TPM/IPM Weekly Report EXTENSION for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture

August 30, 2024

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Beneficial of the Week:

A fungi that kills seed corn maggots

Weed of the Week: Annua lespedeza (Kummerowia

striata)

Plant of the Week: Magnolia grandiflora 'Little Gem'

Conferences Registration links added

Pest Predictive Calendar

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 sqill@umd.edu

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Disease Information: David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols,

Nathan Glenn, and Mark Townsend (UME Extension Educators)

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)

Fall Armyworms – Watch for Them in Late August

By: Stanton Gill

Back in 2020 and 2021, we had a major outbreak of fall armyworms in lawns. Fall armyworm is a native pest to North America. The weather has been perfect for it to flourish in August. The fall armyworm (FAW, *Spodoptera frugiperda*) is a destructive pest that can feed on 80 different crop species, including corn and more importantly to the horticulture industry, turf. It clearly prefers



Fall armyworm caterpillar. Photo: Frank Peairs, Colorado State University, **Bugwood.org**

grasses. This native pest has been exported to other countries.

Back to the lawn situation. Most of the larvae pictures we are receiving are later instar larvae, which tend to be difficult to control. The later instar larvae have distinct inverted "Y" pattern on the head capsule. The larvae have 6 instar stages. In the later instars, the larvae have 4 black spots on the last two abdominal sections with setae (hairs) projecting from the center of the black

spot. Young, early instar larvae are greenish in color and have a black head capsule. By the second instar, the larvae head capsule becomes more orange.

They will be pupating very shortly. The FAW normally pupates in the soil at a depth 2 to 8 cm. The larva constructs a loose cocoon by tying together particles of soil with silk. The cocoon is oval in shape and 20 to 30 mm in length. If the soil is too hard, larvae may web together leaf debris and other material to form a cocoon on the soil surface. The pupa is reddish brown in color, measuring 14 to 18 mm in length and about 4.5 mm in width. Duration of the pupal stage is about 8 to 9 days during the summer, but reaches 20 to 30 days during cooler weather.

Spider Mites Are Very Active on Winged Euonymus

By: Stanton Gill

David Clement, Karen Rane, and I were in New Carrollton (Prince George's County), on Wednesday, near the Carrollton Metro stop. We saw long rows of hedges made up of winged euonymus. Just about every plant was heavily damaged from twospotted spider mites. With the excessive high temperature on Wednesday, they were very active on the undersides of the foliage.

This summer has been perfect for spider mite populations to flourish. For the plants we observed, it was too late to prevent heavy damage. We saw whole sections where over half to three quarters of the plant were defoliated.

The aftermath of this extremely hot summer is going to be felt with many plants dying from extremely dry soils and hot weather conditions. It is very hard to keep plant material adequately watered and treated during these extreme weather periods.



The hot, dry summer has provided ideal conditions for twospotted spider mites to flourish and cause heavy yellow, stippling damage on plants.

Photo: Suzanne Klick, UME

Corrections: Mantid food and Yellow Nutsedge Photo in August 23rd IPM Report

Gaye Williams, MDA, pointed out the photo of the wing on the tree trunk of the insect eaten by the mantid was not that of a spotted lanternfly. Gaye noted that it appears to be a large milkweed bug.

Judy Fulton, EcoPlant Consulting, and Jason Traband, BayLand Consultants & Designers, Inc., pointed out the photo in last week's report weed article was not the seed head of yellow nutsedge, but a plant in the *Carex* genus, likely sallow sedge.

The captions and photo in last week's report that is posted on-line have been corrected.

Katydid Eggs

Marie Rojas, IPM Scout, found katydid eggs on her porch railing this week. Katydids are mainly nocturnal. Many species are ominvores; some species only feed on insects. Katydids will be active into the fall and overwinter in the egg stage.

Paula Shrewsbury, UMD, has more details on katydids in the <u>September 24, 2021 IPM Report Beneficial of the Week</u> article.



Look for lines of these flattened katydid eggs on woody stems; they can also be found on objects such as on the railing in this photo.

Photo: Marie Rojas, IPM Scout

European Hornets

By: Stanton Gill

European hornets are active in late August and they are hungry. We are getting reports that they are feeding on Asian pears, apples that are early ripening, and figs. For the Asian pears and apples, you can have your customers cover the fruit with fine mesh bags. It seems like a lot of work, but there are not many alternatives unless you harvest the fruit as soon as it is harvestable and before the hungry wasps feed on the fruit.

With figs, they generally feed on them if you leave the fig on the plant too long into the ripening process. You have to check figs on a daily basis and pull the ripe figs as fast as you can before the wasps get to them. Once a fig is ripe for picking, every insect that loves sugar is going to show up to help themselves to harvest the fruit. That is not what most people want.



European hornets feed on the sap of woody stems as well as fruit.

Photo: Suzanne Klick, UME

Crapemyrtle Bark Scale (CMBS) Update

By: Sheena O'Donnell, UME

Finally, we have a newly established crapemyrtle bark scale population on some of our trees at the research center in Ellicott City. There are many later instars as well as earlier, recently settled stages. In the vicinity, there are also many lady beetles and other predatory insects, so we will keep an eye out for their activities involving the CMBS. As of now, there are ants feeding on this population's honeydew and lacewing eggs found on nearby leaves of the same tree. These interactions could potentially give us some kind of a foresight as to how CMBS may end up interacting with Maryland's environment.



Crapemyrtle bark scale cover removed to show stages present at this time on plants at the research center.

Photo: Sheena O'Donnell, UME



The current crapemyrtle bark scale population on one of the plants here at the research center. Photo: Sheena O'Donnell, UME

Hibiscus Flea Beetles

By: Stanton Gill

Heather Zindash, The Soulful Gardener, sent in pictures of hibiscus flea beetles feeding on foliage of *Hibiscus moscheutos* 'Disco Belle Mix' in D.C. this week. Mainspring or Altus should provide good levels of control.



Flea beetles and their damage on *Hibiscus moscheutos* 'Disco Belle Mix'.

Photo: Heather Zindash, The Soulful Gardener

Leopard Moths

By: Clover Davis, UME Intern

These two similar-looking moths have entirely different impacts on landscape and growing operations. The giant leopard moth (*Hypercompe scibonia*) is native to the Americas from Ontario down to Columbia. The caterpillars are attracted to unripe vegetables and broccoli flowers, but feed on a wide variety of broadleaf plants from maple and citrus trees to honeysuckle and lettuce. Despite their many hosts, they are of no economic importance and require no control. The wood leopard moth (*Zeuzera pyrina*) is native to Europe and Asia where it is a known pest of fruit and landscape trees. It was introduced to the East Coast of the US in the 1870s. This moth affects plum, pear, and apple fruit trees, as well as ornamental trees such as ash, oak, elm, willow, and beech. The caterpillars burrow through the stems of their host and feed on the living tissue, leaving behind frass resembling sawdust. This feeding results in leaf browning, shoot death, branch dieback, and a greatly reduced fruiting capacity. After overwintering for 2 or 3 years, the adults will emerge from June through August to mate and lay new eggs. Natural control consists of pruning the affected branches and burning them to destroy the eggs and larvae. If the adults are present, chemical control can be used to prevent them from laying eggs. The adults of these two species can be difficult to distinguish; look for the closed black spots on the invasive and open black rings on the native. The larvae are more distinct; the invasive is a tiny off-yellow worm with a black head and black flecks, while the native is a huge black caterpillar with red bands and shiny black bristles.





Wood leopard moth (Zeuzera pyrina) caterpillar within the stem of a dogwood.





Giant leopard moth (*Hypercompe scribonia*) caterpillar and moth. Photos: Suzanne Klick, UME

Wood leopard moth (*Zeuzera pyrina*). Photo: Esmat M. Hegazi, University of Alexandria, Bugwood.org

Cottonwood Petiole Galls

Elizabeth Harden found cottonwood petiole galls on August 28. These galls are caused by aphids which feed on the leaves of *Populus* spp. in spring and cause these galls. After adult aphids emerge in June and July, they spend time feeding on the roots of cabbage before moving back to their woody plant host. No control is necessary. For more details on this aphid's life cycle, see the US Forest Service article on Petiolegall Aphids.





A cottonwood petiole gall broken in half to show what is within the gall at this time of year. The winged aphids leave these galls in June and July.

Photos: Elizabeth Harden

Reporting Sightings of Spotted Lanternfly to the Maryland Department of Agriculture

By: Jessica Boyles, MDA

As many of you may know, the Maryland Department of Agriculture is running a spotted lanternfly program. We are tasked with management, treatment, outreach, and survey of spotted lanternfly within our state. One important aspect of our program is our online reporting tool. We ask anyone and everyone to report all sightings of spotted lanternfly by following this link: Report a Spotted Lanternfly Sighting in Maryland. The data that you submit is vital to our program and is extremely helpful.

We get around 15,000 reports from Maryland residents per year. This data is one source we use to track population sizes, determine where we allocate our limited resources, and discover areas with potentially unreported infestations. Though every report we receive is helpful, we would be grateful for any tips we receive from this group. Our team is small and to have more trained eyes helping to find spotted lanternfly would be significant. We also believe this collaborative effort should be rewarded with a collaborative map.

This year The Maryland Department of Agriculture's Spotted Lanternfly Team would love to create a heat map accessible to the public using the data we gather from our online reporting tool. We are frequently asked where spotted lanternfly infestations are heaviest in Maryland, and we would like to make that information more readily available to everyone. This map would likely come out just before hatch next April, after we quality control the reported sightings. We thank you in advance for your participation. If you have any questions concerning this tool or other aspects of our program you may contact us at dontbug.md@maryland.gov."

Spotted Lanternfly (SLF)

By: Stanton Gill

Not a lot of change from Paula's report last week. We are seeing males mating with females in the Ellicott City area. I agree with Paula we should start to see females laying egg masses fairly soon. Bill Stocker sent in this picture of adult spotted lanternflies hanging out on a metal post in Columbia, MD. He also noted large accumulation of adults on 5 red maple trees in Columbia. They appeared to be feeding and accumulating in large numbers on the trunks of the red maples.

We set up a small trial to evaluate the use of 1% insecticidal soap and 2% horticultural oil in small chambers with 30 adults in each. We had 30 as untreated control in a separate chamber to make sure the confinement did not impact the insects. Within 2-3 minutes of the soap application, the SLF adults flipped on their backs and died. The 2% horticultural oil had the same impact, but it took 5-10 minutes before they died. The untreated control SLF continued to move about their cage for the rest of the day.

Next week our student technicians will place netted bags on ailanthus branches and place 10-20 spotted lanternfly adults into the netted bags. We will try treating the SLF in the netted bags on the branches and then close the bags and see if this works when SLF are treated on branches.

We are looking at the safest materials that your homeowners could potentially use on adult spotted lanternflies to deal with large clusters on lower trunks. Understand soap and oil is merely a contact material and has no residual impact on SLF, but it may provide something your customers could apply safely in home landscapes to knock down large accumulations of adults.



Spotted lanternfly adults covering posts along a Columbia path. Photo: Bill Stocker



A lot of sooty mold is growing on the honeydew from SLF that has dripped onto the ground. Photo: Mark Schlossberg, ProLawn Plus, Inc.

Digger Wasps: Scolia dubia

We are seeing *Scolia dubia* digger wasps nectaring at flowers at this time of year. Female wasps will fly over turf and find Japanese beetle and green June beetle grubs on which to lay eggs.



The yellow spot on the abdomen makes this digger wasp easy to identify as *Scolia dubia*. Photo: Suzanne Klick, UME

Hickory Peach-haired Gall Midge

Dave Freeman, Oaktree Property Care, found hickory peach-haired galls that are caused by midges. The gall midges drop to the soil to pupate. In the spring, the adults emerge from the soil and lay eggs on the developing hickory buds. These galls do not impact the overhall health of the tree, so control is not necessary.



These hickory peach-haired galls are caused by midges.

Photo: Dave Freeman, Oaktree Property Care

Hail Storm in the Area

Paul Wolfe, Integrated Plant Care, reported that there was a hail storm in Poolesville on August 29. The golf-sized hail caused damage to foliage and cars.

Robber Fly

Dave Freeman, Oaktree Property Care, found this robber fly, the red-footed cannibal fly, feeding on a bumble bee. Robber flies are predacious as adults and larvae. They are generalist predators that will feed on insect pests such as brown marmorated stink bugs and pollinators, such as this bumble bee. Robber flies are very proficient when pursuing their prey.



A robber fly is feeding on a bumble bee. Photo: Dave Freeman, Oaktree Property Care

Feather-legged Fly

Dave Freeman, Oaktree Property Care, found this feather-legged fly, *Trichopoda pennipes*, this week. This tachinid fly is another generalist predator. Its main prey are squash bugs and southern green stink bugs. Female adults lay small white to gray eggs on the stink bug or squash bug. This fly overwinters in the larval stage in its overwintering host.



Adult feather-legged flies feed on nectar.

Photo: Dave Freeman, Oaktree Property Care

Beneficial of the Week

By: Paula Shrewsbury

Why are those dead flies stuck to the tips of tree branches?

Recently, a colleague was sent a picture of numerous dead flies on the tips of branches of a diversity of plants in the same location. We often see this during wet springs. Moist, humid conditions are favorable for pathogens known as entomopathogens that attack insects. These entomopathogens provide biological control of certain pest insects such as chinch bug, gypsy moth, seed corn maggot, and others.

The dead flies in the picture were adult seed corn maggot. The seed corn maggot is a pest of many field and horticultural crops such as seeds and seedlings of soybeans, corn, peas, onions, potatoes and beans. Early in spring adult flies emerge from pupal cases in the soil that have survived the winter months. The flies feed on nectar from spring-blossoming plants and lay

P.M. Shrewsbury, UMD

Dead seed corn maggot adults, killed from an insect killing fungi (entomopathogen), on the tip of a maple branch. Ending their life at an elevated point on a plant ensures greater dispersion of the fungal spores. Note the fine fungal mycelium emerging from the flies, and the yellow, discolored abdomens full of fungus.

Photo: P.M. Shrewsbury, UMD

eggs in organic-rich soils. The eggs hatch and the translucent white larvae, called maggots, search for food. These maggots usually consume decaying organic matter, but when a cool wet spring delays germination and development of crops, seed corn maggots feed on seeds and the roots of seedlings still in the soil thereby creating significant injury. Seed corn maggot has multiple (4-5) generations per year. While a cool wet spring is favorable for larvae, as temperatures warm risk of infection increases for adult seed corn maggot flies. Although not visible to us, there are infective spores of a fungus called Entomophthora muscae on the vegetation of many plants. As the fly lands on vegetation, the tiny fungal spores attach to the surface of its exoskeleton (skin). When just the right temperature and humidity come together, the fungal spores germinate and the fungal hyphae penetrate through the exoskeleton of the fly and establish what will ultimately be a lethal infection. Once inside its host, the fungus penetrates the nervous system of the insect turning it into a fly zombie. Entomopthora manipulates the fly's behavior in several ways – all which benefit the survival and spread of the fungus. Research conducted on a related species of fly, the house fly, found that infected female flies became highly attractive to males. In the process of male flies "hooking up" with these infected females, spores on the



A dead seed corn maggot showing signs of infection by the fungal pathogen, *Entomophthora muscae*.

Photo: M.J. Raupp, UMD

surface of the female fly infect the male who unknowingly helps spread the infection – an example of an insect STD! In a final act of behavior manipulation, *Entomophthora* causes the "mostly dead", but still mobile, fly to move upward and outward on the plant (not the normal behavior of uninfected flies) until it reaches its final resting spot at the tip of a leaf or branch (see image) where it goes from being mostly dead to dead. From this elevated location, the fungus explodes from the exoskeleton of the fly and spores shoot into the air. The elevated height allows for better distribution of the spores and therefore increased likelihood that other flies will become infected. When your clients ask you what those dead flies are on their plants you have an interesting story to share with them, including the biological control service the fungus provides.

Weed of the Week

By: Nathan Glenn, UME-Howard County

Annual lespedeza (Kummerowia striata (Thunb.) Schindl.)

Annual lespedeza, *Kummerowia striata*, is a drought-resistant summer annual legume that can be very useful for pasture and hay fields. However, in turf and landscape it can prove to be a troublesome weed. Annual lespedeza—also known as common lespedeza or japanese clover—is a common summer annual leguminous weed of low maintenance turf, roadsides, pastures, and disturbed areas that outcompetes other turf species in the heat and drought of the summer. It is found throughout the eastern United States as far north as New York. It has prostrate to ascending, branched and wiry stems, with hairs that point toward the base of the plant. Older stems become woody and hairless with age. It has alternate trifoliate compound leaves where the leaflets are oblong to elliptical, 1-2 cm long and about ½ as wide, with entire margins and parallel veins. The 3 leaflets arise from the same point and are sessile or on very short petioles. Annual lespedeza flowers from early summer through fall. Flowers are pea-like, purple, pink, white, and small (2-7mm long). They have 5 petals and sepals which are fused at the base to form a cup. The fruits are 1-seeded, 3-4mm long legumes. Seeds are 2mm long, brown, remain in the pods, and roughly kidney-shaped. Annual lespedeza reproduces solely by seeds that germinate in spring through the summer. The stems die after the first frost, but woody stems often persist through the winter.



Photo 1: Annual lespedeza in a lawn setting.



Photo 2: Annual lespedeza woody stems in late summer.

^{*}Photos from University of Georgia Extension website: https://extension.uga.edu/publications/detail.html?number=B1395&title=lespedeza-identification-and-control-in-turfgrass#:~:text=Lespedeza%20striata



Photo 3: Leaves of sericea lespedeza (top) and annual lespedeza (bottom).

Cultural control

- Deep and infrequent irrigation encourages turfgrass root development and improves desirable species' ability to compete against annual weeds such as Annual lespedeza. The best way to irrigate in the summer months is to withhold irrigation until the desirable turfgrass species shows the initial drought stress symptoms. This will reduce soil moisture for potential weed infestations. Overwatering can often be an invitation to lespedeza and other annual weeds to invade.
- Soil compaction can be a problem that allows annuals like lespedeza to compete. Turf managers can aerate lawns during a time when the desirable species is actively growing and will have enough time to fill in the voids left behind by the aerator. For example, tall fescue turf should be aerated in late summer/early fall (once the grass has recovered from the summer dormancy) so that annuals are least likely to be able to compete with the tall fescue grass.
- In addition, make sure to match your mowing height and frequency to the desirable species you are managing. Raising the mowing height during peak germination of annual weeds, like lespedeza, can help the turfgrass outcompete those invaders. Another common issue is mowing frequency and timing. Mowing at greater heights and more frequently during times of vigorous growth can help prevent scalping that can enable weed establishment. On the other hand, be careful about mowing too low right before a time of slow growth or dormancy.

Chemical control

☐ There are a few options for preemergence control, and a number of options for postemergence control. Most options may need multiple applications, but be careful about applying herbicides when the desirable turfgrass species is under significant stress or dormancy.

Plant of the Week

By: Ginny Rosenkranz

Magnolia grandiflora or southern magnolia can grow 60-80 feet tall and 30 to 50 feet wide, which is often too large a plant for many landscapes. Fortunately, there is a wonderful dwarf cultivar Magnolia grandiflora 'Little Gem' that grows 15-20 feet tall and 8-10 feet wide. 'Little Gem' thrives in full sun to part afternoon shade and prefers to grow in organically rich, moist, well drained soils Like many of the Magnolia grandiflora cultivars, 'Little Gem' is moderately salt tolerant, growing comfortably and near roads that get salted during snowy weather. Plants





near the ocean and tidal rivers Magnolia grandiflora 'Little Gem' in the landscape.

Photos: Ginny Rosenkranz, UME

are cold tolerant in USDA zones 7-8 and only slightly tolerant of urban pollutions. Plants are upright, multistemmed, dense pyramidal evergreens with glossy, dark green leaves that are bronze brown on the underside. The fragrant 3-6-inch waxy white flowers grow at the tips of the branches spreading out and blooming from spring into the late summer. Magnolias are pollinated by beetles who were around before bees were, so the petals are thick enough to handle the weight of the larger pollinators. The light lemony scented flowers mature into cone-like spherical fruiting clusters in autumn. When the fruiting clusters mature, they release individual red-rose colored seeds that are suspended on slender threads. 'Little Gem' fits into small landscapes and courtyards as a specimen, and can also be used in a tapestry hedge or as a screen. The bright red seeds are enjoyed by native birds in the autumn into winter. Insect and disease pests can include scale and deer browsing. Although the leaves are evergreen, they do fall in the early spring when the new foliage emerges. The leaves can be left as a mulch or removed if necessary. Pruning should be accomplished in spring or early summer to allow the plants to heal the wound while actively growing.

Pest Predictive Calendar "Predictions"

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (**DD**) this week range from about **2856 DD** (Martinsburg) to **3801 DD** (St. Mary's City). The <u>Pest Predictive Calendar</u> tells us when susceptible stages of pest insects are active based on their DD. Therefore, this week you should be monitoring for the following pests. The estimated start degree days of the targeted life stage are in parentheses.

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Fern scale – egg hatch / crawler (2<sup>nd</sup> gen) (2813 DD)
White prunicola scale – egg hatch / crawler (3<sup>rd</sup> gen) (3238 DD)
Banded ash clearwing borer – adult emergence (3357 DD)
Tuliptree scale – egg hatch / crawler (3472 DD)
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See the <u>Pest Predictive Calendar</u> for more information on DD and plant phenological indicators (PPI) to help you better monitor and manage these pests.

Degree Days (as of August 28)

Annapolis Naval Academy (KNAK)	3390
Baltimore, MD (KBWI)	3420
College Park (KCGS)	3409
Dulles Airport (KIAD)	3445
Ft. Belvoir, VA (KDA)	3433
Frederick (KFDK)	3363
Gaithersburg (KGAI)	3182
Greater Cumberland Reg (KCBE)	3062
Martinsburg, WV (KMRB)	2856
Millersville (MD026)	3238
Natl Arboretum/Reagan Natl (KDCA)	3799
Perry Hall (C0608)	3119
Salisbury/Ocean City (KSBY)	3137
St. Mary's City (Patuxent NRB KNHK)	3801
Susquehanna State Park (SSQM2)	3170
Westminster (KDMW)	3523

Important Note: We are using the <u>Online Phenology and Degree-Day Models</u> site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

2025 Advanced Landscape IPM PHC Short Course

This is a recertification short course for arborists, landscapers, IPM consultants, horticulturalists, professional gardeners, and others responsible for urban plant management. The course lectures will be held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 6 - Thursday, January 9, 2025 from 8:00 am - 3:00 pm

Lab dates: Monday, January 6 - Thursday, January 9, 2025 (space limited) from 3:30 pm - 5:30 pm

Course and registration information: https://landscapeipmphc.weebly.com/ Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

Conferences

September 11, 2024

MAA & MOSH Present: 9th Annual Day of Safety and Health

Howard County Fairgrounds, West Friendship, MD

https://www.eventbrite.com/e/howard-county-event-maa-mosh-present-days-of-safety-health-tickets-997949803727

September 18, 2024

Urban Tree Summit (Casey Trees and Montgomery Parks)

Location: Silver Spring Civic Center. To register please visit Urban Tree Summit or https://urbantreesummit.org/

September 25, 2024 (12:30 p.m. to 3:00 p.m.)

IPM Scouts' Diagnostic Session Location: CMREC, Ellicott City

September 25, 2024

MAA & MOSH Present: Eastern Shore Day of Safety and Health University of Maryland Eastern Shore, Princess Anne, MD

 $\underline{https://www.eventbrite.com/e/eastern-shore-event-maa-mosh-present-days-of-safety-health-tickets-997952892967}$

October 2, 2024

2024 Truck & Trailer Safety Seminar - Hosted by FALCAN Urbana Fire Hall, Urbana, MD https://truckandtrailer24.eventbrite.com

October 9, 2024

MNLGA Retail Day

Location: Homestead Gardens, Davidsonville, MD

October 16, 2024

Cut Flower Program

Location: Central Maryland Research and Education Center, Ellicott City, MD

December 5, 2024

Tech Day: Focus on Solar Location: CMREC, Ellicott City

December 12, 2024

2024 Cultivating Innovation in Maryland's Agriculture and Technology Conference Location: Crowne Plaza, Annapolis, MD (Program and registration information)

Commercial Ornamental IPM Information http://extension.umd.edu/ipm

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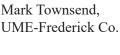
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