

Dave's Ramble

"Pay attention! Nature teaches us every day, plants are the only solution to soil health and carbon sequestration." decreed the Crops Master. In fact, plants are the only reason anything is alive on this wonderful heavenly orb. Another important fact nature shares with us, is that tillage is not an ordinary function in ecosystems. This is well stated by a former colleague, County Agent Robert Faulkner, in his book *Plowman's Folly*, "No one has ever advanced a scientific reason for plowing." He witnessed the dust bowl and came to his conclusions, and we collectively witnessed the quickest loss of topsoil organic matter in the history of earth from 1920-1960. Beginning in 1961, US farmers led the world in the no-tillage revolution that finally halted the horrific topsoil and organic matter losses.

Some say, "We can just add organic soil amendments and manures to solve the soil health problem." Those who make such statements are gardeners, not farmers; the truth is that there is not enough to add. Just ask any farmer this year how much manure was available to spread? High fertilizer prices quickly led to the unavailability of any manure and biosolids.

In the 1980's, fertilizer prices rose in a similar fashion and farmers really began valuing manure to reduce fertilizer inputs. While farming at the Naval Academy Dairy, we recognized that we only had manure available to spread on about twenty percent of the crop fields each year. We reduced the fertilizer bill, utilized nutrients wisely, but certainly did not add enough manure to make a considerable soil organic matter difference, even in a one hundred percent no-tillage system. We were merely recycling plant material removed.

In farming systems, to increase organic matter and create a healthy living soil biota, living green plants have to be ever present. Maryland farmers should be commended, law and nature has taught them a valuable lesson; cover crops are just as important as the harvested crop. We must farm in such a way as to balance the plant matter harvested or lost to tillage, with the amount given to the soil. We ask our farmers to do a lot, but sequestration occurs when we all give more to the soil than we demand. Nature teaches us, "Are we ready to learn?"

Summer 2022

Calendar of Events

Mark Your Calendars --- Plan To Participate

Extension Events

- ♦ Aug 3, 2022 - Crops Research Twilight, CMREC, Upper Marlboro



Vincent Van Gogh *Wheat Fields after the Rain, the Plain of Auvers, 1890*

Inside This Issue

- Food Safety Program Update
- MDA News and Highlights
- EPA Pesticide Program Updates

**Crops Twilight
Barbecue & Ice Cream
Social CMREC Upper
Marlboro Farm
August 3, 2022**



You are invited to a **Fields Crops Research Twilight, Barbecue and Ice Cream Social** at the **Central Maryland Research & Education Center, 2005 Largo Road, Upper Marlboro, Maryland** on **Wednesday, August 3, 2023 from 4:00 to 9 PM**. A barbecue dinner will be served at 4:00 pm followed by homemade ice cream prior to the evening tour. University of Maryland Extension Educators and Specialists will showcase their field crop, vegetable and fruit research plots.

Barbeque begins at 4:00 PM

Ice cream Served at 5:15 PM

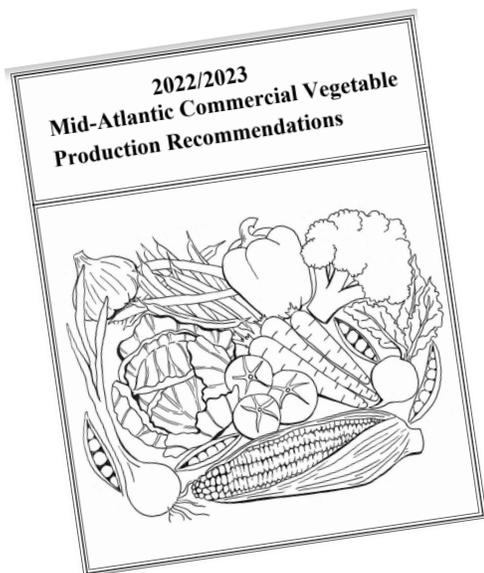
Crops Twilight at 6:00 PM

Please arrive on time as the tour will start promptly at 6:00 PM.

This event is free. However, a reserved meal ticket is required.

If you need special assistance to participate, please contact the Anne Arundel County Extension office at 410-222-3906 by August 2nd.

Register on-line at the Anne Arundel County Extension website: [Click Here](#) or call 410 222-3906.



On-Line PDF
[Click Here](#)

Welcome to the Office

Ag & 4H Summer Intern

By Makayla Kret
Extension Intern
University of Maryland

Hello! My name is Makayla Kret and I am the new Ag Intern for this summer. I was chosen as one of the seven student interns for the Leadership & Professional Development Extension Internship Program. This is a 10-week internship opportunity for undergraduate students from two or four-year institutions who may have an interest in Extension or agriculture. I am from Southern Maryland, and I'm a rising junior at the University of Maryland studying Agricultural and Resource Economics with a concentration in Agribusiness. I recently graduated from the Institute of Applied Agriculture with a certificate in Agricultural Business Management. This summer I will be working with Gretchen Sumbum and Ronald David Myers on 4-H and Ag program projects. I have already learned so much in my 2-weeks here, and I am so excited for what this summer has to offer!

Ways for High School Students to Become Involved In Agriculture

By Makayla Kret
Extension Intern
University of Maryland

As students enter high school, they begin exploring their career interests. Finding ways to become involved in your field of interest can be difficult, especially for those who are interested in agriculture. High school is the perfect time for agriculture students to become involved as much as they can.

One way to become involved in agriculture as a high school student is through the 4-H program. The 4-H youth development program is for children and youth. Clovers are ages 5-8, and members are ages 8-18. The 4-H program is organized into several different clubs that allow you to explore and find what you are interested in. Clubs cover the topics of animal science, agriculture, business, gardening, and many more! Students in 4-H are given opportunities to solve hands-on problems on their own, gain new knowledge, network, travel to new places, and so much more. One way that members can learn hands-on is through their 4-H projects. They are usually one year long and on a topic in which the student is interested. There are many more opportunities in 4-H for you to grow and acquire essential skills for success in your career. Click [Here](#) to explore and join Anne Arundel County 4-H.



Another great way for high school students to become involved in Ag is the Future Farmers of America

Organization (FFA). The FFA is an organization that provides youth with leadership and personal development opportunities for successful careers in agriculture. Students will learn these skills through hands-on agricultural education, networking, and classroom instruction. Youth members of this organization range from grades seven through twelve and college. FFA chapters are located right in your school classrooms. If you do not have an FFA chapter in your school, you may be able to enroll in a chapter elsewhere. The FFA currently has 8,817 chapters in all 50 states. Click [Here](#) to find a chapter located near you. This organization also provides students with scholarship opportunities for students wishing to further their education! To learn more about the FFA, visit their website [Here](#).



Plant Science Food Safety Group
Department of Plant Science and Landscape Architecture
College of Agriculture and Natural Resources
College Park, MD



June 13, 2022

In this issue:

[Strawberries and the Four W's](#)

[Farm Worker Survey](#)

[Produce Safety Rule or GAP?](#)

[Visit Our YouTube Page](#)

Strawberries and the Four Ws

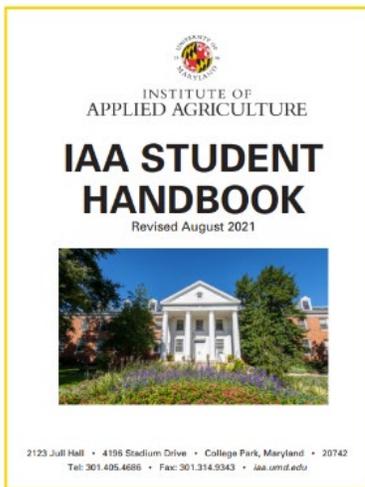
In Good Agricultural Practices (GAP) training we focus on four routes of fecal contamination: workers, water, wildlife and waste – the four W's. When we apply those concepts to strawberries, we typically look at overhead irrigation application for frost protection or evaporative cooling as being a possible source of contamination.

Strawberries are a particularly vulnerable crop as they are eaten fresh, are grown near the ground and are often handpicked. Other routes of contamination also have some history.

In August 2011, fifteen people were sickened, and one person died after eating strawberries from an operation in Oregon. *E. coli* 0157:H7 was identified as the pathogen, and that pathogen was matched to deer feces found in the strawberry fields. The outbreak was complicated as the original producer had distributed the crop through other vendors. Those vendors then sold the berries in direct market venues.



Photo credit, Chris Walsh



If you are planning to attend college after high school, the University of Maryland's Institute of Applied Agriculture (IAA) is a great institution to continue your education in agriculture. The IAA is a two-year 60-credit certificate program within the College of Agriculture and Natural Resources at the University of Maryland. They currently offer nine program tracks which are Agriculture

Business Management, Ag Leadership and Communication, Sustainable Ag, Environmental Stewardship, Ornamental Horticulture, Landscape Management, Golf Course Management, and Sports Turf Grass Management. At the IAA students can gain entrepreneurial and leadership skills through hands-on learning. Being a student at the IAA allows you to network with many professionals/ experts in the agriculture field. This is a great way to learn about jobs that are hiring in your field of interest or spark a mentorship with an expert in your field. If you are interested in pursuing a bachelor's degree, IAA students are able to transfer to the University of Maryland's College of Agriculture and Natural Resources to study any major of their choice. Learn more about or apply to the IAA [Here](#).

There are many opportunities for high school students interested in agriculture to become involved. Any student thinking about pursuing a career in agriculture should get involved in as many ways as they can.

A more recent foodborne illness in strawberries is still undergoing investigation by the FDA and CDC. These fresh, organically grown berries were imported from northern Mexico and distributed through many states and into Canada. Cases of Hepatitis A have been linked to the product in California, Minnesota, and Canada. It is unknown at this time how many people have been affected.

Hepatitis A is a highly contagious liver infection that is spread through contaminated human stool and blood. In this case, a lack of worker training in health and hygiene is implicated. Worker training in the importance of handwashing, recognizing illness, and providing adequate and sufficient sanitary facilities may have prevented this outbreak.

Though strawberries are usually associated with the W of water, a forward-thinking producer will consider all four W's as the above examples illustrate.

Produce Safety Rule Training and Good Agricultural Practices (GAP) Certification; Which Would be Best for Your Operation?

Look on the Plant Science Food Safety Group (PSFSG) webpage: <https://psla.umd.edu/extension/produce-safety>. Scroll down to the article, "Clearing up the Confusion between GAP Audits and PSR Inspections". The left hand column will lead you to more in-depth articles: "Does the Produce Safety Rule apply to my Farm?" and "How will GAP Certification help my Farm?"

Visit our website for more produce safety information: [Click Here](#)

Have You Registered Your Farm or Bee Hive with Maryland's Field Watch?



To register, go to FieldWatch.com. For more information about FieldWatch, read this helpful [resource](#) or call the department's Pesticide Regulation Section at 410-841-5710.

Pest Predictive Calendar

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (DD) this week range from about 775 DD (Martinsburg, WV) to 1176 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:

- Oak lecanium scale – egg hatch / crawlers (789 DD)
- Rhododendron borer – adult emergence (815 DD)
- Japanese maple scale – egg hatch / crawlers (829 DD)
- Dogwood borer – adult emergence (830 DD)
- Azalea bark scale – egg hatch / crawlers (957 DD)
- Japanese beetle – adult emergence (1056 DD)
- Fall webworm – egg hatch (1st gen) (1142 DD)
- Indian wax scale – egg hatch / crawler (1145 DD)
- Oriental beetle – adult emergence (1147 DD)
- Peachtree borer – adult emergence (1181 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.

Where can you find / how do you get DD accumulation data? There are several brands of "technology" that can be purchased and placed in a specific location that record temperature and calculate DD. There is often software associated with this technology that allows you to download the data to a computer. We do this in our research and have used temperature monitors made by Hobo and Watch Dog, but there are others too (no specific endorsement meant here). DD accumulations are reported in various extension publications (ex. the IPM Alert Newsletter). Weather data can be accessed from various sources (NOAA, Underground Weather, and Weather Channel) which provide DD or the temperature data that allows you to calculate DD.

Go to <http://uspest.org/cgi-bin/ddmodel.us> website and follow the directions listed below in this article.

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

Degree day (DD) accumulations provide a tool for more accurately predicting activity of insects and the life stages you want to target for management.



Timely Viticulture is an electronic newsletter that is designed to give those in the grape industry a timely reminder of things they should be considering in the vineyard. Since we are all busy it is not meant to be an exhaustive list of things to consider or even a full discussion of the options. It is just meant to think about what is happening and what is coming up, with some comments.

To view Timely Viticulture [Click Here](#)

Mid-Season (June-July)

- [Brown Marmorated Stink Bug \(BMSB\) - Part 1](#)
- [Brown Marmorated Stink Bug \(BMSB\) - Part 2: Management in the Vineyard](#)
- [Crop Estimation](#)
- [Crop Management](#)
- [Disease Management - Botrytis](#)
- [Drought Stress, Vine Performance, and Grape Quality](#)
- [Grape Berry Moth](#)
- [Hail Damage](#)
- [Japanese Beetles](#)
- [Mid-Season Disease Management](#)
- [Red Leaves in the Vineyard—Diagnosis, and Management](#)
- [Spotted Lanternfly \(SLF\) I - Background](#)
- [Spotted Lanternfly \(SLF\) II - Scouting and Management](#)

Pre-Harvest (August)

- [Brown Marmorated Stink Bug \(BMSB\) - Part 1](#)
- [Brown Marmorated Stink Bug \(BMSB\) - Part 2: Management in the Vineyard](#)
- [Brown Marmorated Stink Bug \(BMSB\) - Part 3: Fruit Damage and Juice/Wine Taint](#)
- [Crop Development Sampling](#)
- [Disease Management - Botrytis](#)
- [Early Warning: Multi-Colored Asian Ladybeetle \(MALB\) for Grape Growers](#)
- [Evaluating Grape Samples for Ripeness](#)
- [Grape Berry Moth](#)
- [Determining Harvest Priorities](#)
- [Nematode Sampling](#)
- [Pre-Harvest Disease Management](#)
- [Red Leaves in the Vineyard—Diagnosis, and Management](#)
- [Round Two: Multi-colored Asian Ladybeetle \(MALD\) Management for Grape Growers](#)
- [Spotted Lanternfly \(SLF\) I - Background](#)
- [Spotted Lanternfly \(SLF\) II - Scouting and Management](#)
- [The Spotted Wing Drosophila \(SWD\) - Part 1: History, Background, and Damage](#)
- [The Spotted Wing Drosophila \(SWD\) - Part 2: Management](#)

Any Perennial Fruit Crop Damage this Spring?

If you have experienced damage to their 2022 perennial crop, please complete the five questions below and return to Joe Fiola and he will forward responses to RMA. Report multiple events separately as appropriate. **All reports will be forwarded anonymously; just the county where they were experienced will be provided.**

Please provide any responses (loss information or no widespread damage) by **June 22th**.

- 1) *Crop:*
- 2) *Issue or event of loss:*
- 3) *Date of damage:*
- 4) *Area (county or region):*
- 5) *Estimated percent of damage or crop loss:*

Joseph A. Fiola, Ph.D.

Specialist in Viticulture and Small Fruit

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Do You Know the Importance of a Farm Plan?



Developing a [Soil Conservation and Water Quality Plan \(SCWQP\)](#),

otherwise known as a Farm Plan, is a free service the [Anne Arundel Soil Conservation District](#) provides to agriculture landowners. A plan includes an aerial photograph of the property, an inventory of resources on the property, a soil map and a list of management decisions made by the landowner.

A conservation planner will work with you to see if you would like to install any [Best Management Practices \(BMP\)](#) to help prevent sediment and nutrients from leaving the farm. There are also BMPs to help with farm management such as adding fencing to have the ability to rotate pastures, stream crossings for livestock and equipment to access other fields and watering facilities to help with livestock rotation. A SCWQP is required if you would like to apply for any of the agriculture preservation programs and if you are applying for either federal or state cost share programs.

Another benefit of a SCWQP allows for a possible exemption from obtaining a building permit and grading permit to construct an agricultural building. If you think you might be interested in having a SCWQP developed for your farm, please contact the Anne Arundel Soil Conservation District at 410-571-6757. [Learn More](#)

June Vegetable Insect Scouting Tips

By Emily Zobel
Senior Agent Associate
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ezobel@umd.edu

Be sure to check all labels carefully before combining insecticides and herbicides. Thresholds are based on sampling 100 plants (10 plants x 10 locations).

Spider Mites: Spider mites can occur in tomato, eggplant, potato, and vine crops such as melons, cucumbers, and other crops. Feeding damage causes leaves to have a yellow-white stippling appearance. Heavy feeding can turn leaves completely pale, dry up, and fall off. They commonly outbreak during hot, dry weather, which also aggravates injury by stressing the plant. However, their populations decline rapidly during periods of heavy rainfall or after overhead irrigation has been used.

Snap beans: Scout for bean leaf beetle, Mexican bean beetle, and potato leafhopper (PLH). Plant leafhopper feeding can cause hopperburn on leaves, reducing photosynthesis and yield. Treated seeds offer protection from plant leafhoppers for about 3 weeks post-planting. The treatment threshold for plant hopper is when adults plus nymphs exceed 100 per 20 sweeps. Bean leaf beetle adults, Mexican bean beetle adults, and larvae chew holes in leaves. The treatment threshold for bean leaf beetle, Mexican bean beetle, is 20% defoliation or 1 beetle per plant.

Onion: Scout for thrips and feeding damage, which looks like whitish or chlorotic streaks. Prolonged feeding reduces bulb size and increases the incidence of leaf and bulb rots. Immature thrips usually feed on young tissue between the leaf sheaths and stem, while adults feed on more mature tissue. The treatment threshold is an average of 2-4 immatures per leaf. High spray pressures and high gallonages are necessary to ensure good contact between the pest and the chemical. Twin flat fan nozzles result in better coverage than single flat fans.

Eggplant & Potato: Scout for flea beetles and Colorado potato beetles. Adult flea beetle feeding creates small feeding holes that create a shot-hole effect. Treatment thresholds are an average of 2 beetles per plant when plants are less than 3 inches high, an average of 4 beetles per plant when plants are between 3-6 inches high, and an average of 8 per plant when plants are above 6 inches. Colorado potato beetle adults and larvae feed on the foliage of solanaceous crops (potato, eggplant, and tomato). They have 1-2 generations per year, and a large population can completely defoliate plants. The treatment threshold is an average of 0.5 adults, 4 small larvae, or 1.5 large larvae per plant.

Cucurbits: Scout for aphids, cucumber beetles, and squash bugs. Aphids are found on the undersides of leaves. Examine two runners at 10 sites. If 20 percent of runners or more have live aphids, treatment may be needed. Good

coverage of the undersides of leaves is needed for control. Hot, dry weather can cause melon aphid populations to increase rapidly. Cucurbit crops that are susceptible to bacterial wilt should be protected from cucumber beetles from seedling emergence to the time vines begin to run. Treatment thresholds are an average of >5 beetles per plant when plants are small (>5th leaf stage). The treatment threshold for plants beyond the 4-leaf stage until vines begin to run is when the average beetle densities are 1 per plant.



Maryland Cover Crop Sign-Up 2022-2023

Mail-in registration for our Cover Crop Program runs July 1 through July 18 at soil conservation districts. This is your chance to apply for attractive grants to plant cover crops in the fall to protect water quality and build healthy soils. New this year, our Cover Crop Plus+ option offers higher incentive payments and more choices for farmers who sign a 3-year cover crop commitment to improve soil health.

WHY COVER CROPS?

Cover crops are your first line of defense against erosion and runoff in winter. Want to improve your soil's health? Check out this triple play of benefits:

- Cover crops add organic matter to the soil.
- Cover crops help suppress weeds and reduce compaction
- Cover crops protect fields from too much or too little rain

2022-2023 COVER CROP PLANTING AND PAYMENT OPTIONS					
TRADITIONAL COVER CROPS PAYMENT OPTIONS	NO-TILL	CONVENTIONAL	BROADCAST WITH LIGHT, MINIMUM OR VERTICAL TILLAGE	AERIAL/ AERIAL GROUND SEEDING	BROADCAST STALK CHOP AND BROADCAST MULTIPACKER
Base payment:	\$55/acre	\$55/acre	\$55/acre	\$60/acre	\$55/acre
Plant by October 10, <i>add:</i>	\$10/acre	\$10/acre	\$10/acre	\$0/acre	\$0/acre
Aerial seed into standing corn on or before September 10, <i>add:</i>	\$0/acre	\$0/acre	\$0/acre	\$10/acre	\$0/acre
Plant rye or a multi-species cover crop, <i>add:</i>	\$15/acre	\$15/acre	\$15/acre	\$15/acre	\$15/acre
Terminate cover crop after May 1, <i>add:</i>	\$10/acre	\$10/acre	\$10/acre	\$10/acre	\$10/acre
Maximum Payment Amount:	\$90/acre	\$90/acre	\$90/acre	\$95/acre	\$80/acre
<i>Flat rate:</i> (for cover crops planted from November 6 through November 15)	\$45/acre	\$45/acre	\$45/acre	\$0/acre	\$0/acre

MAIL IN ENROLLMENT

- This year's enrollment will be conducted entirely by mail.
- Please complete the application (under Cover Crop Forms and Resources below) and mail it to your local soil conservation district. A list of soil conservation district addresses is also posted under this heading.

- Applications must be postmarked between July 1 and July 18, 2022.

WHAT'S NEW THIS YEAR

- The base rate for incorporated seed has been raised to \$55/acre.
- The incentive payment to plant rye and mixed species has increased to \$15/acre.

ADDITIONAL 2022-2023 PROGRAM HIGHLIGHTS

- Incorporated seed qualifies for a \$10/acre early planting incentive.
- Aerial seed or aerial ground seed cover crops into standing corn on or before September 10, 2022 to qualify for a \$10/acre incentive payment.
- Terminate your cover crop after May 1, 2023 to qualify for a \$10/acre Extended Season incentive payment.
- Plant rye or multi-species cover crops for a \$15/acre incentive payment.
- Plant cover crops after corn, soybeans, sorghum, tobacco, vegetables, hemp and millet.

SEED REQUIREMENTS

All seed purchased must be tested and labeled following Maryland Seed Law and Regulations.

- Purchased seed must be free of prohibited noxious weed seeds, have a minimum germination rate of 80%, and have no more than 16 restricted noxious weeds per pound.
- Homegrown seed with a germination rate between 65% and 79% may be used. Certain rules apply.
- Cost-share is available for seed testing.

ELIGIBLE COVER CROP SPECIES

Cereal Grains: Wheat/Spelt, Rye, Barley, Triticale, Oats, and Ryegrass

- **Brassicas:** Forage Radish and Canola/Rape
- **Legumes:** Clover, Austrian Winter Peas and Hairy Vetch (must be planted with a cereal grain as part of a mix)

COVER CROP MIXES

- Two-species cover crop mixes may be planted at a rate of 50% cereal grains and 50% brassicas or legumes.
- Three species mixes (50/25/25) must contain a minimum of 50% eligible cereal grains.

PLANTING TERMINATION DATES AND LATE

PLANTING EXTENSIONS

- Plant cereal grains by November 5, 2022. Some species have earlier deadlines.
- Mixes containing legumes, forage radish, canola/rape, or oats must be planted by October 1, 2022.
- The aerial seeding deadline for cover crops is October 10, 2022. Some species have earlier deadlines.
- Terminate cover crops between March 1 and June 1, 2023.
- Cover crops planted from November 6 through November 15 qualify for a reduced flat rate. Seed

must be incorporated, the rye incentive is available, and termination must occur after May 1, 2023.

FALL MANAGEMENT OPTIONS

Eligible cover crops may be grazed or chopped for on-farm livestock forage after becoming well established. Manure may be applied in fall following Maryland's nutrient management regulations.

CERTIFICATION REQUIREMENT

To receive payment, farmers must certify cover crops with their soil conservation district within one week of planting and no later than November 14, 2022. Late season cover crops planted November 6 through November 15 must be certified by November 22, 2022.

PROGRAM ELIGIBILITY

- You must be in good standing with the Conservation Grants Program and in compliance with Maryland's nutrient management requirements.
- You must submit a current Nutrient Management Plan Certification with your application. Forms are available under Cover Crop Forms and Resources below.
- Additional restrictions may apply.

FIND A CONTRACTOR TO PLANT YOUR COVER CROP

Check out our Contractors Directory for a list of contractors who can plant cover crops in your fields this fall.



INTRODUCING Cover Crop Plus+, a new pilot financial incentive program for soil health farmers.

Cover Crop *PLUS+* offers higher incentive payments and more perks for farmers who plant cover crops to improve soil health. The program is offered by the Maryland Department of Agriculture's Conservation Grants Program.

HOW IT WORKS

Farmers sign a contract to grow cover crop mixes on the same field for 3 consecutive years. You agree to maintain a living root system in enrolled fields for most of the year and manage the cover crop to achieve maximum soil health and water quality benefits.

The base payment for this premium incentive program is \$115/acre per year. Optional add-on practices can increase the reimbursement rate to \$160/acre. To qualify for payment, optional add-ons must be new practices (not used in the previous 3 years) for an enrolled field.

THE DETAILS

- You agree to plant cover crops on the same fields for 3 consecutive years.
- Fall cover crops must be planted by October 1 of each year.
- You must plant a cover crop mix containing at least 50% cereal grains and 25% legumes.

- This program uses the same species and seeding rates as Maryland's traditional Cover Crop Program.
- A cash crop is:
 - Planted directly into a living cover crop in the spring, or
 - The cover crop is terminated no earlier than one week before the cash crop is planted.
- Tillage is limited to no-till or conservation till throughout the 3-year contract.
- You may enroll up to 500 acres in this program.



For a copy of the SARE Cover Crop Economics Bulletin [Click Here](#)

COVER CROP PLUS+ RATE CHART WITH ADD-ON PRACTICES

PRACTICE	PAYMENT RATE
Base Rate Cover Crop Plus+ Conservation Tillage	\$115/acre (per year)
Option 1: Conservation Crop Rotation Add diversity to your current crop rotation	\$15/acre
Option 2: Integrate Livestock into Cropland Graze a well-established cover crop	\$15/acre
Option 3: PSNT (Pre-Sidedress Soil Nitrate Test) Use the PSNT to determine nutrient applications and timing for corn fields that have received organic nitrogen sources	\$15/acre

ELIGIBILITY

- You must meet the State of Maryland's definition of an "agricultural operation."
- If you lease land, you must confirm that the enrolled acres will be under your care for the entire term of the agreement.
- You must be in good standing with the Maryland Nutrient Management Program, the Maryland Agricultural Water Quality Cost-Share Program, the Maryland Agricultural Land Preservation Foundation Program, and other MDA conservation grants programs.
- You must submit a current Nutrient Management Plan Certification with your application.
- Additional restrictions may apply.

HOW TO APPLY FOR COVER CROP Plus+

- Download the application at Cover Crops Forms and Resources below.
- Take the completed application to your local soil conservation district to review and submit to MDA
- Wait for your approval letter before proceeding.
- Contact your local soil conservation district if you need technical assistance or help planning your soil health practices.

Cover Crops Forms and Resources [Click Here](#)

The Cover Crop Program is funded by the Chesapeake Bay Restoration Fund and the Chesapeake and Atlantic Coastal Bays Trust Fund. See your soil conservation district representative or contract for details.



NEWS RELEASE

Office of the Secretary 50 Harry S Truman Parkway Annapolis, Maryland 21401 www.mda.maryland.gov

**Department Releases
Pesticide Use Survey**

The Maryland Department of Agriculture (MDA) has released the results of a statewide pesticide use survey conducted by the U.S. Department of Agriculture (USDA) National Agricultural Statistics Service (NASS). The report, [2020 Maryland Pesticide Survey Statistics](#), was conducted in 2021, and covers usage across the state in 2020.

"This survey provides us with comprehensive information about what pesticides are being used around the state and what trends are developing," said Secretary Joe Bartenfelder. "This data not only helps agriculture and industry professionals understand what is being used, it also provides the public and experts with information that can help them focus their research and monitoring efforts."

Pesticides are defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. They can take the form of bait, liquid, powder or spray. Commonly used pesticides include insecticides, herbicides, fungicides and rodenticides. The survey included information from farmers, private applicators, commercially-licensed businesses and public agencies that are permitted by MDA to apply pesticides.

USDA NASS categorizes data into two categories: "publishable" and "unpublishable." Any reported use under one pound is considered unpublishable. In total, 5.1 million pounds of pesticides were used in 2020 (2.1 million pounds publishable, 3 million pounds unpublishable). The survey attributes 75% of total usage, 13% to insecticides and 11% fungicides. Overall, total usage of pesticide products decreased by 58% since the last pesticide use survey in 2014. The report lists and ranks more than 220 products based on usage. It also provides a comparison of the top 10 pesticide types used in 2020 versus data from surveys conducted in 2014, 2011, 2004, and 2000. For more information go to [MDA's Pesticide Regulation Section](#).

Maryland Announces Extension of Certification and Renewal Dates for Lawn Care Professionals

Businesses and individuals now have until December 31, 2022

The Maryland Department of Agriculture (MDA) has announced new certification and license renewal dates for businesses and individuals hired to fertilize lawns and turf. Certified Professional Fertilizer Applicators (PFAs) and licensed businesses now have until **December 31, 2022** to renew their certifications and licenses instead of June 30, 2022. The move was made to help lawn care professionals and businesses keep their renewals up to date by changing the deadline from peak season to off-season. Here's what lawn care pros and licensed firms need to know:

- PFAs and businesses with valid certifications or licenses expiring June 30, 2022, will be granted extensions until December 31, 2022
- These individuals have been mailed letters announcing this regulatory change to the deadline
 - This letter should be kept with the current certificate or license as proof that credentials are valid and up to date
- Renewal notices for Calendar Year 2023 will be mailed in November 2022, and are due to MDA by December 31, 2022
- The 3-year period for PFAs to obtain six continuing education credits will be extended from June 30, 2022 until December 31, 2023

For more information on certification and license requirements and Maryland's Lawn Fertilizer Law, please visit MDA's [website](#) or email nminfo.mda@maryland.gov.

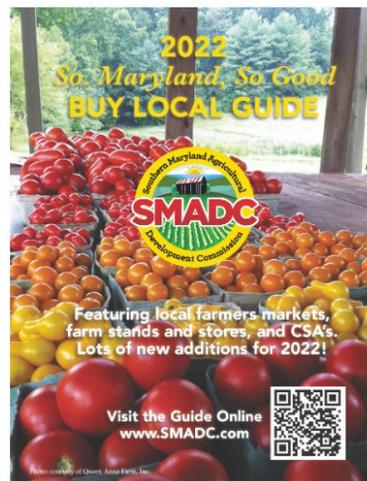


Quarantine Requirements and Spotted Lanternfly Permit Training:

[Click Here](#)

Marylanders Encouraged to Keep a Lookout for this Invasive Pest

If you suspect you have found a spotted lanternfly or their egg masses, snap a picture of it and then smash it. Report the sighting with photo attachments and location information to the Maryland Department of Agriculture at: DontBug.MD@maryland.gov. Dead samples of spotted lanternfly from any life stage can be sent to the Maryland Department of Agriculture's Plant Protection and Weed Management Program at 50 Harry S. Truman Parkway, Annapolis, MD 21401.



Southern Maryland, So Good: Buy Local Guide Released

SMADC's Buy Local Guide features regional Farmers Markets, Farm Stands, On-Farm Stores and CSA's Open for the 2022 Season

The Southern Maryland Agricultural Development Commission (SMADC), a division of the Tri-County Council for Southern Maryland, has released the 2022 'So. Maryland, So Good' Buy Local Guide. [Click Here](#)

Local farm food resources such as farmers markets, neighborhood farm stands and on-farm stores are popular destinations for consumers looking for a dependable supply chain of fresh locally sourced farm products. The So. Maryland, So Good Buy Local Guide is designed to help consumers find the freshest and best Southern Maryland farms have to offer including locally grown veggies and fruits, farm-raised meats, local seafood, cheese, eggs and a wide variety of value-added products such as jams and jellies, sauces, relishes, pickles, honey, baked goods, cut flowers, plants, herbs and more.

The online Buy Local Guide lists more than 29 farmers markets in the five-county area (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's), as well as 28 Southern Maryland farm stands and stores with regular in-person business hours, open to the public seasonally or year-round, and 10 additional markets in Maryland, Washington, D.C and Virginia that host one or more Southern Maryland farm vendor.

The Buy Local Guide will be updated from time to time as farm markets confirm their operational status for the 2022 season. Managers/owner operators of regional markets, farm stands, stores and CSA's that are not currently listed may apply to be included. Find the Buy Local Guide listing application and eligibility information under "List Your Market, Farm/Stand/Store or CSA" on the Buy Local Guide landing page at www.SMADC.com

VIEW THE GUIDE APPLICATION FORM [HERE](#)

Farmers Report Soil-Related Resource Concerns on About Half of Soybean, Wheat, Cotton, and Oat Fields

by Andrew B. Rosenberg and Steven Wallander



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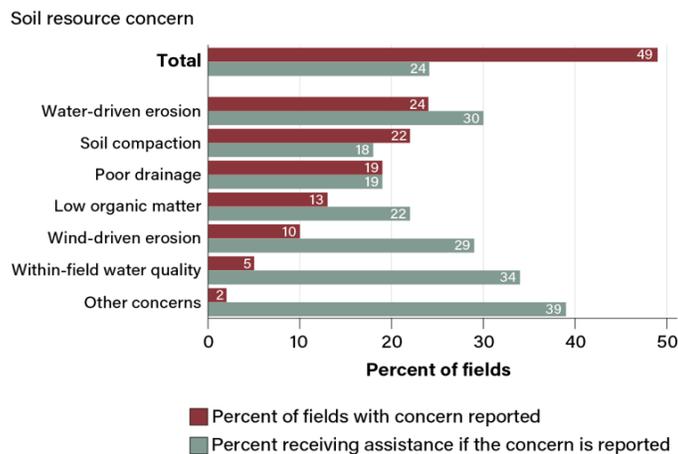
Farmers Report Soil-Related Resource Concerns on About Half of Soybean, Wheat, Cotton and Oat Fields

Read the entire article in Amber Waves [Click Here](#)

Report Highlights:

- Soil resource concerns can reduce farm productivity and profitability on farm fields, as well as exacerbate off-farm impacts of agriculture. Farmers growing oats and cotton in 2015, wheat in 2017, and soybeans in 2018 reported having at least one within-field resource concern on 49 percent of their fields.
- Water-driven erosion is the most prevalent farmer-reported resource concern, followed by soil compaction, poor drainage, and low organic matter.
- Farmers received technical assistance with production practices on 24 percent of their fields with self-reported resource concerns. USDA's Natural Resources Conservation Service was the most common source of technical assistance.

Farmers report resource concerns on almost half of their fields, seek technical assistance on about a fourth of fields with a concern



Notes: The chart summarizes data on soil and water concerns reported across all versions of USDA's Agricultural Resource Management Survey (ARMS): oats (2015), cotton (2015), wheat (2017), and soybeans (2018). Percentages for each concern include fields with multiple concerns. The chart also summarizes data on technical assistance received for resource concerns reported across all the ARMS versions. For example, 24 percent of farmers reported a water-driven erosion concern. Among those farmers who reported water-driven erosion concern, 30 percent received technical assistance. The **other concerns** category represents within-field concerns not already specified.

Source: USDA, Economic Research Service and USDA, National Agricultural Statistics Service, Agricultural Resource Management Survey, Phase 2 for 2015, 2017, and 2018.

Save the Date!



Tickets will be limited and will go fast, so save the date and stay tuned to our [Arundel Ag Facebook page](#) for details!

My ArundelBiz Podcast featuring Great Frogs Winery [tune in to learn more](#) about a business that's growing great grapes, and making great wine, in Anne Arundel County!

Anne Arundel Equipment Rental Program Updates

Beginning July 1, the [Equipment Rental Program](#) will move to an online application process. Applicants will be required to submit a pre-approval application, which will require the submission of a current insurance certificate. The pre-approval application only needs to be completed on annual basis consistent with the renter's insurance expiration date.

In addition, for each rental, the applicant must fill out an online application and wait for approval before rental. This process allows our staff to verify that the renter has submitted all required documents and does not have any past-due invoices. We ask that you submit your application with as much notice as possible. If you plan to rent during the weekend, please submit your application during the week prior to give our staff ample time to review.

Overall, the rental process remains the same and the new online application system reduces abuse to the program process and requirements.

The rental process and online application will be available on our [website](#). More details will be sent out soon.

If you have any questions regarding the new process, please email Brittany Rawlings, brawlings@aaedc.org



EPA Finalizes Biological Evaluations Assessing Potential Effects of Three Neonicotinoid Pesticides on Endangered Species

EPA has released its final biological evaluations (BEs) for clothianidin, imidacloprid, and thiamethoxam, part of a group of insecticides known as neonicotinoids, and its responses to comments received on the draft BEs. These neonicotinoids are used on a variety of crops, turf, and ornamentals, and for other residential and commercial indoor and outdoor uses.

In these BEs, EPA evaluated clothianidin, imidacloprid, and thiamethoxam to determine whether they may affect one or more federally listed endangered or threatened (listed) species or their designated critical habitats. These evaluations, which encompass all registered uses and approved product labels for pesticide products containing these chemicals, are part of EPA's efforts to meet its obligations under the Endangered Species Act (ESA). This work furthers the goals outlined in [EPA's April 2022 ESA Workplan](#) to provide practical protections from pesticides for listed species.

The BEs evaluate the effects of clothianidin, imidacloprid, and thiamethoxam on over 1,700 listed species and over 800 designated critical habitats in the United States, determining that:

- Clothianidin:
 - Will have no effect on 14 percent of species and 17 percent of critical habitats;
 - May affect but is not likely to adversely affect 19 percent of species and 27 percent of critical habitats; and
 - Is likely to adversely affect 67 percent of species and 56 percent of critical habitats.
- Imidacloprid:
 - Will have no effect on 11 percent of species and 10 percent of critical habitats;
 - May affect but is not likely to adversely affect 9 percent of species and 7 percent of critical habitats; and
 - Is likely to adversely affect 79 percent of species and 83 percent of critical habitats.
- Thiamethoxam:
 - Will have no effect on 12 percent of species and 11 percent of critical habitats;
 - May affect but is not likely to adversely affect 11 percent of species and 7 percent of critical habitats; and
 - Is likely to adversely affect 77 percent of species and 81 percent of critical habitats.

The "[likely to adversely affect](#)" (LAA) determination means that EPA reasonably expects that at least one individual animal or plant, among a variety of listed species, may be exposed to the pesticide at a sufficient level to have an adverse effect. The likely "take," which includes unintentional harm or death, of even one individual of a species, is enough to trigger an LAA determination. This is the case even if a species is almost recovered to a point where it may no longer need to be listed. As a result, there are often a high number of LAA determinations in a BE. An LAA determination, however, does not necessarily mean that a pesticide is putting a species in jeopardy.

Because of these findings, EPA has initiated formal consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services). EPA will be working with the Services throughout the consultation process to clarify how the effects determinations included in the final BEs and comments received on the draft BEs can best inform the Services' biological opinions (BiOps). EPA's support is intended to make consultation more efficient and allow the Services to focus their resources on developing additional mitigations to protect species that are the most vulnerable to potential exposures.

During consultation, the Services will develop BiOps, which will include their official determinations of whether a pesticide is likely to jeopardize each relevant listed species or adversely modify its critical habitat, and include any additional mitigation measures the Services develop in coordination with EPA and stakeholders. EPA will then implement any necessary mitigation measures to protect listed species, in collaboration with pesticide registrants.

These final BEs follow the draft BEs for clothianidin, imidacloprid, and thiamethoxam, which EPA released for public comment in August 2021. The draft BEs were developed after the release of EPA's proposed interim decisions (PIDs) for the neonicotinoid pesticides in January 2020. The PIDs are part of EPA's registration review process for pesticides, required under the Federal Insecticide, Fungicide, and Rodenticide Act, to identify risks from pesticides and actions that can mitigate risks. In the PIDs, EPA proposed a suite of mitigation measures including annual application rate reductions, application timing restrictions, and measures to reduce spray drift. The Agency anticipates releasing amended PIDs in 2023, which will include updates to some of the previously proposed mitigations, and early mitigation measures to reduce neonicotinoid exposures for listed species. Mitigation measures will be finalized in the interim decisions, which EPA expects to release in 2024. EPA and the Services will consider these final mitigations during consultation.

Read the final BEs for [clothianidin](#), [imidacloprid](#), and [thiamethoxam](#).

Maryland Beef Webinars

Join us on the second Tuesday of each month from 7:30-8:30 pm

- March 8** — To deworm or not to deworm?
- April 12** — Breeding and Genetics
- May** — Break for weekly public beef education series
- June 14** — Interpreting a Forage Analysis
- July 12** — Mineral Nutrition for Beef Cattle
- August 9** — Pasture Management: Stockpiling Tips
- September 13** — Spring Stocker Cattle Recap: Successes and Lessons Learned
- October 11** — Utilizing Crop Residue as a Forage Source
- November 8** — Benchmarking for Success
- December 13** — Wintering Bulls and Cows



Registration:
<https://go.umd.edu/beef-webinars>

This institution is an equal opportunity provider. If you need a reasonable accommodation to participate in any event or activity, please contact your local University of Maryland Extension Office.

Join Maryland Beef webinars each month at:
[Click Here](#)

Anne Arundel County Extension Ag Website: [Click Here](#)

Anne Arundel County



New Anne Arundel Urban Agriculture Webpage [Click Here](#)



Welcome to the Anne Arundel County Urban Agriculture webpage.

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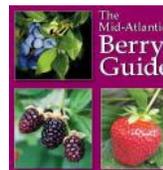
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