

# Ag Notes

Harford County Newsletter

UNIVERSITY OF  
MARYLAND  
EXTENSION

June 2024



## MARYLAND'S BEST DAIRY - Beyond the Cone



Maryland dairy farms offer a wide variety of products in addition to ice cream. For example, in 2022, Maryland's dairy industry produced more than 876 million pounds of milk and generated over \$157 million in sales (USDA NASS, 2023).

You can also find plenty of cheeses from cows to goat and also yogurts! Below is a list of farms and products that sell direct to consumers. Check them out and for more information visit [marylandsbest.net](http://marylandsbest.net)

### KEY:

Ice cream - 🍦 | Milk - 🥛 | Cheese - 🧀 | Yogurt - 🥄  
Cow to Cone - 🐄

BELLEVALE FARM AND PRIGEL FARMS CREAMERY	GLEN ARM	🧀 🥛 🍦
BLUE STAR FARM LLC	WHITE HALL	🥛
🐄 BROOMS BLOOM DAIRY	BEL AIR	🧀 🥛 🍦
CAPRIKORN FARMS LLC	HAGERSTOWN	🧀
CHAPELS COUNTRY CREAMERY	EASTON	🧀
CHEESE GOATEES	HAGERSTOWN	🧀
CHESAPEAKE GOLD FARMS	NORTH EAST	🧀 🥛 🍦
CLEAR SPRING CREAMERY	CLEAR SPRING	🧀 🥛
CLOVER HILL DAIRY	MECHANICSVILLE	🧀
DAILY CRISIS FARM LTD	WHITE HALL	🧀 🥛 🍦
🐄 DELITEFUL DAIRY	WILLIAMSPORT	🧀 🥛 🍦
DOGWOOD LANE DAIRY	WORTON	🧀
FAWN VIEW MANOR FARM	PYLESVILLE	🧀
GROSSNICKLE FARMS	WALKERSVILLE	🧀
KEYES CREAMERY CHEESE	CHURCHVILLE	🧀 🍦
HAPPY COW CREAMERY at GRAND VIEW ACRES FARMS	FREDERICK	🥛 🍦
LOCKBRIAR FARMS	CHESTERTOWN	🧀 🍦
🐄 MISTY MEADOW FARM CREAMERY	SMITHSBURG	🧀 🥛 🍦
MOO COW CREAMERY at WALNUT RIDGE FARM	MIDDLETOWN	🧀 🥛 🍦
NICE FARMS CREAMERY	FEDERALSBURG	🧀 🥛
PA BOWEN FARMSTEAD	BRANDYWINE	🧀
PALMYRA FARM CHEESE LLC	HAGERSTOWN	🧀
ROCKY POINT CREAMERY	TUSCARORA	🧀 🥛 🍦
SAVAGE ACRES FARM INC	DICKERSON	🧀
🐄 SOUTH MOUNTAIN CREAMERY	MIDDLETOWN	🧀 🥛 🍦
WHISPERING BREEZE FARM CREAMERY	TANEYTOWN	🧀 🥛
WOODBOURNE CREAMERY	MOUNT AIRY	🥛 🍦
WINDMILL MEADOWS FARM	HAGERSTOWN	🧀

Cow Photo: Edwin Remsberg

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@mdsbestag

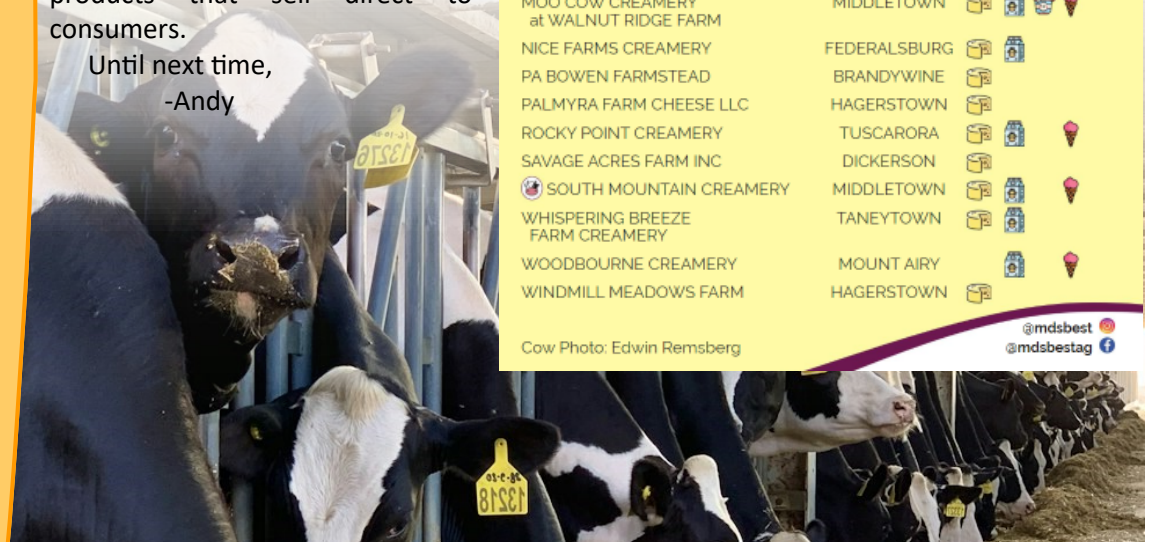
## Hello, Harford County!

As we get into June, the long hot days of summer will be upon us. No better way to cool down than to enjoy some fresh ice cream from a local dairy! June is dairy month in Maryland, and we are fortunate to have several farms in Harford County that sell dairy products directly to the consumer, including two farms on Maryland's Ice Cream Trail.

A full list of farms on Maryland's Ice Cream Trail, as well as farm markets across Maryland that sell dairy products, is available at [marylandsbest.net](http://marylandsbest.net), so be sure to stop in for some fresh milk, cheese, yogurt, or ice cream to celebrate dairy month!

Maryland dairy farms offer a wide variety of products in addition to ice cream. For example, in 2022, Maryland's dairy industry produced more than 876 million pounds of milk (over 101 million gallons) and generated over \$157 million in sales (USDA NASS, 2023). You can also find plenty of cheeses from cows to goats and also yogurts! Below is a list of farms and products that sell direct to consumers.

Until next time,  
-Andy



University of  
Maryland Extension

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Agricultural Center  
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(410) 638-3255

M—F 8:00 a.m.—4:30 p.m.

[Extension.umd.edu/harford-county](http://Extension.umd.edu/harford-county)  
[facebook.com/HarfordAg](https://facebook.com/HarfordAg)

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University of Maryland Extension and partners are excited to be hosting an Equine Grazing School in Maryland this summer and invite equine owners and managers to attend!

Designed with equine interests in mind, this 2-part Equine Grazing School will offer a more in-depth education on pasture and grazing management for horses. Topics covered will include pasture management, forage identification and selection, designing a grazing system, assessing pastures, soil health and fertility, weed management, pasture renovation, and more!

**Part 1 of this course will occur ONLINE via zoom from 6:30 to 8:30 PM on Wednesday, June 19th** (a zoom link will be sent to those who register). This online session will cover several foundational topics related to pasture management and rotational grazing to help set the stage for part 2.

**Part 2 of this course will occur IN PERSON from 8 AM to 5 PM on Saturday, June 22nd at the Baltimore County Extension office in Cockeysville, MD.** Part 2 will include a combination of classroom and hands-on exercises to provide participants with opportunities to

work with grazing tools and fencing materials and to implement some of the practices learned. Participants will also have an opportunity to talk with course instructors to begin developing a customized grazing plan for their farm.

**Enrollment is limited to 30 people** to keep the group small and allow for more interaction, networking, and hands-on opportunities. Lunch and morning refreshments will be provided for the in-person portion. Activities will take place both indoors and outdoors, so be sure to plan ahead and dress accordingly.

For additional details and registration information, please visit <https://go.umd.edu/equinegrazing>.

If you have questions or need assistance please contact either your local county Extension office or the Western Maryland Research and Education Center at (301) 432-2767. If you need reasonable accommodation to participate in any event or activity please contact us at least two weeks prior to the event.

This event is brought to you by University of Maryland Extension, the Maryland-Delaware Forage Council, and the Maryland Horse Industry Board. Thank you to our event partners!

SAVE THE DATE!

## *Equine Grazing School*

June 19th (online) and 22nd (in-person)  
Baltimore County Extension, Cockeysville, MD  
<https://go.umd.edu/equinegrazing>





## New Forage Enterprise Budgets

Nate Bruce, Farm Management Specialist  
University of Delaware

University of Delaware has developed cool season hay forage budgets. The budgets may be accessed the associated [Excel file](#). Cool season forages covered in the budgets include alfalfa, orchardgrass, timothy, fescue, orchardgrass / fescue mix, and orchardgrass / alfalfa mix. All budgets are given with a tab that shows estimated expenses and an actual expenses tab for producers to enter their own information. To streamline use of the budgets, expenses are given for both establishment and production on the same tab. If the forage is already established, remove the expenses with number one footnote from your own budget. Revenue in each budget is based on square bale production and prices. Budgets will be updated for round bale production in the weeks to come and be published on [Weekly Crop Update](#).

Agonomy

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# DRONES IN AGRICULTURE

Learn about the use of drones in agronomic production systems and what you will need to operate legally.



### Dates:

June 25, 2024- Street, MD  
August 1, 2024- Queenstown, MD  
August 2, 2024- Upper Marlboro, MD  
8:30-1:30 p.m.

For more details and  
registraion, visit  
<https://bit.ly/dronesinag>

### Topics to Include:

- ✓ Intro to drones in agriculture
- ✓ Equipment overview
- ✓ What you need to operate legally
- ✓ Using drones for spraying and cover crop seeding
- ✓ Drone demonstrations

This program is  
funded by:



Andrew Kness, Senior Agriculture Agent  
University of Maryland Extension, Harford County

Tar spot is on the mind of many farmers as we enter the 2024 growing season and I have had many conversations with farmers and consultants about strategies for managing this disease. Here are some things to consider and keep in mind as we get into the peak of the corn growing season.

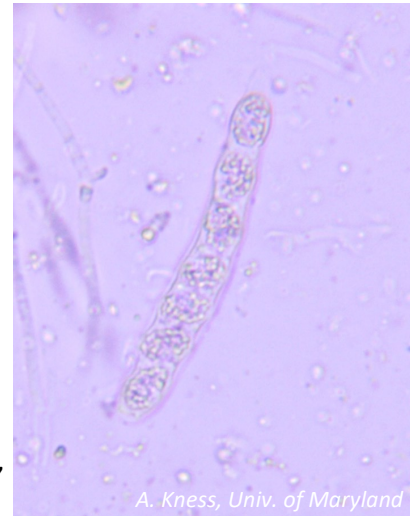
Tar spot is a disease of corn caused by the fungus *Phyllachora maydis*. This disease was first reported in limited amounts in Harford and Cecil County in 2022; in 2023 the disease expanded to at least 8 counties in Maryland and by harvest '23, we found tar spot at a frequency of over 50% of fields scouted in Harford County.



**Figure 1.** Tar spot stromata (raised black specks) on corn leaf.

The tar spot disease cycle starts with old corn crop residue where the fungal spores lay dormant over winter. As conditions become optimal for its development in late spring/summer, spores are released and blown and/or splashed onto corn plants where the spore will germinate and infect the plant. Approximately 12-15 days after infection, symptoms will develop on the corn leaves and/or husks, which include dark, raised, lesions, which are the reproductive structures called stromata (Fig. 1). Inside the stromata are spores (Fig. 2), which are released and will infect new tissue. Tar spot is a polycyclic disease, meaning it has multiple generations or cycles per year. New infections will occur throughout the growing season for as long as green, living corn tissue is present and environmental conditions are favorable.

Here in Maryland and the Mid-Atlantic, tar spot has not been reported to cause any significant epidemics or yield losses thus far, mostly because it becomes established late in the growing season; but that is not to say that serious epidemics couldn't happen. In the Midwest, tar spot has been reported to cause upwards of 50 bushel per acre yield loss, and it was ranked the #1 yield-limiting disease for corn in the U.S. in 2021, 2022 and 2023.



**Figure 2.** Microscope image of *P. maydis* ascus containing ascospores, which are blown/splashed to infect new tissue.

Since tar spot was first confirmed in the United States in 2015, we have learned a lot about its epidemiology. Tar spot hails from the mountain areas of Latin America. When tar spot first moved to the U.S. we had initially thought that mild temperatures and moisture were key variables in the development of the disease; however, recent research has demonstrated that moisture plays a role, but **temperature** is far more crucial. [Webster et. al., 2023](#), found that monthly temperatures average between 64-73°F were optimal for tar spot development and temperatures exceeding 73°F significantly **reduced** tar spot progression. What was more interesting is that they found that moisture both promoted and inhibited tar spot disease progression. Moisture early in the disease cycle aids in infection, but prolonged moisture (greater than 90% humidity), actually inhibits disease progression. Tar spot develops when relative humidity is less than 90% for a 2-3 week period, coupled with mild temperatures. This makes sense for many that may have observed tar spot in 2023, which was not a particularly wet year.

With this in mind, we should consider how these weather parameters influence our management of this disease here in Maryland where our summers tend to be hotter and more humid than many areas of the corn belt states.

If you look at the 5-year average monthly temperatures from regional weather stations (Table 1), you can see that the months of July and August for all three regions are well outside of the 64-73°F window for optimum tar



5 spot development. Compare that with data from Iowa for example, and they consistently run within the optimal temperature range. While only a few degrees may not seem like much, I believe our hot summers may actually keep tar spot at bay until later in August and September on an average year, which would be consistent with when we have found tar spot in Maryland in 2022 and '23.

**Table 1. Average Monthly Temperatures (°F), 2019-2023**

	Westminster	Salisbury	Arlington
May	63.46	64.08	66.13
June	72.48	72.95	75.53
July	79.54	77.99	80.96
August	77.22	76.25	78.77
September	69.94	69.99	72.60

Where tar spot could become a problem are instances when we have an unusually cool June and July which would put the majority of our corn at risk of tar spot infection during its most vulnerable time, which is tasseling through grain full.

Another situation where tar spot could be a problem is for late planted and late maturing hybrids that are in reproductive phases in August and September. Fields that are corn after corn are also in a higher risk situation.

For 2024, I would highly recommend scouting and paying close attention to the weather conditions just prior to tasseling through grain fill in your corn fields. There is an app that can help you determine your tar spot risk, called Tarspotter, and has been reported to be 90% accurate. The app takes into consideration regional weather data and field management to determine a risk percentage. It's available for download for free on iPhone and Android.

If you decide to treat your corn with a fungicide to manage tar spot, VT/R1 timing is still found to be the most effective and economical. A fungicide application at this time will also effectively manage other common foliar fungal diseases of corn (which we shouldn't forget about), such as grey leaf spot and northern corn leaf blight. Most fungicides labeled for tar spot are effective, however there is a better response to products that have 2 and 3-way modes of action.

This year we will continue to do research on tar spot in Maryland with funds from the Maryland Grain Producers Utilization Board. If you find tar spot this year, please report your findings to me via email (akness@umd.edu) or phone (410-638-3255).

## New Fact Sheet: Growing Blackberries

Haley Sater, Agriculture Agent  
University of Maryland Extension, Wicomico County

Blackberries are a hardy plant and a great summer fruit option for a diversified farm, a U-Pick or a garden. While blackberries are a native plant to most of the United States and Canada, most wild blackberries are thorny vines with small and tart fruit. Many modern blackberry cultivars are thornless and produce fruit that is large (up to 10 grams) with varying levels of sweet and tart flavors. Unlike tree fruits such as apples, peaches, and cherries, blackberries grow on canes which are single stems and require fewer years of cultivation before a fruit crop is produced. This fact sheet will provide you with the first-year planting, initial management, and cultivar selection advice to help you begin small-scale blackberry production.

Access the fact sheet online at <https://extension.umd.edu/resource/start-growing-thornless-blackberries-how-prepare-and-select-cultivars-mid-atlantic-fs-2023-0660/> or contact the Extension office for a hard copy.

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AgFS  
Agriculture & Food Systems

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FS-2023-0660 | December 2023

### Start Growing Thornless Blackberries: How to Prepare and Select Cultivars for the Mid-Atlantic

Blackberries are a hardy plant and a great summer fruit option for a diversified farm, a U-Pick or a garden. While blackberries are a native plant to most of the United States and Canada, most wild blackberries are thorny vines with small and tart fruit. Many modern blackberry cultivars are thornless and produce fruit that is large (up to 10 grams) with varying levels of sweet and tart flavors. Unlike tree fruits such as apples, peaches, and cherries, blackberries grow on canes which are single stems and require fewer years of cultivation before a fruit crop is produced. This fact sheet will provide you with the first-year planting, initial management, and cultivar selection advice to help you begin small-scale blackberry production.

#### Growing site selection

Before planting, it's important to select which area of your land will be suitable for blackberry production. Blackberries, like most fruit crops, should be grown in full sun. Commercial producers will generally use drip or overhead irrigation systems for their plants. However, for home gardeners this is not a necessary investment as long as you are able to water your plants several times per week.

#### Plant architecture and training

Blackberries may have different growth habits; some cultivars are vining or trailing, while others can be erect (Figure 1). However, both types require a physical support structure such as a trellis or fence (Figure 1). Trailing cultivars have a growth habit that is more vine-like and requires "training," which involves manual labor to position and tie the cane on the trellis or a fence to keep them upright. In contrast, the upright plant architecture of some cultivars enables the canes to grow with an erect, compact, vertical stem which has the advantage of needing less training.

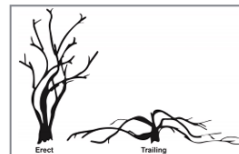


Figure 1. (Right) plant architecture of an erect blackberry bush. (Left) plant architecture of a trailing or vining blackberry. Original illustration by the author.

#### Trellising

Most modern cultivars of blackberries have been bred for an upright plant architecture. However, we still recommend using a trellis system which will allow for more uniform cultivation of plants and prevent fruit-laden canes from lodging on the ground. Trellis systems also makes harvest easier. Construct a trellis before or right after planting. A trellising system requires a metal pole or wooden post on either end of the planted row, ideally with at least two metal fencing wires running between the poles or posts. The lowest wire should be between 1.5-3 ft. above the ground and the upper wire 5-6 ft. above the ground. Common trellis designs include a T structure (Figure 2), V structure (Figure 3) or an I structure (Figure 4). When constructing a trellis, it's important to make sure that the load bearing posts or poles are secured in the ground and are buried deep enough to maintain structural stability. Ideally the posts should be spaced 20-25 ft. apart.



Vegetable & Fruit

Emmalea Ernest, Extension Fruit & Vegetable Specialist  
University of Delaware

Early planted tomatoes should be receiving additional nitrogen (N) and potassium (K) applications as sidedress or fertigation at this time. The tomato section of the Mid-Atlantic Commercial Vegetable Production Recommendations includes specific recommendations for nutrient applications to tomatoes grown on bare ground and in plasticulture systems. Reproduced below is the table with recommendations for fertigating plasticulture tomatoes on sandy, low organic matter soils (higher nutrient requirements) and fine texture, high organic matter soils (lower nutrient requirements).

Adequate nitrogen is essential for plant growth, but potassium is especially important in fruiting vegetables like tomatoes. Potassium is a part of many vital processes in the plant, but related to fruit production it is involved in moving proteins and sugars into the fruit and regulating sugar production.

Tomatoes without adequate potassium develop a ripening disorder called yellow shoulders, in which the top of

the tomato fruit remains firm and turns yellow rather than red. Inadequate potassium can also reduce fruit yield and affect quality factors related to flavor in tomatoes. Potassium applications through fertigation should be initiated before flowering starts, with rates increasing later in the season as fruits form.

Fertigation Schedule Examples for Fresh Market Tomatoes

This table provides examples of fertigation schedules based heavier upland soils (>2% organic matter). Note that this schedule assumes that N and K are applied to the soil before planting, as well as through fertigation. Modify this schedule based on your soil test results and base fertility. **\*\*EDITOR'S NOTE: do not exceed the total N recommendation that's in your Maryland Nutrient Management Plan for your tomato crop\*\***

Fertigation recommendations for 75 lb N and 75 lb K <sub>2</sub> O <sup>1,2</sup>									
For soils with organic matter content greater than 2% or fine texture and high or optimum K									
Preplant (lb/A) <sup>3</sup>			Nitrogen			Potash			
			50			50			
Stage and Description	Weeks	Days	N	N	N	K <sub>2</sub> O	K <sub>2</sub> O	K <sub>2</sub> O	
			lb/day	lb/week	lb/stage	lb/day	lb/week	lb/stage	
1 Early vegetative	1-2	1-14	0.25	1.75	3.5	0.25	1.75	3.5	
2 Late vegetative	3-4	15-28	0.35	2.45	4.9	0.35	2.45	4.9	
3 Early flowering	5-6	29-42	0.5	3.5	7	0.5	3.5	7	
4 Flowering and fruiting	7-8	43-56	0.75	5.25	10.5	0.75	5.25	10.5	
5 Early harvest	9-11	57-77	1.1	7.7	23.1	1.1	7.7	23.1	
6 Later harvest <sup>4</sup>	12-14	78-98	1.25	8.75	26.25	1.25	8.75	26.25	

<sup>1</sup>Rates above are based on 7,260 linear bed ft/A (6 ft bed spacing). If beds are closer or wider, fertilizer rates should be adjusted proportionally. Drive rows should not be used in acreage calculations. See section C 3. Fertigation for more information. <sup>2</sup>Base overall application rate on soil test recommendations. <sup>3</sup>Applied under plastic mulch to effective bed area using modified broadcast method. <sup>4</sup>For extended harvest after 10 weeks continue fertigation at this rate.

## Farm Storage Facility Loans

The Farm Service Agency's (FSA) Farm Storage Facility Loan (FSFL) program provides low-interest financing to help you build or upgrade storage facilities and to purchase portable (new or used) structures, equipment and storage and handling trucks.

Eligible commodities include corn, grain sorghum, rice, soybeans, oats, peanuts, wheat, barley, minor oilseeds harvested as whole grain, pulse crops (lentils, chickpeas and dry peas), hay, honey, renewable biomass, fruits, nuts and vegetables for cold storage facilities, floriculture, hops, maple sap, rye, milk, cheese, butter, yogurt, meat and poultry (unprocessed), eggs, and aquaculture (excluding systems that maintain live animals through uptake and discharge of water). Qualified facilities include grain bins, hay barns and cold storage facilities for eligible commodities.

Loans up to \$50,000 can be secured by a promissory note/security agreement, loans between \$50,000 and \$100,000 may require additional security, and loans exceeding \$100,000 require additional security. You do not need to demonstrate the lack of commercial credit availability to apply. The loans are designed to assist a diverse range of farming operations, including small and mid-sized businesses, new farmers, operations supplying local food and farmers markets, non-traditional farm products, and underserved producers.

For more information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?state=MD>) or visit <https://www.fsa.usda.gov/programs-and-services/price-support/facility-loans/farm-storage/index>.



# Paraquat Training

If you still need your paraquat training, Syngenta is offering more free online training opportunities in June. Seminars will be on Zoom from 2-3:00 PM on June 5, 18, 20, and 25. Use this link to register: [https://syngenta.zoom.us/webinar/register/WN\\_Gh1T5t4tTS-S3QbFJUJe-w#/registration](https://syngenta.zoom.us/webinar/register/WN_Gh1T5t4tTS-S3QbFJUJe-w#/registration).

As a reminder, anyone applying paraquat products must complete a training and certification course every three years. This training is specific to paraquat and separate from your pesticide license. You will also need this certification to purchase paraquat.



## Maryland Weed Management Tour



**4 to 6 p.m. on 6/26** - University of Maryland Wye Research & Education Center in Queenstown, MD

Visit research and demonstration plots and get updates on weed management issues in the region.



For more information:

Kurt Vollmer - [kvollmer@umd.edu](mailto:kvollmer@umd.edu)

Megan Messix Stibbe - [mstibbe@umd.edu](mailto:mstibbe@umd.edu)

Registration encouraged, but not required.



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*Great resources are just a click away!*

*Andrew Kness*

Andrew Kness  
Senior Extension Agent,  
Agriculture and  
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Back-issues can be found at: <https://extension.umd.edu/locations/harford-county/agriculture-and-nutrient-management>

*akness@umd.edu*



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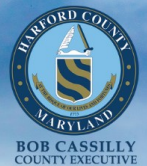
Harford County Newsletter

## Dates to remember

- 11 Jun.** Women in Ag Webinar: Land Use Considerations with Focus on Solar Development. 12 noon. Free. Register [online](#).
- 19 & 22 Jun.** Equine Grazing School. Online June 19 and in-person at Baltimore County Ag Center on June 22. Register online or call (301) 432-2767.
- 25 Jun.** Agronomic Drone School. 8:30-1:30 PM. Harford County Extension office. \$10. Register [online](#) or call (410)-638-3255.
- 26 Jun.** Maryland Weed Management Tour. 4-6:00 PM. Wye Research & Education Center. Free. [Registration](#) not required but encouraged, call (443) 446-4248.

## AG PLASTIC RECYCLING @ HWDC

All plastics should be as clean as possible and stored under cover to minimize moisture. Farms should separate plastic by type. All types of Ag Plastics are received in Supersacks that are provided by Office of Recycling. Harford County farms only.



### ACCEPTABLE ITEMS-FREE DROP OFF

Bale Wrap- Debris-Free  
Black and White Silage Bags/Bunker Covers(without Plastic Baler Twine)  
Woven Plastic Feed Bags & Supersacks #4  
Softener Salt & Pellet Stove Bags #4  
Animal Feed Bags #4  
Plastic Baler Twine  
Greenhouse Cover  
Drip Tape  
Flats, Trays, & Flower Pots  
Clear Stretch Film  
Plastic Pallets



**TO SCHEDULE A DROP OFF PLEASE CALL**

**410-638-3417**

# June 2024