Summer Time Greetings to All  
--Ben Beale

There is a lot of news to share in this edition of the Farm News...from our new location n, to a birthday celebration and finally a new season of summer growing; so please read on to learn more.

The Extension office has moved to greener pastures! Our new office is located at the St. Mary’s Agriculture Services Center, 26737 Radio Station Way, Suite E-2 in Leonardtown. For those who are old enough to remember, the Ag Service Center is near where the old WKIK Radio Station used to be just north of Leonardtown. The entrance to Radio Station Way is between Dunkirk Lumber Supply (the Old MD Tobacco Growers location) and the state highway salt dome. We are very pleased with our new space and believe it will offer several benefits. The new office offers easy access off of Rte. 5, an agricultural lab for processing plant samples, and a functional demonstration kitchen.

St. Mary’s now offers a one stop shop for the many services farmers utilize. The Extension office is just down the hall from the Soil Conservation District, Farm Service Agency, Resource Conservation and Development Board, Farm Bureau and Natural Resource Conservation Service. The Ag and Seafood Section of the Department of Economic Development will join the building in August. We are very grateful to the St. Mary’s County Board of Commissioners and the St. Mary’s Soil Conservation District for their continued commitment to the concept of an Ag Service Center. If you are in the area, please stop in for a visit and see the new space!

On another note, your Extension office is turning 100! In 2014, we celebrate the 100th anniversary of the Smith-Lever Act, which established the Cooperative Extension Service, a state-by-state national network of educators who extend university-based research and knowledge to the people. We are planning a new office open house and birthday celebration in October. Please stay tuned for details.

Finally, in April we bid farewell to our Nutrient Management Advisor Adam Lyon. Adam accepted a new position with the MD Department of Agriculture in Annapolis. We appreciate Adam’s many years of service to the farmers in St. Mary’s county and wish him well in his new position. In the interim, Francis Warring, Nutrient Management advisor for Charles County has been filling in 2 days a week to write plans. If you have not received a NM plan, it would be a good time to call the office and get a plan written for this fall. The St. Mary’s County Nutrient Management position is currently being advertised with a closing date of July 31, 2014. For a detailed position announcement and to apply, go to https://ejobs.umd.edu, position number 120109.

July 18, 2014
Agricultural Education Camp
St. Mary’s County Fairgrounds

July 30, 2014
2014 Annual Tobacco Research & Extension Field Day
VA Tech Ag Research & Extension Center

August 1, 2014
Vegetable Production and IPM Twilight Walking Tour
Farms of Francis Zimmerman, Mechanicsville MD

August 6, 2014
Mid-Atlantic Precision Ag Equipment Day
Wye Research & Extension Center, Queenstown MD
**August 7, 2014**  
Crops Twilight Barbecue & Ice Cream Social  
Upper Marlboro Research and Education Center

**August 14, 2014**  
Organic Vegetable Twilight Tour  
Upper Marlboro Research and Education Center

**August 15, 2014**  
2014 Farm Bill Workshop- Commodity Programs  
10 a.m. to 3 p.m. - costs $10 and covers cost of lunch  
St. Mary’s Agricultural Service Center, 26737 Radio Station Way, Leonardtown, MD 20650

**Youth Agricultural Education Camp**  
July 18, 2014  
8:00 a.m. – 3:30 p.m.  
St. Mary’s County Fairgrounds  
Ages 8-12  
**Hostess:** Gabrielle Cory, Ambassador in Girl Scout Troup 4549 working for her Gold Award

Come and learn about Agriculture! Station topics include: Hand-washing, Grains, Animals, Planting Seeds, First Aid, ATV Safety, and Making Ice Cream the Girl Scout Way!

Accepting the first 100 children ages 8-12. The fee is $5 and your child will be provided a farm fresh lunch! (Parents are welcome to stay with their child throughout the day, and may join us for lunch for a $3 fee.)

Participation is limited, and registration form and payment are required. Contact the UME St. Mary’s office for a registration form.

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**Vegetable Production and IPM Twilight Walking Tour**  
August 1, 2014  
6:00 p.m.-8:00 p.m.  
Location: Farm of Francis Zimmerman, 25530 Lone Spruce Lane, Mechanicsville MD

*If you are currently growing vegetables or considering it as a future crop, plan to attend the Vegetable Twilight Tour.*

This is a diversified vegetable operation with tomatoes, peppers, watermelons, squash, cucumbers, and other minor crops. This will be an informal tour, with plenty of opportunity to discuss your vegetable questions with other growers. Handouts and other brochures will be available.

Information will be presented by University of Maryland Extension Specialists and Agents. Light refreshments will be available.

**Directions:**  
The farm is located on Lone Spruce lane, which is located off of Bishop Rd in Loveville/Mechanicsville. From Waldorf: Take Rt. 5 south toward Leonardtown. From Rt 5 turn left onto Rt 247 (Loveville Rd). Proceed to Bishop Rd. The Loveville Produce Auction will be on the Corner. Turn Right onto Bishop Rd and proceed 1.5 miles to Lone Spruce Lane on the left. The Zimmerman Farm is the first farm on the right after the pond.

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**2014 Annual Tobacco Research and Extension Field Day**  
July 30, 2014  
Virginia Tech Southern Piedmont Agricultural Research & Extension Center

A tobacco field day tour is being conducted at the Virginia Tech Southern Piedmont Research Farm in Blackstone, VA on July 30th from 3:00pm to 8:30pm. Transportation via a passenger van for those interested is being coordinated by the St. Mary’s Extension office. The van will leave St. Mary’s at 12:30pm and return at 11 pm. Call the office to reserve
a seat. The research facility has invited us to come early to allow us additional time to view the variety plots before the actual tour.

Field Tour topics include:

- Tobacco curing efficiency research
- Tobacco sucker control and MH residue management
- Flue, burley, and dark-fired tobacco variety evaluations
- Potential alternatives to control tobacco nematodes
- Management of tobacco leaf spot diseases
- Potential alternatives for black shank control
- Strip-till tobacco production
- Budworm and hornworm control

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**Mid-Atlantic Precision Ag Equipment Day**

August 6, 2014
8:30 a.m. – 3:30 p.m.

New Location:
Wye Research & Education Center
124 Wye Narrows Drive, Queenstown, MD 21658

University of Maryland Extension, in cooperation with Virginia Tech, West Virginia University, Penn State, and University of Delaware, is proud to bring you the Fourth Annual Mid-Atlantic Precision Ag Equipment Day. The event will include the nation’s top experts on agricultural equipment and machinery engineering. New this year will be research information and a demonstration of Drones used for precision agriculture.

Practical and informative advice will be given on sprayer and planter section control, variable rate seeding, economics and practical implementation of RTK and GPS, soil mapping, using technology for on-farm research and developing custom variable rate prescriptions, and much more. You will be able to sit in on informative sessions covering practical application of the latest technology in your operation. You will also have the opportunity to meet with the speakers throughout the day so that you can ask questions in an informal setting. In addition, agricultural equipment dealers from across the region will be in our sponsor midway showing off the latest technology and there will be an equipment demonstration area for you to see this equipment in action.

The event is free for attendees, but we do ask that you register to help us plan for the event. Lunch will be provided and CCA and nutrient applicator credits will be available. Registration: https://midatlanticprecisionagday.eventbrite.com

Contact: Jenny Rhodes, UME Educator, AgNR, Q.A’s Co., jrhodes@umd.edu, 410.758.0166

If you need special assistance to participate in the program, please contact Queen Anne’s County Extension office at 410.758.0166.

If you are in agri-business and would like to reserve a booth there is still space available. Please contact Jennifer Rhodes (410) 758-0166 or jrhodes@umd.edu.

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**Crops Twilight Barbecue & Ice Cream Social**

August 7, 2014
CMREC Upper Marlboro Farm

You are invited to attend a Field Crops Research Twilight, Barbecue and Ice Cream Social at the Central Maryland Research & Education Center, 2005 Largo Rd., Upper Marlboro, MD on Thursday, August 7, 2014 from 4:30 to 9:00 pm. A barbecue dinner will be served at 4:30 pm followed by homemade ice cream prior to the evening tour. University of Maryland Extension Educators and Specialists will showcase their field crop, vegetable and fruit research plots.

Barbecue Begins at 4:30 p.m., Ice Cream Served at 5:15 p.m., and Crops Twilight at 6:00 p.m.

Please arrive on-time as the tour will start promptly at 6:00 pm. This event is free. However, a reserved meal ticket is required.

If you need special assistance to participate, please contact the Anne Arundel County Extension office at 410-222-3906 by August 4, 2014. For full meeting details, and registration information contact any of the Southern Maryland Extension offices. For more information contact David Myers at the Anne Arundel County Extension office at 410-222-3906.
Organic Vegetable Twilight Tour
August 14, 2014
Dinner served from 5-6pm
Wagon tours start at 6pm
Upper Marlboro Research and Education Center
2005 Largo Rd Upper Marlboro, MD 20774

What: Tours of University of Maryland organic research plots
• The effect of cover crops, plastic and other parameters on soil CO2 emissions
• Weed control in organic systems
• How climate change can effect vegetable production practices
• Cover crop effects on pests and natural enemies
• Speakers include organic growers and University of Maryland researchers

Who: All organic vegetable growers or those interested in organic vegetable production

There is no charge for the meeting, but registration is requested to help with meal planning. To register, send an email to Jerry Brust jbrust@umd.edu

Accommodations: If you require special accommodations to attend this program, contact Jerry Brust at 301.627.8440 or jbrust@umd.edu

Helping New Farmers One Step at a Time

Collaborative for Beginning Farmer Success will increase the number of successful beginning farmers and acreage farmed by them in Maryland, with an emphasis on practical training for beginning farmers.

The project builds on existing University of Maryland Extension resources and partnerships with Future Harvest-CASA, Southern Maryland Agriculture Development Commission, regional nonprofits, agricultural organizations, and experienced farmers to provide beginning farmers with easily accessible tools and practical experience-based training on farm production, marketing, land management, business planning, and financial resources.

♦ Explore: Beginning farmers will be able to explore farming options, understand the components of a successful farm operation, and make decisions about what enterprises best fit their interest.
♦ Refine: Beginning farmers will be able to further refine their farm interest, understand the requirements and strategies of different farm enterprises and begin developing plans for assessing resources needed to implement a farm plan.
♦ Develop: Beginning farmers will acquire the skills necessary to develop specific farm production and business plans and obtain needed resources to begin a farm enterprise.
♦ Implement: Beginning farmers will implement farm plans, start agricultural enterprises and continue as successful beginning farmers.

Visit the website to learn more about the project including farming resources, educational program, farm mentoring and on farm apprenticeships, newsletters and featured videos.

www.extension.umd.edu/newfarmer

Yellow Soybeans May Reveal Manganese Deficiency Hot Spots
By R. David Myers
UME Principal Agent
myersrd@umd.edu

Several farms have reported yellowing soybeans typically, but not always on knolls within the field. Manganese (Mn) deficiency may be the culprit, however, there are other soybean antagonists with similar symptoms that need to be ruled out as causal agents. Manganese deficiency most often occurs in over-limed soils, where the pH is > 6.8.

On some of the sandy/gravely knolls in Anne Arundel and Prince George’s Counties that have a low Cation Exchange Capacity (CEC) a lime application may
increase the pH to dramatically when rate of application is based upon the predominate field silt or sandy loam.

Manganese is most available between the pH range of 5.0 to 6.5, yet, soybean rhizobium nodulation and N-fixation is more active at a pH range of 6.5 to 7.2, posing a bit of a pH balancing dilemma.

Manganese is a minor nutrient essential in the activation of many plant enzymes, and is also a critical element in the chlorophyll photosynthesis electron transport process, hence the yellowing.

Manganese deficiency is characterized by uniform yellowing of the younger leaves, with the veins remaining green. The symptoms are more pronounced during cooler than normal growing conditions, and fields may overcome early deficiency symptoms as the soil warms.

Manganese symptoms detected early in the season can be treated with a foliar fertilization spray of manganese sulfate (MnSO4) at 4 lb/acre, lessening the likelihood of yield loss.

Look closely at the affected plants and ask yourself the following questions:
- Could there be any herbicide carryover?
- Has there been adequate rainfall?
- Have the temperatures been cooler than normal?
- Are the younger leaves yellower than the older leaves?
- Are the veins in the leaves a darker green?
- Are any spider mites present?

If there are no spider mites present and the younger leaves are yellower with greener veins, then manganese is a suspect.

We need to now concentrate on the plant roots and soil.
- Do the roots appear healthy with good rhizobium nodulation?
- When the soybeans were planted did you use the proper rhizobium inoculant, and a seed treater that contains fungicides, and molybdenum for the promotion of enhanced rhizobium activity?
- After cutting a nodule open the inside should be pink -- Is it?
- Both molybdenum and nitrogen deficiency resembles, and could easily be mistaken for manganese deficiency.
- Is the soil sandy or gravely at the yellowing area?

What is the pH at this particular field site verses the entire field?

Unfortunately, complete soil sampling at the time of this examination may not be practical due to the urgent need for corrective action in order to offset yield loss. I would suggest the use of a pH test kit to rapidly compare the affected site to an area where the soybeans appear to be growing normally.

An accurate, and fast in field pH determination is best done with a wet chemistry testing kit. La Motte Soil Testing Products located in Chestertown, Maryland offer an excellent pH testing kit.

For a free copy of La Motte’s Soil Testing Catalog call 800 344-3100, or access their website at: www.Lamotte.com

If the soil pH is above 6.8, and all other previously discussed causal agents for soybean yellowing other than manganese have been ruled out, then foliar apply the manganese sulfate 4 lb/acre.

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**Soft Rot of Vegetables**


Kate Everts, Vegetable Pathologist, University of Delaware and University of Maryland; keverts@umd.edu

Soft rot, which is a widespread disease of vegetables caused primarily by *Pectobacterium spp.* (formerly called *Erwinia*), has been observed this past week in cabbage. Numerous vegetable crops are susceptible to this disease, including cabbage, broccoli, onion, pepper, melon, cucumber, bean, and beet (for potato, see below).

The pathogen is a bacterium and overwinters in infected tissue, farm implements, and plant debris. The pathogen invades primarily through wounds. Therefore, it is important to reduce wounding during planting, cultivation, harvesting, and subsequent transport. In addition, uninjured tissue can be infected through natural openings when free moisture is present. Avoid waterlogged soils. The pathogen prefers high temperatures and multiplies quickly at high
temperatures, although disease can progress rapidly when conditions are not optimum for plant growth, even if the temperature is low.

Additional control measures include use of disease free seed and transplants; rotation with crops such as corn, small grains, or alfalfa; and avoidance of insect feeding. Insect feeding creates wounds and insects can carry the bacterium from plant to plant. As the crop grows avoid wounding during cultivation and field work. Also take care to minimize wounding in harvest, and store and ship produce in clean and cool conditions. Hold plants at 39 to 45°F to minimize spread following harvest.

High Populations of Striped Cucumber Beetle Early This Year

June 27, 2014 in Vegetable Crops,
http://extension.udel.edu/weeklycropupdate/

Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

If you think striped cucumber beetles seemed to be in greater than normal numbers this year you are not alone. This has been a particularly bad year for striped cucumber beetles in squash, cucumber, watermelon and, lately, pumpkins. The beetles have been ravaging cucurbit fields in southern and central Maryland as well as the eastern shore. Some fields have been hit particularly hard with beetles causing 10-15% plant loss due just to their feeding. The cool wet spring we had slowed the emergence of the beetles from their overwintering sites. When you combine the delayed emergence of the beetles with the slow planting schedule of squash and cucumber because of the cooler weather you wind up getting a massive movement of beetles into some fields as soon as there are any cucurbit plants available.

The beetles tend to mass on small plants where they eat, mate and defecate (Fig. 1). This type of frenzied activity where there are many beetles feeding on a few leaves or a small plant leads to increased chances of bacterial wilt problems (Fig. 2). The bacterium that causes bacterial wilt in cucurbits, Erwinia tracheiphila, is in the cucumber beetle’s feces. As the beetles defecate on the leaves where they are feeding the bacteria can be moved into open (feeding) wounds with water that is in the form of precipitation or dew. The more beetles feeding and opening wounds on susceptible crops like cucumbers and squash the greater the chance of bacterial wilt infection. In a few small cucumber fields I saw as much as 45% of the plants with bacterial wilt.

One additional problem with these pests and why control sprays have not worked as well as they should have under some conditions is that the beetles are consistently hiding at the base of the plant (in the plastic hole) where they are feeding on the stem (Fig. 3). Sprayers are usually set up to cover a lot of leaf canopy and often do not do a very good job of putting chemical down in the plant hole. This stem feeding can be severe enough to cause some wilting. It is hard enough to control cucumber beetles with a good cover spray, but when only small amounts of spray are reaching them down in the plastic hole they will not be controlled. On many of the farms that were hit hard with early beetle populations, beetle numbers seem to be much lower the last week or so.

Legal Services Directory Available for Farmers

The Agriculture Law Education Initiative in conjunction with the newly formed Maryland State Bar Association (MSBA) Special Committee on Agriculture, has published the 2014 Legal Services Directory, to better serve the needs of Maryland farmers. The Directory lists the 2014 Members of the Committee who provide services and information related to the law and agricultural practices. The directory includes full contact information, practice areas, counties and states served. Directory online at:

http://drum.lib.umd.edu/bitstream/1903/15044/1/AgLaw%20Directory%20041414.pdf

In 2011, the Maryland General Assembly gave the University System of Maryland a new assignment: preserve Maryland’s family farms; help their owners address the complicated legal issues associated with agricultural estates and trusts, regulatory compliance,
and other public policies that comprise what is known as agriculture law.

The Agriculture Law Education Initiative is collaboration under University of Maryland: MPowering the State. The Initiative combines the expertise and efforts of three distinguished Maryland institutions - the Francis King Carey School of Law at the University of Maryland, Baltimore (UMB), the College of Agriculture and Natural Resources at the University of Maryland, College Park (UMD), and the School of Agricultural and Natural Sciences at the University of Maryland, Eastern Shore (UMES). It is committed to providing Maryland farmers with the information they need to prosper while complying with the complex network of laws and policies protecting the integrity of the state’s food system and environment.

http://www.mpowermaryland.com

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**USDA Licenses First Vaccine for Porcine Epidemic Diarrhea**

Porcine Epidemic Diarrhea Washington, June 16, 2014 -- The United States Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) today issued a conditional license to Harrisvaccines, Inc. of Ames, Iowa for a vaccine that may aid in the control of porcine epidemic diarrhea virus (PEDv) in swine. This is the first licensed vaccine for PEDv. It will be used to vaccinate sows with the intent that they build antibody, and transmit that antibody through their milk to newborn piglets. It is intended to protect the piglets against PEDv.

APHIS licenses veterinary biologics products for use in controlling diseases of animals. Conditional licenses are issued based on full safety, purity testing, and an expectation of efficacy. Preliminary studies have been promising, and they’ve shown sufficient data that we think the vaccine will be effective. The company will continue working toward completing the requirements for a full license. In the meantime, there are no restrictions on vaccine use under the conditional license.

APHIS supports and encourages the rapid development of new vaccines, particularly in emergency situations.

When a company obtains a conditional license they are able to bring an important disease management tool to producers safely and quickly. Full licensing can occur subsequently while producers get the products they need to protect animal health.

Porcine epidemic diarrhea is a disease that causes significant sickness in swine, affecting their growth and health, and causes high mortality in piglets. The disease is common in parts of Asia and Europe, but is not reportable to the World Organization for Animal Health (OIE). PEDv only affects pigs and does not pose any risk to people or pets. It is not a food safety concern.

Licensing this vaccine is another step APHIS is taking to continue to help industry/producers.

Recently APHIS announced the availability of $26.2 million in funding to combat these diseases and issued a Federal Order requiring the reporting of new detections of PEDv and other new swine enteric coronavirus disease to APHIS or State animal health officials. The Federal Order also requires that operations reporting these viruses work with their veterinarian or USDA or State animal health officials to develop and implement a reasonable management plan to address the detected virus and prevent its spread. Plans will be based on industry-recommended best practices, and include disease monitoring through testing and biosecurity measures. These steps will help to reduce virus shed in affected animals, prevent further spread of the disease, and enable continued movement of animals for production and processing.

Throughout the PEDv outbreak, APHIS has worked closely with the swine industry to identify risk factors in the transmission of the virus and minimize its impact on producers and industry.
APHIS is part of a task force with the Food and Drug Administration and State and industry stakeholders, including the American Association of Swine Veterinarians (AASV), National Pork Producers Council (NPPC), National Pork Board (NPB), veterinary diagnostic laboratories (VDLs), and State Animal Health Officials (SAHOs). This task force aims to investigate the virus, identify and trace risk factors in the transmission of the disease, and keep producers informed.

**LEAD Maryland Foundation Accepting Applications for Fellowship Program**

**Applications due October 1 for 2015-2016 Class**

Queenstown, MD (July 7, 2014) – The LEAD Maryland Foundation, Inc. (LEAD) is seeking applicants for its next class of LEAD Fellows. Program information and the application are available at [www.leadmaryland.org](http://www.leadmaryland.org) or the University of Maryland Extension’s website at [http://extension.umd.edu/lead-maryland](http://extension.umd.edu/lead-maryland). Completed applications are due to LEAD by October 1, 2014 for participation in 2015-2016.

LEAD Maryland awards two-year fellowships to selected participants, creating classes of 20-25 emerging leaders. The LEAD fellowship curriculum focuses on providing public issues education, skills building, leadership development, and personal growth. Through program participation, Fellows become more equipped to solve problems, identify resources, engage and educate, and to provide leadership in shaping public policy and serving others.

LEAD Maryland seeks a diversity of applicants with interests in:

- Rural, suburban, or urban production agriculture;
- Natural resources, forestry and other natural resource-based industries, and the environment;
- Food processing, food sourcing, distribution, service and retail;
- Rural communities, services, and rural development; and
- Business, communications, education, government, science, technology, nonprofits, land use, and others within or serving agriculture, natural resources, and rural communities.

During 2015 and 2016, LEAD Class IX will complete a series of nine multi-day seminars held at locations throughout Maryland and Washington, D.C.; and the Fellows will participate in a travel study tour. The current class, Class VIII (2013-14), will travel to South Africa in early 2015 to complete their study tour. The study tour destination for the new class will be chosen after the class has been selected and has met for its initial seminars.

“The LEAD program is valuable asset for anyone who is interested in knowledge. It is a great way to learn about the diverse components of Maryland agriculture and, most importantly, it provides a network of professionals and experts that become a resource. Through that LEAD connection I have met some great people that I rely on for advice and support,” said LEAD program graduate Cricket Goodall, executive director for the Maryland Horse Breeders Association and Maryland Million Ltd.

To date 177 Fellows have completed the program. “Over the past 15 years, LEAD Maryland has proven to be a very successful leadership program and I encourage anyone who is interested to apply,” said Agriculture Secretary and LEAD Maryland Foundation Board Member Buddy Hance. “During the program, fellows gain a deep understanding of agricultural, natural resource and rural community issues. Many of the graduates have gone on to be effective advocates for the betterment of these communities through their careers and personal lives.”

The LEAD Maryland Foundation is a partnership 501(c)(3) nonprofit organization dedicated to identifying and developing leadership to serve Maryland’s agriculture, natural resources, and rural communities. Key sponsoring organizations of the program include Maryland Department of Agriculture, University of Maryland Extension, Maryland Grain Producers Utilization Board, Maryland Farm Bureau, Maryland Agricultural Education Foundation, the Farm
Credit System, the Maryland Agriculture Education and Rural Development Assistance Fund, and the Maryland Soybean Board. These and many other sponsors and individuals provide financial, in kind, and volunteer support to the nonprofit.

For more information, please contact the LEAD office at 410-827-8056 or leadmd@umd.edu.

**Confirmed Downy Mildew on Cucumber in Caroline County, MD**

Dr. Kate Everts, MD/DE Extension Specialist, Plant Pathology has confirmed downy mildew on cucumber in Caroline County on July 2, 2014. This is the first report in Maryland for 2014. If uncontrolled this downy mildew will devastate the crop. Dr. Everts believes that the strain that is present will only cause disease on cucumbers. Therefore only cucumbers should receive fungicides targeted for downy mildew. All cucurbits should continue to receive protective fungicides. The conventional fungicides that have performed best in University trials in the past year are Ranman, Zampro, and Previcur Flex. Zampro is a newly registered product, which looked very good in Dr. Everts trial. Additional materials, which are targeted for downy mildew and can be used as tank mix or alternation partners include Tanos, Forum, Curzate, and Presidio.

Please actively scout all cucurbit fields.
- Both conventional growers and organic producers are advised to protect their crop with a fungicide or biofungicide.
- Conventional growers should consult EB 236, MD Vegetable Production Guide for recommended fungicides.
- Organic growers are recommended to use an OMRI approved copper product alternated with Serenade.

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**Poor Watermelon Crown Fruit Set**

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu
http://extension.udel.edu/weeklycropupdate/

Growers with early-planted watermelons (those planted the last week in April or first week in May) have been concerned about the lack of crown set in those fields. Some early set watermelons also have distinctive lobes (are noticeably triangular) and standard seeded pollinizers are showing pinched ends.

These are signs that pollination was lacking during early fruit set. This can occur when there is a lack of pollen - pollinizers have not produced enough male flowers or are delayed in producing male flowers. Another explanation could be a reduction in bee activity during the cold periods we had this spring. Other possible causes would be delays in setting bee hives, damage to flowers, or chemical injury. Early plant stress can also cause abortion of flowers leading to reduced crown set. The earliest set watermelons often are misshaped and have a higher potential for hollow heart.

Management practices to improve early set include use of wind breaks, using pollinizers that produce large numbers of male flowers during the early period, using pollinizers that are the most stress resistant, and placing more bee hives. The University of Delaware vegetable program is currently conducting studies on over 30 pollinizers to evaluate pollen production and pollen viability in early planted conditions (cold weather) and late planted conditions (hot weather).
With small grain harvest underway, there are some questions about preplant weed control with double cropped soybeans. This has always been a challenging situation, and with the presence of herbicide-resistant weeds, it has become even more complicated and results are often less than satisfactory. Larger plants that have been cut off or damaged by the combine are going to be less susceptible to herbicides and achieving 100% control will require a lot of environmental factors falling in your favor -- the recent dry spell does not work in your favor.

A non-selective burndown herbicide and a residual herbicide for broadleaf weeds are needed for some situations. Remember, you want to start “clean” and if the field has weed seedlings already present, they will have a growth advantage over that of the soybeans. In situations where grasses are present, glyphosate will be the best choice.

Residual products such as Canopy, Valor XLT, Envive, Prefix, and the Authority products are all options to assist with burndown control, but only in some situations due size of the weeds and limited spectrum of control. I list these products because they either do not have active ingredients that are Group 2 (ALS-inhibiting herbicides) or they do not rely only on Group 2 products. If your soybean planting is delayed, remember that Prefix, Valor XLT, Envive, Canopy, and the Authority products have a ten-month rotation to field corn.

Liberty Link soybeans are a tool for double cropped soybeans because they allow for a different mode of action and Liberty 280 has some activity on marestail (see below) and it is effective on small Palmer amaranth plants.

Control of horseweed (marestail) preplant is going to be quite challenging. I do not recommend 2,4-D because of off-target movement at this time of year and it is not effective on these large and damaged plants. I do not have experience with Sharpen under these conditions, but it can be used on medium textured soils at 1 oz/A, or 1.5 oz/A with a 14-day interval before planting (30-days for coarse-textured soils). The Sharpen label recommends horseweed height at 6 inches tall, and that is before it is cut off by the combine. Likewise, Liberty 280 will injure or suppress large horseweeds but often not kill them. Products with chlorimuron or cloransulam such as Canopy, Envive, Valor XLT, Authority First or Sonic may suppress horseweed plants if used at the full rate (although it will not kill them). Another complicating factor is that there are biotypes of horseweed that are resistant to chlorimuron and cloransulam in the region.

If you have Palmer amaranth that is resistant to glyphosate and/or Group 2 herbicides, your options are limited as well. If the Palmer amaranth plants are resistant to both glyphosate and Group 2, we do not have any products that will consistently control them. Gramoxone (paraquat) or Liberty 280 are two options but regrowth is likely. These products will probably not control established grasses. After the beans are planted your options for postemergence activity on Palmer amaranth would include Blazer (use of Reflex will probably limit next year’s rotation so be sure to check the label). If you used any of those Group 2 products mentioned earlier for burndown (Canopy, Valor XLT, Pursuit, Sonic etc.) do not use another group 2 herbicide postemergence.
Advertisement: Nutrient management advisor for St. Mary’s County office of University of Maryland Extension; individual will develop nutrient management plans; BS in an agricultural, environmental or natural resource science and knowledge of agricultural production practices and cropping systems is required. Individual must pass nutrient management certification exam within one year of employment. Current driver’s license and access to vehicle are required. Preference given to certified nutrient management consultants. This is a contractual position which includes health benefits subsidy and retirement subsidy. For a detailed position announcement and to apply, go to https://ejobs.umd.edu, position number 120109. For more information, contact Ben Beale at 301-475-4481.

Wishing you a happy summer and productive 2014!

Benjamin E. Beale, Extension Educator
UME – St. Mary’s County
Agriculture & Natural Resources

Jennifer Horton, Master Gardener Coordinator,
Program Assistant
UME – St. Mary’s County
Agriculture & Natural Resources

Jamie Fleming, Administrative Asst. I
UME – St. Mary’s County

The University of Maryland, College of Agriculture and Natural Resources programs are open to all and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, or national origin, marital status, genetic information, or political affiliation, or gender identity and expression.