Ag Notes
Harford County Newsletter

UNIVERSITY OF MARYLAND EXTENSION

November 2019

The Extension Office will be closed on November 11 for Veterans Day and 28-29 for Thanksgiving.

University of Maryland Extension

Harford County Agricultural Center
Suite 600
3525 Conowingo Rd.
Street, MD 21154
(410) 638-3255
M—F 8:00 a.m.—4:30 p.m.

Extension.umd.edu/harford-county
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Hello, Harford County!

As the 2019 growing season draws to an end, it's time to start thinking about winter production meetings to get your pesticide and nutrient management credits, as well as stay up-do-date with the latest research and production information. A complete list of the 2020 University of Maryland Extension winter meetings can be found online. Below are a few local meetings that may be of interest to you. Call or email for more information and registration details.

Agronomy Meetings

Northern Maryland Field Crops Day

December 5, 2019. 9:00 a.m. - 3:00 p.m.

Friendly Farms, Foreston Road in Upperco, MD. Call (410) 887-8090 or email ecrowl@umd.edu.

Carroll County Mid-Winter Farm Meeting

January 16, 2020. 9:00 a.m. - 3:00 p.m.

Burns Hall, Carroll County Ag Center, Westminster, MD. Call (410) 386-2760 or email plcoffey@umd.edu.

Cecil County Winter Agronomy Meeting

January 29, 2020. 9:00 a.m. to 3:00 p.m.

Calvert Grange, Rising Sun, MD. Call (410) 996-5280 or email dbehnke@umd.edu

Harford County Mid-Winter Agronomy Meeting

February 11, 2020. 9:00 a.m. - 3:00 p.m.

Deer Creek Overlook at Harford 4-H Camp, 6 Cherry Hill Road, Street, MD 21154. Call (410) 638-3255 or email akness@umd.edu.

Forage Meetings

Delmarva Hay and Pasture Conference

January 14, 2020. 9:00 a.m. - 3:30 p.m.

Delaware Ag Week. Harrington, DE. Call (302) 856-2585 .

Central Maryland Forage and Livestock Conference

January 17, 2020. 9:00 a.m. - 3:30 p.m.

Jefferson Ruritan Center, Jefferson, MD. Call (302) 432-2767.

Vegetable & Fruit Meetings

Central Maryland Vegetable Growers Meeting

January 23, 2020. 9:00 a.m. - 3:00 p.m.

Friendly Farms, Foreston Road in Upperco, MD. Call (410) 887-8090 or email ecrowl@umd.edu.

Urban Farmer Winter Meeting

January 26, 2020.

Baltimore, MD. Call (410) 856-1850 x123 or email nglittle@umd.edu.

Western Maryland Fruit Meeting

February 13, 2020. 8:00 a.m. to 4:00 p.m.

Western Maryland Research and Education Center, Keedysville, MD. Call (301) 432-2767 x301 or email sbarnes6@umd.edu.

I hope to see you at some of these meetings this winter. Have a great Thanksgiving!

Until next time,

-Andy

Reducing the Risk of Prussic Acid Poisoning

Amanda Grev, Pasture Specialist
University of Maryland Extension

Warm-season annuals can serve as a means to provide forage for livestock during the summer months when the growth of cool-season perennials is slowed. In many cases, regrowth can allow for more than one grazing or harvest to be obtained from these forages, providing an additional source of forage into the cooler days of fall. Under certain conditions, there is potential for prussic acid accumulation in some of these warm-season annual species.

What is prussic acid?

Sorghum species, like sorghum, sudangrass, sorghum-sudangrass hybrids, and johnsongrass, contain a cyanogenic compound called dhurrin within the plant. Under normal circumstances, the dhurrin is bound and non-toxic; however, if the plant tissue is injured by some sort of stressor, the plant cells can become damaged and an enzyme called emulsion can break down the dhurrin, resulting in the formation of a highly toxic hydrogen cyanide compound commonly referred to as prussic acid. A prussic acid concentration as small as 0.1 percent of dry tissue is considered dangerous. Prussic acid hinders the animal's ability to transfer oxygen in the blood stream. When a lethal dose is consumed, animals die from asphyxiation within minutes. Common symptoms prior to death include excessive salivation, difficulty breathing, staggering, convulsions, and collapsing.

What causes prussic acid accumulation?

The greatest levels of prussic acid can be found in the leafier parts of the plant, particularly in new growth, and young, growing plants contain more prussic acid than older plants. Any stress condition or injury can lead to an appreciable accumulation of prussic acid within the plant. Frost damage is one of the more common causes leading to an accumulation of prussic acid, as prussic acid is released very quickly in frozen leaves. However, other stress conditions, such as a prolonged drought or soil nutrient imbalances from excessive nitrogen fertilization and deficient phosphorus or potassium levels can also cause high levels of prussic acid accumulation.

How can prussic acid poisoning be avoided?

Most problems with prussic acid can be avoided with proper management. To reduce the potential of prussic acid poisoning, utilize the following guidelines:

1. Select a variety that has a lower prussic acid accumulation potential.
2. Maintain proper soil fertility and avoid excessive nitrogen applications.
3. Do not graze on nights when frost is likely, as high levels of the toxic compounds are produced within hours after a frost.
4. After a killing frost, wait at least 7 to 10 days before grazing or green chopping forage, as prussic acid does not begin to decline until after the leaves have dried.
5. After a non-killing frost, do not graze until the regrowth has reached a minimum of 2 feet in height or 2 weeks have passed, as the regrowth will likely contain high levels of prussic acid.
6. Utilize heavy stocking rates and rotational grazing to reduce the risk of animals selectively consuming only young growth that is high in prussic acid.
7. Test questionable forage to ensure safety before grazing or feeding.

What about harvested forages?

Proper field curing or ensiling can help reduce the potential for toxicity in harvested forages because prussic acid is volatile and some of the toxic components will dissipate as a gas during the drying or fermentation process. Forages should be ensiled for at least 3 to 4 weeks before feeding, or a minimum of 8 weeks if there was a risk of high prussic acid levels at the time of chopping. The prussic acid content in hay can be reduced by as much as 75% during the curing process, so hay is typically not hazardous when fed to livestock.

Can prussic acid levels be tested?

Forages can be analyzed prior to feeding to ensure the toxic compounds have been reduced to a safe level for consumption. Because the greatest prussic acid concentrations are found in new, leafy growth and livestock generally consume leaves before stems, samples taken for prussic acid analysis should be largely comprised of leaves. Samples should be collected from several places throughout the field and kept in a sealed plastic bag to prevent the volatilization of prussic acid from the sample. Samples should be kept refrigerated and delivered to a testing laboratory as soon as possible.

Maryland Winter Dairy Series

December 4

10:00 a.m.
Fawn View Farm
Pylesville

Dairy producers and industry personnel are invited to join us for our Winter Dairy Meeting Series this December. Each event in this series will feature a brief session on current industry topics, such as new updates to the FARM 4.0 program and dairy economics, followed by a training session geared toward helping dairy producers learn effective strategies for communicating with the public. Each program will begin at 10 a.m. and conclude after a visit to a local dairy in the afternoon. Lunch will be provided.

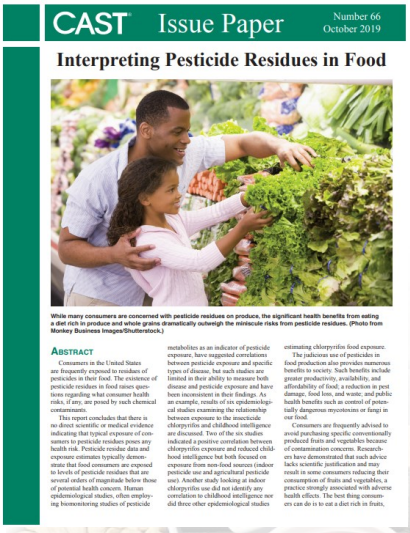
Presenters for this event include Dale Johnson, Farm Management Specialist at the University of Maryland Extension; Sarah Potts, Dairy and Beef Specialist at the University of Maryland Extension; Amy Yeiser Leslie and Emma Andrew-Swarthout from the American Dairy Association North East; and a representative from the Dairy FARM program. **Registration for this event is free**, but we ask participants to pre-register for planning purposes.

This meeting will take place at three different locations throughout the State of Maryland. The Harford County Workshop will take place on Wednesday, **December 4th**, at Fawn View Farm in Pylesville, MD. The Washington County Workshop will take place on Thursday, **December 12th**, at the Washington County Extension Office and Shenandoah Jerseys in Boonsboro, MD. The Frederick County Workshop will take place on Tuesday, **December 17th**, at Teabow Farms in Walkersville, MD. The specific agenda varies by location, so be sure to take a look before registering.

This event is sponsored by University of Maryland Extension, the American Dairy Association North East, and Maryland and Virginia Milk Producers Cooperative.

For more details and to register, please visit dairyworkshops.eventbrite.com or contact Sarah Potts at (301) 432-2767 or sbpotts@umd.edu.

Interpreting Pesticide Residues in Food


CAST Issue Paper Number 66 October 2019

Interpreting Pesticide Residues in Food

While many consumers are concerned with pesticide residues on produce, the significant health benefits from eating a diet rich in produce and whole grains dramatically outweigh the miniscule risks from pesticide residues. (Photo from Monkey Business Images/Shutterstock.)

Abstract

Consumers in the United States are frequently exposed to residues of pesticides in their food. The existence of pesticide residues in food raises questions regarding what consumer health risks, if any, are posed by such chemical contaminants...

The Council for Agricultural Science & Technology (CAST) has released a new issue paper on the pesticide residues in foods. According to its website (https://www.cast-science.org/about/), CAST was established in 1972 as a result of a 1970 meeting sponsored by the National Academy of Sciences, National Research Council. CAST is a nonprofit 501 (c)(3) organization composed of scientific societies and many individual, student, company, nonprofit, and associate society members. CAST's Board is composed of representatives of the scientific societies, commercial companies, and nonprofit or trade organizations, and a Board of Directors.

From the abstract: "Consumers in the United States are frequently exposed to residues of pesticides in their food. The existence of pesticide residues in food raises questions regarding what consumer health risks, if any, are posed by such chemical contaminants…The judicious use of pesticides in food production also provides numerous benefits to society. Such benefits include greater productivity, availability, and affordability of food; a reduction in pest damage, food loss, and waste; and public health benefits such as control of potentially dangerous mycotoxins or fungi in our food… This report concludes that there is no direct scientific or medical evidence indicating that typical exposure of consumers to pesticide residues poses any health risk."

The full report, CAST Issue Paper No. 66, and a brief summary, are available from the CAST website at: https://www.cast-science.org/wp-content/uploads/2019/10/CAST_IP66_Residues.pdf, or obtain copies from the Extension Office.

Spotted Lanternfly Quarantine in Harford & Cecil

Maryland Department of Agriculture press release

Figure 3. Spotted lanternfly adult. Image: P. Coffey, University of Maryland.

The Maryland Department of Agriculture today issued a spotted lanternfly quarantine for all of Cecil and Harford Counties. This quarantine is effective immediately and will restrict the movement of regulated articles within the quarantine zone that contain the spotted lanternfly in any of its life stages, including egg masses, nymphs, and adults.

Examples of regulated articles include landscaping, remodeling, or construction waste; packing materials like wood boxes or crates; plants and plant parts; vehicles; and other outdoor items.

Following the department's 2019 survey season, these two counties were found to have established populations of spotted lanternfly. The quarantine has been issued in an effort to control the spread of this invasive insect to other parts of the state. A map of the quarantine zone can be viewed here.

Businesses, municipalities, and government agencies that require the movement of any regulated item within or from the quarantine zone must have a permit. A permit can be obtained by taking a free online training course through PennState Extension. Upon completion of the course and an online exam, individuals will receive a permit.

Managers, supervisors, or employees of a business or organization operating in the quarantine zone must receive the approved training and pass the exam by at least 70% to demonstrate a working knowledge and understanding of the pest and quarantine requirements. Training of other employees, inspection of vehicles and products, and removal of living stages of spotted lanternfly must also be completed.

All spotted lanternfly permits for Virginia, Pennsylvania, New Jersey, and Delaware are transferable and valid throughout the region — meaning a permit from any of these states can be used in Maryland. Maryland is currently in the process of developing its own training and permitting system for spotted lanternfly.

Those living within the quarantine zone are encouraged to be vigilant in containing the spread of spotted lanternfly. The department has created a residential compliance checklist that is available for download on its website that educates residents on the lifecycle of the spotted lanternfly, and areas to inspect around the home.

The spotted lanternfly poses a threat to the region's agricultural industries as it feeds on over 70 different types of plants and crops, including grapes, hops, apples, peaches, oak, pine, and many others. Originally from Asia, the spotted lanternfly is nonnative to the U.S., and was first detected in Berks County, Pennsylvania in the fall of 2014. As a known hitchhiker, the spotted lanternfly has spread to 14 counties within Pennsylvania, and also has confirmed populations in Delaware, Virginia, and New Jersey.

This fall, the department's Plant Protection and Weed Management Program partnered with the U.S. Department of Agriculture (USDA) to treat *Ailanthus altissima* for spotted lanternfly at multiple sites in the upper northeast corner of Cecil County, and along the northern border of Harford County. In total, 2,698 trees have been treated (2,403 trees in Cecil County and 295 trees in Harford County). The program continues to work with USDA Animal and Plant Health Inspection Service Plant Protection and Quarantine program, University of Maryland Extension and others to monitor the insect in Maryland.

If you suspect you have found a spotted lanternfly, snap a picture of it, collect it, put it in a plastic bag, freeze it, and report it to the Maryland Department of Agriculture at DontBug.MD@maryland.gov. Dead samples from any life stage can be sent to the Maryland Department of Agriculture Plant Protection and Weed Management Program at 50 Harry S. Truman Parkway, Annapolis, MD 21401.

More information about the spotted lanternfly can be found on the department's website. For questions related to the quarantine, permitting, or treatment, please contact that Plant Protection and Weed Management Program at (410) 841-5920.

Download the department's Spotted Lanternfly Quarantine Fact Sheet for more details about the quarantine.

Additional information on spotted lanternfly can be found on page 5.

Spotted Lanternfly

Doris Behnke, Master Gardener Coordinator
University of Maryland Extension, Cecil County

The spotted lanternfly (SLF) *(Lycorma delicatula),* is an invasive pest from Asia that has been seen on numerous occasions in Cecil and Harford Counties over the last several months. Investigations conducted by the Maryland Department of Agriculture (MDA) have confirmed these sightings and have determined a breeding population of this invasive pest to warrant a quarantine.

On October 28, 2019, it was announced by MDA that Cecil and Harford County is under quarantine for the spotted lanternfly. This means any person that is moving items in and out of Cecil County needs a SLF quarantine permit. To find out more about obtaining a permit, go to: https://mda.maryland.gov/plants-pests/Documents/SLF-Quarantine-Fact-Sheet.pdf.

What to look for: At this time of the season (October thru December), look for adult spotted lanternfles and its egg masses.

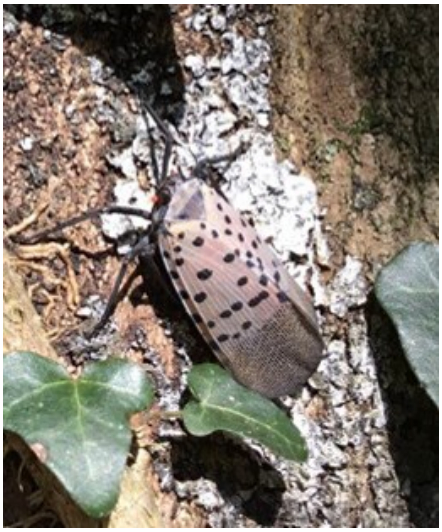


Figure 1. Adult spotted lanternfly. Image: D. Behnke, University of Maryland.

Adults (Figure 1) can be described as being about 2.5 cm (1 inch) in length with fore wings a greyish-brown with black spots. The wing tips have a darker, brick-and-mortar pattern. The hind wings are mainly red with black spots, followed by a white band and a black tip (Figure 2). When the spotted lanternfly is at rest, a hint of the red color can be observed through the forewings, but the color is especially noticeable when it is in flight.

The eggs can be described as looking like mud or putty (Figure 3). The eggs are laid in groups of approximately 30-50, and then coated with a waxy gray film. When this film has dried, it can look similar to a splash of mud, or a smear of putty which can make them difficult to notice.

What to do: Kill all of the adults that you find! Do this by smashing them, bagging them in a Ziploc bag and freezing them, or by collecting them into a container with rubbing alcohol in it. Either way you collect them, please follow up by reporting your sighting to the Maryland Department of Agriculture at: DontBug.MD@maryland.gov.

Figure 2. Adult spotted lanternfly at rest (left) and with wings open (right). Image: D. Behnke, University of Maryland.

To destroy the SLF eggs, you should carefully scrape the eggs into a Ziploc bag containing some hand sanitizer. Once the eggs are in the hand sanitizer and the bag is zipped closed, smash the eggs and freeze the bag before you report your finding at the same link as above.

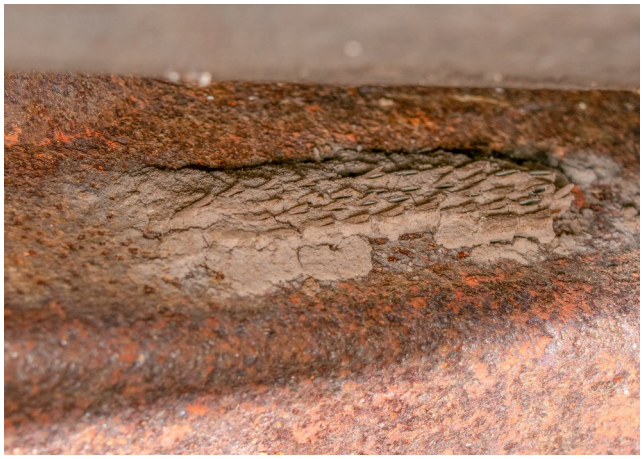


Figure 3. Spotted lanternfly egg mass. Present in fall & winter and blend in well with their surroundings. Image: P. Coffey, University of Maryland.

Learn more: To learn more about the SLF, go to:

https://mda.maryland.gov/plants-pests/Pages/spotted-lantern-fly.aspx

https://extension.umd.edu/hgic/topics/spotted-lanternfly

SARE Farmer Grants Due December 3

The Northeast Sustainable Agriculture Research and Education (SARE) Program has released the call for applications for 2020 Farmer Grant projects. Proposals are due online by 5 p.m. eastern time on Tuesday, December 3, 2019. Farmer Grants provide research funds for commercial farms to explore new ideas in almost any aspect of production, marketing and other topics that influence successful farming in the region. Application materials, including detailed instructions and supporting documents, are posted on the Northeast SARE website at www.northeastsare.org/FarmerGrant.

Changes To MD's Nutrient Management Program

Sarah Everhart, Legal Specialist
University of Maryland Francis King Carey School of Law

Reposted from Maryland Risk Management Blog, abridged

This article is not a substitute for legal advise

During the last legislative session, the Maryland General Assembly passed Senate Bill 546 (SB 546), which enacted many changes to the Nutrient Management (NM) and Confined Animal Feeding Operation (CAFO) Programs; all of which are effective on October 1, 2019. Specifically, SB 546 increases financial penalties for farmers who are out of compliance with the Nutrient Management Program, adds supplementary reporting requirements on manure transport and land application, places new requirements on CAFOs, and requires water quality monitoring at nine sites on the lower Eastern Shore.

As of this month, farmers with late or missing Annual Implementation Reports (AIRs) may be fined, after notice of violation, up to $1,000. The fine for failing to implement a Nutrient Management Plan (NMP) is now capped at $500 per violation and up to $5,000 per operator, per year. Both of these fines require the Maryland Department of Agriculture to consider, before assessing the fine, circumstances such as the willfulness of the violation, whether the violation is part of recurrent pattern of behavior, and in the case of failing to implement a NMP, any actual harm to the environment or to human health and the available technology and economic reasonableness of controlling, reducing, or eliminating the violation.

The legislation also creates new fines related to Maryland's Phosphorus Management Tool (PMT). There will now be a $250 fine for anyone who applies phosphorus to land in violation of the PMT regulations. Additionally, licensed businesses and certified consultants must comply with all nutrient management reporting requirements including PMT implementation deadlines and submission of soil test data required by the PMT and failure to do so may result in a $250 fine.

SB 546 also modifies how MDA tracks manure movement both inside and outside of the State and created additional record keeping responsibilities on farmers, manure haulers, and brokers. The 2019 AIR will have an expanded section on manure transport and will require a farm operator using animal manure to include the following on the AIR:

1. The amount of animal manure imported to exported from the person's farm;
2. For any animal manure that was imported, the name and location of the sending farm; and
3. For any animal manure that was exported, the name and location of the farm, alternative use facility, or manure broker that received the manure.

*If the farm operator receives animal manure through a manure broker, the broker shall provide the operator with the name and location of the sending farm.

SB 546 also requires CAFO operators to have coverage under the General Discharge Permit, issued by the Maryland Department of the Environment (MDE), before construction on any CAFO may begin. MDE is also prohibited from issuing coverage under the General Discharge Permit to a person who began constructing a CAFO before being issued permit coverage. MDE must also now charge a one-time permit application of at least $500 for notice of intent to seek coverage under the General Discharge Permit for a proposed or modified CAFO that will have a house capacity of 350,000 square feet or more. These CAFOs will also be subject to an annual $500 fee for continued coverage under the General Discharge Permit.

Anyone with questions about nutrient management or any other issue related to agricultural law may contact the Agriculture Law Education Initiative at (410) 706-7377 or umaglaw@umd.edu.

Northern Maryland Field Crops Day

Grain farmers, industry professionals, and ag service providers are invited to join us on December 5 for Northern Maryland Field Crops Day. Topics for this year include:

Fungicides on Corn | Forage Management | Herbicide Resistance | Cover Crop Research

Industrial Hemp Update | Pesticides and Communicating Risk | Agricultural Conservation

Leasing | Agronomic Weed Control Update.

Location: Friendly Farm Restaurant, 17434 Foreston Rd. Upperco, MD 21155 located about 5 miles west of I-83 via Mt. Carmel Rd. and right onto Foreston Rd.

Time: 8:30 a.m. — refreshments, visit sponsors & exhibits. 9:00 a.m.– 3:00 p.m. — Presentations.

Registration: $22 if you pre-register, $30 at the door, includes an-all-you-can-eat lunch. This meeting serves as recertification for Maryland private pesticide applicators and offers recertification credits for Pennsylvania Applicators. In addition, producers can attend specific presentations to also renew their Maryland nutrient applicator's voucher and earn Certified Crop Advisor (CCA) continuing education credits. To register to attend or get more information, call the University of Maryland Extension, Baltimore County Office at (410) 887-8090. Or you can sign up on Eventbrite at https://2019fcd.eventbrite.com .

Help Improve Cover Crop Incentive Programs

Cornell University, with support from Sustainable Agriculture Research and Education (SARE), is conducting a survey to assess cover crop incentive programs in Maryland, New York, Pennsylvania, and Vermont. They are also seeking participation from fruit, vegetable, field crop, grain, and mixed crop-livestock producers in Maryland, New York, Pennsylvania, and Vermont.

The goal is to identify how cover crop incentive programs can be improved to better suit farmer needs. Key findings from the survey will be shared widely and communicated directly to local, state, and federal program administrators.

If you're interested, please click here to fill out the survey: https://cornell.qualtrics.com/jfe/form/SV_41vvNzqOIAQTmyF.

Farm Bureau Bull Roast

February 22

7—11:00 p.m..
Jarrettsville Gardens
Jarrettsville, MD

The 3rd Annual Harford County Farm Bureau Bull and Shrimp Roast will take place at Jarrettsville Gardens on February 22, 2020. Activities include live music from Red Dirt Revolution, live and silent auction, raffles, and a cash oyster bar. Tickets are $50 per person or $450 for a table of ten. Call (443) 504-2187 or (410) 935-5527 or email HCFBBullroast@hotmail.com to purchase tickets.

Agricultural Plastic Recycling

As a reminder, agriculture plastic recycling will be closed at the Scarboro Landfill for the winter months and will resume next year. If you have any questions about agricultural plastic recycling, contact Wendy Doring at (410) 638-3417.

Great resources are just a click away!

Andrew Kness
Extension Agent,
Agriculture and
Natural Resources

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Back-issues of this publication can be found at: https://extension.umd.edu/news/newsletters/657

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Ag Notes

Harford County Newsletter

Dates to remember

5 Nov. MACS Cover Crop Program cost share planting cutoff date. Fall certification deadline is **Nov. 13.** Contact your local Soil Conservation District for more information.

13 Nov. Women in Ag Webinar: Excel & Spreadsheets on the Farm. 12 p.m. Free. Register online.

14 Nov. Ag Law Conference. 8-3 p.m. Crowne Plaze Hotel, Annapolis. $50, students are free. Register online by Nov. 10.

19-21 Nov. Mid-Atlantic Crop Management School. Princess Royal Hotel, Ocean City, MD. $285-$355. Register online.

4 Dec. Winter Dairy Series. 10-2 p.m. Fawn View Farm, Pylesville. Free. Register online or call (301) 432-2767 x324.

5 Dec. Northern Maryland Field Crops Day. 9-3 p.m. Friendly Farm Restaurant, Upperco. $22 in advance, $30 at door. Register online or call (410) 887-8090.

16 Jan. Carroll County Winter Farm Meeting. 9-3 p.m. Westminster, MD. Registration information forthcoming.

23 Jan. Central MD Vegetable Growers Day. 9-3 p.m. Friendly Farm Restaurant, Upperco. $22 in advance, $30 at door. Register online or call (410) 887-8090.

24 Jan. FSMA Produce Safety Training. 8-5 p.m. Harford County Extension Office, Street. $25. Register online or call Deanna Baldwin at (410) 841-5769.

11 Feb. Harford County Mid-Winter Agronomy Meeting. 9-3 p.m. Deer Creek Overlook, Street. Registration information forthcoming.

November 2019