Howard Soil
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Conservation Matters

JUNE 2021

MDA Cover Crop Program

The state of Maryland has been at the forefront of encouraging the planting of cover crops by farmers for years. Through the state's Cover Crop Program, hundreds of thousands of acres are planted each year. The primary goal of Maryland's program is for cover crops to take up excess nutrients into the plants, that otherwise may leach or runoff to surface waters, and eventually, to the Chesapeake Bay. Cover crops are widely recognized as one of the most cost-effective and environmentally sustainable ways for farmers to meet nutrient and sediment reduction targets outlined in Maryland's Watershed Implementation Plan to protect and restore the Chesapeake Bay by 2025.

In 2010, the U.S. Environmental Protection Agency established nutrient and sediment limits for the Chesapeake Bay known as the Total Maximum Daily Load (TMDL). Maryland and the other Bay jurisdictions are working to meet these pollution thresholds by implementing their Watershed Implementation Plans (WIP). Cover crops and other Best Management Practices are an important part of the strategy to achieve the WIP goals.

As they grow, cover crops protect water quality by recycling unused plant nutrients remaining in the soil from the preceding summer crop. Once established, cold-hardy cover crops work all winter to shield fields against erosion caused by wind, rain, snow and ice. Cover crops can also smother weeds, break insect and disease pest cycles, and maintain soil moisture. A legume cover crop can provide nitrogen to the next crop in a rotation.

One of the best impacts of cover crops is their effect on soil health by adding organic matter. The increase in organic matter, includes not just the above ground plant, but also, the plant roots. For many cover crop species, the root system is as abundant as the biomass on top the soil. The growing roots help to improve soil structure. The roots also provide channels for water to flow, increasing water infiltration. By growing something year-round, the soil has increased biological activity. The soil microbes are fed continuously. Fungi thrive and are important for bringing nutrients to the plant roots. As microbes die, they become part of the soil organic matter content too.

The Maryland Department of Agriculture's Cover Crop Program provides grants to farmers who plant small grains such as wheat, rye or barley, or brassicas (plants in the cabbage family) on their fields following the fall harvest. These grants help offset a portion of seed, labor and equipment costs associated with planting cover crops.

Farmers may sign-up for the 2021-2022 Cover Crop Program July1 through July 16. MDA will be mailing applications to participants of the 2020-2021 Cover Crop Program. If you are interested, and did not participate in this past year's program, or if you have any questions please contact Howard Soil Conservation District, 410.313.0680 or kmccormick@howardcountymd.gov

A field of barley cover crop on a beautiful fall day in Howard County.

CALENDAR

June 18: Office Closed in Observance of Juneteenth

July 1 - July 16: 2021-22 MDA Cover Crop Program Sign-up

July 5: Office Closed in Observance of Independence Day

August 7-14: Howard County Fair

September 6: Office Closed in Observance of Labor Day

September: Howard SCD Cooperator Dinner (Date TBD)

HSCD Board Meetings: 4th Thursday at 8AM (Call 410.313.0680 for more details)

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twitter.com/HowardSCD

instagram.com/HowardSCD

Turf & Lawn Nutrient Management

In the spring and summer many people's mind turn to the lawn. Our lawns can often be an extension of ourselves. We might wish to have one of the very best possible. But what does it mean to have the very best lawn? A lush carpet of turf? The deepest green color in the neighborhood? A weed free field? These are all excellent quests as they do look very nice.

Lawn care over many generations has included the early spring application of the much needed nitrogen. A great deal of research by many Land Grant Colleges including the University of Maryland have generated the recommendations for the amount of nitrogen to apply. One does not soil test to determine the nitrogen needs of a site. The yearly need for nitrogen varies according to the predominate species of turf that your lawn has. Most lawns in the mid-Atlantic region are made up of one of the many varieties of Tall Fescue. An established lawn of tall fescue needs 2 to 3 actual pounds of nitrogen over the complete growing season. This can be accomplished in several ways, none of which is to apply this total amount in a water soluble form all in the early spring growth period. Most fertilizers labeled for use on lawns will contain both water soluble nitrogen, which contains nutrients that will be released over the first several days after application, and also a portion of water insoluble nitrogen, we call it WIN, which can have a release rate starting at 2 weeks after application to up to 12 weeks after application. This mixture can provide the needed nitrogen to your lawn in an even fashion over the important growing period of the lawn. Maryland does limit the total amount of nitrogen that is applied to no more than .9 pounds of actual nitrogen per 1,000 square foot per application. The lawn can't use more than that.

What about the phosphate and potash needs of the turf? Many soils residing under our lawns have adequate amounts of phosphate. Soils can hold only a certain amount of phosphate (the middle number on the fertilizers guaranteed analysis) and if we add more than the soil can hold it becomes a source of water pollution that can lead to algae outbreaks on the waterbodies around the state. You are not allowed to apply a phosphate bearing product, either organic or synthetic, unless the soil at the site shows a need based upon a soil analysis. Potash, the third number on the fertilizer bag, is known for its ability to help a lawn deal with extreme cold, and heat, as well as heavy amounts of activity on it. This element is held tightly by the soil, and is not known as a potential pollutant.

Timing of fertilizer applications is very important also! If the lawns roots are not in active growth, the site does not benefit from the application of nitrogen or phosphate products. Maryland has a regulation that restricts the use of nutrient sources, either synthetic or organic from November 15 each year until March 1. During this period the lawns roots are usually in a dormant stage and the application of the nutrients can lead to the nutrients not being used by the lawn at all. Actually one of the bigger changes in turf management is the suggested application timing of the nutrients. A fall application of nitrogen helps build a strong root system, and will not produce a large flush of growth that means more than one mowing a week. That suggested fall application is best when applied between mid-October and November 15. An early spring application can be useful if one is applying pre-emergent herbicides that are mixed with the fertilizer.

The management of pH is extremely important, as keeping the soil pH in the best zone for the lawns growth also provides the greatest availability of the needed plant nutrients. That pH range is 5.8 to 6.3. The application of lime is not regulated at all, and one must understand that it takes time for the value of a lime application to be recognized. Lime can take up to 6 months to work.

To review the amount of actual nutrients that can be applied to a lawn one can review the Turf Technical Updates that are written for Maryland at https://mda.maryland.gov/SiteAssets/Pages/fertilizer/TT115.pdf.

In summary, remember to apply the needed lawn nutrients when the plant can make the best use of the nutrients. Never apply more than the soil can utilize as this can result in negative impacts to local water quality. Soil testing tells us of our pH, phosphate and potash needs. If anyone has any questions on this topic be sure to reach out to Chuck Schuster cfs@umd.edu, as he is more than willing to assist you in reaching your quest for the "best lawn possible" .

The health of soil, plant, animal and man is one and indivisible.

- Sir Albert Howard, 1947

Envirothon 2021

Envirothon, neither the Howard County competition or the Maryland state event, took place in 2020. As with many changes and cancellations that we have experienced over the last 15 months, these cancellations were due to the COVID-19 pandemic and measures to keep everyone safe. However, we were fortunate to bring students back to the program virtually in 2021.

How this event looked different.
This virtual event was held using University of Maryland's Enterprise Learning Management System (ELMS) platform. Instead of a county event where the winning team from each county would move on to the state event, the Maryland Envirothon was open to multiple teams per county. The event was held the last week in April: one resource area per day, with a flexible schedule.

This was still Envirothon.
While there were changes to how things were done this was still Envirothon. High school students worked together in teams of five. Resource area stations included Aquatics, Forestry, Soils and Wildlife. The Current Environmental Issue, or 5th Issue, was not included. The winning, or overall high scoring, team will receive training on the Current Environmental Issue prior to representing Maryland at the NCF-Envirothon virtual event in July. Resource professionals worked to make the Maryland Envirothon event as "hands-on" as possible while being virtual. There continued to be problem solving and opportunities to increase knowledge in the area of natural resources.

Opportunities for training.
Training videos are up on the Maryland Envirothon website, https://mdenvirothon.org , and the Maryland Envirothon YouTube page. Resource professionals held virtual "training sessions" to answer any questions that students might have.

If you have any questions about Envirothon or if your Howard County school or organization would like more information for the 2022 Envirothon event please contact Howard County Envirothon Coordinator Kristal McCormick, 410.313.0680 or kmccormick@howardcountymd.gov .

Congratulations to the winning team from Richard Montgomery High School (Montgomery County).

Thank You to Past Howard County Envirothon Sponsors (2000-2020)

Airview Farm	Dawn Acres Angus	Just This Side of Paradise Farm
Marilyn & Allan Bandel	Edgewood Farm, Harold & Martha Clark	McDonald & Sons, Inc.
William E. Barnes Excavating	Greenway Farms	MidAtlantic Farm Credit
Benchmark Engineering, Inc.	Gutschick, Little & Weber	Miller Land Company, Paul Miller
Capitol LLC	Howard County Conservancy	J. David Mullinix & Sons, Inc.
Chanceland Farm	Howard County Fair Association, Inc.	Joe Rutter
Chapel View Farm, Paul Shoffeitt	Howard County Farm Bureau, Inc.	Sun Nurseries, Inc.
Circle D Farm	Howard County Forestry Board	Tim Barkley Law Offices
Columbia Builders, Inc.	Howard Soil Conservation District	Walnut Springs Nursery, Inc.
Country Spring Wholesale Nursery	Indian Ridge Farm	Welling Family Revocable Trust

Ag Preservation Accepting Applications

The Howard County Agricultural Land Preservation Program (ALPP) is open and accepting applications. Through this voluntary program, a farmer whose land meets certain size and soil criteria can offer to sell a perpetual easement to the County, while holding fee simple title to the land and continuing to farm. The farm may be sold, but the easement, which restricts the development of the property, remains with the land and binds future owners. Any interested property owner whose farm meets the minimum eligibility criteria may apply. The ALPP utilizes an objective scoring system to determine the value of the farm as agricultural land. This score translates into a per acre price offer that the County is willing to pay for an easement on the property. The County is currently offering a maximum of $40,000 per acre to purchase development rights. Actual offers typically range between $25,000-$30,000 an acre. If you would like additional information, please contact Joy Levy, Program Administrator, at 410-313-5407, or check out the ALPP webpage at https://www.howardcountymd.gov/Departments/Planning-and-Zoning/Conservation-and-Preservation/Agriculture.

URBAN AGRICULTURE INITIATIVE

The Urban Agriculture Initiative is a collaborative effort with Howard County Public Schools and the University of Maryland Extension - Master Gardeners Program to create vegetable gardens with Howard County Title I schools.

Howard SCD has been coordinating with several elementary schools in the more urban areas of the County to develop vegetable gardens on school property. The goals of the program are to teach students about where and how their food is grown, to give them a hands-on learning opportunity related to establishing and caring for vegetable gardens, and to create a resource (gardens) for the school and the local community. The Howard SCD is striving to develop these vegetable gardens at all Title I Elementary Schools in Howard County as part of their Urban Agriculture Initiative.

Howard SCD staff and Board Chair Justin Brendel installed 2 raised beds at Swansfield Elementary School and Cradlerock Elementary School, both in Columbia. The Brendel family also provided all of the topsoil, compost, and mulch for all of the raised beds through their company, Level Land Incorporated. The raised bed design should improve the ease of tending and maintaining the vegetable gardens, and provide a great opportunity for students and the local community to learn about growing fresh vegetables. By demonstrating how to construct, plant, and take care of these raised beds the District hopes that some school neighbors will be interested in constructing their own vegetable gardens on their property.

University of Maryland Extension's Master Gardeners are another key partner in the school garden initiative. Master Gardeners were at the plantings to help guide the students' planting activities and to show the kids some examples of the veggies the seeds they were planting will produce. The Master Gardeners will also be a critical link to assisting the schools and the community with their future gardening endeavors.

Top: Master Gardener Erica Jones, aka Chef Erica, helps a Swansfield Elementary School student plant seeds.

Swansfield Elementary School students spread mulch around the raised beds.

A Swansfield Elementary School student plants seeds using a planting square to help space the seeds.

The roots of this Urban Agriculture Initiative is really the partnerships, and teamwork, everyone's willingness to come together for the students.

Left: David Plummer, HSCD District Manager, helps students plant seeds at Swansfield Elementary School.

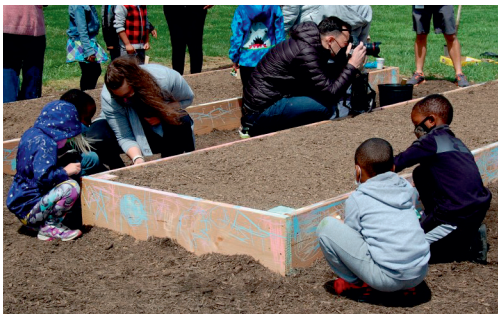
Right: Justin Brendel, Howard SCD Chairman, and Howard SCD staff fill the constructed beds with a top soil and compost mix donated by Level Land Inc., owned by the Brendel family.

URBAN AGRICULTURE INITIATIVE

Earth Day Celebration

Howard County Executive Dr. Calvin Ball and County Councilmember Christiana Rigby joined the Howard Soil Conservation District for an urban agriculture project on Earth Day, to help Cradlerock Elementary students plant a variety of early season vegetable seeds. Superintendent Michael Martirano and School Board Member Jennifer Mallo were also in attendance to celebrate. Cradlerock ES Principal Jonathan Davis and project coordinator Kathleen Miller helped guide the elected officials and students through the various learning stations, which included making plant row markers, decorating the raised-bed garden boxes, and planting individual seeds in cups for the students to grow in their classrooms. County Executive Ball informed the students that of all of the Earth Day requests he received, he was most excited about the opportunity to help them create their very own vegetable gardens at Cradlerock ES.

Howard SCD Supervisor John Dove was also available to show the students how to plant and answer their questions about growing vegetables. John is the owner/operator of Love Dove Farms in Woodbine, a vegetable operation that sells produce through farmers markets and direct sales to restaurants. "A lot of these kids have only ever seen vegetables in the grocery store, and probably don't realize that our food starts on farms" John commented. "And many of them may not be aware that we have farms right here in Howard County that grow most of the veggies they are learning about today." As a LEAD MD Program Alumni, John is active in outreach efforts to elected officials and the general public, but he seems to have a particular knack for working with kids. "These kids will remember this Earth Day celebration and what they learned about agriculture and soil health long after something they read in a book", he said.



Top: Councilwoman Christiana Rigby helps students decorate their raised garden beds.

Bottom: Cradlerock Elementary School students created a festive fence to protect their garden and efforts.

Below; John Dove, Howard SCD Supervisor and farmer, helps a second grader at Cradlerock Elementary School plant seeds.

Howard County Executive Dr. Calvin Ball discusses Earth Day with second graders at Cradlerock Elementary School, as they prepare to plant their new vegetable gardens, constructed by Howard SCD.

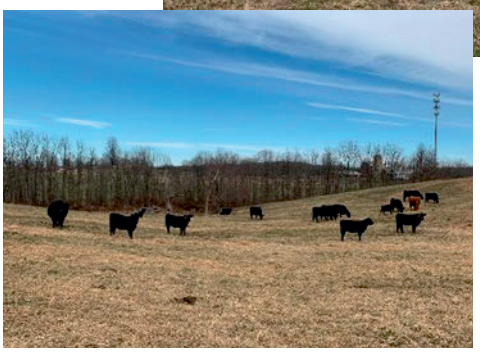
Principal Jonathan Davis, Howard County Executive Dr. Calvin Ball and Councilwoman Christiana Rigby celebrate an urban agriculture project for Earth Day with second graders at Cradlerock Elementary School.

Howard County Executive Dr. Calvin Ball helps Cradlerock Elementary School second graders plant vegetable seeds in their new school gardens, constructed by Howard Soil Conservation District.

Rotational Grazing

Rotational grazing differs from continuous grazing in that the fields are separated into smaller paddocks and the groups of animals are moved regularly between paddocks. This intensifies the grazing pressure for a smaller period of time, leaving a period for rest and re-growth in between. Rotational grazing practices were developed to encourage grazing of forages at optimal stages of height, maturity, nutrient concentration and digestibility.

Howard SCD Supervisor Nora Crist, who has a cattle operation on her family farm, Clark's Elioak, uses a rotational grazing system. Howard SCD developed a grazing management plan for pasture land to improve forage quality, livestock health and water quality. In a managed grazing system, livestock are moved frequently among pasture divisions or paddocks based on forage quality and livestock nutrition needs. Portable fencing allows each paddock to rest and regrow until the next grazing rotation. Compared to traditional continuous grazing, managed grazing can provide a healthier plant community, decreased erosion and runoff, better livestock health and performance, and reduced costs to the landowner.



Top: A watering trough provides a drinking source for livestock.

Left: Cattle enjoying the pasture.

Planning

- Consider the number of livestock and the forage needed. Will existing pasture meet livestock needs, or will seeding and/or fertilization be needed? Plan for management alternatives for times of low forage production.
- Is there adequate, good quality water distributed throughout the pasture?
- Soil erosion control practices may be needed on stream banks or in areas of concentrated runoff before the grazing system can be put in place.
- Move livestock on and off paddocks according to forage availability, not according to the calendar. Plan rest periods so paddocks have adequate time to recover during the growing season.

Maintenance

- Apply lime and fertilizer as indicated by soil tests.
- Haying may be necessary during heavy growth periods.
- Repair fencing as needed.
- Remove or drain pasture watering systems during winter.
- Revise the rotation schedule and the size and number of paddocks as herd size and other factors change.

There are options for interior fencing of a rotational grazing system, from temporary to permanent. Above is an example of permanent fencing.

2021 Howard SCD Cooperators Dinner

Howard Soil Conservation District will hold its Cooperators Dinner this fall. Look for information this summer for our September celebration.

We look forward to seeing everyone and finally celebrating, not only our 75th anniversary, but our cooperators and their conservation efforts. More information to come.

Howard SCD Chairman, Justin Brendel presents an award to Suzanne Kingsbury, HSCD 2018 Cooperator of the Year.

Maryland Horse Council Government Relations Update

*by Kimberly K. Egan, MHC Government Relations Committee (first published in the May 2021 Equiery) * Below is an excerpt.*

The 2021 session of the Maryland General Assembly closed on April 12, and we are pleased to report that our Government Relations Committee scored several victories this year. As is so often the case, our victories came in the form of successful opposition to legislation that would have been contrary to the interests of horses and horse people.

Cost of Care of Seized Horses (HB 1080/SB 760)

A pair of bills this session would have required owners under investigation for animal cruelty to pay the costs of caring for the animal after the animal has been seized, or forfeit all rights to the animal. We opposed these bills because of due process concerns.

We also opened discussions with sponsors and the committees in an effort to persuade them to exempt livestock – including horses –from the bills. The committees each told us that they would propose an amendment to that effect. In fact, the bills never progressed beyond the initial hearing, and died in committee.

Therapy Horses (SB 284)

The General Assembly passed a bill to add "therapy horses" to the list of service animals eligible for reimbursement by the State's Veterans Service Animal Program. The bill limits eligibility to facilities either certified as Professional Association of Therapeutic Horsemanship (PATH) Premier Accredited Centers (PAC) or that have Equine Assisted Growth and Learning Association (EAGALA) certified professionals on staff.

We had opened discussions with the sponsor and with the therapy horse community to try to expand the definition beyond PATH/PAC and EAGALA facilities. The issue proved complex, however, and we did not arrive at an alternate definition that satisfied both the equine therapy community and the goals of the Maryland Veterans Administration in time for this session.

We are not giving up however, for more details please go to our website https://www.mdhorsecouncil.org/

If it weren't for agriculture, there would be no culture at all.

- Elwynn Taylor

HCEDA Agricultural Innovation Grant

Howard County Agricultural Innovation Grant, from Howard County Economic Development Authority (HCEDA), is a grant funding opportunity to encourage Howard County's agricultural producers to expand or diversify their business operations. Eligible applicants must be a crop or livestock producer or processor, agricultural cooperative, seafood processor, or primary or secondary timber products processor.

Applicants can receive grants from $1,000.00 up to $10,000.00 for research and development, production buildings, major fixtures, processing facilities, etc. The applicant must provide funds and/or materials of an invested value equal to the grant received. Grant applications will be accepted no later than July 15th or January 15th of each fiscal year.

Applications must be accompanied by:

- a Schedule F, Form 1120S, or Schedule C
- a business plan, with budget, detailing the planned use of the requested funds and the expected outcome. Please visit agplan.umn.edu for assistance in writing a business plan.

Grantees must agree to the following:

- At least one member of the grantee's business will actively participate in a HCEDA small business development program
- Submission of program status reports on a schedule, and in a format, determined by the HCEDA, after consultation with the grantee.
- This is a reimbursable grant, which means the HCEDA will only provide awarded grant funds upon receipt of a request for reimbursement including verifiable substantiation of a planned program expenditure by the grantee.

Applications can be found at http://www.hceda.org/farm-agriculture/grants www.hceda.org/farm-agriculture/grants

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