## Upcoming Programs

### **Procrastinators' Pesticide Recertification Conference**

June 6, 2008

Montgomery College, Germantown

For more information contact: Chuck Schuster at 301-590-2807 or [cfs@umd.edu](mailto:cfs@umd.edu)

### **IPM for Nurseries and Landscapes**

June 11, 2008

Allegheny College of Maryland, Cumberland

For more information contact: Derrick Bender at 301-724-3320 or [dbender@umd.edu](mailto:dbender@umd.edu)

### **Procrastinators' Pesticide Recertification Conference- Eastern Shore**

June 13, 2008

Wye Research and Education Center, Queenstown

For more information contact: Ginny Rosenkranz at 410-749-6141 or [rosnkranz@umd.edu](mailto:rosnkranz@umd.edu)