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IPMnet
Integrated Pest
Management for
Commercial Horticulture
extension.umd.edu/ipm

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems (**include location and insect stage**) found in the landscape or nursery to sklick@umd.edu

Coordinator Weekly IPM Report:

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Regular Contributors:

Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant

Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist), and Joe Roberts (Plant Pathologist for Turf)

Weed of the Week: Chuck Schuster (Extension Educator, Montgomery County)

Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)

Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)

Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Screening Plant Material

By: Stanton Gill

At the MNLGA nursery field day on Wednesday, I had a chance to talk with several nursery growers about plant material and plant problems. Several growers are still growing and selling large numbers of Leyland cypress, even though they admit it is one insect and disease prone plant. The answer of why is “It sells, and people want a fast growing screening plant”.

Everyone is growing and selling *Thuja* ‘Green Giant’ as the great screening plant. What worries me is if we continue to plant the same thing everywhere, then a pest problem will bring it all down. Call me a worrywart, but that is what I do in my job - look for problems and try to come up with solutions.

That said, I am trying to develop a list of potential screening plants so we can have a greater palette of plants from which to choose in the industry that would give the customer the screening, but not use the same plants over and over and over. One plant that caught my eye on a nursery visit is the upright growing male ginkgo ‘Grindstone’. What a great name. This plant stands upright like a pencil and is narrow in width. Yes, it is deciduous, but most people just need screening in spring, summer and fall when they are using their backyard.

Ok, here is where you come in. Please send me pictures of your best screening plants, and let me know if it is a specific cultivar. Do not send me pictures of Leyland cypress or *Thuja* ‘Green Giant’. I want original thoughts on this request. Send pictures to Sgill@umd.edu

Lily Disease Problems

By: Stanton Gill

Usually I report on insect problems, but I am getting a flood of emails from cut flower and greenhouse growers growing lilies in pots with pictures of Asiatic, Oriental, and LA hybrid lilies with spotting on the foliage. In some cases, the growers have reported that the leaves start with spots, and then within a couple of days most of the foliage is hanging limp on the plant. This problem is also showing up in landscapes. I had David Clement, UME Plant Pathologist, look at one of the plants and he identified it as a species of *Botrytis* that is specific to *Lilium* species.



In most years, we see this disease showing up when growing lilies in the fall when rains become more frequent and light levels are lower. Weather over the last four weeks has been mainly cloudy with frequent heavy rains and plenty of periods of high humidity. This pattern has made it perfect conditions for *Botrytis elliptica* to infect *Lilium* plants.

Like any *Botrytis* disease, the best solution is sunshine and cool, drying breezes. Unfortunately, we have not been getting a lot of this weather over the last month. There are several fungicides labeled for preventing *Botrytis*. The trouble is that these products work preventatively and the heavy rains would likely wash them off.



Get rid of damaged foliage to try to reduce inoculum. Since most growers in Maryland sequence plant their lilies, we will hopefully move into some drier weather. If not, try using the preventative fungicides on the new plants to prevent the disease from becoming established. Add in a spreader sticker such as Nu-Film P to keep the fungicide on the foliage.

***Botrytis elliptica* causes spotting on foliage of *Lilium* species**
Photos: Stanton Gill, UME

Tuliptree Scale

By: Stanton Gill

Steve Castrogiovani, Mead Tree and Turf, and Heather Zindash, Mainscapes, Inc., both reported heavy production of honeydew from tuliptree scale on magnolias and tulip trees that are infested with tuliptree scale. This soft scale is bulking up right now with tree sap. The females are mainly after the protein in the sap. The sugars she pulls up are passed through her body as honeydew. Steve said the honeydew is creating a major sticky situation for his customers' sidewalks and patio areas. Heather mentioned they had applied dinotefuran to the infested magnolias after bloom, but a lot of honeydew was still being produced. Either the material has not moved up into the phloem tissue on which the tulip tree scale is feeding or the material is just not reaching up into the upper canopy. This scale will produce crawlers this fall in September. If you can wait and apply Distance or Talus as a spray when crawlers are out, I would suggest waiting. Meanwhile, get the pressure washer out and clean up the honeydew.

Clematis Leaf Spot and Wilt

By: Karen Rane

Another disease favored by the frequent rainfall this season is a fungal disease of clematis, called Clematis wilt, leaf blight or Ascochyta blight. The pathogen is *Calophoma clematidina*, (formerly called *Ascochyta clematina* or *Phoma clematina*). Initial symptoms include leaf spots and blotches (Fig. 1). The fungus also causes stem cankers, wilting and stem collapse (Fig. 2). This disease is not a true vascular wilt – it’s the cankers on the stems that girdle the shoots and cause wilting. Improving air circulation by thinning out vines will help keep foliage dry and reduce this disease. Remove infected leaves and collapsed vines, making sure to cut stems well below the infected area to remove as much inoculum as possible.

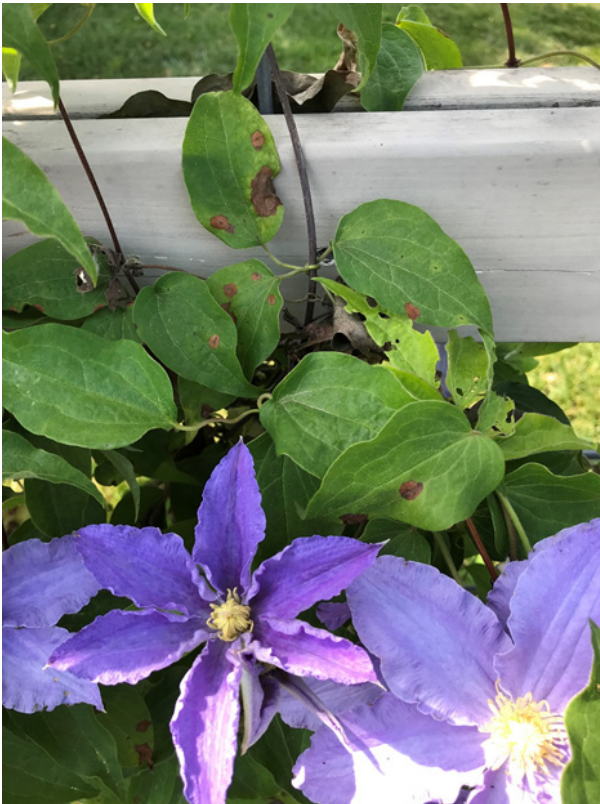


Fig. 1. Leaf spot symptoms on clematis
Photo: K. Rane



Fig. 2: Stem dieback and wilt symptoms from *Calophoma clematidina* infection
Photo: K. Rane

Nutsedge Control in Landscapes

We had several questions on the best materials for nutsedge control in landscape beds. Jeff Derr, Virginia Tech, had these comments:

“Nufarm Prosedge is the same herbicide as SedgeHammer and is applied exactly the same way. It should be applied as a directed spray and not over top of woody ornamentals as we have seen injury to certain species when applied overtop. Try to get good coverage though of the nutsedge foliage. They should also be utilizing a premergence to suppress nutsedge, such as FreeHand. It needs to be applied prior to nutsedge emergence or in conjunction with a postemergence such as Prosedge.”

Wet Weather = Psocids (Barklice) Activity

By: Stanton Gill

Rachel Rhodes, UME, found barklice on June 25 in Queen Anne's County. Heather Zindash, sent in an interesting picture of an alate (winged stage) of a psocid she found while viewing plant samples under the microscope. Kevin Nickle, ProLawn Plus, Inc., found them on a customer's crape myrtle. They look like a heavy bodied ant to many people. The non-winged forms of barklice are generally what you will find on plants, but alates (winged forms) are produced to spread the population. Psocids do not feed on living plants. They feed on lichens, decaying organic matter, dead insects, molds, fungi and pollen. No control is necessary. Since they are basically cleaning up fungi and mold, they are doing your customer a service. No charge this week.



Barklice do not harm plants or people
Photo: Rachel Rhodes, UME



Winged psocids disperse the populations
Photo: Heather Zindash, Mainscapes, Inc.

Carpenterworms

By: Stanton Gill

George Mozal, Stansbury Tree Company, sent in an interesting picture of a larva boring into a branch of river birch that he wanted identified. This is a native pest of the East Coast that attacks several species of native and non-native trees. It has managed to spread across the United States and into Canada. *Prionoxystus robiniae*, the carpenterworm moth or locust borer, is a moth of the Cossidae family. Carpenterworms feed on a variety of deciduous trees including oak, birch, ash, black locust, elm, maple, willow, cottonwood, pecan, and less commonly on fruit trees such as cherry, peach, pear, and apricot. The larvae change in color as they progress through their instars. Early instar larvae tend to be dark reddish, while medium-sized larvae are pinkish. Large male larvae are pinkish to creamy brown. The larvae can feed within a stem for 1 year, but several will spend 2 years as a larvae. They pupate within the stem and the moth emerges in summer to mate and the females lays eggs on susceptible plants. The larvae feed in the heartwood so the damage often goes unnoticed until a branch breaks. They generally attacked weakened trees. The problem is detecting a weakened tree. Protectant sprays of bifenthrin or permethrin could be applied in summer to prevent young larvae from entering the branch.



Carpenterworms tend to attack weakened trees
Photo: George Mozal, Stansbury Tree Company

Swiss Needle Cast of Douglas-fir (*Pseudotsuga*)

By: David Clement, UME-HGIC

Many of our Douglas-fir trees in the landscape are infected and severely damaged by the fungal disease known as Swiss needle cast. It is also in some of the native stands of Douglas-fir in Oregon and Washington states and is especially problematic in Christmas tree farms.

The fungus, *Phaeocryptopus gaeumannii*, can produce spores on green needles, but is usually diagnosed when the needles start to turn yellow-green and then brown and then begin to drop prematurely. The defoliation starts with the oldest needles and proceeds until only the youngest needles at the branch tips are left. The diagnostic sign of the pathogen are the rows of dark spore bearing structures called, pseudothecia, that grow in lines along the stomates on the undersides of the needles. These structures are usually visible on one year or older needles and sometimes on current season needles in early August.

The fungus overwinters as mycelium in the infected needles and sexual spores are released in response to moisture from April through September. Most spores are released through late spring into early summer. Rainy weather promotes infection on first year needles at the time of shoot elongation. However, the pathogen has overlapping generations of spore release, and thus many disease cycles can occur throughout the season.

Disease management for Douglas-fir in the landscape is very intensive and problematic because of the extended disease cycles throughout the season. It requires multiple fungicide applications at the recommended intervals on the label, sometimes as frequent as weekly sprays, during the peak spring season. This disease makes it a hard choice to recommend Douglas-fir for most landscape situations. Older diseased and disfigured tree will have to be removed and replaced.

Other evergreen choices might include Serbian spruce, Nordmann fir, cultivars of American holly, Arizona cypress, hardy cultivars of Deodar cedar, cultivars of arborvitae, and selected cultivars of the native cedar-*Juniperus virginiana*, etc...



Swiss needle cast is a major problem in Christmas tree farms

Photo: David Clement, UME-HGIC



Most Swiss needle cast spores are released late spring through early summer

Photo: Heather Zindash, Mainscapes, Inc.

If You Thought Japanese Beetles Were Bad – Check Out the Midwest

By: Stanton Gill

Again, thanks to all of you who are sending in pictures of emerging Japanese beetles. We have established that they are active from Northern VA, DE southern PA, and all of Maryland at this point. Steve Sullivan, Brightview, just got back from central Illinois. He said while he was visiting there, Japanese beetles had just started to emerge. In 5 days, they had completely defoliated linden trees in the neighborhood he was visiting. He said the Japanese beetles were so thick that they were all over fields of soybeans and were even feeding on young corn plants. Japanese beetles are a relatively new pest in the Midwest, compared to our well established populations on the East Coast. We will see what our population is doing as we progress into early July. Let me know if you find ridiculous populations in your section of the state. Sgill@umd.edu.



Japanese beetles are a relatively new pest in the Midwest

Photo: Steve Sullivan, Brightview

Dogwood Sawfly

Elaine Menegon, Good's Tree and Lawn Care, found active dogwood sawflies on red twig dogwoods in Hershey, PA. Examine the foliage of dogwoods this week for the larvae. This sawfly tends to be on native dogwood species, especially gray dogwood. We have not noted it on Kousa dogwood. Dogwood sawfly will eat all but the midrib of the leaf. These sawflies overwinter in the last instar stage. After the second molt, the bodies of the larvae become covered with a white powder-like material to mimic bird droppings which helps to protect them from their enemies. At their final molt they have a spotted pattern to camouflage them as they crawl over leaf litter. There is only one generation per year.

Control: Options include Conserve and synthetic pyrethroids. Remember, sawflies are related to bees and wasps so Bt will not control them.



Dogwood sawflies feed on all but the midrib of *Cornus* species

Photo: Elaine Menegon, Good's Tree and Lawn Care

Emerald Ash Borer Workshop

An Integrated Approach to Managing the Invasive Emerald Ash Borer Using Biological Control and Systemic Insecticides to Protect North American Ash Resources

July 10, 2018 (9:00am to 2:30pm), National Arboretum, 3501 New York Ave., NE, Washington DC 20002

The National Arboretum and Forest Service invite you to attend the Emerald Ash Borer Workshop. National and regional experts will share their most recent findings on EAB biology and management with an emphasis on biological control - including a field release of EAB parasitoids at the arboretum.

Registration is required. Please click the blue ["Registration is required"](#) link to register online. **Please register by June 30.** Registration fee is \$10. Optional lunch \$12. (You must pre-order lunch; pay at workshop).

Lunch will be catered by Green Plate Caterers. Or bring your own lunch. **If you have problems with the online registration, please email me to reserve a spot. You can pay at the workshop.**

AGENDA

Deb McCullough. Using What We've Learned to Manage Ash & EAB.

Roy van Driesche. Overview of Biocontrol for Insect Pests.

Jian Duan. Biocontrol of EAB - Progress and Challenges.

Houping Liu. Pennsylvania EAB update.

Colleen Kenny. Maryland EAB update.

Lori Chamberlin. Virginia EAB update.

Trent Dicks. Chemical Control of EAB Using Insecticide Injection.

Chris Carley. U.S. National Arboretum efforts.

Alan Whittemore. Genetics of *Fraxinus* in eastern U.S.

Ben Slager. EAB parasitoid rearing, field release permit and request.

Jian Duan. Field releases of EAB parasitoids.

The Emerald Ash Borer (*Agrilus planipennis*) is one of our most serious invasive insect pests and has killed millions of ash trees from Michigan to Maryland. It continues to spread into the Southeast. However, all hope is not lost. Uninfected ash trees, resprouts, saplings and seedlings can be protected with help from biological and chemical control, providing opportunities for ash forest regeneration and restoration. This workshop will provide urban forest managers, park managers, land managers, landowners and others with the latest information on how to protect ash from EAB infestation using integrated pest management.

Green June Beetles

Marie Rojas, IPM Scout, reported that green June beetles were active on June 28 in western Montgomery County. We have not seen them emerging from the turf areas here at the research center in Ellicott City yet. If you have trees with wounds, you might find green June beetles feeding on the sap. At this time, look for adults hovering over grassy areas looking for mates. Green June beetles are usually not a pest on trees, but sometimes they can be found feeding on ornamental plants such as the Rose of Sharon or on fruit. These beetles are more of a problem in turf.



UMD-PI/Net
Look for green June beetle activity now

A Dying Rose Hedge

Jean Scott sent in photos of a hedge of Knock out roses that started dying last year. The roses are on her neighbor's property. Jean reported that "I explained to him and his wife what rose rosette disease was and to take them out. This picture is from last week. He had them sprayed. Some unscrupulous applicator apparently went ahead and sprayed them. The homeowner sets up a sprinkler every evening to water them."



This Knockout rose hedge is infected with rose rosette disease

Photo: Jean Scott

Dog Vomit Fungus

We have been receiving various reports over the last month of dog vomit fungus (which is actually a slime mold). It shows up in mulched areas in spring and summer usually after soaking rains. This slime mold is bright yellow and slimy when it is starting its fruiting stage. It becomes duller and crustier as it continues its development. Although unsightly, it is harmless so no control is necessary.



Dog vomit fungus often shows up in mulch after periods of heavy rain

Photo: Mark Schlossberg, ProLawn Plus, Inc.

Bacterial Wilt Problems in Cucurbits This Year

By: Jerry Brust, UME

In a sentinel plot of cucurbits (cantaloupe, cucumber, watermelon, pumpkin, etc. near Cambridge, MD on the Eastern Shore and in a few other cantaloupe and cucumber fields are some of the worse cucurbit bacterial wilt (*Erwinia tracheiphila*) infections I have seen in the past 5-7 years. Most of the infected plants are still small and were fed on by cucumber beetles 2-2.5 weeks ago. The first sign of bacterial wilt infection is when leaves near the base of the plant wilt and turn a brownish-gray/green and then dry up (fig. 1). Then other leaves on the vine with those first dying leaves will begin to flag and wilt in the mid-afternoon (fig. 2). In a few more days, the entire vine will wilt. Sometimes that may be the only problem, but often another vine will start to wilt and then another until the plant is dead. After bacteria enter the plant, it takes anywhere from 2-4 weeks for an infected plant to wilt and die.

So far this year about 18% of the cantaloupe and cucumber plants have begun to wilt. Normally I see 3-6% of plants wilt down at this plant size. I don't think it was an unusually high striped cucumber beetle population (these beetles act as vectors for *E. tracheiphila*), although a few areas had very high numbers (15-20/plant). It appears that a greater percentage of beetles were carrying the bacteria than what we would normally encounter. In figure 3, this level of feeding damage would usually lead to about 35-40% of the plants going down to bacterial wilt, this year it is 65-75% of plants like this going down to wilt.

Under this sort of pressure, applying neonics to plants while they were in the tray or that were drenched at planting (which is usually sufficient) often will not be enough to hold back beetle transmission of the bacteria 7-10 days after treatment. Foliar sprays with pyrethroids would be needed. But how do you know when more beetles are going to act as vectors—you don't. And that is the problem, next year do you over treat because of one outlier season or continue with what you have been doing? My guess is that this is a onetime blip that so many more beetles were infective than normal. If your cantaloupe or cucumber plants look good and do not have any more than the usual amount of bacterial wilt, you can consider your striped cucumber beetle management to be good.



Fig. 1 The base leaves of an infected vine begin to wilt and then dry up and die
Photo: Jerry Brust, UME



Fig. 2 After 7-10 days leaves on the infected vine become flaccid
Photo: Jerry Brust, UME



Fig. 3 Heavy beetle feeding on cantaloupe plant
Photo: Jerry Brust, UME

Beneficial of the Week

By: Paula Shrewsbury, UMD

Bats eat lots of insects!

I am always looking for ideas of beneficials to write about. This week Nancy Harding (UMD) suggested I discuss bats since she found some nesting behind window shutters at her house. Some of you may be thinking about the stereotypical views of bats and saying “bats – yikes!” Bats, like many spiders, are poorly understood and often thought of to be scary, blood sucking animals that vector diseases. This is not however true for bats in MD. There are 10 species of bats that live in MD and all of them are insectivorous. In the U.S. statistically, more people are killed by lightning strikes and dog attacks than rabid bats. Not to say that bats, like many wild creatures, do not become pests when they move from their natural nesting habitats (caves and hollow trees) into urban locations (ex. roosting in attics or behind window shutters). Overall, bats are very beneficial organisms. Bats are an important component of the food chain and they provide beneficial services to people. They eat insects! Bats are the only mammals that can fly. Bats often appear to have erratic flight and sometimes may fly too close to a person for comfort on warm summer nights. They are actually going after insects flying near you, not after you! Bats navigate using echolocation, which means they emit high frequency wavelengths that bounce off of objects such as insects allowing bats to determine their size and location. These vocalizations are not heard by humans. The two most common bat species in MD are the little brown bat and the big brown bat.



Don Pfitzer, U.S. Fish and Wildlife Service

The little brown bat is a common insectivorous species in Maryland.

Photo: Don Pfitzer, U.S. Fish and Wildlife Service

Bats are very beneficial and provide biological control of insects that can become nuisance and economical pests in natural and urban and agricultural environments. Because bats feed within a few kilometers of their roosting site and return to the same roost every day, bats can play an important role in local suppression of agricultural and ornamental insect pests. The little brown bat often hide and rest during daylight hours in its day roosting habitat, and then around sunset they begin to hunt and feed for about the next 4-5 hours. Little brown bats may directly capture an insect in flight with its teeth, or it may use its wings and tail to scoop up the insect and then transfer the captured insect to its mouth. [Click here to see a video of bats catching insects.](#) There are numerous facts known as to what and how many insects bats consume. Bats can devour as much as 1/3 of their weight in flying insects every ½ hour! Impressive! They eat hundreds of different insect pests that include mosquitoes (eat more please), cucumber beetles, June beetles, stink bugs, leafhoppers, cicadas and cutworm and corn ear worm moths, in addition to many other insects during warm summer nights. One little brown bat has been estimated to eat about 1,200 mosquito size insects per hour. Big brown bat colonies normally consist of about 150 individuals and are known to reduce root worm populations by about 33 million on a farm in a summer season. Bats clearly play a beneficial role in preventing many “potential” insect pests from becoming pests.

Given their beneficial value, implementing measures to attract bats to your nurseries, golf courses, sod farms, etc. by providing bat habitat is a good idea! Incorporating bat houses into your locations is a great way to increase bat populations. Bat houses and all the accessories can be purchased (an internet search will help you find these) or you can make them yourself (an internet search can find directions on how to build them). Though this sounds easy bats are pretty particular about their houses. Temperature is critical for bats. Too hot

or too cold and they will leave. The exterior color of the house and ventilation slits can affect temperature. Sun exposure, the height of the house above the ground, and proximity to water and open areas are all very important. So do read up on this topic before jumping into it. Bats prefer open areas and areas with a nearby water source such as a pond, river, stream, and even backyard pools. It is also a good bat conservation practice to support non-crop habitats such as woodlands with wood edges and diverse tree species, ponds, and meadows. Because of the high beneficial service that bats provide it is worth the investment to enhance bat populations.

See the below resources for more information on bat houses (construction, placement, commercial sources) and attracting bats, and how to get rid of bats that are roosting in places you don't want them - such as your home.

UME Fact Sheet "Got Bugs? Get Bats" -

http://extension.umd.edu/sites/extension.umd.edu/files/_images/programs/hgic/Publications/non_HGIC_FS/FS791%20Got%20Bugs_Get%20Bats.pdf

Rutgers Fact Sheet "Ecological and Economic Importance of Bats in Integrated Pest Management" -

<https://njaes.rutgers.edu/fs1270/>

"Bats benefits for your garden" -

https://youtu.be/_RWBUIiUoDc

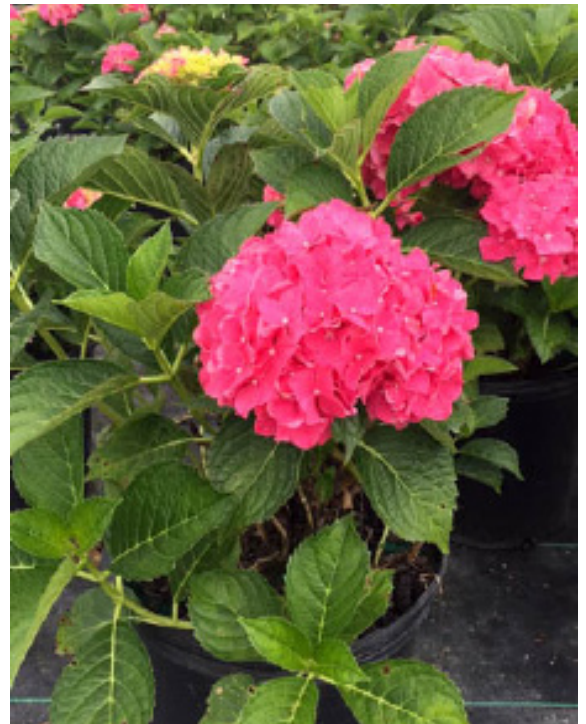
Bat Conservation International -

<http://www.batcon.org/>

Plant of the Week

By: Ginny Rosenkranz, University of Maryland Extension

During the MNLGA Field Day, I had the pleasure of seeing so many beautiful plants that it was hard to keep listening to the cool details of the updated irrigation systems, roof vents and plastic covers. One of the plants that stood out was *Hydrangea macrophylla* 'Glowing Embers', one of the big leaf hydrangea that offers beautiful and vibrant pink to red flowers. The compact plants grow 3 feet tall and 5 feet wide and are winter hardy in USDA zones 6-9. Plants grow best in rich, moist, but well drained soils with morning sun and afternoon shade. Soil pH affects flower colors of many *Hydrangea macrophylla* plants, the more acidic the soils (5.0-5.5) the bluer the flowers. An addition of lime brings the soil pH up to 6.0-6.5 and will cause the plants to produce more pink flowers. Soil pH doesn't seem to affect the flower color of 'Glowing Embers' as much as other cultivars. 'Glowing Embers' flowers bloom from July to August and start out white to lime green, then mature to bright pink to red. The 4-petaled sterile flowers are clumped together in an 8 inch rounded cluster, giving it the common name of mophead. The common name of big leaf hydrangea is very appropriate since the deep green waxy leaves can grow up to 4-6 inches long. Soil moisture must be consistent to maintain both the plant health and the flowers. All *H. macrophylla* produce their flower buds on the previous season's stems, so pruning must be done after the flowers are finished blooming and not in the early spring. Plants can be massed together in a shrub border or used as an accent plant to brighten up shady gardens. 'Glowing Embers' is also salt tolerant, and could be used near a walkway or driveway that gets de-iced in the winter months. Plant pests include bud blight, bacterial wilt, leaf spot, powdery mildew and aphids.



Soil pH seems to have less of an impact on the flower color of *Hydrangea macrophylla* 'Glowing Embers' than on other cultivars
Photo: Ginny Rosenkranz, UME

Degree Days (As of June 27)

Aberdeen, MD (KAPG)	1088	Annapolis Naval Academy (KNAK)	1504
Baltimore, MD (KBWI)	1398	College Park (KCGS)	1351
Dulles Airport (KIAD)	1412	Frederick (KFDK)	1342
Ft. Belvoir, VA (KDAA)	1482	Greater Cumberland Reg (KCBE)	1295
Gaithersburg (KGAI)	1350	Martinsburg, WV (KMRB)	1290
Natl Arboretum.Reagan Natl (KDCA)	1651	Salisbury/Ocean City (KSBY)	1445
St. Mary's City (St. Inigoes, MD-KNUI)	1527	Westminster (KDMW)	1422

This week, the site for degree days was not functioning as it has been. The steps below might not work at this time. We are checking into the situation. We are now using the [Weather Underground](#) site for degree days. It changes some of the locations available.

1. Enter your zip code (not all locations are included, check nearest weather station to your site) and hit enter
2. Click the "custom" tab/button below the date
3. Enter the start date below the word "from" (ex. Jan. 1) and the end date below the word "to" (current date)
4. Hit the get "history" button
5. Read your growing degree days (base 50) in the 'Sum' column (=Cummulative DD to date for the year)

CONFERENCES

Turfgrass Research Field Day July 18, 2018

- 12:30 – 1:00 Registration and Posters
1:00 – 4:00 Walking tour Presentations: Selecting

Improved Varieties
Cultural and Chemical Management of
Weeds and Disease
New Research on Implementing
Biological
Control

- 4:30 Dinner at Facility

Location: UMD Turf Farm, College Park, MD

The following credits are available for Recertification.
MD Pesticide Applicators - 8 Credits: Categories
3A(Ornamental-Exterior), 3C (Turf), 6 (Right of Way
and Weed), and 10(Demonstration and Research)
MD Professional Fertilizer Applicator - 2 credits
DE Pesticide Applicator - 4 Credits Categories
PA (Core or Private Applicator) and 03 (Turf and
Ornamental)

To register:

[https://psla.umd.edu/field-day#overlay-context=about/
turfgrass-field-day-registration](https://psla.umd.edu/field-day#overlay-context=about/turfgrass-field-day-registration)

PGMS Green Industry Field Day

July 19, 2018

Location: American University, Washington D.C.

Contact: info@pgms.org

Cut Flower Operation Tour

September 12, 2018

Location: St. Mary's County (Loveville and nearby
sites)

Details will be available later in the summer

New Plants for Nursery Growers

October 25, 2018

Location: Country Springs Nursery, Woodbine, MD

Details will be available later in the summer

Conference information is posted at:
<http://extension.umd.edu/ipm/conferences>

2018 MDA Pesticide Recycling Program

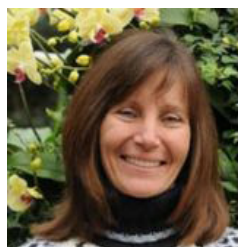
The Maryland Department of Agriculture is offering the empty plastic pesticide container recycling program in 2018. You can view the locations and requirements in the [online brochure](#).

Montgomery County is a new location this year and will also accept clean containers from Prince George's County as well as D.C., as they do not have a collection.

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