

Farm News

Summer 2021

August

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Hello St. Mary's County Farmers. In the grain arena, something is happening we rarely see. Most areas have received the right amount of moisture at the right time to keep crops growing well with the majority of farms showing promise of at least average yields if not better. At the same time, grain prices are at highs not seen since the 2010-2012 marketing years. December corn is trading at 5.50 bu, November soybeans at 13.65 bu, and September wheat at 6.80 bu. I'm a firm believer in not counting your chicks until the eggs have hatched, and we do have some time before the grain is at the elevator, but this year is looking to be profitable. Hopefully, we will receive some more summer rains soon to finish out crops. We have experienced a good season thus far for most other crops as well. Vegetable production continues to increase in the county. The cooler weather in April and May has delayed harvest by a week or two, but main season harvest is upon us now. We have had few significant widespread pest issues this summer. Spider mites are now prevalent. We are seeing spots of phytophthora rot in cucurbit fields. Foliar disease pressure has been light. The same weather provided for some very nice first and second cutting hay. Tobacco harvest has been under way for a few weeks with the Connecticut broadleaf coming off much earlier than burley or MD Type 32.

The Northern Farmers Market, located off Thompsons Corner Road adjacent to the Three Notch Trail, is taking shape fast. Walls are up now and structures in place. Read more about this exciting project on page 3.

St. Mary's County Government is updating the county's Comprehensive Plan to strategize for future land use, transportation, and community facilities. Residents are invited to participate and help shape this plan into a successful and sustainable roadmap for the future. The county is requesting citizen input and volunteers to serve on various advisory positions. For more information, visit <https://www.stmarysmd.com/lugm/comprehensiveplanupdate/> or contact the Department of Land Use and Growth Management at 301-475-4200, ext. 1500

The Maryland Department of Agriculture is offering a one time signup bonus of \$1000/acre for extending CRP or CREP contracts for 30 years. Farmers enrolled in the Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) with contracts due to expire on Sept. 30, 2021, now have the opportunity to transition to a 30-year contract option.

MDA's bonus payment of \$1,000/acre will be eligible on accepted CLEAR30 contracts except for grass waterways and contour grass strips. Current CRP and CREP enrollees with contracts expiring before Sept. 30, 2021, must apply with a local USDA Service Center before Aug. 6, 2021. Farmers interested in MDA's \$1,000/acre signup bonus, should contact their local soil conservation district before Aug. 6, 2021.

It has been nice to finally get back together for our annual twilight tours. The Vegetable IPM and Walking Tour on July 28th was well attended and we are looking forward to sharing all of our research updates at the Upper Marlboro Twilight tour on Wednesday, August 4th. We are planning to offer our regular assortment of fall classes in-person this year with some additional online options for those who need it. Courses for pesticide and nutrient voucher recertification credits will be available starting in October.

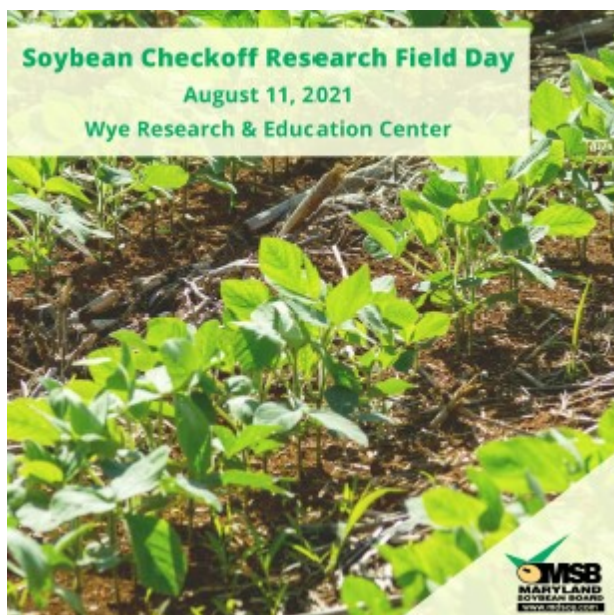
Hoping everyone has a safe and productive end of summer. Ben

Beef Cattle Webinar: Fall Pasture Management

Join us for our new monthly beef cattle webinar series on the first Thursday of each month from 7:30-8:30 pm. During this session, we will discuss some things you can be doing this fall to enhance your pasture system.

This event is free, but you must register ahead of time in order to attend. Register online here. If you have questions regarding this program, contact Sarah Potts, sbpotts@umd.edu.

**August 5
7:30-8:30 PM
Online via Zoom**



Soybean Field Day

Maryland farmers and industry professionals are invited to join the Maryland Soybean Board on August 11 at the Wye Research and Education Center (124 Wye Narrows Dr, Queenstown, MD 21658) to learn about checkoff-funded research out in the field and enjoy a snakehead fish fry and barbeque dinner. Research to be featured includes a spray drone demonstration, use of forage soybeans to control deer damage, evaluation of growth-promoting projects, variety trials, cover crops, and weed management. CEUs are available. Although this is a free event, pre-registration is encouraged: <https://msbfieldday2021.eventbrite.com>

**August 11
2:30-8:00 PM
Wye Research & Education Center
Queenstown, MD**

Small Ruminant & Pasture Field Day

University of Maryland Extension, Future Harvest CASA, and the Maryland Graziers Network are cosponsoring a **Small Ruminant & Pasture Field Day on Thursday, August 12th from 4:00 to 7:00 p.m.** at the Western Maryland Research & Education Center. More details will be forthcoming.

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Pesticide Disposal Program

The Maryland Department of Agriculture's Pesticide Disposal Program is a free service for all current or retired farmers and producers, including orchardists, nurserymen, greenhouse operators, and Christmas tree growers.

The program will collect any product with a registration number from the U.S. Environmental Protection Agency (EPA) or U.S. Department of Agriculture (USDA), and any other material that can be identified as a pesticide. Any unknown material will be sampled and tested by MDA prior to collection to ensure safe and proper disposal.

To participate in the program, farmers are asked to fill out the registration form here at <https://mda.maryland.gov/plants-pests/Pages/Pesticide-Disposal-Program.aspx> and submit to MDA's Pesticide Regulation Section (see below for more detail). The application period runs from March 15 - Sept. 15, 2021.

After reviewing applications, an MDA inspector will schedule a site visit to verify information. Once the program has a complete inventory of materials that need to be disposed, MDA will contract a licensed hazardous waste hauler to collect the pesticide materials directly from the storage site and transport to an EPA-approved disposal facility. Pickups are expected to begin in October 2021.

MDA's Pesticide Disposal Program was first introduced in 1995, and was last conducted in 2011. The program has collected nearly 190,000 pounds of unusable or unwanted pesticide from 385 sites since its inception. Funding for the program comes from licensing, certification and registration fees collected from pesticide businesses, certified applicators, and pesticide manufacturers and registrants. For more information on the program, please contact the Pesticide Regulation Section at 410-841-5710.

ST. MARY'S COUNTY REGIONAL FARMER'S MARKET



Southern Maryland RC&D is pleased to announce the start of the construction phase of the new Regional Farmer's Market Complex and Three Notch Trail Extension, located on Thompson Corner Road in Charlotte Hall, MD. RC&D has the privilege of being responsible for the design and construction of this much-anticipated community project.

The project is primarily being funded by St. Mary's County, with several other partners providing supplemental funds through grants, including Southern Maryland Agricultural Development Commission (SMADC) and Rural Maryland Council (RMC/RMPIF). Support for grants was also provided by the Charles and St. Mary's County Farm Bureaus.

The current farmer's market, located at the Charlotte Hall Library, will move to the new site. The new complex will provide a 5,100-square-foot Seasonal Market building with multiple vendor stalls; a 5,100-square-foot year-round Value Added Market building that will provide for a vast array of market and community activities geared towards agriculture & aquaculture; a boardwalk and viewing platform through the woods linking the Market buildings to the nearby Three Notch Trail; ample parking; and public restrooms. Groundbreaking occurred in January 2021 and the Market complex is anticipated to open Fall of 2021.

RC&D is working with the University of Maryland Extension and Maryland Master Gardeners on several elements for the Farmer's Market complex. Interpretive signage and native plant gardens will enhance the site, bringing more visitors to the market and helping to educate our community about the ties between agriculture and nature. RC&D was grateful to receive \$2,500 worth of plants from the MD Gift of Trees program for use in this effort.

RC&D recently started a fundraising campaign to support site amenities at the new Regional Farmer's Market. As part of that effort, RC&D developed a hard copy brochure for distribution at locations throughout Southern Maryland. **RC&D is now accepting donations for site amenities at the Regional Farmer's Market** in St. Mary's County. Donations will fund gardens, bike racks, benches, and more. Visit www.somdrdc.org/farmersmarket for more information and to donate.

New Poultry Litter Manure Spreader Has Arrived!

St. Mary's SCD is excited to offer a new piece of rental equipment to our inventory. The new equipment is a 16' Endurance pull type poultry litter spreader. Funding to purchase this new spreader came from a grant provided by the Southern Maryland Agriculture Development Commission (SMADC). This is a 10 ton hydraulic spreader designed for poultry litter, compost, and lime.

This is a tandem axle spreader that should be pulled using a minimum 70 horse power tractor. The spreader is hydraulically driven by pump off of the tractor 540 RPM or 1000 RPM PTO.

To rent the manure spreader or any of the District equipment, please contact Phone: 301-475-8402 ext 3, Email: info@stmarysscd.com



SMADC Announces Funding For The Southern Maryland Farmer Mini-Grant Program



The Southern Maryland Agricultural Development Commission (SMADC) is pleased to announce the 8th Round of the Southern Maryland Farmer Mini-Grant Program.

SMADC will begin accepting Mini-Grant applications on July 15, 2021. The Mini-Grant closes on September 1, 2021, with awards announced by October 15, 2021.

The Mini-Grant program aligns with SMADC's mission to support farms and the future of agriculture in Southern Maryland and is designed to assist new and beginning farmers who own or lease existing agricultural properties with small start-up projects, and to assist experienced farmers who are looking to diversify or expand a current agriculture project. The projects should be simple in scope and must be successfully completed within one year.

SMADC awards will be up to \$2,000 per applicant and is a one-to-one match by the farmer. A total of \$40,000 in funding is available. However, it is anticipated that the number of applicants may exceed the amount of funding available, therefore grant applications will be ranked and awards may be less than the requested amount.

For complete details of the SMADC Southern Maryland Farmer Mini-Grant Program, including Round 8 criteria, Grant guidelines, and to access the online Grant application form, visit 'Farmer Resources' to find the 'MiniGrants' page at www.SMADC.com or call 240-528-8850

Considerations when Selecting the Right Miticide

By: Laura Ingwell

Sometimes choosing the right product to manage a particular pest can be a daunting and risky task, especially when crops are close to harvest and an imposing outbreak sneaks up on you. One such pest that is sneaky are two-spotted spider mites (*Tetranychus urticae*; Figure 1). This microscopic pest can hang out in the crop or neighboring habitat and go unnoticed for a long time, just waiting for the perfect combination of crop growth stage and environmental conditions when it will explode in numbers and become a noticeable threat to the crop.



Figure 1. Adult two-spotted spider mites are distinguished by the two black dots on the dorsal side of their body. Their eggs are small and translucent and can be seen in the figure as well. (Photo by John Obermeyer.)

Here are the facts on spider mites. They have a wide host range, meaning they feed on more than 20 different species of plants. This makes limiting host plant availability as a means of control impossible. They can withstand a variety of environmental conditions and overwinter in sheltered environments in our region (greenhouses, high tunnel, etc.). Their main mechanism of dispersal is on the wind. Eggs are laid on fine silk webbing and under high populations this webbing resembles those produced by spiders, hence the common name. Depending on the environment, they can complete their life cycle in 5-20 days. Generally, the warmer it is the faster they develop. This rapid life cycle leads to an increase in the potential to develop resistance to pesticides applied to manage this pest. Mites feed on the plant at the cellular level, removing photosynthates and creating a stippling pattern on the leaves.

This looks like white/yellow speckles on the upper surface of the leaves and on the underside you will see the pest and webbing (Figure 2).

The mites thrive in hot and dry weather, and therefore many of you may be noticing them in your crops beginning in July. There are a variety of products available for use to manage this pest, and careful consideration should be made. Below I will discuss four common products that are used in conventional production of cucurbit crops.

Oberon® (spiromesifen) is a contact pesticide effective against all development stages, however juveniles are more susceptible than adults. This product belongs to group 23 insecticides, according to the insecticide resistance action committee (IRAC) mode of action designation. Group 23 are growth inhibitors specifically preventing lipid biosynthesis leading to death. This is why adults are less susceptible, they are not growing nearly as much as the immature stages of this pest. Growth inhibitors can be slow acting; you should wait 4-10 days to evaluate mortality following the application. Thorough coverage is key.

Portal® (fenpyroximate) is a group 21A insecticide. It controls all mobile stages of mites by inhibiting cellular respiration in the mitochondrion of cells resulting in rapid cessation of all biological activities including feeding and reproduction. Feeding stops immediately after application and mortality can be observed within 3-7 days.

Zeal® (etoxale) is a group 10B insecticide, interrupting the production of chitin which is the substance that constitutes the exoskeleton of the pest. It is a growth inhibitor, like spiromesifen, but disrupting a different aspect of the growth process. It is predominately an ovicide (kills eggs) and larvicide (kills immatures). No more than one application per season and 3.0 oz per acre are allowed. Coverage is essential for good control and the water volume in the mix should be increased when making applications to mature plants or those with more compact foliage. Like group 23 products, group 10B is slow acting because it is interrupting development, i.e. progression into the next development stage is disrupted.

Agri-mek® (abamectin) is a group 6 insecticide. Products belonging to this group target nerves and muscles in the insect causing paralysis. This mode is generally fast acting, and you can see results in a short amount of time. Thorough spray coverage is key. Group 6 products are highly toxic to bees and should not be applied during bloom. An adjuvant must be used with application to avoid illegal crop residues.

Be sure to scout your crop and evaluate the level of infestation, development stage of the pest and progress of the crop when choosing a miticide. As always, follow the label directions for whichever product you choose; the label is the law.

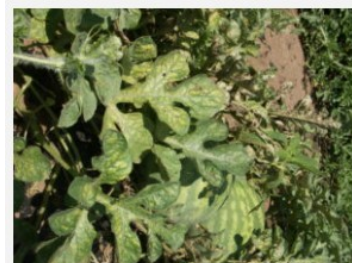


Figure 2. Spider mite damage often causes interveinal chlorosis on older leaves and may be mistaken for a nutritional problem. (Photo by Dan Egel)

Heat Damage in Vegetables Revisited

By: Gordon Johnson, Extension Vegetable & Fruit Specialist University of Delaware

The current heat wave is causing losses in vegetables and fruits. The following are some effects of high temperatures on vegetable and fruit crops.

The plant temperature at which tissue dies is around 115°F. Normally, plant temperature is just above air temperature. However, plant temperature can rise to a critical level under certain conditions. Plants have 3 major ways in which they dissipate excess heat: 1) long-wave radiation, 2) heat convection into the air and 3) transpiration.

A critical factor is transpiration. If transpiration is interrupted by stomatal closure due to water stress, inadequate water uptake, injury, vascular system plugging or other factors, a major cooling mechanism is lost. Without transpiration, the only way that plants can lose heat is by heat radiation back into the air or wind cooling. Under high temperatures, radiated heat builds up in the atmosphere around leaves, limiting further heat dissipation.

Dry soil conditions start a process that can also lead to excess heating in plants. In dry soils, roots produce Absciscic Acid (ABA). This is transported to leaves and signals to stomate guard cells to close. As stomates close, transpiration is reduced. Without water available for transpiration, plants cannot dissipate much of the heat in their tissues. This will cause internal leaf temperatures to rise.

Vegetables can dissipate a large amount of heat if they are functioning normally. However, in extreme temperatures (high 90s or 100s) there is a large increase the water vapor pressure deficient (dryness of the air). Rapid water loss from the plant in these conditions causes leaf stomates to close, again limiting cooling, and spiking leaf temperatures, potentially to critical levels causing damage or tissue death.

Very hot, dry winds are a major factor in heat buildup in plants. Such conditions cause rapid water loss because leaves will be losing water more quickly than roots can take up water, leading to heat injury. Therefore, heat damage is most prevalent in hot, sunny, windy days from 11 a.m. to 4 p.m. when transpiration has been reduced. As the plants close stomates to reduce water loss, leaf temperatures will rise even more. In addition, wind can decrease leaf boundary layer resistance to water movement and cause quick dehydration. Wind can also carry large amounts of advected heat.

Photosynthesis rapidly decreases above 94°F, so high temperatures will limit yields in many vegetables and fruits. While daytime temperatures can cause major heat related problems in plants, high night temperatures can have great effects on vegetables, especially fruiting vegetables. Hot night temperatures (nights above 75) will lead to greater cell respiration. This limits the amount of sugars and other storage products that can go into fruits and developing seeds.

High temperatures also can cause increased developmental disorders in fruiting vegetables. A good example is with pollen production in beans. As night temperatures increase, pollen production decreases leading to reduced fruit set, reduced seed set, smaller pods, and split sets. Most fruiting vegetables will abort flowers and fruits under high temperatures.

Heat injury in plants includes scalding and scorching of leaves and stems, sunburn on fruits and stems, leaf drop, rapid leaf death, reduction in growth, and lower yields. Wilting is the major sign of water loss which can lead to heat damage. Plants often will drop leaves or, in severe cases, will "dry in place" where death is so rapid, abscission layers have not had time to form.

On black plastic mulch, surface temperatures can exceed 150°F. This heat can be radiated and reflected onto vegetables causing tremendous heat loading. This is particularly a problem in young plants that have limited shading of the plastic. This can cause heat lesions just above the plastic. Heat lesions are usually first seen on the south or south-west side of stems. High bed temperatures under plastic mulch can also lead to reduced root function limiting nutrient uptake. This can lead to increased fruit disorders such as white tissue, yellow shoulders, and blotchy ripening in tomato fruits.

High heat and associated water uptake issues will cause heat stress problems. As heat stress becomes more severe a series of event occurs in plants starting with a decrease in photosynthesis and increase in respiration. As stress increases, photosynthesis shuts down due to the closure of stomates which slows or stops CO₂ capture and increases photorespiration. This will cause growth inhibition. There will be a major slow-down in transpiration leading to reduced plant cooling and internal temperature increase. At the cellular level, as stress becomes more severe there will be membrane integrity loss, cell membrane leakage and protein breakdown. Toxins generated through cell membrane releases will cause damage to cellular processes. Finally, if stress is severe enough there can be plant starvation through rapid use of food reserves, inefficient food use, and inability to call on reserves when and where needed.

Another negative side effect of reduced plant photosynthate production and lower plant food reserves during heat stress is a reduction in the production of defensive chemicals in the plant leading to increased disease and insect vulnerability.

The major method to reduce heat stress is by meeting evapotranspiration demand with irrigation. Use of overhead watering, sprinkling, and misting can reduce of tissue temperature and lessen water vapor pressure deficit. Certain mulches can also help greatly. You can increase reflection and dissipation of radiative heat using reflective mulches or use low density, organic mulches such as straw to reduce surface radiation and conserve moisture. In very hot areas of the world, shade cloth is used for partial shading to total incoming radiation and heat. Research at UD has shown that use of shade cloth can have significant benefits in heat sensitive crops if applied at the right time.

Pumpkin Disease Control

By: Gordon Johnson, Extension Vegetable & Fruit Specialist

I was recently asked about disease control programs for pumpkins. The following was modified from an article by Dr. Kate Everts in 2019 that I have added updated fungicide recommendations and additional information about certain diseases.

A frequent question that I get from growers is “what is the best spray program for my pumpkin crop (and other ornamental squashes)?”. It is a challenging question to answer, in part because each field/farm may have different disease pressure, and Ag Chem suppliers may only stock some fungicides. With that in mind, I have come up with the following step by step procedure to use as a guide in designing an individualized pumpkin program. The numbers in parenthesis that follow the fungicide name are the Fungicide Resistance Action Committee (FRAC) code for the product. Except for the broad-spectrum fungicides chlorothalonil, mancozeb and copper, always alternate other fungicides with different FRAC codes to avoid disease resistance buildup.

Step 1 Use all available cultural practices to reduce disease pressure, including planting disease resistant varieties when possible, using good rotations, and using no-till mulch based systems. If possible, modify your spray equipment to get excellent fungicide coverage on both the upper and lower surfaces of leaves.

Step 2 Learn to identify key diseases: powdery mildew, downy mildew, Plectosporium blight, gummy stem blight/black rot and bacterial leaf spot.

Step 3 Begin a basic preventative spray program with a chlorothalonil or mancozeb product. Spray every 7 to 14 days, beginning when vines run. (Organic alternative: copper). This will give protection against most foliar diseases.

Step 4 Use predictive models or scout for disease presence and if the following diseases occur or are predicted, use the following guidelines:

Gummy Stem Blight/Black Rot and Anthracnose Alternate chlorothalonil with Rally (3), tebuconazole (3), Procure (3), Proline (3), Rhyme (3), Inspire Super (3+9), Aprovia Top (3+7), Switch (9+12), or Miravis Prime (7+12).

Bacterial Leaf Spot Add a copper product to the basic preventative program (applied every 7 to 10 days).

Powdery Mildew Powdery mildew control is critical to maintain quality of pumpkins and maintain strong “handles”. Some varieties have resistance or tolerance to powdery mildew and should be used when possible. Powdery mildew generally occurs from mid-July until the end of the season.

Development on tolerant varieties will vary from year to year. Planting tolerant varieties will help delay the development of powdery mildew and improve the performance of fungicides.

Make first application when powdery mildew is observed in the area or is detected by scouting (one lesion on the underside of 45 old leaves per acre). Add powdery mildew specific products to basic preventative program. Alternate FRAC codes.

Select one of these: Vivando (50), Luna Experience (3+7), Torino (U06), or Quintec (13).

And alternate with one of the following: Rally (3), tebuconazole (3), Proline (3), Rhyme (3), Inspire Super (3+9), Luna Experience (3+7), Aprovia Top (3+7), Magister(39), Miravis Prime (7+12) or Pristine (7+11).

(Organic alternative: Regalia, Micronized Wettable Sulfur)



Powdery mildew on pumpkin leaves.



Shriveled pumpkin handles are common with powdery mildew infection.

Downy Mildew Only apply if the disease is predicted in the region. Strains of downy mildew that infect cucumbers and cantaloupe may not affect pumpkins and winter squash. If found in the region, add downy mildew specific product to the basic preventative program. Select two downy mildew products with different FRAC codes and alternate them. *Downy mildew products include:* Orondis Ultra (U15+40), Orondis Opti (M5+U15), Ranman (21), Previcur Flex (28), Presidio (43), Elumin (22), Zing! ((M5+22), Ariston (M5+27), Tanos (11+27), Curzate (27), Forum (40), and Zampro (40+45).

Plectosporium Blight Chlorothalonil is good on Plectosporium blight. Full coverage will be needed for control.



UMass Extension Vegetable Program

Plectosporium lesions on pumpkin fruit.

Step 5 Special cases:

Phytophthora Fruit Rot. Avoid planting pumpkins in a field with a history of this disease. To manage Phytophthora fruit rot, select two of the following Phytophthora products that are in different FRAC code groups and rotate them. Phytophthora fruit rot products include Orondis Ultra (U15+40), Orondis Opti (M5+U15), Ranman (21), Presidio (43), Elumin (22), Zing! ((M5+22), Forum (40), and Zampro (40+45).

Fusarium Fruit Rot This disease is especially destructive in fields where pumpkins are grown every year. Once the pathogen is established in a field, loss can be significant. Fruit rot is caused by several Fusarium spp., and fungicide applications are not effective. Hard rind cultivars are less susceptible to Fusarium fruit rot than other cultivars. Production of pumpkin on a no-till cover crop mulch layer such as winter rye plus hairy vetch has been shown to help reduce disease incidence. Greater disease reductions will occur when the mulch layer is thicker.

Viruses (WMV, PRSV, ZYMV, and CMV) The most prevalent virus in the mid-Atlantic region is WMV, followed by PRSV, ZYMV, and CMV. For control use varieties with virus resistance whenever possible. Reduce aphid transmission of viruses with insecticide programs. This information was adapted from <https://sites.udel.edu/weeklycropupdate/?p=14260> by Kate Everts, Vegetable Pathologist, University of Maryland and the MidAtlantic Commercial Vegetable Production Recommendations: <https://www.udel.edu/content/dam/udelimages/canr/photography/extension/sustainable-ag/NFP-2020-F-Pumpkin.pdf>

Small Grain Variety Trial Results

By: Andrew Kness, Agriculture Agent UME Harford County

Results of the 2021 Maryland Wheat and Barley Variety Trials are now available. The trials evaluate wheat and barley yield, head scab/DON, and growth of select varieties planted across the state of Maryland. Data is used to help farmers and crop advisors select the best performing varieties. When picking varieties, remember to select varieties that have good yield stability and have good resistance to Fusarium head blight. Some of the top performers are in the table below.

An online copy of the report can be downloaded at <http://blog.umd.edu/agronomynews/2021/07/23/2021-maryland-small-grain-variety-trials/> or call the Extension office for a hard copy. For more information about how to interpret and apply variety trial data, consult this [fact sheet](#). For questions regarding the small grain trials, contact Dr. Vijay Tiwari (vktiwari@umd.edu) or Dr. Nidhi Rawat (nidhirwt@umd.edu).

Variety	Statewide Average Yield (bu/a)	DON (ppm)
Local Seed 'LW2169'	112.6	3.00
AgriPro 'SY100'	107.4	2.84
AgriMAXX '514'	107.3	2.20
Mid-Atlantic 'MAS86'	104.7	2.18



Hot-Set Tomato Cultivar Trial Update

By: Ben Beale, Extension Agent - St. Mary's

We are conducting a hot set tomatoes trial this summer. The trial include 13 cultivars of tomatoes that show promise to be able to set fruit in high temperatures during hotter summer conditions present in So MD. The trial contains several standard varieties for comparison purposes. The tomato trials are located on 10 cooperating farms in St. Mary's and Charles Counties as well as a more formal replicated trial at UMD-CMREC research farm in Upper Marlboro. Cultivars under trial include Red Deuce, Red Mountain, Red Morning, Scarlet Red, Roadster, Red Snapper, STM 2255, Bejo 3437, Camaro, Grand Marshall, Rambler, Bejo 3345 and XTM 5187.

Plants were set in the field between the first and third week of June. Most plants are up to the third string. Fruit set has begun with largest fruit between 2-3 inches in size. Temperatures in the last 2 weeks have reached into the upper 90's. I hope that we will find some new cultivars that will perform well during the summer slump.



New Livestock Newsletter

By: Charlie Sasscer III, Extension Educator— Agricultural Marketing, Prince Georges County

The University of Maryland Livestock Extension Team has developed the Cattle Tales Livestock Newsletter that will be sent out quarterly covering a range of topics relevant to the season for several livestock species. Contributions come from county agents and state specialists who are heavily involved in livestock programming. While the newsletter will have a heavy beef cattle focus, articles will also be included that focus on or pertain to equine, swine, and small ruminants, as well as forage management. The link to "subscribe" to our newsletter listserv is: <https://go.umd.edu/subscribe-livestock-newsletter>. To request a mailed hard copy version please contact the St. Mary's County Extension office at 301-474-4484 or Po Box 663 Leonardtown MD 20650

Key Steps for Optimum Forage Establishment

By: Amanda Grev, Extension Specialist, Pasture and Forage, Western Maryland Research & Education Center

Last month we discussed strategies for assessing pasture stands and some initial considerations when beginning to think about pasture renovations. Now that August has arrived, if you have decided to proceed with some form of pasture renovation this fall it will soon be time for planting. Regardless of the extent of your renovation, there are several steps you should follow to make sure the seeding process goes smoothly. Below is an overview of the key steps necessary for optimum forage establishment.

Step 1: Correct Soil Fertility

Poor soil fertility is one of the most common causes of poor stand establishment and also poor stand persistence over time. Acidic conditions (low soil pH) will reduce nutrient availability and impair root growth and development, and essential nutrients like phosphorus are critical for proper seedling development. Because of these effects on plant nutrient availability and utilization, ensuring adequate soil pH and fertility is essential for optimum stand establishment and to obtain persistent, high-yielding stands long term. Soil fertility testing should be done prior to renovation so that lime and fertilizer can be applied according to soil test recommendations.

Step 2: Control Weeds

Weeds compete with desirable forages for light, nutrients, moisture, and space and can shade out or outcompete new seedlings. For best results, ensure weeds are controlled prior to seeding. Remember that while herbicides can be a useful tool for weed management, they are not the only option for weed control. An integrated approach that combines various cultural, mechanical, and chemical control practices will be the most successful.

Step 3: Select Adapted Species

Not all forages will perform equally on different sites, so be sure to select forages that are well suited for your soil and site characteristics. This includes variables such as soil type, drainage, moisture holding capacity, pH, fertility, and topography. For example, species such as orchardgrass or alfalfa require a higher level of fertility and will not thrive in systems with low soil pH or poor soil fertility. Be sure to select forage species that will match your intended use (hay vs. pasture, perennial vs. annual, time of year, management system) and livestock requirements based on species, age, and life stage.

Step 4: Inoculate Legume Seeds

If you plan to incorporate a legume as part of your forage mix, be sure the seed is properly inoculated with nitrogen-fixing bacteria. Some legume seeds come pre-inoculated, which saves time and helps to ensure inoculation. If not, be sure to select the appropriate inoculant strain depending on the legume species and inoculate the seed with fresh inoculant prior to seeding using an effective adhesive material to hold the inoculant on the seed. Inoculants are living organisms and will only work if the bacteria are alive when applied, so be sure to use proper storage and handling and check expiration dates.

Step 5: Graze and/or Clip Close

Grazing or clipping a pasture close to ground level prior to seeding will help eliminate residue and assist in suppressing competition from existing vegetation, giving new seedlings an opportunity to grow. If using livestock to accomplish this via grazing, be mindful of the potential effects this may have on animal performance, including the consumption of lower quality forage and/or the potential for increased parasite loads as animals graze below the usual minimum height recommendation.

Step 6: Prepare a Proper Seedbed

This step will vary slightly depending on the use of tilled vs. no-till seedings. If using tillage, be sure the seedbed is soft yet firm following tillage. An underworked seedbed will have too much surface residue and will be too rough for good seed placement, while an overworked seedbed will be too fluffy and fine and will dry out quickly. A good rule of thumb is that your boot tracks should be around ¼ inch deep. For no-till seedings, it is especially important to suppress the existing stand and reduce residue prior to planting. In addition to close grazing and/or clipping, the existing stand can be suppressed using a nonselective herbicide.

Step 7: Seed at the Proper Depth

Seeding too deep is one of the most common causes behind establishment failures. Be sure the seed drill is calibrated appropriately so that seed is placed at the proper depth. Take into account your soil type, texture, and moisture conditions; in general, seed should be placed slightly shallower in a heavier soil with a higher moisture content and slightly deeper in a lighter soil with lower moisture content. For most cool-season forages, the ideal seeding depth is ¼ to ½ inch, but seed characteristics vary so be sure to determine the optimum depth and adjust accordingly prior to planting. The key is to provide good seed to soil contact without placing the seed too deep.

Step 8: Seed at the Proper Time

Cool-season forages can be seeded in either the spring or late summer. Advantages of late summer seedings generally include reduced weed competition and cooler weather conditions during establishment. The ideal time will vary depending on your location and weather conditions but in general, the optimum time for late summer seeding in Maryland occurs from mid-August through mid-September.

Step 9: Seed at the Proper Rate

Similar to seed depth, calibration is essential to achieve a proper seeding rate. Seeding rates will vary based on forage species selection, be sure to follow recommendations when making seeding rate decisions. Pasture seeding rates are typically higher than hay seeding rates to provide a denser sod for grazing. Seeding rates can be adjusted slightly based on conditions at the time of seeding. If conditions are optimum, seed at the lower end of the recommended range. If conditions are poor, seed at the higher end of the recommended range.

Step 10: Manage New Seedlings During Establishment

New seedlings are especially sensitive during their establishment year. To maximize success, delay grazing on newly seeded areas until sufficient root systems have been developed to prevent livestock from uprooting newly established plants when grazed. Avoid grazing new stands during extremely wet periods, be very careful not to overgraze, and continue to scout for weeds or other potential issues that can impair establishment.



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**All the best for a
Wonderful
Summer!**

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Nutrient Management Update

While recent events forced us all to adopt new ways of conducting much of our business it has been another busy planning season for the Nutrient Management Program. Since this time last year 429 plans have been developed covering 12,680 acres.

This is the time of year many are waiting on timely rains to see their crops through to harvest. Fortunately we've benefited from a few of those timely showers already and with any luck there will be more to come. But a farmer's work is never done and when rain or brutal summer heat keeps you out of the field consider some of these indoor activities that may save you time at the end of the year:

- **Collect your fertilizer receipts** and calculate nutrient applications per acre for each field. This will be helpful when the time comes to fill out your Annual Implementation Report for MDA.
- **Update field-by-field activity records.** Information including previous yields, planting dates, cutting dates for hay, etc. may be help for future planning.
- **Plan your remaining nutrient applications.** See where you stand on what nutrients have already been applied as compared to the total allowable application. Pay attention to recommended timing of split applications for maximum production.
- **Check your Nutrient Management Plan** to see what is needed for the next update. Are your soil samples expiring; while they need to be sampled in the coming fall? Will you need to provide a manure analysis?

Remember, it is never too early to start planning for next year. Contact your Nutrient Management Advisor at 301-475-4480 to get a head start on spring 2022.

On the Lighter Side...

A farmer and his recently hired hand were eating an early breakfast of biscuits and gravy, scrambled eggs, bacon and coffee that the farmer's wife had prepared for them. Thinking of all the work they had to get done that day, the farmer told the hired man he might as well go ahead and eat his lunch too.

The hired man didn't say a word, but filled his plate a second time and proceeded to eat. After awhile the farmer said, "We've got so much work to do today, you might as well eat your supper now too."

Again, the hired man didn't respond but refilled his plate a third time and continued to eat. Finally, after eating his third plate of food, the hired man pushed back his chair and began to take off his shoes.

"What are you doing"? the farmer asked.

The hired man replied, "I don't work after supper."

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