Greetings,

Water, water, where are you…
Water- an essential substance we all depend on each day, but often take for granted. Water is an amazing compound- and plays many more roles than people realize. Water is also limited- we can't make more or less, but we can change the amount that is suitable for our use. Farmers have a unique relationship with water. It's easy to lose sight of how precious water is. In our area, we normally receive around 42 inches of rainfall each year. This equates to about 1.14 million gallons per acre (27,150 gallons/acre inch X 42 inches). Just a small deviation from the average can create big problems-particularly when they occur during the main growing months of June, July, and August. The drought this summer clearly demonstrates how important water is in modern agriculture. It should also be noted that many agricultural regions of the world are dependent upon water transported from miles away. For example, many of the the fertile valleys of California and Arizona are possible only due to the use of irrigation. Deserts can become fertile fields with just a little water.

As of this writing, Southern Maryland still remains in a moderate drought classification, according to the US Drought Monitor. Rainfall is still at a significant deficit with a departure from normal of around 8 inches for the region. Let's hope for some more rain this fall and winter- it's too important to do without!

Some interesting water facts:
• Water is one of the few liquids which expand when it freezes. Thus ice is less dense and lighter than water. It floats.
• Of all the water on earth, 97% is salty and not suitable for plant or human consumption. Of the fresh water remaining, 2% is bound in ice caps and glaciers. The remaining 1% makes up all of the rivers, lakes, aquifers and atmospheric water on earth.
• Water is vital to most all life forms. It is an essential component of photosynthesis and plant respiration. The high cohesion factor of water allows plants to pull water from the soil to the leaves in the uppermost through transpiration.
• The presence of abundant drinking water from underground confined aquifers is not present everywhere. We are privileged to be able to turn on the faucet and obtain good, clean water.

October 17, 2012
Optional Review Session for Pesticide Exam

October 25, 2012
Pesticide Exam

November 13-15, 2012
Maryland Mid-Atlantic Crop Management School

November 29, 2012
Southern Maryland Crops Conference

December 5, 2012
Producer’s Digital Toolbox Seminar

December 9, 2012
Loveville Produce Auction 8th Annual Meeting

2013 Dates:
January 16, 2013
Southern MD Forage Conference

February 6, 2013
Southern MD Vegetable Conference

February 20, 2013
Pesticide Applicator Recertification

January 22, 2013
Optional Review Session for Pesticide Exam

January 29, 2013
Pesticide Exam
Private Pesticide Applicator’s Course and Exam  
October 17, 2012 - Review Session  
October 25, 2012 - Exam

Need a Private Applicator Pesticide License?

Anyone who is interested in acquiring their private pesticide applicator’s license should plan to attend our next scheduled workshop to be held on October 17. The optional workshop will help prepare you to take the exam the following week on October 25. Please call the office at 301-475-4484 to register and obtain the necessary study materials. The training class will be held at the St. Mary’s Agriculture Services Center in Leonardtown, MD from 6:00 p.m. to 8:00 p.m. The actual exam will be held the following week at the same time; same place.

Maryland Mid-Atlantic Crop Management School

November 13 - 15, 2012  
Princess Royale Hotel in Ocean City  
Mid-Atlantic Crop Management School

The Mid-Atlantic Crop Management School will be held at the Princess Royale Hotel in Ocean City on November 13-15. Individuals seeking advanced training in soil and water, soil fertility, crop production and pest management will have an opportunity at hands on, intensive sessions that also provide continuing education units (CEU’s) for the Certified Crop Advisor (CCA)Program. This is the premiere event for advanced agronomy training in the region. You may also register on line at: http://www.psla.umd.edu/extension/crops/home.cfm

Southern Maryland Crops Conference

November 29, 2012  
Baden Volunteer Fire Department  
Waldorf MD  
4:00 – 8:30 p.m.

The Southern Maryland Agents would like to invite everyone to join with our University specialists to have your questions answered about crop production and pest control at the Southern MD Crops Conference on Thursday, November 29, from 4:00 to 8:30 p.m. at the Baden Volunteer Fire Department in Waldorf, MD.

Attendance at this conference will satisfy the requirement for the Private Pesticide Applicator Recertification & Nutrient Management Voucher. Please call the Charles County Extension Office at 301-934-5403 to register. Make plans now to attend.

Loveville Produce Auction 8th Annual Meeting

December 7, 2012

The Loveville Produce Auction invites all interested farmers and buyers to attend the annual meeting on December 7, 2012. The meeting will be held at 25120 Dove Point Road. Take Rt. 247 (Loveville Road) to Parsons Mill Rd. Dove Point Lane is ½ mile on left. More information will be forthcoming.
**Southern Maryland Hay & Pasture Conference**

January 16, 2013
8:30 a.m.- 4:00 p.m.
Brandywine, MD

Make plans to attend the Southern Maryland Hay & Forage Conference, January 16, 2013, in Brandywine, MD. Topics will be presented covering all aspects of hay and pasture production. The programs will address key issues and concerns facing hay and pasture producers. Dr. Ed Rayburn; Extension Specialist - Forage Agronomist with West Virginia University Extension Service will be our featured speaker for the 2013 Conference. Dr. Rayburn will share the results of a baleage survey study conducted in WV and related best practices for baleage production and no-till sequential cropping of summer and fall annual forage species compared with grassland.

In addition, Jeff Harman; General Manager with Green World Ag, LLC will discuss hay additives and preservatives.

A variety of other topics and speakers will round out the program. Certified crop advisor and pesticide and nutrient management certification credits will be offered.

More detailed program information on the Southern Maryland conference will soon be available on the Web at: http://www.mdforages.umd.edu or through local county Extension and NRCS/Soil Conservation District offices in Maryland. Pesticide recertification and nutrient voucher credits available. Register by calling the St. Mary’s County Extension office at 301-475-4484.

**Southern Maryland Vegetable & Fruit Conference**

February 6, 2013
St. Mary’s County
8:00 a.m. to 4:00 p.m.

Make plans to attend the Southern Maryland Vegetable and Fruit Production Meeting on Wednesday, February 6, 2013. This year the meeting will be held in St. Mary’s County from 8:00 a.m. to 4:00 p.m.

Speakers will provide IPM updates and present on a broad range of production topics. Also, meeting sponsors will showcase their products and services, and state vegetable organization leaders will be present to recruit and answer your questions.

Full conference details will be announced soon.

**Maryland Rural Enterprise Development Center Co-Sponsors Food for Profit Class**

October 10, 2012

Have you ever been told that your favorite homemade bread, or salsa, is “good enough to sell?” Do you have additional fruit or vegetables from your farm or home garden that you would like to make into a commercial product? Food for Profit is a one-day workshop designed to help you work through the maze of local and state regulations, food safety issues, and business management concepts that all must be considered in setting up a commercial food business. The course will be held at the
9th Annual Small Farm Conference
November 2 & 3, 2012

Entering its 9th year, the conference provides a venue for farmers, landowners and supporters of agriculture to come together to network and learn about new opportunities and strategies that promote farm profitability and sustainability.

Other conference highlights include sessions that are divided into three different educational tracks: alternative agriculture, farm business and marketing and health and wellness. **Spaces are limited, so pre-registration for the canning course is required.**

**AGsploration** is the theme for the youth program. It encourages awareness of production agriculture, how the environment affects Maryland agriculture and how agriculture affects everyday life in relation to nutrition and health.

Producer’s Digital Toolbox Seminar
December 5, 2012

This seminar will assist you in capitalizing on the hardware and digital tools now available through the internet. Three courses packaged into a one day seminar. It will cover topics on:

1. **Digital Databases** - Getting Your Business Listed — How to enter their business information in the 8-9 digital databases, such as Google Maps and others.
2. **Fingertip Marketing for Portable Devices** — Incorporating digital service and application into your marketing plan.

For more information concerning the youth programming, contact Nicole Skorobatsch at 410-651-1350 or by email at nramirez@umd.edu. Youth ages 6-12 are invited to attend. Registration is $25 per person and $40 per couple. For youth attending with registered parents, registration is free. For youth who will not accompany a registered parent, registration is $10. **All registrations must be received by Friday, October 26, and registrants who need special services or accommodations must call at least two weeks in advance to make arrangements.**

For more information about the 9th annual Small Farm Conference, call 410-651-6206/6070 or send an email to mce@umes.edu. Online registration and regularly updated information is available at www.smallfarminstitute.com
3. Apps, and Social & Professional Applications — An introduction to the basics of Facebook, Twitter, and LinkedIn for businesses. This seminar will explore basic fundamentals of popular social networking sites, examples of use, and the potential benefits social media could bring to your business and community.

The seminar will be held at the Calvert County Economic Development Building in Prince Frederick MD on December 5, 2012 from 9:30 a.m. – 2:00 p.m. The cost of the seminar is $40.00 per person and includes lunch and course materials.

For more information about this program please contact: Shannon Dill (sdill@umd.edu) or Ginger S. Myers (gsmyers@umd.edu)

Maryland Department of Agriculture Offering Free Grain/Forage Testing Program

The Maryland Department of Agriculture (MDA) is offering a free testing program for Maryland farmers for nitrate and prussic acid in forage and for aflatoxin in corn grain. Prussic acid poisoning is mostly associated with sorghum and related species. The program is a cooperative effort between MDA and the University of Maryland Extension. Testing is done by the MDA State Chemist’s Section.

Farmers can bring their samples to their nearest UME office so that UME can assist them with paperwork and make sure the samples and paperwork are properly prepared. MDA will pick up the samples daily (Monday through Friday) and fax results to farmers usually within 24 hours.

Instructions for preparing and packing samples for testing are below. Use one Sample Identification and Information Sheet for each sample submitted. Place samples in a plastic bag and refrigerate or freeze as soon as possible, especially if held overnight, and keep on ice during transport. Each separate field should have its own paperwork and sample.

Taking corn samples for aflatoxin analysis:
• Collect 12 ears of corn from different areas of the field to get a representative sample.
• Keep cold as described above.
(Note: Shelled corn already harvested can also be tested. Collect a 1 quart representative sample and bring to the Extension office)

Taking silage samples for nitrate and prussic acid analysis:
• Collect at least 10 stalks from different areas of the field to get a representative sample.
• Chop silage up into 6” pieces and thoroughly mix samples together.
• Prussic acid samples must be kept frozen at all times to prevent volatilization of prussic acid (hydrocyanic acid).

Nutrient Management Update Fall 2012

Now is the perfect time to update your Nutrient Management Plan for the next cropping season! It is important to note that fall seeded crop recommendations must be included in your plan. These include fields that are enrolled in the Maryland Cover Crop Program. If you are making a decision about applying Nitrogen in the fall for Wheat or Barley, we can help! A fall nitrate test can be conducted following crop harvest to determine how much Nitrate is left over from the previous crop. This test, performed here at our office, can give you the information you need to determine whether or not you should apply Nitrogen in the fall on your small grain. Samples for the fall nitrate test should be taken at a 6” depth (as opposed to a normal soil sample, which is taken at 8”) and dried quickly. Please call for more information and to schedule your fall nitrate test.
Below is an abbreviated list of important items that will need to be addressed in order to update your plan for the next cropping season:

1. **Soil tests** must be less than three years old.
   - Fields with differing crop or nutrient application histories, as well as differing soil types should be sampled separately.
   - Pastures should be sampled as well, even if no nutrients are applied.
2. **Manure samples** should be analyzed every year.
   - Collected manure that will be spread onto crop or pasture land must be analyzed before spreading.
3. **Animal information** should be documented and updated.
   - Type of animals, average weight, confinement periods, and bedding material.
4. **Field histories** should be documented.
   - Multiple cropping scenarios can be planned for. A plan can be developed that covers many different crops that you may want to plant in each field!
   - Manure/Sludge, as well as Legume histories should be documented.
5. **Yield Goals** for every crop should be developed based on prior yield records.
   - If you are unsure, or have no realistic yield goals developed, we can help!

As always, we can help with any questions or concerns that you may have. Most farm operations should have an updated plan completed every year. If you are ready to have your plan updated, or if you are unsure, please give us a call at (301)-475-4480, or email Adam Lyon (Nutrient Management Advisor) at adamlyon@umd.edu. We have soil probes, soil bags, and a wealth of information that you are more than welcome to take advantage of. We look forward to working with you!

---

**Growers with Marestail Weed Issues Should Consider Fall Herbicide Treatments**

Growers in Southern Maryland have been battling glyphosate resistant marestail for a number of years now. The issue becomes more acute each year. In my experience, marestail is now the most troublesome weed growers deal with in soybean and corn production. There are some new technologies that will be on the market in the coming years which will help with control, most notably dicamba and 2,4-D tolerant varieties of corn and beans.

An fall application of 2,4-D is very effective on small marestail and should be considered on fields with a history of resistant marestail.

For the time being, growers should rely on a comprehensive approach to marestail control. This includes the use of crop rotation; fall herbicide treatments for fields with a history of marestail problems; use of Liberty-link soybean varieties; the use of spring burn down products other than glyphosate (Liberty or Gramoxone) and careful spring planning including the use of some residual products such as Sharpen, metribuzin and others. Mark Loux, Extension Weed Specialist with Ohio State University Extension has provided a good overview of how and when to use fall herbicide treatments. I have included his summary below:

**Fall herbicide applications – an integral part of marestail management**

Mark Loux

The basic information on fall herbicide treatments can be found in a number of C.O.R.N. articles from previous years, including the following:

“Fall herbicide treatments”
Fall herbicide treatments are an important component of marestail management programs. The primary role of the fall treatment is to remove the marestail plants that emerge in late summer and fall, so that the spring herbicide treatments do not have to control plants that have overwintered. Failure to do so results in a population of plants in spring that is tougher to control and needs to be treated earlier, which introduces variability in burndown effectiveness and means that residual herbicides may be applied earlier than is optimal. Conversely, an effective fall treatment results in a weed free seedbed in early spring, and more flexibility in the spring burndown/residual treatment timing. The treatments recommended in the aforementioned articles will provide effective control of emerged marestail. Marestail plants are small in the fall, and easily controlled with 2,4-D.

The major errors with fall treatments where marestail is a target are:

1) using glyphosate or ALS inhibitors alone;
2) spending money on residual herbicides that is better spent in the spring.

The application of Canopy/Cloak products in fall can provide substantial residual control into the following spring of marestail that are not yet ALS-resistant, and other weeds as well. However, many marestail populations are ALS-resistant, and it’s important to save most of the residual herbicide for the spring application. Our research has consistently shown that other residual herbicides – including Valor, Authority, and metribuzin – provide little residual in the spring when applied in fall. The utility of these herbicides comes

Thoughts on Planting Soft Red Winter Wheat Early
Richard Taylor, Extension Agronomist; rtaylor@udel.edu

With corn harvest proceeding much earlier than in 'normal' years, many growers could be considering whether to go ahead and plant their wheat or barley crop in the next few weeks. The recommended or suggested planting date varies from county to county based on the Hessian fly-free date. (For more information on Hessian fly see the article by Joanne Whalen "Agronomic Crop Insects – September 7, 2012" in issue 20:25 of the Weekly Crop Update) The fly free dates are Oct. 3 for New Castle County, Oct. 8 for Kent County, and Oct. 10 for Sussex County.

For barley, we have conducted planting date studies in Sussex County comparing early-planted (September 26) barley with a close to suggested planting date (October 7). Our results indicated a fairly consistent 5 percent reduction in yield with September planted barley as compared with the October 7 planting date. Winter weather in the years the study was conducted did not result in significant visual winter injury to the barley so the impact appeared to be more of a general nature. Barley planting was dramatically affected by late planting unlike wheat. Delaying barley planting by just one week to October 15 resulted in a (four year average) yield reduction of over 15 percent and delaying two weeks to October 25 resulted in an over 20 percent yield reduction. Delaying planting barley until November increased the yield potential reduction to over 40 percent.
For winter wheat, experience has to be our guide with respect to planting date. We have evaluated the ideal planting date versus later planting dates but not against a September planting date for wheat. However, we can use both past experiences and basic agronomic knowledge to evaluate the risk involved with early planting wheat.

Since September planting dates are before the Hessian fly free date for all our counties, we can surmise that the risk of lodging during grain fill will be increased versus planting after the fly-free date. You do need to keep in mind that the fly-free date is based on temperature averages and during warmer than normal falls fly emergence and egg-laying activity can extend past the listed dates. Larval activity can cause lodging, stunting, and yield loss since wheat tillers can be severely injured. In past variety trials, we have seen significant injury and yield reductions on susceptible varieties. Early planting of wheat can increase your risk of an infestation especially if wheat is planted in fields with wheat stubble or in fields next to one with wheat stubble.

For wheat that is planted following dryland corn, the greatest risk this year likely is due to excessive soil residual nitrogen (N); or, if the fall weather is warm and moist, to fall N mineralization from the high levels of nitrate in the dryland corn residue. High fall N availability can lead to excessive growth that will be more susceptible to winter kill or injury if we have a cold, open winter. In past years, we have had many growers asking what they could do about all the excessive top growth that occurs when wheat is planted in September and fertility levels are high. In some areas of the country, the extra foliage is used to graze cattle or sheep but most Delaware farmers do not have this option. The option tried has been to mow off and sometimes remove the excessive top growth. This has at least in part been successful in reducing winter injury but there are significant costs associated with the practice.

Another concern that again depends on fall weather conditions as well as insect populations and a residue of 8 disease inoculum is the development in September planted wheat of disease or insect problems. In particular, barley yellow dwarf virus, which is transmitted in the fall by aphids feeding on the lush growth, can cause more severe injury than spring infections. The lush growth of early planted wheat could be more of an attractant for aphids but certainly will have a longer exposure to the risk of infestation. All these cautions are not to say that you should never plant wheat or barley before the fly-free date only that you should be aware of the possible consequences and make a decision on when to plant and how many acres to plant from a position of knowledge.

LATE BLIGHT FOUND

Late blight was found during the second week of October on several farms in St. Mary’s County. Fortunately, a disease outbreak this late in the year will cause limited damage, however growers who wish to keep tomatoes in production until frost should consider targeted fungicide applications. The organism prefers cool moist weather and cannot over winter in Delaware or Maryland (outside a living host) because only one mating type is known to occur in these states. (If the other mating type is introduced, the pathogen would be able to form resistant oospores.) In the absence of resistant oospores, the late blight pathogen overwinters in infected potato tubers or is introduced into an area on wind, or on infected transplants.

The following are some fungicides that have performed well on tomato in our region. Growers should apply them with a protectant and rotate among them based on rotation of products that are in a different FRAC grouping. A spray interval of 5-7 days is recommended.

- Curzate--3.2 to 5.0 oz 60DF/A
- Forum--6.0 fl oz 4.18SC/A
- Presidio--3.0 to 4.0 fl oz 4SC/A
- Previcur Flex--1.5 pt 6F/A
- Ranman--2.10 to 2.75 fl oz 400SC/A
- Reason--5.5 to 8.2 fl oz 500SC/A
- Revus Top--5.5 to 7.0 fl oz 4.16SC/A
- Tanos--8.0 oz 50WG/A
Aphids Prevention and Barley Yellow Dwarf Management

Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu, Phillip Sylvester, Kent Co., Ag Agent; phillip@udel.edu and Nancy Gregory, Plant Diagnostician; ngregory@udel.edu

As discussed in the article, Review of Barley Yellow Dwarf in 2012, the spread of barley yellow dwarf virus (BYDV) is completely dependent on aphids transmitting the virus which causes the infection. There are four aphid species occurring in Delaware that are capable of transmitting BYDV from infected grasses into wheat including the English grain aphid, bird cherry-oat aphid, corn leaf aphid, and the greenbug. For photos to help you identify aphids go to: http://kentagextension.blogspot.com/2007/10/know-your-small-grain-aphids.html

Aphids can infest small grain fields in the fall and again in the spring. The number of aphids arriving in fields in the fall is often dependent on the growing conditions the preceding summer. In general, cooler summer conditions with adequate rainfall followed by a warm, dry fall favors aphid development, especially in early planted fields. In drier summers, fewer aphids are produced due to reduced host plant quality. It should be noted that greenbug aphids (which cause direct damage to small grains as well as transmit BYDV) are favored by cool, late summer conditions. Aphid population densities in the fall are also affected by when the first hard frost occurs in relation to wheat seedling emergence. Crops that emerge long before a hard freeze have a greater potential for aphid infestation (and exposure to BYDV). Planting after the fly free date can help to manage aphids as long as the freeze occurs when expected. Aphids arriving in the fall will continue to feed and reproduce as long as temperatures remain above 48°F.

In areas where you have seen BYDV in the past, where you are planting early (before the Hessian fly-free date), or you have seen direct damage by greenbug aphids, a commercial applied seed treatment which includes an insecticide would be a good control option for fall infestations. Another option would be to scout fields and apply a foliar insecticide. Information from Kentucky indicates that planting date is the most important factor determining the intensity of an aphid infestation. The most important time for controlling aphids in the fall is the first 30 days following emergence. The second most important time is the second 30 days following emergence. So it will be important to scout wheat starting at plant emergence if you plan to use a foliar insecticide for fall aphid management. The following link to a fact sheet from Kentucky provides more information on aphids and BYDV in wheat (http://www.ca.uky.edu/entomology/entfacts/ef121.asp).

Since the incidence of BYDV has not been widespread in past years in Delaware and Maryland, we do not have current data from our area evaluating thresholds to time sprays for fall aphid management. The following thresholds from Kentucky (included in the above fact sheet) could be considered when making a decision to apply a fall foliar insecticide: (a) the first 30 days after planting treat if you find an average of three or more aphids per row-foot, (b) from 30-60 days after planting treat if you find six or more aphids per row-foot, and (c) more than 60 days after the plants emerge treat if you find ten or more aphids per row-foot. Depending on weather conditions, a second application could be needed, especially if temperatures remain warm. As we saw this past season, aphid populations remained high throughout the winter and early spring so you will need to continue scouting if conditions remain mild again. They also indicate that in some years these thresholds may be too high and in others too low but currently this is the best available information. In addition, the risk of BYD infection varies from year to year. At this point, we are still not certain if the 2012 season was just an unusual one for BYD or if we will continue to see an increase in problems. We hope to survey for aphids this fall and evaluate these thresholds under our conditions.
USDA Secretary Signs Maryland Disaster Designations
*Federal Funding Follows Request from Gov. O'Malley, MD Delegation*

On Aug. 29, USDA Secretary Tom Vilsack issued a Secretarial Disaster Designation for Maryland following severe drought and excessive heat which have decimated Maryland crops. Click here for a copy of the Governor's letter to the U.S. Department of Agriculture requesting the federal assistance. "Thanks to Secretary Vilsack, other leaders in the Obama Administration, and all of our federal partners in Maryland's Congressional delegation, we are now able to provide Maryland's farmers with some relief during the drought," said Governor O'Malley. "Our farmers continue to be a vital part of Maryland's heritage and together, we can support our rural economies, improve our quality of life, and secure the future of Maryland agriculture and our environment for generations to come. We will continue to work with the Maryland Department of Agriculture and our federal delegation to help our farmers get through this drought."

Affected Maryland communities include the counties of: Anne Arundel, Baltimore, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Harford, Howard, Kent, Montgomery, Prince George's, Queen Anne's, St. Mary's, Somerset, Talbot, Wicomico, Worcester and the City of Baltimore. MDA Offering Free Grain and Forage. (Pictured below: Drought damage to the corn crop. ©Edwin Remsberg/ www.remsberg.com)

---

On the Lighter Side...

A farmer had started his chores and was starting to milk. He had just found his rhythm when a bug flew in the barn. After flying around him for a while, the bug flew in the cow's ear. The farmer continued to milk when the bug came out in the cow's milk. "Oh well," said the farmer. "In one ear and out the udder"!

*Winter is an etching, spring a watercolor, summer an oil painting, and autumn a mosaic of them all."-- Stanley Horowitz*

All the best for a wonderful Fall Season!

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

Adam Lyon, Nutrient Mgmt. Consultant
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

EQUAL OPPORTUNITY PROGRAMS