

Commercial Horticulture

October 1, 2021

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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)

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Disease Information: Karen Rane (Plant Pathologist) and David Clement (Extension Specialist)

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

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

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

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Interesting OMRI Listed Biological Herbicide for Weed Control in Nurseries and Greenhouses

By: Stanton Gill

In our IR-4 meetings, they had a section on newer herbicides for organic approved use in greenhouses and nurseries. OHP has announced the launch and immediate availability of FireWorxx Herbicide an OMRI-listed biological herbicide that is active against weeds, algae, and moss. Using a non-staining ammonium soap of fatty acids, FireWorxx is a non-selective herbicide that controls or suppresses troublesome weeds such as bittercress, chickweed, groundsel, dandelions, oxalis, and grasses.

FireWorxx can be used in greenhouses, nurseries, landscaped areas, flower gardens, around buildings and sidewalks, in gravel, and in other areas. Users should be aware not to spray on desirable plants. FireWorxx has a 12-hour Restricted Entry Interval and Caution Signal Word.

MAC-ISA Meeting Next Week

By: Stanton Gill

The International Society of Arboriculture MAC division is holding a seminar for arborists on October 3 – 5 in Solomons Island, Maryland. Kirk Floyd, KDrone Company, and I will be talking about our University of Maryland Extension field research projects using spray drones in Maryland nurseries at this conference. It should be a great two-day conference on a series of topics related to tree health.

Sad News

Dr. Lee Hellman passed away this week. Lee was known to the turf industry as the Turfgrass Entomologist Supreme. We will miss his enthusiastic lecturing style.

Hickory Borer... That Attacks Hickory and Pecan Trees?

By: Stanton Gill

We have seen an increase in people planting pecan trees that are hardy in Maryland. At one point back in the 1930s, there was a pretty good pecan industry in the Salisbury area on the Eastern Shore. A labor shortage was one of the reasons it declined, and many of the pecan growers sprung up in Georgia and North Carolina. It might be the Covid influence, with people planting more edible plants, but pecan tree cultivars, hardy to Maryland, are cropping up in many landscapes.

Pecans and hickories have large tap roots, and the plants do pretty well in well-drained soil. In soils that are frequently saturated with water then trees are weakened and secondary pest moves in. We had 3 – 5” of rain on September 23, and many isolated heavy downpours in several parts of Maryland in September, saturating soils. It was not as bad as 2018 and the spring /summer of 2019 but still saturated soils. We are seeing hickory and pecan trees that are suffering root injury from these saturated soil conditions.

North Carolina State Extension put out a Factsheet in 2020 about an *Agrilus* species beetle borer hitting pecans in and hickory in North Carolina.

[Hickory Spiral Borer | NC State Extension Publications](https://content.ces.ncsu.edu/hickory-spiral-borer)

<https://content.ces.ncsu.edu/hickory-spiral-borer>

Here some highlights that the fact sheet states about the beetle: “The hickory spiral borer, *Agrilus torquatus*, is an elongate, shiny brownish copper beetle about $\frac{3}{8}$ inch long (female) or a slender beetle with a reddish copper pronotum and black wings that reflect iridescent greens, blues, and violet colors (males). Males are smaller than females. Adults appear from spring throughout the summer. Females lay tiny flat, disk-like eggs under bark scales and crevices of the main trunk or branches or glued firmly to smooth bark of twigs by a transparent secretion. From the eggs hatch slender, segmented, legless grubs that eventually grow into $\frac{3}{4}$ inch flatheaded wood borers. These grubs bore into the bark and feed in the outer sapwood. Hickory spiral borers develop for two growing seasons. In late autumn, grubs begin spiral burrows inside the stem, encircling the stem until reaching the center. They typically infest stems that are $\frac{1}{2}$ to $1\frac{3}{4}$ inches in diameter. Grubs then pupate in cells hollowed out in the pith. Infested stems usually break off at the spiral gallery. New adults emerge the third year and chew large irregular holes in the leaves.”

In Maryland: I have not seen this pest in Maryland, yet, but with the many plantings of pecans trees in landscapes, you need to be on the lookout for it. If you see branches dying back and find an *Agrilus* larva in the stems, please send along a sample to me at CMREC, Sgill@umd.edu.

Spotted Lanternfly

In last week's article by Kenton Sumpter, there was not an active link for the survey. Here is the info from last week with the link: If you discover SLF, please report your sighting to the [MD Spotted Lanternfly Online Survey](#). In this survey you can give as much contact info as you are comfortable with. You can also place a marker on the map as to where you sighted SLF. Please be sure to place the map marker as accurately as possible. This greatly reduces the amount of time it takes the MDA to arrange a survey. You can also include information about where, how many, and what life stage of SLF that you saw.

Indian Wax Scale

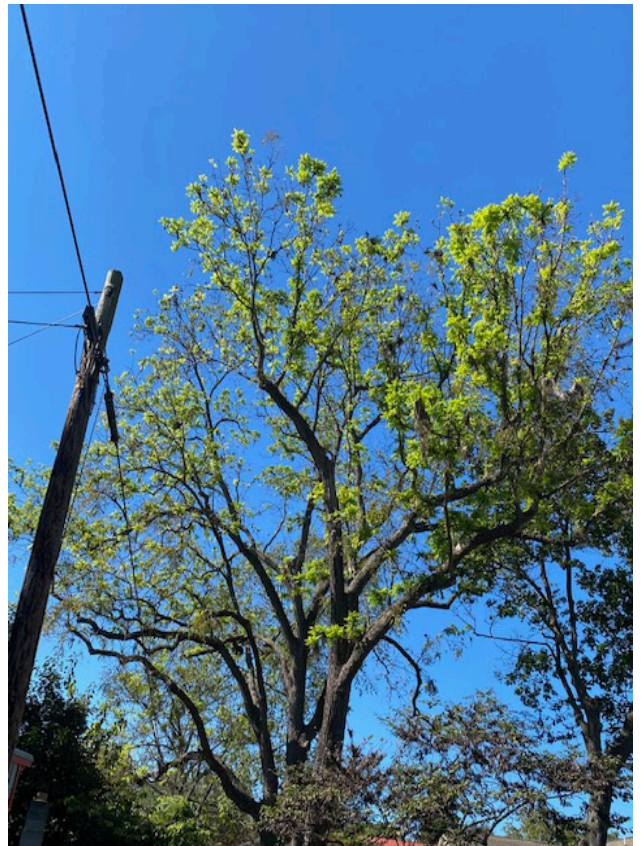
Chris Erb found Indian wax scale on large, mature London plane trees in Gaithersburg. Chris noted that there are a lot of them on several trees. London plane trees are not a species on which we receive reports of this scale.



Indian wax scale on London plane trees
Photos: Chris Erb

Fall Webworms

Shawn Walker, Trees 101, reported that he has never seen such complete defoliation of black walnut from fall webworm. Shawn noted that it is to the extent that they are actually coming out with new flushes of growth.



Fall webworm damage on walnut
Photo: Shawn Walker, Trees 101

Deer Damage

Tim Overstreet, Howard County Dept. of Recreation and Parks, sent us photos of peonies stripped of foliage from deer at Waverly Mansion. Tim noted that these peonies have been there for decades.



Deer have fed heavily on these peonies in a landscape in Howard County
Photo: Tim Overstreet, Howard County Dept. of Recreation and Parks

Milkweed Bugs

Elaine Menegon Good's Tree and Lawn Care, found large milkweed bugs on milkweed this week in Ephrata, PA. Large milkweed bugs feed on stems and leaves, but are most often found in clusters feeding on seed pods. No control is necessary.



Milkweed bugs are commonly found feeding on milkweed seed pods
Photo: Elaine Menegon, Good's Lawn and Tree Care

Garden Argiope Spider

Gretchen Stark found a garden argiope spider adjacent to her front door this week. Paula Shrewsbury discusses this group of spiders in the Beneficial of the Week article in the [October 30, 2020 IPM Report](#).



Look for these argiope spiders and their dew covered webs at this time of year
Photo: Gretchen Stark

Beneficial of the Week

By: Alina Avanesyan and Paula Shrewsbury, UMD

Digger wasps in your landscapes: the more the better!

The digger wasp (a.k.a. blue-winged wasp), *Scolia dubia*, in the family Scoliidae, is an important beneficial insect in your garden or production area. It is native to the US and can be found from the St. Laurence River down to Florida, and west to Arizona. They are common in the Washington metropolitan area. You can see the digger wasp from June to October with the peak of its abundance in August. [The digger wasps](#) often fly over pastures or lawns looking for prey species which are primarily [white grubs](#) (especially green June beetle grubs); they also search for nectar on plants which are in bloom.



White grubs.
Photo: David Cappaert, Bugwood.org

Scoliid wasps are very easy to identify. They fly low, they are relatively large, slightly hairy with bright markings. The adult *Scolia dubia* is over ½ inch long with dark shiny body, black antennae, red colored abdomen, which looks a bit fuzzy, and blue-black wings. There are also two yellow spots along the abdomen, one on each side; the spots might look like a band across the abdomen when the wasp is flying.

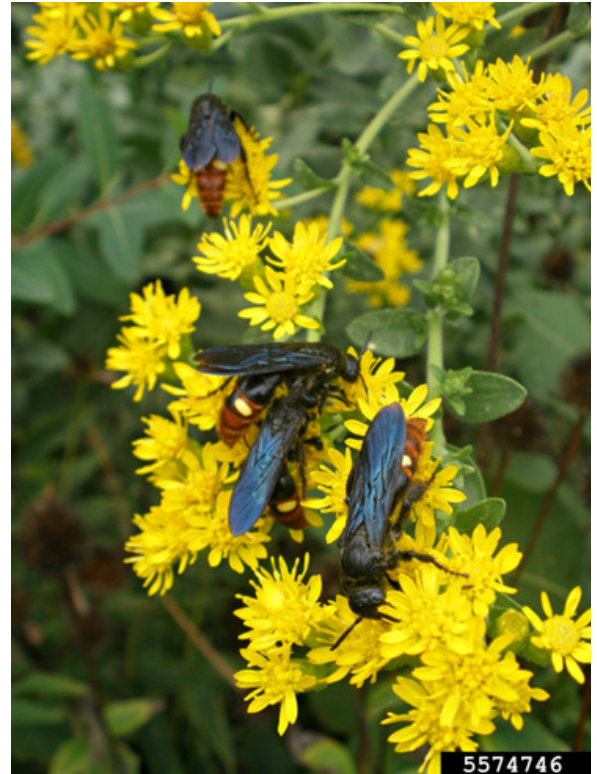


Adult *Scolia dubia* and its two yellow spots along the abdomen.
Photo: Royal Tyler, Pro Pest and Lawn Store, Bugwood.org

The female digger wasp burrows into the soil in search of white grubs. It either burrows new tunnels or follows the tunnels which the white grubs (often Japanese beetles, June beetles, or other beetle grubs which feed on the roots of lawn grasses) made in the soil. Once it has located a grub, the female deposits an egg on the "skin" of the grub. The grub can't remove the wasp egg. The egg hatches, and the parasitic wasp larva develops and as it grows and matures, it slowly consumes the white grub. The wasp larva can consume the grub in approximately 2 weeks; then it spins a cocoon in which it spends the late fall and winter as a prepupa in the burrow made by the grub. The mature prepupae molt into pupae from which a new generation of adults emerges the following summer.

The digger wasps are highly beneficial – their presence just above your lawn indicates there likely are grubs beneath your turf and it might be helpful to watch for turf damage. The digger wasps are very helpful in controlling populations of green June beetle and other non-desirable scarab beetles. These wasps are not aggressive to humans, and they don't sting unless threatened or hurt during the egg-laying process. When not hunting for grubs, the adults [forage for nectar](#) in wildflowers such as goldenrod and horsemint. The digger wasp especially enjoys various Goldenrod cultivars, which is great to plant to attract these beneficials. The researchers are still investigating the preferences of these wasps for the nectar from Goldenrod and which of the Goldenrod cultivars (which might differ in nectar quality) contribute more to the health of the wasps. However, planting any varieties of Goldenrod will definitely attract the digger wasp and enhance its "local

population" in your garden. As a desirable outcome, you should see a decrease in Japanese beetles and other non-desirable scarab beetles next season.



Adults *Scolia dubia* foraging for nectar.
Photo: Ansel Oommen, Bugwood.org

Weed of the Week

By: Chuck Schuster

Yellow nutsedge (*Cyperus esculentus L.*) seems to have survived the heat of the summer and is thriving with the recent heavy rains in the region. This troublesome perennial weed is widely found in turf, nurseries, and landscape beds. Yellow nutsedge becomes more problematic during spring and summers with above average rainfall. The seedling is very inconspicuous and looks very much like the desired turf species we want to find, but given time becomes more noticeable. One distinguishing characteristic is the color which is light green, with flat slender cotyledons (seed leaves) Yellow nutsedge can produce seed but also reproduces through tubers and bulbs (Red Arrow photo 1). Several hundred tubers or nutlets can be produced from a single plant during the summer. These nutlets can survive in the soil for several years if conditions are not appropriate for them to grow and produce a new plant. The mature stem is triangular in shape which will help distinguish it from any member of the grass family. Lower leaves are arranged in groups of three. ***Remember sedges have edges to help you identify it from grasses.***



Photo 1: Yellow nutsedge reproduces through tubers and bulbs (as well as producing seed)
Photo: Chuck Schuster

While it does produce seed, it spreads mostly by way of tubers or nutlets. Control of this plant earlier in the season before these tubers are formed is the best line of defense. Yellow nutsedge tubers can easily be spread by soil (topsoil or fill dirt) from one area to another during construction. Additionally, people and equipment can spread yellow nutsedge any time they move soil while planting or dividing ornamental plants in the landscape.

Control can be obtained by maintaining a dense stand of turf with proper fertilization. Yellow nutsedge becomes more of a concern when mowing heights are not maintained at proper levels and in soils that receive more than adequate amounts of rainfall/irrigation or do not drain well. Yellow nutsedge can also be a problem in well-drained areas, especially thin turf. In small stands of yellow nutsedge found in landscapes, consider digging around the plant and removing all of the root system. Appropriate pH management is another cultural tool that is very useful.

Products that contain sulfentrazone (Dismiss) have been shown to provide both pre emergence and post emergence control, though not labeled for pre emergence. Prodiamine and sulfentrazone (Echelon), is labeled for pre emergence

control. Sulfentrazone and Quinclorac (Solitare) are effective as post emergence products but will require more than one application in some cases 30 days apart. Other products containing sulfentrazone include Q4 Plus, Surge, SureZone, and TZONE, but these products are labeled for **suppression** as they contain lower concentrations of the active ingredient. Other products labeled are bentazon found in Basagran, labeled for use in tall fescue, which is the predominate species in this region, Halosulfuron-methyl found in Sedgehammer and Sedgehammer+ (Sedgehammer+ contains a surfactant, S-Metolachlor found in Pennant Magnum). Mesotrione (Tenacity) is also labeled for post emergence control in Kentucky bluegrass, perennial ryegrass, and tall fescue. This product causes a bleaching of the weeds. Read the label to determine if a nonionic surfactant is needed. Control generally takes more than one application. Halosulfuron products are rated the best for control of this difficult weed in many studies.



Yellow nutsedge seed head and overall plant
Photos: Chuck Schuster

In landscape and nursery settings, it was found that Pennant Magnum, Sedgehammer, and Casoron (dichlobenil) worked well. Check labels to determine plant species that are safe for use with each chemical. Casoron as a granular product (4G) can be applied as a pre-emergence product during the dormant season in nurseries but not in the container themselves. It requires moisture following application. Sedgehammer works well in landscapes but should not be sprayed onto desired species of plant material.

When controlling yellow nutsedge in turf, always remember the following 5 points. 1). Follow label directions exactly, 2). Do not mow turf 2 days prior to application of the herbicide, 3). Use the proper volume of water, and do not apply when the turf is stressed 4). Be cautious near transitions of turf to ornamental beds as some herbicides can cause damage to desired ornamentals. And lastly but not the least is 5). Repeat application according to label instructions.

Plant of the Week

By: Ginny Rosenkranz

Cornus kousa or Chinese dogwood is a lovely medium-sized tree that starts out with a vase shape that as the tree matures becomes more wide spread and open with the branches growing more horizontally. The variegated cultivar, *Cornus kousa* ‘Snowboy’, has the same growth pattern, but because of the bright white borders on each

bright green leaf, this dogwood needs to grow in shade from late morning into the late afternoon, very much like our own native *Cornus florida*. 'Snowboy' grows 6-10 feet tall and wide, thriving in well-drained acidic soils with a cover of mulch around its shallow roots. The pure white, star-shaped bracts bloom about a month after our native dogwood in May to June, and the fall berries look a lot like red raspberries, which the birds find very tasty. Autumn brings reddish purple color into the leaves to glow along with the bright red fruit. In the winter, the bark peels off in attractive patches to give the winter landscape more interest. These slow growing trees are winter hardy from USDA zones 5-8 and have better disease resistance to anthracnose and some resistance to deer. The insect pests can include calico scale, dogwood borer, dogwood sawfly, Japanese maple scale, leafhoppers, and oystershell scale. Botrytis can affect both leaves and bracts, and crown canker, bacterial leaf scorch, powdery mildew and septoria leaf spot diseases can be slightly problematic. Ripe fruit that falls to the ground can start to ferment and attract yellowjackets.



Because of the bright white borders on each bright green leaf, *Cornus kousa* 'Snow Boy' needs to grow in shade from late morning into the late afternoon.

Photos: Ginny Rosenkranz, UME

Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about **3366 DD** (Martinsburg WV) to **4305 DD** (Reagan National Airport). 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.

- Banded ash clearwing borer – adult emergence (3357 DD)
- Tuliptree scale – egg hatch / crawlers (3519 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 29)

Aberdeen (KAPG)	3428
Annapolis Naval Academy (KNAK)	3920
Baltimore, MD (KBWI)	4017
Bowie, MD	4005
College Park (KCGS)	3676
Dulles Airport (KIAD)	3790
Ft. Belvoir, VA (KDA)	3830
Frederick (KFDK)	3649
Gaithersburg (KGAI)	3620
Greater Cumberland Reg (KCBE)	3380
Martinsburg, WV (KMRB)	3366
Natl Arboretum/Reagan Natl (KDCA)	4305
Salisbury/Ocean City (KSBY)	3937
St. Mary's City (Patuxent NRB KNHK)	4178
Westminster (KDMW)	4069

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 calculator. Thresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start:Jan 1

UNIVERSITY OF MARYLAND --- EXTENSION

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

Tuesday, November 9th, 2021

9 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 use fertilizers and you gross \$2500 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.

Each program consists of a Training Day and an Exam/Signoff Day. The Training Day, **Tuesday, November 9th, 2021** 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 going over your newly developed plan (or renewing your old plan).

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 continuing education credits.

The cost for this program is **\$35.00** and covers program costs and the MDA exam fee. For consultants not taking the exam, the cost is \$15. 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 by **November 1st**. An Event Brite registration page has been created and is linked [here](#). If you have questions please send an email to me (aristvey@umd.edu) or call me at 410-827-8056 x113.

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](#).

At present, this is a face to face meeting. Face masks are presently recommended. However the situation with COVID-19 is fluid and we may decide to run a virtual program. Since WyeREC is located in Queen Anne's County it will depend on the County Health Department directives. If this occurs, the registered attendees will receive a link to an online virtual program.

The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, genetic information, political affiliation, and gender identity or expression.

Conferences

FALCAN Truck and Trailer Safety Seminar

October 20, 2021

Location: Urbana Fire Hall, Urbana, MD

For more information

falcantruckandtrailer21.eventbrite.com

December 3, 2021

Integrated Pest Management Conference (details will be posted when available)

Location: Carroll Community College, Westminster, MD

December 9, 2021 (date change for last week's listing)

Turf Nutrient Management Program (half day)

Location: Carroll Community College, Westminster, MD

December 16, 2021

Biological Control Conference

Location: Maritime Institute, Linthicum Heights, MD

2022 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 VIRTUAL (online). In addition, there will be an IN-PERSON LAB held over two days (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture (virtual) Dates: Tuesday, Wednesday, Thursday; January 4, 5 and 6 AND January 11, 12, and 13

Lab (in-person) dates: Tuesday and Wednesday January 18 and 19

Course and Registration* Information: <https://landscapeipmphc.weebly.com/>

*Registration will open within the next week or so. Please check the site again.

Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

January 5 - 7, 2022

MANTS

Location: Baltimore Convention Center

January 21, 2022

FALCAN Pest Management Conference (currently in person)

Location: Frederick Community College, Frederick, MD

*Snow date is March 11, 2022

LCA Pesticide & Fertilizer Recertification (Virtual Program, February 2022)

The Pesticide & Fertilizer Recertification will return in 2022 with great speakers and new topics.

February 17 and 18, 2022

Chesapeake Green Horticulture Symposium

Location: Maritime Institute, Linthicum Heights, MD

March 15 and 16, 2021

MAA Pest Conference

Location: Turf Valley, Ellicott City, MD



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For more information on eligibility and to apply online or download an application, go to mnlga.org/cph.

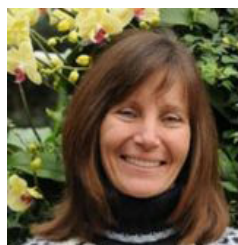
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