UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **September 6, 2024**

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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 sgill@umd.edu

Coordinator Weekly IPM Report:
Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

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

Improving Your Diagnostic Skills in Disease and Insect IPM

Bring your disease and insect damaged plants to the IPM diagnostic session on September 25, 2024 from 1:00 – 3:00 p.m. This will be held in the Central Maryland Research and Education Center at 4240 Folly Quarter Road, Ellicott City, MD.

David Clement, Karen Rane (retired), and Stanton Gill, of the University of Maryland Extension will help guide you through the major insect and disease diagnostic process using the new Entomology and Pathology lab.

Bring samples from your nursery, greenhouse, or customers' landscape to this hands-on session.

This session offers 4 credits for Maryland pesticide recertifcation for Categories 3A, 3B, 3C, and PVT.

Go to our IPMnet Conferences page for a link for information and to register.

October 16, 2024 Cut Flower Program

Location: CMREC, 4240 Folly Quarter Road, Ellicott City, MD 21042

Go to our IPMnet Conferences page for a link for information and to register.

Cool Weather Finally Arrives in Maryland

By: Stanton Gill

The cool weather that blew in Labor Day Monday was very welcome. It was ridiculously hot this summer, and the rains have been plentiful in some areas in August and completely dry in other areas. We continue to see the aftermath of the heat with scorched foliage common in many landscapes. With the cool weather, pansies are being moved into the landscape as we move into mid-September. In many urban landscapes, this is providing a “salad bowl of greens” for deer populations. We see many plantings that need small wire supports combined with bird netting to keep deer from mowing down the pansy plantings.

Camphor Beetles

John Dwyer, Shreiner Tree Care, pulleda camphor beetle from Japanese maple 'Bloodgood'. This beetle shows up in stressed trees.

Camphor beetles found in sweet bay in 2018.
Photo: Suzanne Klick, UME

Arborvitae Dying

By: Stanton Gill

Paul Wolfe, Integrated Plant Care, and others are reporting that they are seeing large arborvitae trees dying. No one reports seeing any apparent disease or insect problems. It looks like it is tied into the hot weather and the drought.

Pawpaws Starting to Ripen

By: Stanton Gill

Pawpaws have been the very popular since they are native fruit and well adapted for the Maryland climate. This week in central Maryland, early varieties of pawpaws started to ripen. 'Shenandoah' and 'PA Sunflower' both have many fruits reaching prime harvest states. Late varieties such as 'Wabash' are still hard like a rock.

When harvesting pawpaws, you have to realize all of the fruit on a tree does not reach the prime harvest state at the same time. You should check the pawpaw fruit each day and slightly squeeze it. It should feel like a water balloon with a slight give to the skin. If you push in the skin slightly and a dimple remains, it is ready for harvest. If you pick the pawpaw too soon, then it remains hard as a rock and really does not improve any. The harvest timing takes a little practice to get it at the prime state. When it is slightly soft, like a water balloon, handle it very gently, since it easily bruises. Don't rush pawpaw picking season! Leave the fruit on the tree until it softens for maximum flavor. As to how long you will be harvesting pawpaw fruit, again, it depends on the cultivar, location, and weather conditions.

Over Mulching

By: Stanton Gill

I am always amazed to see pictures like the ones we feature this week. Not sure who is not listening to the message – Making mulch volcanos is not healthy for trees and shrubs. I dug down into these piles and they were over 6 – 8 inches deep. Maybe they feel it is healthy for a tree to have gobs of mulch piled around trees, but it is not.

Mulch volcanoes hold moisture against the bark, inviting rot, pests, rodents, and disease.
Photos: Stanton Gill, UME

Defoliated Cherry Trees

By: Stanton Gill and David Clement

We are receiving pictures of ornamental cherry trees that are defoliating in early September. Cherry shot-hole disease is a "catch-all" phrase referring to the symptom of tiny round holes (about ⅛” in diameter) in leaves of cherry trees and cherry laurel shrubs (*Prunus* spp.).

The two pathogens that commonly produce these symptoms are bacterial leaf spot caused by the bacterium *Xanthomonas pruni* and cherry leaf spot caused by the fungus *Blumeriella jaapii.*

Both diseases are favored by warm, wet spring weather and also favored by warm and wet August weather. The rain carries the pathogens onto the leaf petioles which girdles the leaf and results in early leaf droppage. There is not much you can do at this time of year, but you can explain to your customers it is tied into the weather.

Cool Nights and Sunny Days: Perfect for Powdery Mildew

By: Stanton Gill and David Clement

With the sunny days and cool nights, just enough dew will cover foliage making conditions perfect for powdery mildew to show up. If your customers have powdery mildew susceptible dogwoods, euonymus, monarda, and phlox, then now is the time to apply preventative fungicides.

The best method of control is prevention. Avoiding the most susceptible cultivars, placing plants in full sun, and following good cultural practices will adequately control powdery mildew in many situations. Some ornamentals do require protection with fungicide sprays if mildew conditions are more favorable, especially susceptible varieties of rose and crape myrtle. Crape myrtles with Native American names such as ‘Hopi’, Catawba’, and ‘Cherokee’, were developed by breeders at the National Arboretum and have resistance to powdery mildew. Disease resistant monardas include: ‘Marshall’s Delight, ‘Blaustrumph’ and ‘Colrain Red’. A powdery mildew resistant phlox includes one that was found by Richard Simon, Bluemount Nursery (Monkton, MD), and named ‘David’. 'Jeana' is another option. There is an article by Richard G. Hawke from the Chicago Botanic Garden on *P. paniculata* cultvars that includes more options for powdery mildew resistant cultivars.

Leafminer on Inkberry

Natalie Bok, Good’s Tree and Lawn Care, found active leafminers on inkberries in New Cumberland, PA this week. Leafminers overwinter in the larval stage. If leaves drop prematurely, remove them from the area to reduce the source of a future infestation. Look for pupation and adults next spring. The leafminers are not going to affect health of the plant. If damage is high, you can use a soil drench of dinotefuran in the spring.

Inkberry leafminer overwinters in the larval stage. Photo: Natalie Bok, Good's Tree and Lawn Care

Spotted Lanternfly (SLF) Update

By: Paula Shrewsbury

SLF adults are active and abundant in many locations. Adult females are larger than males, with a set of red valvifers at the tip of their abdomen (seen from the underside). Most females have swollen abdomens that are yellow with thick black stripes which indicate they are full of eggs. In the field monitoring SLF this week, most of the females had eggs in their abdomens. I reviewed research that looked at SLF phenology and degree day (DD) associations with particular focus on SLF oviposition. I found that in Pennsylvania, first oviposition occurred around 3,062 DD, and peak oviposition at 3,322 DD. If you look at the report on DD accumulations at the end of this newsletter, it indicates that DD accumulations in the area range from 2,993 DD (Martinsburg WV) to 3,997 DD in St. Mary's City. I would expect that some of you might see new egg masses soon, if not already. Keep your eyes open for the eggs. If you see **SLF egg masses**, please contact Stanton Gill (sgill@umd.edu) and me (pshrewsbury@umd.edu) and let us know where and on what host plant / structure you see the egg masses.

Spotted lanternfly female with her abdomen swollen and full of eggs.
Photo: S. Muller, MD Biodiversity Project

Egg masses of spotted lanternfly laid last November (2023). Note that some are covered with a protective covering of a white-grey putty-like material, while other was not covered and you can see the distinct rows of eggs.
Photo: P.M. Shrewsbury, UMD)

TT-77 Recommended Turfgrass Cultivars Publication Now Available

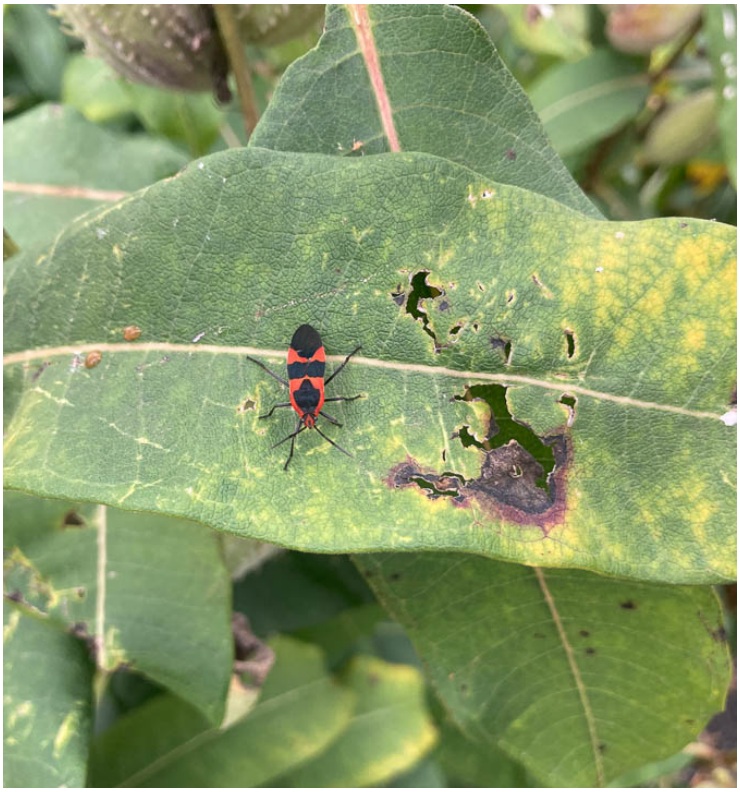
By: Geoff Rinehart, Institute of Applied Agriculture

With the arrival of cooler weather this week, it's looking like lawn overseeding and renovation season is under way. The University of Maryland coordinates with Virginia Tech and conducts several trials identifying the top varieties that have performed well in our area. The Maryland-Virginia recommended list (Publication TT-77) has been recently updated and is available on the Maryland Turfgrass Council website (mdturfcouncil.org) under the "Maryland Extension Publications and Resources" tab. Utilizing these improved varieties to incorporate during overseeding will help build more stress tolerant lawns.

Cultivar evaluation helps to identify disease tolerant and disease prone varieties.
Photo: Geoff Rinehart, IAA

Milkweed Bugs

Elaine Menegon, Good's Tree and Lawn Care, found large milkweed bugs (*Oncopeltus fasciatus*) on milkweed in Lancaster, PA this week. This species is an herbivore. There is another orange and black bug found on milkweeds that is called the small milkweed bug (*Lygaeus kalmii*). It feeds on both plants and insects. Milkweed bugs are most numerous when milkweeds go to seed.

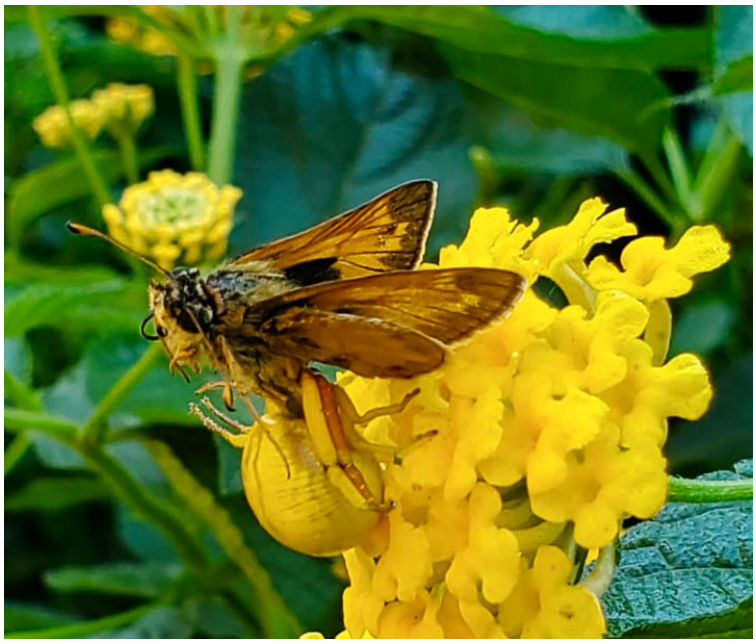


A large milkweed bug adult.
Photo: Elaine Menegon, Good's Tree and Lawn Care

A small milkweed bug adult on *Asclepias tuberosa*.
Photo: Suzanne Klick, UME

Crab Spider

Carlos Ruiz, Oaktree Property Care, found a crab spider on a lantana flower in Fairfax, VA. The spider was able to catch a skipper butterfly for its next meal. Crab spiders are 'sit and wait' or ambush predators. They often are well camouflaged on flowers and wait until prey insects come to the flower, and that is when the spider grabs the insect. For more information, see Paula Shrewsbury's article on crab spiders in the Sept. 18, 2020 IPM Report.



Crab spiders are often well camouflaged on a flower and then sit and wait to grab prey, like this skipper butterfly, that comes close to it.
Photos: Carlos Ruiz, Oaktree Property Care

Beneficial of the Week

By: Paula Shrewsbury

Ambush bugs: another "sit and wait" predator

Goldenrod is in bloom and a great plant to find ambush bugs. Ambush bugs are a group of predatory true bugs (Order Hemiptera: Heteroptera) that belong to the family Reduviidae (same as assassin bugs) and subfamily Phymatinae. There are about 30 species of ambush bugs in North Amercia that vary in their appearance and size, and the type of plant they use as there foraging habitat. They usually camouflage very well with their host, in particularly the flowers. There is one generation a year. Overwintering is in the egg stage from eggs laid on the stems of flowering plants last fall. In the spring, nymphs hatch and begin hunting for prey. They complete multiple molts during the season and by now, most ambush bugs are in the adult stage (~1/2" in length). Males are smaller than females, and will often be seen riding on the

The yellow and brown patches of color and irregular outline of the body of this ambush bug helps it to camouflage very well within the golden rod flowers, where sits and waits until an unsuspecting victim comes too close and becomes its next meal.
Photo: M.J. Raupp, UMD

back of the females while they continue to feed. This behavior is called guarding and is a way to ward off other males, but the males also take advantage of the fact that females are larger and good hunters, and share in her bounty. After mating, the female then lays eggs for the winter.

At this time of year, fall blooming flowers such as golden rod and asters look amazing. If you look VERY closely at the flower heads of these plants, you may see a highly camouflaged adult ambush bug sitting and waiting for its dinner to arrive. Adults and nymphs of ambush bugs camouflage with the flowers of the plants where they forage for prey. It was not known, if ambush bugs could change color to match the plant or if they select plants on which they camouflage well. Interestingly, a recent study demonstrated they use a combination of color change and choice of habitat (Boyle and Start 2020). Their coloration is often mottled (ex. yellow and brown or white and brown), and the outline of their body irregular, both characteristics that help them hide from unsuspecting prey (see the images).

This ambush bug is light in color and camouflages nicely on this light-colored flower head.
Photo: M.J. Raupp, UMD

Look very closely and you can see the ambush bug's sucking beak inserted into the head of the paper wasp (Polistes dominula), which has been shown to attack monarch caterpillars, among others, in urban gardens. The unsuspecting wasp landed on the flower to suck up some nectar and ended up with quite a surprise.
Photo: M.J. Raupp, UMD

Ambush bugs are "sit and wait" predators, as are many other predators (ex. crab spiders, preying manitds). They use there camouflage and ability to sit very still for hours to hide from potential prey items. When the unsuspecting prey lands on the flower, the ambush bug pounces with speed and stealth on the prey grabbing it with its well-developed, thickened raptorial front legs (similar to a preying mantis). The ambush bug then injects enzymes into the prey. A paralyzing enzyme immobilize the prey and a digestive enzyme liquefy it allowing the ambush bug to slurp up its dinner using its sucking mouthparts. Click here or here to see videos of an ambush bug attacking prey. Ambush bugs feed on insects as big as or bigger than themselves. They feed on a variety of insects that visit flowers such as the wasp pictured here and other wasps, flies, beetles, bees, and more. The wasp pictured here (see image) is the European paper wasp, *Polistes dominula*. Introduced to the U.S. around 1970, it is now widespread especially in urbanized areas. Studies out of Dan Potter's lab (Univ. of Kentucky) found this wasp was the most common caterpillar-hunting wasp in urban gardens and that it preyed on monarch caterpillars. This ambush bug is providing some good biological control. Although these bugs feed on a diversity of insects including pollinators so some may not always consider them "beneficial". However, these dynamics are all part of the circle of life, which is truly amazing when you pay attention to it.

Weed of the Week

By: Kelly Nichols, UME-Montgomery County

Before we get into this week's weed, a note about Japanese stiltgrass (*Microstegium vimineum*) - stiltgrass plants are starting to produce a seedhead here in Derwood (Figure 1). Now is the time to mow these plants in order to prevent seeds from becoming fully mature and the population starter for next year.

Figure 1. Japanese stiltgrass plants are forming seedheads. Photo Credit: Kelly Nichols, UME Montgomery

Oriental bittersweet, *Celastrus orbiculatus*, often called Asiatic bittersweet, is an invasive, deciduous woody perennial plant which grows very prolifically in this area. A problem of wooded areas as well as nursery and landscape settings, this fast growing vine can grow as tall as sixty feet or more in one year, with a stem diameter of up to four inches. The leaves will be alternate, round in shape, with a finely toothed margin (Figure 2). Damage from this weed can be from breakage of the desired plant as it will grow into the canopy and create either weight or potential storm damage. The spirally habit (Figure 3) can also choke other desired plants. The color and large number of berries produced make them an eye-catching and plentiful source of food for birds. Unfortunately, this also means the seeds become well-distributed.

Figure 2. Alternate leaf pattern of Oriental bittersweet. Photo Credit: Chuck Schuster, Emeritus Ag Agent, UME Montgomery.

Oriental bittersweet is very similar to American bittersweet (*Celastrus scandens*), and can be distinguished by the location of the flowers and fruit. Berry location on the American bittersweet is only at the tips of the vines where with the Oriental bittersweet, the berries occur all along the vines. American bittersweet is native to the U.S.; however, in some areas it has quickly been replaced by Oriental bittersweet.

Control of Oriental bittersweet can be accomplished through either mechanical or chemical means. Cutting near the base can be effective with small plants. As plants mature, the use of a stem application after cutting with the immediate use of triclopyr (e.g. Garlon 4) or glyphosate (e.g. Roundup, others). Use caution not to apply the herbicide to the desired plant material, as thin barked species can be damaged or killed. In open settings, where possible apply triclopyr and glyphosate. If possible mow the site first to create the cut stem. Repeated applications may be necessary. The use of a basal oil and a penetrant may be beneficial. Use eye protection when doing stem applications, as some products are salt based and may cause eye damage.

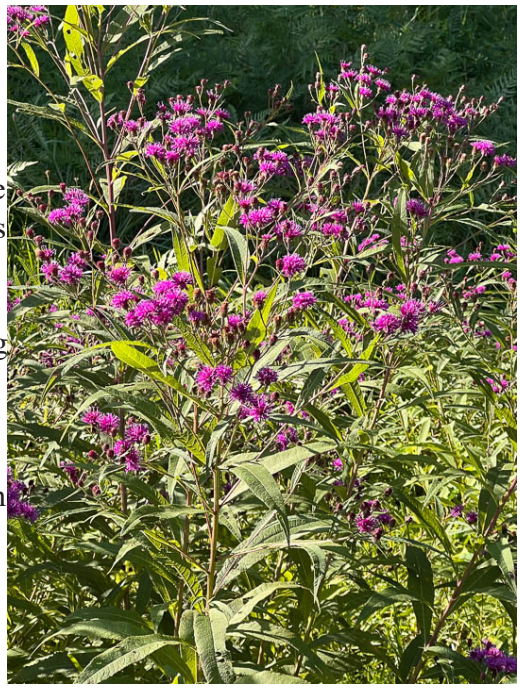
Figure 3. Twining growth habit of Oriental bittersweet.
Photo: Chuck Schuster, Emeritus Ag Agent, UME Montgomery.

Figure 4. Fast growing upright growth of Oriental bittersweet.
Photo: Chuck Schuster, Emeritus Ag Agent, UME Montgomery.

Plant of the Week

By: Ginny Rosenkranz

Vernonia noveboracensis or New York ironweed is a fall blooming native herbaceous perennial that can be found in bloom along roadsides that provide moist, organically-rich, acidic soils. Plants prefer full sun but are tolerant of some light shade, and are also tolerant of many soil types, and heat and humidity of Maryland summers. These tall plants are best for the backgrounds of pollinator, butterfly, native or rain gardens as they can grow 4-6 feet tall and 3-4 feet wide. The plants I photographed are thriving near a ditch bank with a lot of other plants, but as they grow taller than the grasses, they are easily seen by many pollinators including butterflies and bees, including the specialized native bee, *Melissodes denticulatus*, also known as the long-horned bee that loves New York ironweed. The strong stiff stems are rusty copper -brown and green, usually smooth with the leaves attached alternately. The deciduous green 6-8-inch-long leaves are lance shaped with finely notched margins. The



Look for pollinators, including the specialized long-horned bee on New York ironeweed in late summer.
Photo: Ginny Rosenkranz, UME

top of the leaves are smooth while the undersides have a fine downy hairs. The bright deep purple to lavender flowers are made up of tiny fluffy disc flowers that are held on a 3-4 inch wide clusters that sit on the tops of the stiff stems. There are other ironweeds including a white flowering one, 'White Lightening', *Vernonia arkansana* or Curlytop ironweed and *Vernonia lettermannii* 'Iron Butterfly', also called narrow-leaf ironweed or 'Iron Butterfly'. In Maryland, the New York ironweed can be found blooming from July to September, and the rusty colored seeds will be feasted on by native birds or will start new plants nearby. The spent flowers can be pruned to reduce the number of seedlings, and the stems can be pruned in spring to different heights to allow the flowering in the late summer and fall at different levels. Both rabbits and deer may nibble but will not destroy ironweed, which can also grow near black walnut trees. There are no serious insect or disease pests.

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 **2993 DD** (Martinsburg) to **3997 DD** (St. Mary's City). The Pest Predictive Calendar 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.

White prunicola scale – egg hatch / crawler (3rd gen) **(3238 DD)**
Banded ash clearwing borer – adult emergence **(3357 DD)**
Tuliptree scale – egg hatch / crawler **(3472 DD)**

See the Pest Predictive Calendar for more information on DD and plant phenological indicators (PPI) to help you better monitor and manage these pests.

Degree Days (as of September 4)

Annapolis Naval Academy (KNAK)	3552
Baltimore, MD (KBWI)	3582
College Park (KCGS)	3566
Dulles Airport (KIAD)	3599
Ft. Belvoir, VA (KDA)	3592
Frederick (KFDK)	3509
Gaithersburg (KGAI)	3323
Greater Cumberland Reg (KCBE)	3213
Martinsburg, WV (KMRB)	2993
Millersville (MD026)	3389
Natl Arboretum/Reagan Natl (KDCA)	3974
Perry Hall (C0608)	3259
Salisbury/Ocean City (KSBY)	3294
St. Mary's City (Patuxent NRB KNHK)	3997
Susquehanna State Park (SSQM2)	3315
Westminster (KDMW)	3679

Important Note: We are using the Online Phenology and Degree-Day Models 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

UNIVERSITY OF MARYLAND EXTENSION | AgFS Agriculture & Food Systems

Operator Certification (FTC) for Writing Nursery Nutrient Management Plans for Nurseries, Greenhouses and Controlled Environments

Thursday, October 3rd, 2024,

9:30 AM to 3:30 PM

Location: Wye Research and Education Center, 124 Wye Narrows Drive, Queenstown, MD 21658

Nursery Operator Certification (FTC) for writing nursery nutrient management plans will be offered to growers who are interested in attaining Farmer Training Certification for writing nutrient management plans. This training program will assist you in writing a nutrient management plan for your nursery or greenhouse operation, or controlled environment. You must write a nursery nutrient management plan if you are an agricultural business and gross $2,500 or more per year in sales. With this certification, you will be able to sign-off and submit your own plan and annual implementation reports.

This program consists of a Training Day and an Exam/Signoff Day. This training day, **Thursday, October 3rd 2024,** will consist of learning the plan-writing process. After the training day, you will have about 5 weeks, during which time you will study the Nursery Nutrient Management Training Manual and develop your plan. The Exam/Signoff Day will be at a location and on a date "**to be announced"**. This date will also be for reviewing your newly developed plan (or renewing your old plan). You must write a plan for Maryland Dept of Agriculture (MDA) to become certified.

The process is relatively simple for small (or low-risk) operations, so if your operation size is less than 5 acres, we would strongly encourage you to think about becoming a certified operator. If your operation is larger than 5 acres or you run a controlled environment, we would still encourage you to become a certified operator, even though the nutrient management process may be a little more complicated. For nutrient management consultants who wish to learn more about the process for developing nutrient management plans for greenhouses and container crop production, this workshop will offer 6 hours of CEUs.

The cost for this program is **$40.00** and includes program costs (including lunch) and the MDA exam fee ($20). For consultants not taking the exam, the cost is $20. Payment will be required at the beginning of the program. A check can be made out to ***University of Maryland***. A receipt will be available.

If you wish to register, please do so before **September 26th, 2024** by emailing Dr. Andrew Ristvey (aristvey@umd.edu). Add your business name and phone contact number. If you have questions, please email or call me at 410- 827-8056 x113. If you need any accommodations for this program, please contact me by **September 19th**.

Wye Research and Education Center is located on the Eastern Shore of Maryland, about 20 minutes from the Bay Bridge. A map to WyeREC can be found here. Note the circled area on the map; we will be at the WyeREC Office and Lab location.At present, this is scheduled to be an in-person meeting. Face masks are not required, but you are welcome to wear one. We will be learning in a large room and we will be adequately spaced. WyeREC is located in Q.A. County and is subject to local/county health department guidelines. Should we receive word of updates, all registered attendees will receive a link to an online virtual program. We will start at 9:30am, promptly.

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
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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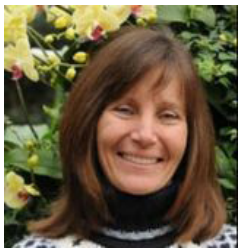

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.