



Dave's Ramble

"My farmer said! It's bona fide and that settles it!" It seems everyone lays claims to ownership of a local farmer. Therefore, as farmers we need to walk humbly and craft our words very carefully. Our words of decision are called upon to offer validity and assurance to a myriad of life's questions. I have never seen a population of people more anxious about the safety of their food and general well-being than this generation.

Coincidentally, in 1940 each farmer produced enough food for 19 people; by 1970 each farmer produced food for 73 people; and today each farmer produces to feed 155 people. This leaves too many disconnected from the everyday farm life and the chance encounter of soothing farmer words of validation; leaving us as wanton as a child without an assuring father. There are just not enough farmers to go around!

A man was repairing the steps on a local church as a young boy approached on his roller blades. "What are you doing?" the boy quickly asked. "I am replacing the damaged bricks on these steps," replied the man. "My name is Ezekiel and I am six. Can I help?" stated the boy. "Hello Ezekiel. Yes, take that brush and clean the bricks," replied the man. "What do you do?" asked Ezekiel. "I teach agriculture," stated the man. "What's that?" asked Ezekiel. "It's what farmers do," replied the man. "Are you a farmer?" questioned Ezekiel excitedly. "Yes I am," replied the farmer. From that point on the questions flowed from Ezekiel; "Do you have a tractor? Do you have a cow?" "I have tractors and ducks," answered the farmer. "Can I have a duck?" pleaded Ezekiel.

The farmer suddenly felt more like Santa Clause than a man covered to his elbows in mortar. "Ezekiel, maybe someday you will grow up to be a farmer!" assured the man, offering the best gift to the young boy that any could give.



Summer 2010

Calendar of Events

- July 7 – Poultry Farm Management
- July 21 - UM Turfgrass Research Field Day
- August 5 – Crops Twilight Tour & BBQ
- Farmer Trainings & Certification –
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Summer Meetings

Mark your calendars now and plan to attend.



POULTRY FARM MANAGEMENT FOR NEW & EXISTING GROWERS July 7, 2010

Wicomico County Extension Office Meeting Room
28647 Old Quantico Road, Salisbury, MD 21802

Time: 8:00 am to 3:30 pm.

The University of Maryland Extension has created a one day workshop for new and existing poultry farmers on Delmarva focusing on poultry farm management. With today's environment it is important to learn about the many aspects of poultry farm management.

The topics that will be addressed are: farm management, site management & maintenance, best management practices, mortality, manure handling, litter management, windbreaks/vegetative environmental buffers, financial/recordkeeping, concentrated animal feeding operation regulations, nutrient management, comprehensive nutrient management plans, Environmental Protection Agency inspections and emergency preparedness.

We will also share all the information in a binder to take back to the farm for future reference. Certificate of completion will be awarded to each participant.

To register: Jeri Cook 410-742-1178, jcook2@umd.edu

This workshop is open to all. If you need special assistance please register 2 weeks before the date. Registration cost - \$20 includes refreshments, lunch and materials. **Please register by June 30th.**

For more information, call or email Jenny Rhodes, jrhodes@umd.edu, 410 758 0166 or Jennifer Timmons, mdchick@umd.edu, 410 742 1178.



UM TURFGRASS RESEARCH FIELD DAY July 21, 2010

Paint Branch Turfgrass Research Facility

The 2010 University of Maryland Biennial Turfgrass Research Field Day will be held at the **UM Paint Branch Turfgrass Research Facility (395 Greenmeade Drive) in College Park** in conjunction with the Mid-Atlantic Association of Golf Course Superintendents (MAAGCS) Annual Picnic on **July 21, 2010**. The tour of research projects is scheduled to begin at **2:00 PM and conclude at 5:30 PM**, with the barbecue picnic to follow.

The field day walking tours include numerous research projects conducted by Dr.'s Mark Carroll, Peter Dernoeden, Paula Shrewsbury and Tom Turner. Among the research projects and topics that are traditionally discussed include turfgrass variety trials and the National Turfgrass Evaluation Program; herbicide and fungicide trials; various lawn and putting green management studies; and an insect pest control update.

Numerous research projects involving the epidemiology as well as cultural and chemical management of dollar spot have come to fruition and will be featured in 2010.

Steve McDonald, M.S. will be on hand to update current problems from the field and Dr. Kevin Mathias and Ken Ingram, M.S. will discuss new learning opportunities at the Institute of Applied Agriculture.

Crops Twilight Barbecue & Ice Cream Social CMREC Upper Marlboro Farm August 5, 2010

You are invited to attend a **Field Crops Research Twilight, Barbecue and Ice Cream Social at the Central Maryland Research & Education Center, Upper Marlboro Farm on Thursday, August 5, 2010 from 4:30 pm to 9 pm.** A barbecue dinner will be served at 4:30 pm followed by homemade ice cream prior to the evening tour!

The research farm is located at **2005 Largo Road, Upper Marlboro, Maryland.** The University of Maryland conducts equal access programs.

University of Maryland Extension Educators and Specialists will showcase their field crop, vegetable and fruit research plots. The twilight tour highlights will include:

Specialty vegetable & cut flower production; Strip-till and no-till vegetable production systems; Vegetable integrated pest management and reduced risk control methods; Field crops research updates; Fruit research update for apples, peaches, peentos, blueberries and beach plums; and a vineyard research update for wine grapes.



Barbecue Begins at 4:30 pm

Ice Cream Served at 5:15 pm

Crops Twilight at 6:00 pm

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 410-222-6759 by August 3, 2010.

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 410-222-6759.

FARMER TRAINING & CERTIFICATION Summer/Fall 2010

Write Your Own Nutrient Management Plan

The Farmer Training and Certification course provides an opportunity for farmers to learn how to write nutrient management plans for their own operations. As a producer, you have first-hand knowledge of your own crops, animals, and equipment. Who better to write your nutrient management plan than you? This course will teach you how to do it!

You will receive:

- **A comprehensive training binder** – that will be used during the class, serve as a reference during the exam, and as a valuable resource when you write future plans for your operation.
- **Certification** – producers who pass the exam will be certified by MDA to write their own nutrient management plans.
- **Voucher training credits** – this class will fulfill the nutrient applicator voucher training requirements.
- **A discount** – on the purchase price *NuManPro*, Maryland's nutrient management planning software.

You will have the opportunity to:

Complete a nutrient management plan for your operation that meets MDA regulations.

In order to work on your own plan, you need to begin gathering information **now**. You will need a map or sketch of your operation, soil tests that are less than two years old and a recent manure analysis (if manure is applied to your land). Contact your county Extension office if you need assistance with this.

Registration Information

Space is limited and applications are accepted on a first-come basis; therefore, **register early**. Registrations must be received 10 days before the first class. For more information, call (410) 841-5959. Classes will be cancelled if there is lack of interest.

Evening Classes (\$20 for certification exam)

- #1 **Operations with Pastured Animals** (hay and pastured animals) *Howard County Fair Grounds, West Friendship, July 20, 22 and August 17 (exam) and 19 (plan writing); 5:30 – 9:30pm each evening.*
- #2 **Diverse Operations (crops, pastured animals, vegetables & flowers)** *University of Maryland Extension - Frederick County Office, October 19, 21, 26 and 28, November 3 (exam), 4 & 9 (plan writing); 7-9pm each evening*

Day Classes 9:30am – 4:30pm (\$35 total, \$15 for lunch on first day & \$20 for certification exam)

#3 Crop Operations using Litter and Fertilizer University of Maryland – Wye Research and Education Center, Queenstown, December 2, 10 (exam and plan writing) and 13 (plan writing, if needed)

Vegetable Crop Insects

Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Squash Bugs in Cucurbits (including melons)

We are once again starting to see an increase in squash bug populations. The following links from past seasons provide good information on pest identification and management:

<http://mdvegetables.umd.edu/files/Squash%20bugs%20in%20Pumpkins-website.pdf> –Jerry Brust, University of Maryland

http://www.umassvegetable.org/soil_crop_pest_mgt/insect_mgt/squash_bug.html – by Ruth Hazzard, University of Massachusetts Vegetable IPM Program

Cucumbers

Continue to scout all fields for cucumber beetles and aphids. Since fresh market cucumbers are susceptible to bacterial wilt, treatments should be applied before beetles feed extensively on cotyledons and first true leaves. Although pickling cucumbers have a tolerance to wilt, a treatment may still be needed for machine-harvested pickling cucumbers when 5% of plants are infested with beetles and/or plants are showing fresh feeding injury.



Melons



Economic levels of spider mites are being found and in some cases 2 applications will be needed to control populations.

The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Acramite, Agri-Mek, bifenthrin, Danitol, Oberon, Portal and Zeal are labeled on melons for mite control. Be sure to check all labels for rates, precautions and restrictions, especially as they apply to pollinators.

Peppers

As soon as the first flowers can be found, be sure to consider a corn borer treatment. Depending on local corn borer trap catches, sprays should be applied on a 7-10 day schedule once pepper fruit is ¼ – ½ inch in diameter. Be sure to check local moth catches in your area by calling the Crop Pest Hotline (instate: 800-345-7544; out of state: 302-831-8851) or visiting our website at <http://ag.udel.edu/extension/IPM/traps/latestblt.html>.



You should also continue to check fields for aphids. A treatment may be needed prior to fruit set, if you find 1-2 aphids per leaf for at least 2 consecutive weeks and beneficial activity is low.

Potatoes

Continue to scout fields for Colorado potato beetle (CPB), corn borers (ECB) and leafhoppers. Low levels of the first aphids have also been found.



Snap Beans

Continue to sample all seedling stage fields for leafhopper and thrips activity. Both insects can be found in seedling stage fields. As a general guideline, once corn borer catches reach 2 per night, fresh market and processing snap beans in the bud to pin stages should be sprayed for corn borer. Sprays will be needed at the bud and pin stages on processing beans. After the pin stage, sprays are based on trap catches for corn borer. Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7 to 10-day schedule should be maintained for corn borer control. Since trap catches can change quickly, be sure to check our website for the most recent trap catches and information on how to make a treatment decision in processing snap beans using trap catches

(<http://ag.udel.edu/extension/IPM/traps/latestblt.html> and

<http://ag.udel.edu/extension/IPM/thresh/snapbeanecbtfresh.html>).

Sweet Corn

Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample all fields from the whorl through pre-tassel stage for corn borers and corn earworms. Both species can be found feeding in whorls and tassels of sweet corn. A treatment should be applied if 15% of the plants are infested with larvae. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check both blacklight and pheromone trap catches since the spray schedules can quickly change. Trap catches are generally updated on Tuesday and Friday mornings



(<http://ag.udel.edu/extension/IPM/traps/latestblt.html> and

<http://ag.udel.edu/extension/IPM/thresh/silkspraythresh.html>). You can also call the Crop Pest Hotline (in state: 1-800-345-7544; out of state: 302-831-8851).

Insecticide Update: Endosulfan (Thionex)

Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

This news release was received as an EPA Pesticide Program Update from EPA's Office of Pesticide Programs on June 10, 2010.

"EPA Moves to Terminate All Uses of Insecticide Endosulfan to Protect Health of Farmworkers and Wildlife.

"The U.S. Environmental Protection Agency (EPA) is taking action to end all uses of the insecticide endosulfan in the United States. Endosulfan, which is used on vegetables, fruits, and cotton, can pose unacceptable neurological and reproductive risks to farmworkers and wildlife and can persist in the environment.

"New data generated in response to the agency's 2002 decision have shown that risks faced by workers are greater than previously known. EPA also finds that there are risks above the agency's level of concern to aquatic and terrestrial wildlife, as well as to birds and mammals that consume aquatic prey which have ingested endosulfan. Farmworkers can be exposed to endosulfan through inhalation and contact with the skin. Endosulfan is used on a very small percentage of the U.S. food supply and does not present a risk to human health from dietary exposure.

"Makhteshim Agan of North America, the manufacturer of endosulfan, is in discussions with EPA to voluntarily terminate all endosulfan uses. EPA is currently working out the details of the decision that will eliminate all endosulfan uses, while incorporating consideration of the needs for growers to timely move to lower-risk pest control practices.

"Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA must consider endosulfan's risks and benefits. While EPA implemented various restrictions in a 2002 re-registration decision, EPA's phaseout is based on new data and scientific peer review, which have improved EPA's assessment of the ecological and worker risks from endosulfan. EPA's 2010 revised ecological risk assessment reflects a comprehensive review of all available exposure and ecological effects information for endosulfan, including independent external peer-reviewed recommendations made by the endosulfan Scientific Advisory Panel.

"Endosulfan, an organochlorine insecticide first registered in the 1950s, also is used on ornamental shrubs, trees, and herbaceous plants. It has no residential uses."

For more information, you can go to the following link: <http://www.epa.gov/pesticides/reregistration/endosulfan/endosulfan-canc1-fs.html>



Fertigating Drip Irrigated Vegetables

Gordon Johnson, Extension Vegetable & Fruit Specialist;
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Fertigation is the term used when soluble fertilizer sources are delivered through the irrigation system to crops. Drip irrigation is an ideal means to fertigate and to deliver mineral nutrients to vegetables during the growing season. Nutrients are carried with the irrigation water right to the root zone where they can be efficiently taken up by vegetable plants.

There are several strategies for fertigating vegetable plants. One strategy is to split fertigation so that crop nutrient needs, after preplant fertilizers are accounted for, are delivered in 4-5 applications just prior to critical growth stages. For example, for fruiting vegetables, the first fertilizer application through the drip system would be done after planting when plants have become established, the next prior to rapid vegetative growth, the next at flowering or early fruit formation, and the last during fruit expansion. For crops that have long fruiting and harvest periods, an additional application would be made after first harvest to encourage continued production.

Other strategies use weekly applications or applications of fertilizers through the drip system every time the crop is irrigated. In these systems, smaller amounts of fertilizers are applied each time and rates are increased as plants get larger. This requires a somewhat higher level of management.

For general vegetable fertigation through the drip, a 1-1-1 N-P₂O₅-K₂O ratio soluble fertilizer (such as 20-20-20) is recommended. Where phosphorus (P) levels are very high, lower P ratios are appropriate (such as a 21-5-20). In some vegetables, only nitrogen (N) sources will be needed if soil fertility (P and K) are high. Soluble potassium nitrate and calcium nitrate are often used in combination in crops such as tomatoes and plasticulture strawberries to provide N, K (potassium), and Ca (Calcium).

Fully soluble fertilizers must be used for fertigation. Those in dry form must be mixed with water until they fully dissolve to create a concentrated stock solution. Those already in liquid form should be checked to make sure there has been no salting out of nutrients during storage – if salting out has occurred, you will need to make sure the fertilizer re-dissolves by agitation prior to use. It is important to know how much fertilizer is contained in these liquid stock solutions to match to injection rates.

A good quality fertilizer injector matched to the flow rate of your drip system is important to deliver the fertilizer the length of each bed uniformly in the field. Run the drip system to fill the drip tubes and come to

steady pressure, start injecting, and then continue injecting using an injection rate that matches the irrigation period. You may then run the irrigation for a short period after fertigation to flush the lines. It is important not to over-irrigate as nutrients may be moved out of the root zone (especially N). Fertigation rates should be based on a mulched acre – that is only the amount of ground covered by plastic mulch.

For more information on fertigation go to our Commercial Vegetable Production Recommendation guide <http://ag.udel.edu/extension/vegprogram/pdf/CIrrigation.pdf> starting on page C-5.

Cucurbit Downy Mildew Update –

June 18, 2010

*Bob Mulrooney, Extension Plant Pathologist,
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There have been no more reports of northern movement of downy mildew since last week. There were new reports from Sampson county NC, GA and SC. Be sure to keep current on disease occurrences by visiting <http://cdm.ipmpipe.org/>.

I wanted to clarify my comments that I made last week on the use of Previcur Flex for downy mildew control on cucumbers. It has been one of the cornerstone fungicides for successful downy mildew control. I was not saying not to use it, especially this time of the season. My concern is that under very high disease pressure last fall it did not look as good as in the past. Similar results occurred in VA in the fall as well. Researchers in other parts of the country have not experienced the reduced level of control that we noticed last season. Remember that it should be applied with a protectant and used in a rotation with downy mildew fungicides with a different mode of action such as Ranman or Presidio.

Pepper Anthracnose

*Bob Mulrooney, Extension Plant Pathologist,
bobmul@udel.edu*

Symptoms of pepper anthracnose on fruit include sunken, circular spots which develop blackish-tan to orange concentric rings as lesions develop. Lesions on stems and leaves appear as grayish-brown spots with dark margins and can easily be overlooked. **Control of anthracnose begins scouting on a regular basis and applying preventative fungicides before symptoms appear, especially in fields or areas of the farm where you have had anthracnose problems in the past.** Beginning at flowering and as small fruit begin to set, alternate chlorothalonil (M5) at 1.5 pt 6F/A with one of the following FRAC code 11 fungicides: azoxystrobin (Quadris at 6.0 to 15.5 fl oz 2.08F/A) or Cabrio (pyraclostrobin) 20EG. After

harvesting, pepper fields should be disced and plowed under thoroughly to bury crop debris.



Anthracnose on bell pepper fruit

Early Blight on Potato & Tomato

*Bob Mulrooney, Extension Plant Pathologist,
bobmul@udel.edu*

On both potato and tomato early blight produces large brown areas on the leaf, usually with a concentric ring pattern. On potato early blight usually begins after flowering on susceptible varieties, especially once potatoes or tomatoes begin to senesce. The disease is favored by high humidity and periods of leaf wetness. Optimal temperatures for infection range from 75-80°F.

Control of early blight begins with crop rotation then protectant fungicides, such as chlorothalonil or mancozeb, should be applied every 7 to 10 days, depending on the weather. Once flowering occurs on potato a systemic fungicide is recommended for several sprays, especially if a susceptible variety is grown or early blight is found in the field. Systemic fungicides recommended for early blight control on potato include: Endura, Gem, Headline, Quadris, Reason, Revus Top, and Tanos. As always, follow pesticide labels for rates and usage. Revus Top and Tanos will also offer suppression of late blight. See the Potato Disease Advisory for P-day accumulations to predict early blight appearance. The same fungicide list applies for tomato, just substitute Cabrio for Headline. Alternate the protectant fungicide with the systemic fungicide combined with a protectant as per label instructions.



Early blight on potato



Early blight on tomato

Watermelon Gummy Stem Blight Fungicide Programs in 2010

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

Our weather has **not** been highly conducive to gummy stem blight or anthracnose in the last two weeks. Therefore, under low disease pressure a good strategy is to apply Bravo on a 7-day schedule. Alternatively, our trials over many years have demonstrated that

under low disease pressure the spray intervals can be lengthened. Following the weather forecaster 'MELCAST'

<http://mdvegddisease.umd.edu/forecasting/index.cfm> can help determine the safe interval that can be used without the likelihood of risking disease increases.

There are several fungicides available for gummy stem blight management. Although several products are available, the usefulness of some of these products is limited by resistance development in the pathogen. On Delmarva we have confirmed the presence of resistance in *Didymella bryoniae*, the pathogen, to fungicides in the FRAC code group 11 (strobilurins, including Quadris and Cabrio) and FRAC code 3 (demethylation inhibitors or DMIs, including Topsin M). Resistance to Pristine exists in Georgia, and therefore Pristine is not recommended in that state. We have not yet detected resistance to Pristine here. However many of our transplants are grown in the south and it would not be surprising to find that resistance has been introduced here.

The following are fungicide programs that performed well in trials in Maryland and other areas in the southeast US in 2009:

- Switch 14 fl oz/A (1 day PHI; FRAC codes 9 and 12) alternated with Bravo
- Folicur 8 fl oz/A (7 day PHI; FRAC code 3) alternated with Bravo
- Inspire Super at 20 oz/A (7 day PHI) alternated with Bravo (Inspire Super is a new product that has two active ingredients. Although one component is in the FRAC code 3 group – Inspire Super performed very well in 2009.)
- Pristine 12.5–18.5 oz/A (0 day PHI; FRAC codes 11 and 7) alternated with Bravo (Pristine continues to perform very well in my trials -it usually ranks at the top, although it is not always significantly better than other products. However, because it performs very poorly in Georgia trials and because of the potential for resistance development, use caution and monitor disease levels carefully, if you choose to use Pristine.)

Watermelon is susceptible to other diseases as well. Scout for downy mildew, Phytophthora fruit rot and powdery mildew. The presence of these diseases will require additional fungicide applications with products with different modes of action.

Powdery Mildew on Cucurbits

*Bob Mulrooney, Extension Plant Pathologist,
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Continue to scout cucurbits for powdery mildew. Symptoms typically begin on older, lower leaves and can spread rapidly under dry, humid conditions. Control of powdery mildew begins with regular scouting for symptoms and weekly fungicide applications. Begin a fungicide program when one lesion is found on the underside of 45 leaves. For control of cucurbit powdery mildew in:



Pumpkin and Winter Squash:

Alternate:

Rally (myclobutanil, 3) at 5.0 oz 40WSP/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Procure (triflumizole, 3) at 4.0 to 8.0 oz 50WS/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Folicur (tebuconazole, 3) at 4.0 to 6.0 fl. oz 3.6F/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

With one of the following:

Micronized Wettable Sulfur (M2) at 4.0 lb 80W/A (Sulfur may injure plants especially at high temperatures. Certain varieties can be more sensitive. Consult label for precautions.)

or

chlorothalonil *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 12.5 to 18.5 oz 38WG/A

or

Quintec (quinoxifen, 13) at 6.0 oz 2.08F/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

When Powdery mildew has become well-established in the mid- to late part of the season, only apply protectant fungicides such as chlorothalonil or sulfur.

Summer Squash and Cucumber:

Alternate:

Rally (myclobutanil, 3) at 5.0 oz 40WSP/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Procure (triflumizole, 3) at 4.0 to 8.0 oz 50WS/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Folicur (tebuconazole, 3) at 4.0 to 6.0 fl. oz 3.6F/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

With a tank mix containing:

chlorothalonil *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 12.5 to 18.5 oz 38WG/A

Muskmelon and Watermelon:

Alternate:

Rally (myclobutanil, 3) at 5.0 oz 40WSP/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Procure (triflumizole, 3) at 4.0 to 8.0 oz 50WS/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

Folicur (tebuconazole, 3) at 4.0 to 6.0 fl. oz 3.6F/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

With a tank mix containing:

Quintec (quinoxifen, 13) at 6.0 oz 2.08F/A *plus* chlorothalonil at 2.0 to 3.0 pt 6F/A

or

chlorothalonil *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 12.5 to 18.5 oz 38WG/A

For more information on control of powdery mildew of cucurbits please see the [2010 Delaware Commercial Vegetable Production Recommendations Guide](#).

Blossom End Rot in Tomatoes

*Jerry Brust, IPM Vegetable Specialist, University of Maryland,
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This is just a quick reminder that we are in very dry conditions right now and tomato plants are putting on large fruit at the same time they are flowering profusely. Everyone knows that blossom end rot is caused by too little calcium in the fruit while it is developing, usually from the time of flowering until it is the size of a quarter. Most of the blossom end rot I have seen in tomato is due to too little water supplied to tomatoes during dry, very hot periods like we are having now. Some varieties are much more sensitive to dry conditions and will show severe blossom end rot symptoms while other varieties do not. Your tomato plants are going to need more water than you may be used to giving them over the next few weeks if conditions remain hot and dry.



Blossom end rot on tomato fruit

Tomato Pith Necrosis Found in Maryland

Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu and Karen Rane, Director UMD Plant Diagnostic Laboratory

In the last few days we have received tomato samples that have the same unusual disease called Tomato pith necrosis. Tomato pith necrosis is caused by the soilborne bacterium *Pseudomonas corrugata*. Pith necrosis has occurred infrequently in Maryland over the past few decades. The disease usually is found in early planted tomatoes when night temperatures are cool, but the humidity is high, and plants are growing too rapidly **because of excessive nitrogen** application. Once night temperatures warm up, the plants usually outgrow the problem. We have had an early spring, which has allowed many growers to plant their crops 2-3 weeks earlier than normal. We then had cool nights in May and at times high humidity. In the field, diseased plants occur randomly with initial symptoms often being seen as the first fruit clusters reach the mature green stage. Symptoms include chlorosis (yellowing) of young leaves and shoots, followed by wilting of the infected shoots in the upper part of the plant canopy (Fig. 1). This wilting is usually associated with internal necrosis at the base of the stem. Black streaking may be apparent on the surface of the main stem, which often splits (Fig. 2). When the stem is cut open along its length, the pith will be discolored and may have hollow areas (Fig. 3). There is often prolific growth of adventitious roots in the stems with discolored pith, and the stems may appear swollen.

There is not much that can be done for control of pith necrosis. The best practice is prevention by avoiding the use of **excessive amounts of nitrogen** in tomato, especially early in the season when nights are still cool. Using plant activators such as acibenzolar-S-methyl (Actigard) have resulted in 55% disease reductions, but applications must be started before symptoms appear. There is some evidence that the pathogen may be seedborne, but more research is needed on the epidemiology and management of this disease.

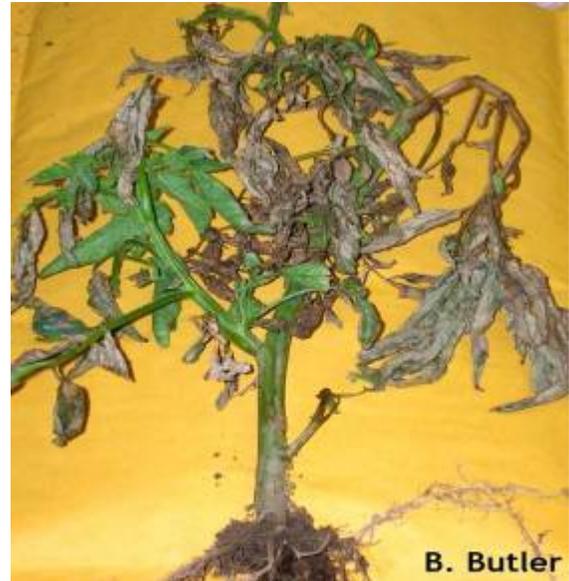


Figure 1. Whole plant symptoms of tomato pith necrosis



Figure 2. Splitting of the main stem and darkened pith caused by tomato pith necrosis



Figure 3. Discolored pith and prolific adventitious root growth cause by tomato pith necrosis

Watch for Phytophthora Fruit Rot on Cucurbits

*Bob Mulrooney, Extension Plant Pathologist;
bobmul@udel.edu*

Be on the lookout for Phytophthora fruit rot on cucurbits, especially watermelon. After last seasons' losses from Phytophthora fruit rot due to the excessive rainfall in 2009, growers should be thinking about the possibility of fruit rot this season. We are at risk for Phytophthora blight if the scattered thunder storms, along with the frog-strangling rains that we can get. Phytophthora blight is a tough disease to control, but if you have cucurbits in fields that had fruit rot last season you are at very high risk if the soil stays saturated even for a few hours. This is a fungus that moves in water and the spores will move where water goes. (Spores will not move more than a few feet in the air.) Some additional cultural controls would be rotation (5 years or more) for watermelons, sub-soiling between the rows before they close to help water drain faster and to keep the fruit out of standing water. Fungicides will only suppress the disease and those that have the best activity are the following: Presidio, Revus, Ranman plus a surfactant (see label), Forum, Gavel and Tanos. Depending on the test, the season, and the location, the efficacy of these fungicides varies. However, proper application of these products will result in better yields than in untreated fields. Remember that Revus and Forum are Group 40 fungicides and have the same mode of action, so they should not be applied in succession. All of these fungicides, except Ranman, should be tank mixed with fixed copper if the label allows. **Fixed copper is not compatible with Ranman plus the surfactant. Good coverage of fruit is very important.**

On pickling cucumbers, fruit rot fungicides should be applied soon after flowering when the fruit are one inch long and repeated once they are three inches long for the best results. Data from Michigan State indicate that Presidio, Revus, Gavel, Forum (Acrobat), and Ranman provide suppression of fruit rot. Remember that Revus and Forum are Group 40 fungicides and have the same mode of action, so they should not be applied in succession.

Magnesium Deficiencies in Vegetables

*Gordon Johnson, Extension Vegetable & Fruit Specialist;
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I have recently looked at a field of pickling cucumbers with areas that showed symptoms of magnesium deficiency. Magnesium (Mg) is considered a secondary macroelement and is essential for plant growth. It is a component of chlorophyll, the green pigment that

captures light energy in photosynthesis. The chlorophyll molecule has a porphyrin ring with a magnesium atom at the center. Therefore, deficiencies of magnesium will result in reduced chlorophyll production and yellowing of plants.

In most vegetable crops, magnesium deficiency commonly first appears as yellow or white areas between the veins of older leaves. As the deficiency progresses, the yellowed areas may turn into dead spots. Older leaves in plants may also have a purple or bronze appearance and leaf tips and margins may brown and die. The plants may be stunted and have an overall yellow appearance. Symptoms are most severe on older leaves because magnesium is a mobile element in plants and will be scavenged from older leaves and transported to new growth.

In Delaware, magnesium deficiencies are most commonly found in sandy, acid soils with a pH below 5.4. Therefore, magnesium deficiencies are commonly not field wide, but will be in areas of a field with depressed pH such as "sand hills" that have been excessively leached. Often, a whole field's pH will be in an acceptable range so it is critical to check the soil pH in affected areas. Tissue tests should be considered to confirm the magnesium deficiency.

Excessive levels of potassium can also induce magnesium deficiency where available magnesium levels are low to moderate to begin with.

Commonly, magnesium is applied to soils with dolomitic limestone (Hi-Mag lime). Sulfate of potash and magnesia (K-Mag, Sul-Po-Mag) is a naturally mined mineral deposit that can also be applied to add magnesium to soils. Other magnesium sources include magnesium sulfate (same as Epson Salts), magnesium oxide (basic slag), and magnesium chloride.

To correct a deficiency in growing vegetables, soluble magnesium sources should be used. Foliar applications are effective but must be applied in a dilute solution to avoid salt injury. Spray 20 lbs of a soluble magnesium source (20 lbs of magnesium sulfate for example) in 100 gallons of water per acre (10 lbs in 50 gallons or 5 lbs in 25 gallons). Dry broadcasts of 15-25 lbs of actual magnesium per acre, irrigated in, or fertigation with similar amounts from soluble sources will also be effective. Sidedress applications may also be effective at 15-20 lbs of actual magnesium per acre. For drip irrigated vegetables, soluble magnesium fertilizers can be applied through the drip system.

Magnesium deficiencies corrected early enough in the growing season will often result in little yield loss. However, it is critical to target affected fields with corrective liming for future crops in the rotation. Variable rate liming may be considered and is recommended where there is excessive variability in pH in a field.

If pH is below 5.2 and vegetables are still small, dolomitic limestone may be broadcast over the top and cultivated in to correct pH related problems. This should be coupled with a foliar magnesium application to more quickly address the magnesium deficiency.

In vine crops, low pH may also be a causal factor for manganese toxicities and you may see both magnesium deficiency and manganese toxicity in the same field. Manganese toxicity symptoms in melons will initially show up as small yellow spots on upper leaf surfaces. On lower leaf surfaces you will see dead spots with water soaked rings around these dead spots. As the toxicity worsens, these leaf areas will turn brown and die. In watermelons, manganese toxicity will show up as black speckling in the lower leaf surfaces and extensive vein browning. However, manganese toxicity is not common in watermelon. For a review of manganese toxicity in cantaloupes refer to an article by Jerry Brust in the WCU archives [Volume 14, Issue 15, July 7, 2006](#).

Agronomic Crop Insects

Joanne Whalen, Extension IPM Specialist, jwhalen@udel.edu

Alfalfa

Continue to sample for potato leafhoppers on a weekly basis. We continue to see both the adult and nymph stage. As indicated before, the nymphs can cause damage very quickly, so sample fields on a weekly basis for both stages. Once plants are yellow, yield loss has already occurred. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa.

Soybeans

Be sure to sample fields in the seedling stage for bean leaf beetles, grasshoppers and thrips. We are getting reports of an increase in grasshopper activity in no-till soybeans so watch carefully for this insect. Multiple applications may be needed since they can re-infest fields quickly after treatment and nymphs and adults can both be found in fields. Although no precise thresholds are available, a treatment may be needed if you find one grasshopper per sweep and 30% defoliation from plant emergence through the pre-bloom stage. Numerous products are labeled for grasshopper control including a number of pyrethroids, dimethoate, Lorsban, Orthene 97 and Sevin XLR. ***Be sure to check all labels carefully before combining insecticides and herbicides since there are a number of restrictions on the labels.***

In the earliest planted fields, we can also find green cloverworms activity so be sure to scout soybeans for all of these defoliators.

We have started to find low levels of spider mites in the earliest planted no-till soybean fields. As we all

know from past experience, early detection and control is needed to achieve spider mite suppression. Dimethoate, Lorsban, Hero (zeta-cypermethrin + bifenthrin) as well as a number of stand alone bifenthrin products (***not all may be labeled so be sure to check the label***) are available for spider mite control in soybeans. All of these products need to be applied before mites explode. Be sure to read the labels for use rates and restrictions – there is a limit on the number of applications as well as the time between applications on all of the materials labeled for spider mite control.

Grain Marketing Highlights

Carl German, Extension Crops Marketing Specialist;
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USDA Export Sales Report 06/17

Pre-report estimates for weekly **export sales of U.S. soybeans** (combined old-crop and new-crop) ranged from 12.9 million bushels to 16.5 million bushels. The weekly report showed total export sales of 11.6 million bushels, with old-crop sales of 5 million bushels due to a cancellation by Japan, below the 2.3 million bushels needed this week to stay on pace with USDA's demand projection of 1.455 billion bushels for U.S. exports. Total shipments of 7.8 million bushels were below the 9.7 million bushels needed this week. There are eleven weeks remaining in the '09/'10 marketing year for soybeans. The report is viewed as bearish.

Pre-report estimates had **weekly corn export sales** at 27.6 million bushels to 39.4 million bushels. The weekly report showed total export sales of 47.9 million bushels, with old-crop sales of 42.9 million bushels, well above the 12.1 million bushels needed this week to stay on pace with USDA's export demand projection of 1.95 billion bushels. Total shipments of 42.2 million bushels were below the 46.1 million bushels needed this week. With eleven weeks remaining in the '09/'10 marketing year, U.S. corn export shipments are currently 5 percent behind USDA projections. This report is considered bullish.

Pre-report estimates for **wheat exports** ranged between 7.3 million bushels and 12.9 million bushels. The weekly report showed total export sales of 35.3 million bushels, well above the 14.6 million bushels needed this week to reach USDA's projected 900 million bushels. Shipments of 14.5 million bushels were below the 17.5 million bushels needed this week. This report marks the second week of the '10/'11 marketing year for U.S. wheat exports. This report is considered bullish.

Market Strategy

Outside market forces have been the driver behind improvement seen in commodity prices this week. Dec '10 corn futures closed at \$3.77 per bushel in yesterday's trading, 11 cents higher than last week. New crop Nov '10 soybean futures closed at \$9.24, 33 cents higher than last week, buoyed by old crop prices. New crop SRW wheat closed at \$4.61 per bushel, 30 cents per bushel higher than last week, buoyed by world wheat growing conditions. Nearby old crop July '10 corn futures closed at \$3.56 per bushel, 15 cents per bushel higher than last week. Old crop July '10 soybean futures closed at \$9.57 per bushel, 25 cents per bushel higher than last week. Can this week's rally be sustained? Much of the answer to that question depends on mostly unknown factors. The impact that weather has on growing conditions for U.S. row crops this summer now becomes the primary factor. Thus far, USDA's Weekly Crop Progress reports are not indicating any problems for 2010 U.S. corn and soybean production. For the week ending June 13th, 77 percent of the U.S. corn crop and 73 percent of the soybean crop were rated in good to excellent condition. Locally, crop conditions are extremely dry.

Outside market forces were supportive of commodity prices this week. The U.S. dollar index weakened this week, now trading at 85.77 as compared to 87.18 last week. The Dow strengthened from 10,095 last week to 10,342 this morning. The nearby crude price increased from \$74.38 per barrel last week to \$77.20 this morning.

Generally speaking, market rallies should be rewarded with advancing sales and those lagging on making new crop sales would be encouraged to do so. However, considering local dry conditions and current basis levels: new crop corn at 5 under to 10 over; new crop soybeans 30 to 50 under; and new crop SRW wheat at 45 under; it becomes necessary to consider other alternatives for advancing sales. Among them, using put options due to the fact that one does not have to deliver bushels in the event of a production shortfall. Plus, basis will not be assigned to buying the put option until a later date. Basis can be assigned later by using a basis contract or by making the cash sale at harvest. Contracted bushels using put options would not result in having to settle on cash contracts with crop insurance payments. Only the premium cost would need to be covered. For those caught up on new crop sales, now is a good time to think about doing nothing, wait 'n see what happens, bearing in mind that the June 30th Planted Acreage report will be issued in just thirteen days. General pre-report expectations are for increased U.S. corn acres and reduced soybean acres from the March 31st Planting Intentions report.

For **technical assistance** on making grain marketing decisions contact:

Carl L. German, Extension Crops Marketing Specialist
Department of Food & Resource Economics
208 Townsend Hall, Univ. of Delaware, Newark, DE
19716, **Phone:** 302-831-1317 **Fax:** 302-831-6243

List Owner: **E-Grain Marketing Club** grn-mktdg@udel.edu;

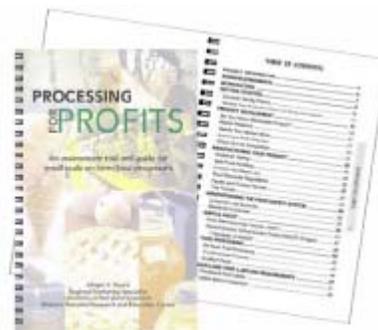
Farmer's Grain Marketing Decision Aid
www.webixi.com/grainguide and

Farm Fresh Retail/Wholesale Marketing Web Site www.agriculturehealth.com.



A new Mastering Marketing Highlight is now available "What's Your Sign?" has been posted to the web:

<http://www.agmarketing.umd.edu/NewslettersPDF/AgMarketingHighlights/102609MMHighlightWhatsYourSign.pdf>



New On-Farm Processing Guide for Maryland Farmers: "Processing for Profits"

Got questions about value-added processing, the regulations, and its profit potential for your farm? Get answers in the new publication, "Processing for Profits." This publication is an assessment tool and guide for small-scale, on-farm food processors. While written with Maryland farmers in mind, any producer interested in the potential and pitfalls of on-farm and value added food processing, will find this new resource helpful in their planning and implementation process.

Written by Ginger S. Myers, Ag Marketing Specialist and Director of the Maryland Rural Enterprise Development Center, University of Maryland Extension, the publication addresses:

- ▶ Product development and manufacturing.
- ▶ Understanding the food safety system, labeling, and acidified food.
- ▶ FAQ's about Maryland's food regulations and specific Maryland processed farm products.
- ▶ Business planning and marketing for specialty food producers and processors.

This publication can be downloaded at www.mredc.umd.edu.

Printed copies are available free of charge upon request. Please direct your request to Ginger S. Myers (gsmyers@umd.edu) or Susan Barnes (sbarnes6@umd.edu) at 18330 Keedysville Road, Keedysville, MD 21756, 301-432-2767.

This publication was made possible through grant funding from the Harry R. Hughes Center for Agro-Ecology, Inc., with support from the United States Department of Agriculture – Cooperative State Research, Education, and Extension Service (USDACSREES.)

The Mastering Marketing Highlight is an important update that is published periodically between the issues of the *Mastering Marketing Newsletter* by Ginger S. Myers, Regional Agricultural Marketing Specialist.

If you have any questions or comments about this publication or have clients or colleagues that would value receiving it as well, please contact Ginger Myers at gsmyers@umd.edu or sbarnes6@umd.edu



MDA, NRCS Team Up to Offer Farmers Better Cover Crop Incentives

MDA and the USDA's Natural Resources Conservation Service (NRCS) have teamed up to offer Maryland farmers more choices and better incentives to plant cover crops in their fields this fall. This year, MDA will provide farmers with approximately \$15 million to plant cover crops. NRCS has made an additional \$3 million

available to farmers who plant traditional or harvested over crops this fall. This year, farmers can choose from several cover crop planting options. Special incentives are available to farmers who plant rye.

Farmers should contact their local soil conservation district office right away to enroll in the NRCS Cover Crop Program, which is now open for sign-up. The enrollment dates for the MDA program are June 21-July 15, 2010. Click [here](#) for more details.



Register Backyard Flocks

Many Marylanders are becoming more interested in backyard gardening and growing their own food, including poultry and eggs. With this growing trend, it's important to

know that the Maryland Department of Agriculture requires all poultry flocks in Maryland to be registered with department in accordance with Maryland law which was established in 2005.

Since then, MDA has been compiling this data to create maps and tables of poultry in Maryland for purposes of biosecurity and disease prevention/control purposes. This information will be used to help the state quickly identify poultry flocks when a disease hits Maryland's poultry industry and to adequately respond to a poultry disease outbreak. As of May 1, 2010, Maryland has registered over 3,600 backyard and commercial poultry flocks. Is your flock registered? Click [here](#) for more information and registration form.



Maryland's Container Recycling Program

"We are especially pleased with the cooperative effort of the Ag Container Recycling Council and US Ag Recycling, Inc., which makes local recycling and special pick up for large quantities possible, providing a convenient and much cheaper alternative to landfill disposal," said Secretary Hance. "With continued cooperation among the participating groups, farmers and pesticide applicators, the program will continue to be successful and will protect the natural resources of the state from potential contamination by pesticides."



Maryland's container recycling program is a combined effort of state, county and federal agencies, as well as private industry, working together to protect the environment. With cooperation between MDA and Mid-Shore Regional Solid Waste Facility, Kent County Public Works, Wicomico Public Works, Frederick County Bureau of Solid Waste Management, Harford County Public Works, Crop Production Services-Denton, Southern States Centreville Cooperative, Southern States Hampstead Cooperative, Southern States Kennedyville Cooperative, Martin's Elevator, Angelica Nurseries, Inc., The Mill of Black Horse, Willard Agri-Service Inc., Chesapeake Ag. Air, Tim's Aerial Applications, Allen Chorman and Son, Eddie Mercer, Inc., Maryland Environmental Service, U.S. Department of Agriculture-Agricultural Research Service, and Maryland farmers and applicators, the program has been effective in reducing the landfill disposal of plastic pesticide containers and in allowing the plastic to be reused.

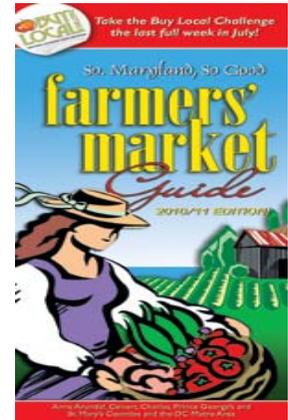
A schedule of collection dates and sites is available on the MDA website at www.mda.state.md.us/pdf/recycle.pdf.

For additional information, or to schedule a chipping date at your site, contact Rob Hofstetter, special programs coordinator, Pesticide Regulation Section, Maryland Department of Agriculture, Annapolis, MD, telephone 410-841-5710.

SMADC Releases 2010 Farmers' Market Guide

The *2010-11 So Maryland, So Good Farmers' Market Guide* is now available through the Southern Maryland Agricultural Development Commission (SMADC). The new guide includes 29 Southern Maryland Farmers' Markets located in Anne Arundel, Calvert, Charles, Prince George's and St. Mary's counties as well as other markets in Washington DC and Virginia that feature Southern Maryland farm vendors.

The Farmers' Market Guide lists the market contact details, location and the days and hours of operation; additionally, individual market website addresses are included so that consumers can find out more about their local markets. Many market websites now offer weekly newsletters with information on their farmers and their growing practices, plus weekly 'what's new at market' produce updates and great recipe ideas for fresh farm foods.



The Farmers' Market guide also features a unique regional harvesting chart that makes it easy for Southern Maryland residents to find out when seasonal favorites will be available at their most delicious peak. Southern Maryland's markets offer a wide range of farm products year round including produce, meats, eggs, cut flowers and potted plants, local honey, jellies, jams and baked goods. A trip to a farmers' market makes a wonderful family outing and is a great way to teach children about healthy eating habits and how important farms are to our communities and the environment.

The handy print version of the guide is free and available while stocks last at Southern Maryland farmers' markets and regional public libraries, or call (301) 274-1922 for a list of additional pick-up sites. The guide can be downloaded at www.somarylandsogood.com or www.smadc.com.

The Farmer's Market Guide is one of many resources created by SMADC in support of regional agriculture to assist local farm-based businesses in their continued growth and commercial viability. A related effort is the upcoming state-wide Buy Local Challenge Week (July 17 - 25). Marylanders are challenged to pledge to eat at least one locally grown item per day for a week. To participate in the Buy Local Challenge, simply visit www.buy-local-challenge.com for more information and links to local farms, farmers markets, menu ideas and shopping tips, and special Buy Local Challenge Week events.

The Southern Maryland Agricultural Development Commission (SMADC) was established to promote diverse, market-driven agricultural enterprises, which coupled with agricultural land preservation, will preserve Southern Maryland's environmental resources and rural character while keeping the region's farmland productive and the agricultural economy vibrant.

To learn more about additional programs and resources, contact SMADC, P. O. Box 745, Hughesville, MD 20637; phone: 301-274-1922; fax: 301-274-1924; email cbergmark@smadc.com; or visit www.smadc.com.



NEWS RELEASE

NRCS to Play Critical Role in Chesapeake Bay Clean-up Efforts

WASHINGTON, May 12, 2010 – The Obama Administration recently announced that the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) will expand and accelerate its efforts to restore clean water throughout the 64,000 square-mile Chesapeake Bay Watershed.

"A thriving agricultural sector is critical to restoring the Chesapeake Bay," NRCS Chief Dave White said. "Thanks to the 2008 Farm Bill, NRCS has unprecedented ability to help agricultural producers meet their conservation goals."

The Obama Administration released its final strategy for restoring the Chesapeake Bay on May 12, 2010. In the strategy, USDA commits to implementing new conservation practices on four million acres in the bay watershed by 2025. NRCS will play a major role in accomplishing that objective.

According to Maryland NRCS State Conservationist Jon Hall, the strategy leverages the voluntary efforts agricultural producers are already making to help restore the bay. "NRCS will continue to work with Maryland producers and partners to ensure we meet the federal objectives and state milestones," said Hall.

NRCS plans to meet this objective by targeting funding to the places and practices that would be most effective in reducing nutrient and sediment runoff. For example, the Chesapeake Bay Watershed Initiative, authorized in the 2008 Farm Bill, provides NRCS in Maryland over \$7 million in fiscal year 2010. This amount will likely increase for 2011. Working with local and state partners, NRCS will use these funds to target priority watersheds and conservation practices to maximize water quality improvements in the bay and its tributaries.

NRCS will work with partners to accelerate conservation adoption to meet objectives contained in

the strategy. Using its Cooperative Conservation Partnership Initiative, Maryland NRCS has entered into a 5-year partnership with the Pinchot Institute for Conservation. The goal of the partnership is to help producers reduce nutrient emissions to a level that enables them participate in ecosystem market trading.

NRCS is also working to accelerate the development and adoption of emerging conservation technologies through its Conservation Innovation Grants. Since 2005, NRCS has provided up to \$5 million annually for grants in the Chesapeake Bay Watershed that have been used to address many natural resource issues such as manure management and clean water technologies. Conservation partners that have benefited from these grants include the Maryland Department of Agriculture, Maryland Grain Producers, and the University of Maryland.

"NRCS is committed to doing more than ever to help agricultural producers achieve their conservation goals and, in turn, achieve the goals of President Obama's Chesapeake Bay restoration strategy," Hall said.

The NRCS activities are part of a larger Chesapeake Bay Watershed effort that include a commitment to accelerating the use of riparian forest buffers in the Bay watershed and the establishment of an inter-departmental Environmental Market Team to design an infrastructure that will allow agricultural producers to generate tradable credits by implementing conservation practices on their land.

For more information about NRCS Chesapeake Bay activities, visit www.nrcs.usda.gov/feature/chesapeakebay.html.

For information about the Chesapeake Bay restoration strategy, visit <http://executiveorder.chesapeakebay.net/>.

NRCS is celebrating 75 years helping people help the land in 2010. Since 1935, the NRCS conservation delivery system has advanced a unique partnership with state and local governments and private landowners delivering conservation based on specific, local conservation needs, while accommodating state and national interests.

EPA Proposes New Permit Requirements for Pesticide Discharges

Action would reduce amount of pesticides discharged and protect America's waters

WASHINGTON - The U.S. Environmental Protection Agency (EPA) is proposing a new permit requirement that would decrease the amount of pesticides discharged to our nation's waters and protect human health and the environment. This action is in response

to an April 9, 2009 court decision that found that pesticide discharges to U.S. waters were pollutants, thus requiring a permit.

The proposed permit, released for public comment and developed in collaboration with states, would require all operators to reduce pesticide discharges by using the lowest effective amount of pesticide, prevent leaks and spills, calibrate equipment and monitor for and report adverse incidents. Additional controls, such as integrated pest management practices, are built into the permit for operators who exceed an annual treatment area threshold.

"EPA believes this draft permit strikes a balance between using pesticides to control pests and protecting human health and water quality," said Peter S. Silva, assistant administrator for EPA's Office of Water.

EPA estimates that the pesticide general permit will affect approximately 35,000 pesticide applicators nationally that perform approximately half a million pesticide applications annually. The agency's draft permit covers the following pesticide uses: (1) mosquito and other flying insect pest control; (2) aquatic weed and algae control; (3) aquatic nuisance animal control; and (4) forest canopy pest control. It does not cover terrestrial applications to control pests on agricultural crops or forest floors. EPA is soliciting public comment on whether additional use patterns should be covered by this general permit.

The agency plans to finalize the permit in December 2010. It will take effect April 9, 2011. Once finalized, the pesticide general permit will be used in states, territories, tribal lands, and federal facilities where EPA is the authorized permitting authority. In the remaining 44 states, states will issue the pesticide general permits. EPA has been working closely with these states to concurrently develop their permits.

EPA will hold three public meetings, a public hearing and a webcast on the draft general permit to present the proposed requirements of the permit, the basis for those requirements and to answer questions. EPA will accept written comments on the draft permit for 45 days after publication in the Federal Register.

More information on the draft permit:
<http://www.epa.gov/npdes>

EPA Adds More Than 6,300 Chemicals and 3,800 Chemical Facilities to Public Database

Unprecedented access provided for the first time

WASHINGTON – As part of Administrator Lisa P. Jackson's commitment to increase public access to information on chemicals, the U.S. Environmental

Protection Agency (EPA) has added more than 6,300 chemicals and 3,800 chemical facilities regulated under the Toxic Substances Control Act (TSCA) to a public database called Envirofacts.

"The addition to Envirofacts will provide the American people with unprecedented access to information about chemicals that are manufactured in their communities," said Steve Owens, assistant administrator for EPA's Office of Chemical Safety and Pollution Prevention. "This is another step EPA is taking to empower the public with information on chemicals in their communities."

The Envirofacts database is EPA's single point of access on the Internet for information about environmental activities that may affect air, water and land in the U.S and provides tools for analyzing the data. It includes facility name and address information, aerial image of the facility and surrounding area, map location of the facility, and links to other EPA information on the facility, such as EPA's inspection and compliance reports that are available through the Enforcement Compliance History Online (ECHO) database. EPA is also adding historic facility information for another 2,500 facilities.

EPA has conducted a series of aggressive efforts to increase the public's access to chemical information including reducing confidentiality claims by industry and making the public portion of the TSCA inventory available free of charge on the agency's Web site. EPA intends to take additional actions in the months ahead to further increase the amount of information available to the public.

More information on Envirofacts:
<http://www.epa.gov/enviro/facts/tsca/index.html>

More information about EPA's efforts on increasing transparency on chemical information:
<http://www.epa.gov/oppt/existingchemicals/pubs/enhancements.html>

Note: If a link above doesn't work, please copy and paste the URL into a browser.

[View all news releases related to pesticides and toxic chemicals](#)

EPA Responds to the BP Oil Spill in the Gulf of Mexico

Since the BP Oil Spill in the Gulf of Mexico on April 22, 2010, EPA has mobilized resources to support the U.S. Coast Guard and protect public health and the environment. Our Emergency Operations Center at headquarters has been activated, trained EPA responders are working on the scene, and special mobile equipment has been sent to the Gulf area.

We have several online resources available:

1) We're posting updated data and other information on our [BP oil spill site](http://www.epa.gov/bpspill) (www.epa.gov/bpspill):

- Get air quality and water data
- Find answers to common questions
- Submit technology solutions

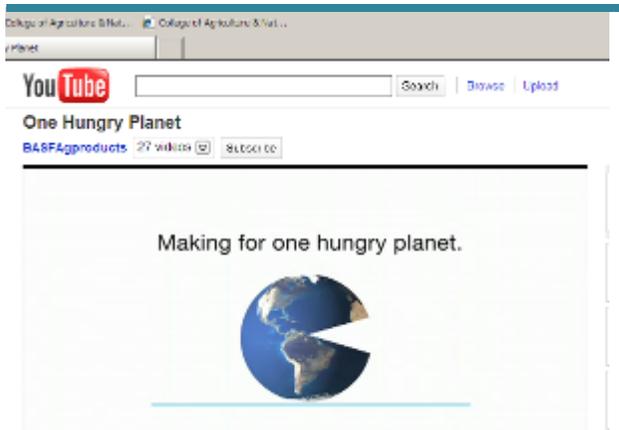
2) Connect with us on social media sites:

- Administrator Jackson's personal account of the response to the oil spill: [Facebook](#) and [Twitter](#)
- EPA's announcements about our response: [Facebook](#) and [Twitter](#)

3) Please subscribe to our oil spill updates at http://service.govdelivery.com/service/subscribe.html?code=USA-EPA_389.

You can also visit the [coordinated government response site](http://www.deepwaterhorizonresponse.com) (www.deepwaterhorizonresponse.com) for:

- Information about the spill and efforts to stop the oil from flowing
- Hotlines to report oil on land or injured wildlife
- Details of how you can volunteer



One Hungry Planet - BASF

World food production will need to double by the year 2050 in order to head off mass hunger, according to the Food and Agriculture Organization of the United Nations. It will require education and technology, according to speakers at the BASF Agricultural Solutions Media Summit last week in Chicago.

At first glance, the prospect of doubling current food production may seem daunting. But, according to a [video that BASF released on Wednesday](#),

agricultural production has already shown tremendous progress during the past 60 years:

- From 1950 to 2000, average corn yields grew from 39 bushels per acre to 153 bushels per acre.
- From 1987 to 2007, farmers grew 40 percent more corn, 30 percent more soybeans and 19 percent more wheat — all on the same amount of land.
- In 1940, one farmer produced enough food for 19 people. By 1970, it had risen to 73 people. And, today, one farmer produces enough food for 155 people.

As productivity has improved, so too have the techniques for preserving resources. For instance, farmers now grow 70 percent more corn from every pound of fertilizer than they did in 1970. And, they are doing a better job of conserving water and the soil.

The whole idea, several speakers noted, is to “grow more with less.” Rather than cutting down forests to create more cropland, the challenge is to get the most out of existing farmland and natural resources -- all the while trying to feed a hungry world.

“I’m betting we will figure it out,” said Terry Uhling, senior vice president of The J.R. Simplot Company.

When Mike Geske, grain farmer from Matthews, Mo., and board member of the National Corn Growers Association, graduated from college in 1972, it was around the time that biologist Paul Ehrlich came out with the book, “The Population Bomb,” and there was concern about starvation in the world. But, Geske added, technology has allowed farmers to grow more food on fewer acres with less fertilizer. “Technology has always allowed us to keep up,” he said. And, the technology has also benefitted the natural environment, he added.

Nutrient Management Update

Krista Mitchell, University of MD Extension Nutrient Management Advisor

It may seem too early to begin your 2011 nutrient management plan, but it is a necessity to stagger nutrient management plan development over many months in order to assist all the



producers in the county who would like their nutrient management plan to be written by Extension. In the past few years, producers have mostly requested nutrient management plans after January 1st, despite numerous attempts to contact them the previous

summer and fall. This has resulted in producers being turned away and having to hire private consultants, due to our long waiting list. Anne Arundel County only has a half-time nutrient management advisor, who is shared with Howard County, and it is impossible to write all the nutrient management plans for producers in the county in the small window of time between January 1st and spring planting.

In order to ensure equal access of no-cost nutrient management plans to all producers in the county, the following operations are strongly encouraged to get their 2011 nutrient management plans completed over the summer before the grain harvest rush:

- 1) those utilizing commercial fertilizer only (no manure) and
- 2) animal operations that don't utilize their manure, such as horse farms.

After January 1st, plan-writing focuses on operations that utilize manure as a nutrient source, which require a manure sample collected as close to application time as possible. Nutrient management plans must be completed prior to planting and nutrient applications; therefore, producers should check their 2010 nutrient management plans to be sure their fall 2010-planted small grain crop nutrient recommendations have been included in their 2010 plan.

A minimum of 2-3 weeks is needed to write your plan, get it reviewed, and schedule an appointment to go over it with you. As a reminder, Anne Arundel County only has a half-time nutrient management advisor who is in the office on Mondays, Tuesdays, and alternate Wednesdays, so if you would like to ensure you receive a nutrient management plan for your operation, you need to start as early as possible on your 2011 nutrient management plan.

Funding for the University of Maryland Extension's Nutrient Management Program beyond June 30, 2011 is uncertain due to the state's economy; therefore, producers are encouraged to consider other options for nutrient management planning, such as attending the Farmer Training and Certification Program to become certified to write their own plan. For upcoming trainings, refer to the MD Department of Agriculture's website.

NUTRIENT MANAGEMENT PLANS FOR FRUIT GROWERS:



If your operation has tree fruit, brambles or blueberries, the small window of time to take plant tissue samples for your 2011 nutrient management plans is coming up.

Timing for plant tissue sampling:

Blueberries: 1st week of harvest

Fruit trees: July 15th - September 1st

Brambles: August 1st - 20th

Contact your county's nutrient management advisor for sampling instructions and a list of approved labs that conduct plant tissue analysis.



New Vegetable and Agronomy Newsletters

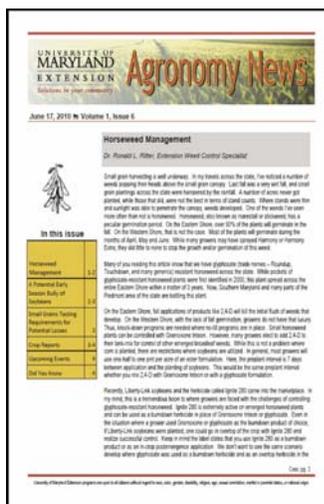
Call your local Extension office to Sign-Up Today for emails. Also available online at:

Agronomy News:

<http://annearundel.umd.edu/AGNR/AgronomyNews.cfm>

Vegetable & Fruit Headline News:

<http://annearundel.umd.edu/AGNR/VegFruitNews.cfm>



Ag Web Modules

New website features in Anne Arundel County -
Agricultural Program Teaching Modules:

<http://annearundel.umd.edu/AGNR/agmedia.cfm>

1. Pasture Management

<https://connect.moo.umd.edu/p12049696/>

2. Pasture Herbicides

<https://connect.moo.umd.edu/p13059797/>

3. Handling Tall Fescue Toxicity Events

<https://connect.moo.umd.edu/p59425434/>

4. Modern Vegetable Production Technology for Early Market

<https://connect.moo.umd.edu/p75657057/>

5. Vegetable Herbicides for Controlling the Top 10 Weeds of Southern Maryland

<https://connect.moo.umd.edu/p25962088/>

6. Sustainable Low Input Strip-Till & No-Till Vegetable Planting Tactics

<https://connect.moo.umd.edu/p55665058/>

7. Fruit Establishment Tactics to Maximize Our Coastal Plain Advantage

<https://connect.moo.umd.edu/p61165608/>

8. Vineyard & Orchard Weed Control

<https://connect.moo.umd.edu/p44883980/>

9. Vineyard Establishment Supplies & Equipment

<https://connect.moo.umd.edu/p48194311/>

Note: Registered Trade Mark® Products, Manufacturers, or
Companies mentioned within this newsletter are not to be
considered as sole endorsements. The information has been
provided for educational purposes only.

Other Updated County Website Features

Anne Arundel County Extension website:

<http://annearundel.umd.edu/>

Ag Newsletter *Production Pointers*

The current and past agricultural newsletter additions
are available for viewing or copy at:

<http://annearundel.umd.edu/AGNR/agnews.cfm>

Ag Bulletins

An agricultural bulletin page is also available for
viewing or copy under our hot topics section at:

<http://annearundel.umd.edu/AGNR/agnews.cfm>

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<http://annearundel.umd.edu/AGNR/agmedia.cfm>

College AGNR 150 Anniversary

Also relive the history of Extension and University of
Maryland College of Agriculture Land Grant Mission by
viewing the 150 Years Anniversary PowerPoint:

<http://annearundel.umd.edu/files/University%20of%20Maryland%20150%20Year%20Anniversary.pps>



Thanks for Partnering

Thanks for partnering with University Maryland
Extension, and supporting our programs.

R. David Myers, Extension Educator
Agriculture and Natural Resources
Anne Arundel & Prince George's Counties

NACAA Communication Award
Individual Newsletter
2002 National Winner

NACAA
National Association of
County Agricultural Agents



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