



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

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**January 23, 2009**

**Chesapeake Green 2009 – A Horticulture Symposium**  
**Great Topics for Greenhouse Growers and Garden Centers**

Be sure to mark you calendar for **February 4 and 5, 2009** for the Chesapeake Green conference at the Maritime Institute (near BWI Airport). MGGA, MNLA and the University of Maryland Cooperative Extension have designed 2 days of topics that will help benefit your business in 2009. Pesticide recertification credits are available for Maryland, D.C., Delaware, Pennsylvania and West Virginia.

**Visit <http://www.chesapeakegreen.org/> to obtain a complete schedule**

**Are Plastic Pots Dying Out?**

There were several displays at the MANTS show in January featuring environmentally friendly pots. There is a rapid rush toward alternatives to plastic pots. Everything from pots made from chicken feathers, coir pots, wheat based pots and neem-based pots are being looked at as possibilities.

A real revolution occurred in the green industry back in the 1960s when cheap, lightweight, plastic pots caught on and growers were able to offer plants throughout the year. The plastic pots enabled mechanized production of plants. The problem has been that when fuel prices spiked in 2008 plastic pots became painfully expensive. A second major hurdle is how to re-cycle these pots that are often coated with dirt.

Plastic pots still have a lot of good points including the fact that they hold up very well for outdoor container perennials production, outdoor annual production systems and tree/ shrub production. They are tough and can take rough handling much better than some of the environmentally friendly pots now on the market. The new environmentally pots still have a way to go to replace plastic pots but have no doubt the days of the plastic pot are numbered. Some people have experimented with thinner plastic pots that use less plastic, costing less money than standard pots. This reduces cost but is difficult to use with mechanized potting systems. Though they use less plastic there is still a problem with disposal of the pots after planting.

There is also a split between companies over which is more environmentally sound - producing compostable pots or making bio-degradable pots. Some feel that compostable pots really don't

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break down unless composted in a commercial facility and rarely break down in home compost piles. Most of the bio-degradable pots can be directly planted into the soil by the consumer. The problem has been that the pots made of materials that are bio-degradable do not hold up well in the garden center when customers grab the pots by the lip. Manufacturers are developing ways to get around this issue with carrier trays made of materials like re-cycled paper or plant based plastic-like sleeves. The pots are marketed so the customer does not handle the bio-degradable pots until they get them home and plants the whole pot into the soil. This is an interesting development but it still means that a grower has to handle the bio-degradable pot very carefully to avoid breaking the pot apart. It does not lend itself easily to mechanized potting or handling.

At the MANTS show I asked a couple of growers what type of pot would interest their customers and which ones they would probably purchase. Garden center operators commented that a pot must display well and hold up well in the garden center. This is an absolute must. They also want a pot that can have a bar-code printed on the pot. Most said that environmentally-friendly pots would sell well and customers are environmentally concerned about plastic pots. Garden center owners are very well aware that in 2009 people will be price conscious so the price of the environmentally friendly pot has to be competitive with plastic.

Production growers commented that a pot must be tough, not easily crushed or misshapen, lends itself to mechanized potting, and must be inexpensive. This is a tall order, and I did not see anything in the marketplace that fits all of these requirements at this point. Give the manufacturers a chance and I am sure they will meet this challenge. It may be difficult to transition out of plastic pots in 2009 because of the ailing economy but in the long run growers can expect to see more alternative pots enter the marketplace, and the pressure to rely less and less on plastic pots will increase.

On the first day of the **Chesapeake Green Conference on February 4, 2009** we are inviting greenhouse and nursery growers to attend a special lunchtime discussion on alternatives to plastic pots. A few representatives from this industry will be present so growers can provide their input on what type of pot they want to see moved into the marketplace. Make sure you attend the conference and share your views and expectations of improvements to alternative pots before your company would start using or expand your use of these products.

### **Caterpillar on New Guinea Impatiens**

A grower in western Maryland sent in a picture of a caterpillar feeding on New Guinea impatiens. Un-rooted cuttings had been shipped in from Guatemala and after rooting the plants the grower noticed that the caterpillars were consuming the foliage. It appears to be a caterpillar in the family Noctuidae. They have sent in a sample so we can figure out the genus of this insect. Meanwhile, if you have New Guinea impatiens in your greenhouse, check for caterpillars. If you find them you have several materials to choose from for controlling them. Conserve, Pylon, bifenthrin (Talstar) will all provide good levels of control.



## Thrips Control

For the last 10 years many growers have been relying on spinosyn materials (Conserve) to control thrips in greenhouses. We have been warning growers not to rely on just one product to control this pest group because of chance of development of resistance. The resistance problem is being detected in greenhouses in North America. Dow AgroScience voluntarily suspended the sale and use of spinosyn insecticides in Broward and Palm Beach County in Florida as of August 14, 2008. This is a



warning shot over the bow of the boat. It would be best to look for alternative control measures. **(Photo shows thrips damage on garden impatiens)**

### Early in the season:

In January through April thrips are generally present at relatively low numbers in most greenhouses unless you maintained a large weed population under your bench or maintained stock plants in the greenhouse loaded with thrips over the winter. When populations are low, usually measured by 1 - 2 adult thrips per sticky card, it would be best to use one of the neem insecticides such as Azatin, Neemix, or Aza-Direct mixed with BotaniGard or neem insecticide mixed with Naturalis-O can give good control when a thrips population is relatively low.

Here are some of the products that can be used to rotate between to control thrips:

- Abamectin
- Acephate (Orthene)
- Bifenthrin (Talstar)
- Chlorfenapyr (Pylon) (5 oz/100 gallons for low populations. For high populations use 10 -15 oz/100 gallons)
- Fluvalinate (Mavrik)
- Kinoprene (Enstar II)
- Methiocarb (Mesurol)
- Novaluron (Pedestal)
- Spinosad (Conserve – Dow Agro Science))
- Pyridalyl (Overture – Valent Company)

Overture 35 WP (active ingredient pyridalyl) by Valent Company can be used to target two pests in greenhouses - thrips and caterpillars. Overture was labeled for use in greenhouses in 2008. This material works by contact action and has translaminar properties. It is applied as a foliar spray. The label rate for thrips is 8 oz per 100 gallons and it has a 12 hour Re-entry Interval (REI). One thing we have noticed with the product is that control of thrips is often not seen for 7 to 14 days after treatment. Overture should be considered most effective when used as a preventative treatment or as a rotation product. Overture should be a good product to use in rotation with Conserve, Pylon and other thrips insecticides.

### **Easter Lily**

Easter lily shoots should be 3 – 4” tall at this point in the season (Around January 23 – 25, 2009). Maintain the greenhouse temperatures below 65 °F until the bud initiation is completed. You should start leaf counting and graphical tracking in the next week. For information on how to effectively use leaf counting and graphical tracking see the Ball RedBook, 16<sup>th</sup> edition

### **Pink Hibiscus Mealybug Trap**

Carol Allen from Johnson’s Garden Center sent us an interesting piece of information on a new pink hibiscus mealybug trap. USDA-Agriculture Research Service has granted an exclusive license to South Carolina Scientific Inc. to produce and market an insect sex pheromone that can help control the pink hibiscus mealybug (*Maconellicoccus hirsutus*). The pheromone is placed inside sticky traps and monitors and traps mealybug males by drawing them into the traps. Relatively high concentrations of the pheromone could also repel males and disrupt mating. The pheromone does not attract natural enemies of the mealybug. The pheromone was developed by ARS chemist Aijun Zhang. Pink hibiscus mealybug attacks many species of ornamental plants, vegetable and citrus crops, and forest trees.

### **Mite Damage on Rosemary Topiary in Florida**

We received the e-mail below from Susan Halbert, [halbers@doacs.state.fl.us](mailto:halbers@doacs.state.fl.us), Florida Department of Agriculture

This Christmas season, our inspectors found badly damaged rosemary topiaries for sale. The damage looked like mite damage, but on closer examination, the culprit was a tiny leafhopper in the genus *Eupteryx*. Unfortunately, the infestation was past its prime, and we were able to obtain only one moldy specimen. However, we were able to extract male genitalia, and the species appears to be one that may not be known from North America. It is similar, but not identical to *Eupteryx melissae*, which has been in the USA for quite a long time. The plants were not originally from Florida, and after the topiaries were gone, we could not find any more specimens. We followed up with the originating nursery and again drew a blank so far. I am wondering if anyone else has seen this damage on plants in the mint family, and, if so, if they would be willing to send me some specimens. Thanks very much.

### **Advanced IPM Scouts’ Training March 5, 2009**

Brookside Gardens  
Maryland and Pesticide Recertification Credits Available  
A brochure is posted on-line at <http://ipmnet.umd.edu/crses97.htm>

(To conduct hands-on activities, space is limited)