

Summer 2009

Dave's Ramble

Veteran no-till farmers do not need formalized



scientific study beyond their own power of observation to be convicted in their soil building conservation practices; but sound research sure helps to nail the treatise to the door. USDA ARS Scientist

Ron Follett recently published in the *Agronomy Journal* that no loss of soil organic matter occurred after six years of no-till corn in a field that had previously been in thirteen years of permanent bromegrass. Indeed, this is powerful scientific discovery. (See the inside article)

Recently, due to our unrelenting planting season rains, I have concluded that the desire to have a perfect farming year is a lofty, prideful goal. I must come to terms with a much more pragmatic farming realism. Just exactly what are my goals anyway? Make all of the money in the world! Build bigger barns! How many times will nature humiliate me before I walk humbly? Some years we are meant to walk with the toads. We are Farmers! There will be periods of unrelenting flooding rains and conversely long dirges without a cloud of water to be found; possibly, an embedded good spell. Our job is to farm the land in a manner that finds a hope for every ray of sunshine and drop of rain in something living until it is harvested.

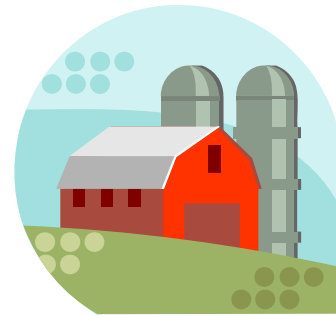
Hence, no-till farming will always strike a harmonic balance; not always the best yield every year, but the most consistent. Imagine a field that produces bountifully, while its soil is steadily improves in tilth; where the rains may beat upon it, but clear water trickles in and flows from its surface. This soil has a structure, which is deeply layered able to bear any farming task. Evens as drought threatens our crops will suffer less; for it is a soil in which time released nutrients and water have been sequestered in cover crops and residues, cycling through a chain of life

available for the successive crops. I am convinced that nothing cares for a struggling earth better than a no-till crop blanket. This has never been stated clearer than by my agricultural hero, the father of the reduced tillage era: In 1943 Edward H. Faulkner a County Extension Agent wrote his book, a treatise entitled "Plowman's Folly" in which he challenged agricultural scientists to disprove his statement or accept it that, "No one has ever advanced a scientific reason for plowing."

Calendar of Events

Mark Your Calendars --- Plan To Participate

- ◆ August 6 – Crops Twilight & Barbecue – CMREC



Inside This Issue

- Vegetable Crop Update
- Agronomic Crop Update
- Grain Market Updates
- MDA News
- Nutrient Management Update

Can Wind and Solar Make your Business More Profitable

Wind Power and Solar Field Day for the Nursery, Landscape and Greenhouse Industry
June 23, 2009



Are you looking to save money? Would you like to own an even "greener" business?

We have asked several alternative energy using horticulture and small business operations in central Maryland to open their doors to you. This will allow you to see what alternative energy sources are available, give you the opportunity to speak with the owners and to assess the cost effectiveness for small to medium size horticulture businesses.

- ✓ Visit Ruppert Nursery's LEED certified office,
- ✓ See newly installed solar system and wind turbine at Capitol Landscape and Nursery operation
- ✓ Watch as Pogo's Organic nursery filters used cooking oil and runs their trucks and equipment on Bio-Diesel
- ✓ Have lunch at the Brick Ridge Restaurant of Mt. Airy, Maryland currently using wind power and looking into solar heated water,
- ✓ Visit Carlos Fernandez's 25 acre farm in Frederick County where over 15 wind turbines keep the lights on!

Registration-limited to the first 60 people to sign up:

Cost: The registration fee is \$25.00 per person. This will cover literature, light refreshments and cost of lunch at Brick Ridge Restaurant.

Checks are made payable to the University of Maryland and mailed to 11975 Homewood Road, Ellicott City, MD 21042. We can accept credit cards for registration. Call our office at 301-596-9413

Brought to you by the Central Maryland Research and Education Center office at the University of Maryland Extension in cooperation with the Maryland Greenhouse Growers Association, the Maryland Nursery and Landscape Association, the Maryland Arborist Association, Landscape Contractors Association, and MDA.

Tour Information: Participants meet at the locations. Those that want to carpool can join together with other participants at our first location to carpool through the day.

Time: We start this field day at 7:00 a.m. and you will be finished by 4:00 p.m.

Directions to first location: Pretty Penny Farm-Pogo's Organics - 21601 New Hampshire Ave, Sunshine, MD. This farm is located near Brighton Dam located off Rt. 650 (New Hampshire Ave) just south of the intersection of Rt. 650 and Rt. 97.

Annual Field Crops Research Twilight Barbecue & Ice Cream Social CMREC, Upper Marlboro Farm August 6, 2009



You are invited to attend a twilight wagon tour of the University of Maryland Upper Marlboro Research Farm, on **Thursday, August 6, 2009 from 4:30 p.m. to 8:30 p.m.** Maryland Cooperative Extension will host this **Annual Field Crops Research Twilight Barbecue & Ice Cream Social.**

Served after the barbecue, "Old-fashioned" homemade ice cream! It's "old fashioned" ice cream because we will be using a 1929 Fair-Banks Morse antique gas engine to do the cranking.

This event will highlight all field crops, agronomic and horticultural research projects currently conducted at the CMREC Upper Marlboro Farm, possibly including but not limited to the following:

- ◆ Vegetable IPM
- ◆ Weed Control
- ◆ Vineyard Projects - Table and Wine Grapes
- ◆ Corn Stalk Nitrate Test Study
- ◆ P Phyto-Remediation Grain vs. Forage Systems
- ◆ Apple, Peach & Beach Plum Research
- ◆ Blueberry Project
- ◆ High Tunnel Specialty Vegetable Production
- ◆ Strip-Till/No-Till Vegetable Production Techniques

Vegetable & Fruit Crop Update

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Cabbage

Economic levels of diamondback and imported cabbage worm larvae continue to be found. A treatment should be applied when 5% of the plants are infested and before larvae move to the hearts of the plants.



Cucumbers

Cucumber beetles continue to be active so be sure to scout for beetles as well as aphids. Fresh market cucumbers are susceptible to bacterial wilt, so treatments should be applied before beetles feed extensively on cotyledons and the 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. A treatment should be applied for aphids if 10 -20% of the plants are infested with aphids with 5 or more aphids per leaf.

Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf.

Although not wide spread at this point, we continue to find fields with spider mites at economic levels.

The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Cucumber beetles continue to be the main insect problem at this time. Since beetles can continue to reinfest fields as well as hide under the plastic, be sure to check carefully for beetles as well as their feeding damage. Multiple applications are often needed to achieve effective control. Now that most fields are blooming, it is important to consider pollinators when making an insecticide application.

<http://extension.oregonstate.edu/catalog/pdf/pnw/pnw591.pdf>.

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/latest](http://ag.udel.edu/extension/IPM/traps/latestblt.html)

[blt.html](http://ag.udel.edu/extension/IPM/traps/latestblt.html). You should also watch for an increase in aphid populations. 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. Adult CPB as well as the small and large larvae can now be found. A treatment should be considered for adults when you find 25 beetles per 50 plants and defoliation has reached the 10% level. Once larvae are detected, the threshold is 4 small larvae per plant or 1.5 large larvae per plant. As a general guideline, controls should be applied for leafhoppers if you find ½ to one adult per sweep and/or one nymph per every 10 leaves.

Snap Beans

Continue to sample all seedling stage fields for leafhopper and thrips activity. The thrips threshold is 5-6 per leaflet and the leafhopper threshold is 5 per sweep. If both insects are present, the threshold for each should be reduced by a third. In addition, continue to watch for bean leaf beetle. Damage appears as circular holes in leaves and significant defoliation can quickly occur. As a general guideline, a treatment should be considered if defoliation exceeds 20% prebloom. 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. 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.

<http://ag.udel.edu/extension/IPM/traps/latestblt.html> and <http://ag.udel.edu/extension/IPM/thresh/snapbeanecbthresh.htm>

Sweet Corn

Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample whorl through pre-tassel stage corn for corn borers and corn earworms. 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 black light 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 for the most recent trap catches (in state: 1-800-345-7544; out of state: 302-831-8851).

Gummy Stem Blight Found on Watermelon and Cantaloupe Transplants

Bob Mulrooney, Extension Plant Pathologist
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Gummy stem blight was diagnosed on watermelon and cantaloupe transplants this week from Sussex County. Nancy found abundant fruiting bodies of the fungus and plenty of spores. The cotyledons were black and the fungus had infected the stems on some plants. If these transplants are set out, most of the infected plants will die but not before possibly producing spores that could infect nearby plants that might not be showing symptoms. Fungicide applications in the field would be strongly recommended if you suspected or had confirmed infection on transplants. Normally we would suggest a band application of chlorothalonil (Bravo) as a preventative but with the possibility of high disease pressure a combination of chlorothalonil and Pristine would be suggested.

In situations where there might be suspected resistance issues with Pristine or reduced activity with Pristine, there are two other products that are labeled for gummy stem blight but are not in the recommendations book since we have seen little data in the region. A fall test in SC in 2008 conducted by Dr. Tony Keinath at Clemson University showed very good control of gummy stem blight under heavy disease pressure with Folicur and Switch. Both products were alternated with 2 pts of Bravo after two applications of either fungicide. This is only one test but the results were significant. With the weather being what it is, alternating Pristine with one of these products may be an effective alternative.



Two gummy stem blight infected transplants and a healthy one on the right.

Controlling the Crown Rot Phase of Pepper Phytophthora Blight

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To control the crown rot phase of Phytophthora blight in pepper apply 1.0 pt Ridomil Gold 4E/A or 1.0 qt Ultra Flourish 2E/A (mefenoxam, 4), or MetaStar metalaxyl, (4) at 4.0 to 8.0 pt 2E/A. Apply broadcast prior to planting or in a 12-16 inch band over the row before or after transplanting.

Make two additional post planting directed applications with 1 pint/A Ridomil Gold 4E or 1 qt/A Ultra Flourish 2E to 6 to 10 inches of soil on either side of the plants at 30-day intervals. Use the formula "Calibration for Changing from Broadcast to Band Application" on page E6 in the [Pest Management Section](#) of the [Delaware Commercial Vegetable Production Recommendations](#) to determine amount of Ridomil Gold needed per acre when band applications are made. When using polyethylene mulch, apply Ridomil Gold 4E at the above rates and timing by injection through the trickle irrigation system. Dilute Ridomil Gold 4E prior to injecting to prevent damage to the injector pump.

Cucurbit Downy Mildew Update

Bob Mulrooney

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There have been no new reports of downy mildew on the east coast since last Friday's report of the discovery in North Carolina. The forecast for Thursday June 11 was for a moderate risk of transport into the Delmarva Peninsula.

Growers and processors are encouraged to keep abreast of the progress of downy mildew by visiting the CDM IPM PIPE website <http://cdm.ipmpipe.org>. Forecasts are made every Monday, Wednesday and Friday.

With the weather pattern favoring diseases this year, a cover spray of Bravo or mancozeb on cucumbers at this point should be considered. Once the disease gets closer or is found in DE then switching to a downy mildew specific fungicide such as Previcur Flex, Presidio, Ranman or Tanos is recommended.

Upper leaf surface of cucumber with downy mildew.



Missed the WYEREC Strawberry Twilight?

View the Presentations On-Line



We are pleased to have most of the presentations from the recent Bay Area Fruit School, held February 18, 2009 at the WREC, available for viewing and downloading on our webpage:

www.wrec.umd.edu. Select "Recent Programs/Activities Materials & Presentations" and then "2009 Strawberry Twilight".



University of Maryland
MD Department of Agriculture
University of Delaware
Virginia Polytechnic Institute
Issue #4: June 3, 2009

Gerald Brust, IPM Vegetable Specialist, University of MD

There have been some problems with peas this season due to the wet soil conditions we have had in our area resulting in "soil rots". We have had anywhere from 2-5 inches above average rainfall for the month of May throughout Maryland, which has resulted in the second wettest May over the last 50 years for many areas. Last year we also had a very wet May; it was the 3rd wettest May in many areas, which resulted in many more root rot problems in cucurbits, i.e., watermelons, cucumbers, cantaloupes, pumpkins, etc. [We can probably count on similar problems this year in the field as the June forecast calls for wetter than normal conditions.](#)

For more information, contact: [Gerald Brust](#)

Increase in Soil Rots May Be in Store for Area Cucurbits

Gerald Brust, IPM Vegetable Specialist,
University of Maryland

There have been some problems with peas this season due to the wet soil conditions we have had in our area resulting in "soil rots". We have had anywhere from 2-5 inches above average rainfall for the month of May throughout Maryland, which has resulted in the second wettest May over the last 50 years for many areas. Last year we also had a very wet May; it was the third wettest May in many areas, which resulted in many more root rot problems in cucurbits, i.e., watermelons, cucumbers, cantaloupes, pumpkins, etc. We can probably count on similar problems this year in the field as the June forecast calls for wetter than normal conditions.

The symptoms in watermelon fields usually begin with leaves flagging on a few plants down a row and then a few

days later a total collapse of those same plants. Sometimes the wilting occurs within certain rows while in adjacent rows the watermelon plants look fine (Fig 1a). If wilted plants are dug up you can see reddish-brown discoloration of the crown of the plant (Fig 1b). The roots will be decayed as well. There are several fungi that can cause crown and root rot diseases, including *Fusarium*, *Pythium* and *Phytophthora*.

To identify the specific fungi involved, samples should be sent to a diagnostic laboratory for testing. The disease often starts with a few plants in one row then moves down that row. Water, either through irrigation or heavy rains is usually responsible for the movement of the disease down a row. High plant loss can occur in the lower areas of fields where water stands after heavy rains. In the last month we have had several days of heavy rains with water sitting in fields, which will stress young plants and allow root rot diseases to get started.

Fig 1a. Watermelon rows with and without Fusarium crown rot Fig 1b. Watermelon plant with crown rot



One thing growers can do for root and crown rot diseases is to be sure to not over water the plants or apply excess nitrogen. Rotation helps somewhat especially for *Fusarium* wilt, but the root and crown rot pathogens can infect many hosts, making crop rotation less effective in reducing disease. Environmental conditions are probably the most important component for the development of root and crown rot diseases. Well drained fields will have less of a problem than poorly drained fields.

Besides seed treatments using fungicides which will protect the seed from rots, there is a biological control that can be seed applied (preferred application method) or drenched onto the transplant that will help protect the plant from soil rots. The product is T-22 a naturally occurring fungus, *Trichoderma harzianum*, strain T-22. *Trichoderma* grows on the surface of roots, where it provides disease control and enhances root growth. Its spores survive in the soil, but the food it exists on is secreted from the root surface. The fungus multiplies on its own, protecting the roots over the growing season. The fungus, however, does not work very well if fields have standing water in them over a period of days so it is important to keep your fields well drained.

Pest Net Updates for MD, DE and VA can be accessed online at any time:

<http://www.mdipm.umd.edu/network/pestNet/index.cfm>

To subscribe to Pest Net: Send an email to listserv@listserv.umd.edu The body of the email should contain the line: subscribe pestnet-information 'your name' Replace 'your name' with the appropriate information and send the message from the email address to which you want the information sent.

To unsubscribe to Pest Net: send an email to listserv@listserv.umd.edu the body of the email should contain only: 'unsubscribe pestnet-information'



If you have any difficulty subscribing or unsubscribing to the list, please send email to alwilson@umd.edu.

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2009 Grape Disease Management

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&

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Early bloom disease management when it is extremely wet, warm & humid.

As we approach bloom (Erie County) or progress through bloom (Southern PA), your number one priority is the fungicidal protection of developing clusters from all fungal diseases (Phomopsis, Black rot, Downy mildew, Powdery mildew, and even Botrytis). In general, fruit are most susceptible during the first two or three weeks after capfall. During this period, apply your best materials, full rates, spray every row, ensure best coverage, and shorten intervals, especially if conditions are wet (unfortunately, the wetter conditions become, the more difficult it is to shorten intervals). Berries are rapidly expanding shortly after bloom and will need a regular refreshing of fungicide residue (at least every 10 days), even if conditions are dry (powdery mildew does not need rainfall to spread and infect). Anything less and you will likely pay a price later (trying to play catch up, which never works) in all but the driest of seasons. Here are some brief reminders for each major fungal disease at this point in the season.

Black rot: Determine your risk by scouting your vineyard for evidence of inoculum sources. Inoculum for this disease during bloom can come from over-wintering sources such as old fruit mummies, either left in the trellis or on the ground, or wood-borne infections (old cane lesions). If you haven't done so already, make sure you have removed all old clusters from the trellis (this can help for *Phomopsis* and *Botrytis* control as well). Current season leaf and shoot infections are also potent sources of inoculum for this disease. Inoculation experiments at Erie have shown that pre bloom leaf and shoot infections can provide an abundance of spores for fruit infections during bloom and often indicate the presence of an over-wintering inoculum source in the trellis. The fruit susceptibility period varies with variety, but generally natives like Concord are susceptible from capfall through 4-6 weeks after bloom. *Vitis vinifera* cultivars, representing the other extreme, may be susceptible for a week or two longer. Sterol biosynthesis inhibitors (Rally, Elite) and strobilurins are the most effective materials against this disease and are very rain-fast. Mancozeb based fungicides are also effective, but more subject to wash off by rain.

Phomopsis: Phomopsis is often thought of as primarily an early season threat to shoots and leaves, but the fruit rot phase can cause serious economic losses. As with the other major fungal diseases, fruit will need protection from *Phomopsis* during bloom and early development stages. Fruit can be susceptible to *Phomopsis* most of the season, but *Phomopsis* usually loses its teeth within a few weeks after bloom, as over-wintering spore sources run dry. The old standards like Captan, Mancozeb, and Ziram have been quite effective against this pathogen, with the strobilurins being somewhat less effective.

Powdery mildew: The mother of all grape diseases! The good news is that the fruit susceptibility period for powdery mildew is limited. Fruit of all varieties are most susceptible from capfall to fruit set. Concord fruit remain susceptible through about 2 weeks after fruit set, with *vinifera* being susceptible for about an additional two weeks. Quintec, strobilurins, and sterol biosynthesis inhibitors are all effective against this disease, but carry a high risk of the development of resistance. If you suspect you have resistance to powdery mildew fungicides in your vineyard, a tank mix with sulfur will provide an extra measure of control and insurance against crop loss. Remember, the immediate pre bloom, immediate post bloom period is the most critical period for fruit (\$\$\$) protection. A loss of disease control during this period will haunt you for the rest of the season. Make use of the best disease management tools and strategies during this period.

Downy mildew: Fruit of susceptible varieties will require fungicidal protection for 4 weeks after the start of bloom. Ridomil is highly effective against this disease. Old standards like copper, Captan and Mancozeb are also very effective but more subject to wash off. The strobilurins differ widely in their effectiveness against this disease, with Abound and Pristine being highly effective, Sovran being

less effective, and Flint being least effective. Phosphonates (Prophyt, Phostrol, Topaz, and others) are also very effective against downy mildew and will provide a good deal of curative (post infection) activity against this disease. However, they will not generally provide as long a protective interval as the strobilurins. Phosphonate intervals should not be stretched past 10 days on susceptible varieties, especially during the fruit protection period if conditions are wet.

Bunch rot prevention and control: With all the other diseases developing in the vineyard, *Botrytis* bunch rot prevention may be near the bottom of the list of priorities. However, there are some important steps wine grape growers can take NOW and in the coming weeks to prevent problems with bunch rots later, especially if you are growing the more susceptible varieties (Pinot Noir, Chardonnay, Riesling, Vignoles, etc). During bloom, *Botrytis* can establish latent infections in clusters that remain symptomless until ripening, when they may activate and form a focus of rot in the cluster. The vast majority of these infections appear to remain latent (or dormant) and never cause a problem. However, in varieties with compact clusters, one small center of rot can spread quickly throughout the cluster, even in relatively dry weather. So, a *Botrytis* spray during bloom can be a prudent decision on these varieties, particularly if weather is wet during bloom. All the *Botrytis* specific fungicides are prone to development of resistance, so use each one sparingly in any given season. Fortunately, we have many to choose from allowing us ample room to rotate materials throughout the season.

The effectiveness and consistency of *Botrytis* bunch rot control is directly related to the level of integration of chemical AND cultural methods, and the production of healthy grapes *regardless of the weather* is key to strengthening the reputation of Pennsylvania wines. A solid bunch rot control program would not be complete without the removal of leaves in the fruit zone about 2 weeks after bloom. Fruit zone leaf removal exposes clusters to better aeration and sunlight and reduces conditions for fungal pathogen development. It also opens the cluster zone to better fungicide penetration and may therefore increase the effectiveness of your fungicide sprays for control of *Botrytis* and other diseases during the fruit susceptibility period. We cannot control the weather during ripening, but we can greatly reduce the effects of wet, humid weather on bunch rot development (and the development of other diseases) with leaf removal. Consider it insurance against the uncertainty of the weather in Pennsylvania.

Final Comments. This spring season has been a challenge but good disease management is possible. Think through and implement your disease management strategy without taking chances and you can anticipate a clean crop at harvest.

Article Source:

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Agronomic Crop Update

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Alfalfa

Continue to sample for potato leafhoppers on a weekly basis. We are now finding adults and nymphs in fields. Although both life stages can damage alfalfa, the nymphs can cause damage very quickly. 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.

Field Corn

Be sure to watch for armyworms moving out of small grains and into adjacent field corn. Remember, worms must be less than 1 inch long to achieve effective control. The treatment threshold for armyworms in corn is 25% infested plants with larvae less than one-inch long. Large larvae feeding deep in the whorls will be difficult to control.

Soybeans

Be sure to sample seedling stage beans for bean leaf beetles, grasshoppers and thrips. We have seen an increase in both bean leaf beetle and grasshopper feeding damage. As barley is harvested and soybeans are planted, these fields will be especially susceptible to attack by grasshoppers which can often cause stand loss. If stand reductions are occurring from plant emergence to the second trifoliolate, a treatment should be applied. 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. As a general guideline, a treatment may be needed for bean leaf beetle if you observe a 20 - 25% stand reduction and/or 2 beetles per plant from cotyledon to the second trifoliolate stages. The Iowa State economic threshold for cotyledon stage is four beetles per plant. Once plants reach the V1 and V2 stages, their thresholds increase to 6.2 (V1 stage) and 9.8 (V2 stage) beetles/plant. These treatment thresholds should be reduced if virus is present or you suspected virus the previous season.

As far as thrips, information from North Carolina indicates that "soybean thrips and other thrips species can feed and reproduce on the leaves and buds of soybean seedlings. Their feeding creates bleached-out lesions along the leaf veins and gives a silvery/bronzed appearance to the leaf surface when damage is severe. These insects are very small (less than 1/10 inch) and are torpedo shaped. While thrips always occur on soybean seedlings, it is only during outbreak years that they cause concern. In particular, during dry weather and on earlier planted full season soybeans, thrips populations can explode when plants are growing slowly. Under these circumstances thrips injury will occasionally kill seedlings. Other stressors, such as nutrient deficiencies and herbicide injury, can add to thrips damage and cause plant loss." Yellowing can occur from thrips but

there are also a number of other factors that can cause yellowing so it is important to scout fields to identify what is causing the yellowing. Although no precise thresholds are available, as a general guideline, treatment may be needed if you find 4-8 thrips per leaflet and plant damage is observed.

Wheat Scab Update

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Wheat is rapidly turning but scab is widespread in the state. We did not dodge the bullet unfortunately. Levels of scab really vary depending on the flowering time of the wheat and whether it corresponded with favorable weather for infection. We can expect lower yields and test weights were scab is heavy.

The first symptoms of **Fusarium head blight** include a tan or brown discoloration at the base of a floret within the spikelets of the head. As the infection progresses, the diseased spikelets become light tan or bleached in appearance. The infection may be limited to one spikelet, but if the fungus invades the rachis the entire head may develop symptoms of the disease. The base of the infected spikelets and portions of the rachis often develop a dark brown color. When weather conditions have been favorable for pathogen reproduction, the fungus may produce small orange clusters of spores or black reproductive structures called perithecia on the surface of the glumes. Infected kernels are often shriveled, white, and chalky in appearance. In some cases, the diseased kernels may develop a red or pink discoloration.



Grain produced in heads damaged by Fusarium head blight is often shriveled, white, and chalky in appearance.

Fusarium graminearum is known to produce two important mycotoxins, deoxynivalenol (DON) and zearalenone, which can contaminate the diseased grain. The mycotoxin DON can cause reduced feed intake and lower weight gain in animals at levels as low as 1-3 ppm, especially in swine. Vomiting and feed refusal can occur when levels of DON exceed 10 ppm. Humans are also sensitive to DON, and the FDA has recommended that DON levels not exceed 1 ppm in human food. Ruminant animals, including dairy cows and beef cattle, are less sensitive to the toxin.

The fungal toxin zearalenone has estrogenic properties and produces many reproductive disorders in animals. Swine are the most sensitive to the toxin, but cattle and sheep may also be affected. Zearalenone concentrations of 1-5 ppm can result in negative effects in animals and humans. Producers

concerned about these mycotoxins should have grain tested prior to feeding to animals. Contact the state or local extension office for more information about testing for mycotoxins.

When high levels of Fusarium head blight are present in fields, precautions can be taken to reduce mycotoxin contaminations of the grain. The mycotoxin contamination is often highest in the severely diseased kernels. **Adjusting the combine to blow out the small, shriveled kernels can help reduce mycotoxin levels.**

Harvested grain should be dried to 13.5 percent moisture as soon as possible to limit continued fungal growth. Grain suspected to have been damaged by Fusarium head blight should be tested for DON and zearalenone at a private agricultural lab or grain elevator. Do not mix contaminated grain with good grain prior to a mycotoxin analysis. The mixing will result in more contaminated grain, which may be difficult to sell.

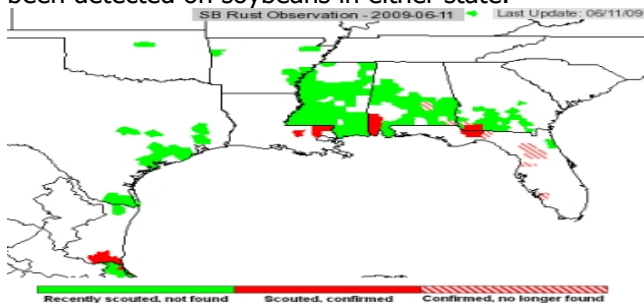
Edited from Penn State fact sheet on Head Blight authored by Eric DeWolf.

http://www.wheatcab.psu.edu/PDF/Fusarium_Head_Blight_.pdf

Soybean Rust Update

Bob Mulrooney
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On June 9, soybean rust was detected on kudzu in Grady County, Georgia. On June 8, soybean rust was confirmed on samples collected in late May from a soybean sentinel plot in Washington County in Alabama. On June 4, soybean rust was found in a soybean sentinel plot in Iberia Parish in Louisiana. The reports of soybean rust on soybeans in Alabama and Louisiana are the earliest the disease has ever been detected on soybeans in either state.



Postemergence Herbicides with Residual Activity

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The recent rain and favorable conditions for weed growth have resulted in situations where postemergence herbicides are needed earlier than normal. Corn does not form a competitive crop canopy as quickly as soybeans and other crops, so weeds can become established after an early postemergence application and compete with corn. Do not

wait to apply postemergence herbicides because early-season weed competition in corn can reduce corn yields.

The strategy is to use a postemergence herbicide that will provide residual weed control. Many of our postemergence herbicides provide little to no residual control (including glyphosate, Ignite, Banvel, Aim). The residual herbicides that are typically used at planting can be applied early postemergence, but they will not control emerged weeds (see the article titled [Delayed Soil Applied Herbicide Application](#) in [WCU 17:8](#)). The following herbicides provide postemergence and residual weed control: Accent, atrazine, Beacon, Callisto, Hornet, Option, Resolve, and Sandea.

Postemergence Herbicides That Can Provide Residual Weed Control

Herbicide	Premixes ¹	Strength	Weakness
Accent	Steadfast	some grasses, pigweed	crabgrass, limited spectrum of control
atrazine	numerous	broadleaf weeds; residual control depends on rate	grasses, triazine-resistant biotypes
Beacon	NorthStar	pigweed	grasses, limited spectrum of control
Callisto	Halex GT	broadleaf weeds (Halex GT contains Dual for grass control)	grasses, ragweed, morning-glory
Option	Equip	some grasses	crabgrass, limited spectrum of control
Resolve	Steadfast, Basis	some grasses, pigweed, lambsquarters	crabgrass, large-seeded broadleaf weeds
Sandea	Yukon	lambsquarters, nutsedge, pigweed, ragweed	grasses
Hornet	Sure Start	SureStart is broad-spectrum, grass and broadleaves (contains acetochlor ²)	morning-glory

¹The premixes of Halex GT and SureStart significantly improve the spectrum of control over Callisto or Hornet, respectively.

²Sure Start will not control emerged grasses. Nightshade is a species that can emerge for an extended period of time and fields infested with it should include a residual herbicide when treated postemergence. Atrazine and Callisto are the best two options for residual control of eastern black nightshade.

Postemergence Control of Pokeweed

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Pokeweed has been on the increase the past few years and this looks like it may be the worst year yet. I have seen many fields with pokeweed

seedlings emerging and I suspect there will be a number of fields needing a postemergence herbicide to control them. We have had limited experience with pokeweed, but we had a small test and found dicamba [Banvel, Clarity, Sterling]; Distinct; NorthStar, and Callisto were the best treatments for conventional corn hybrids. Glyphosate was also effective if Roundup Ready corn was planted. Our trial did not include Lightning, but a trial at Southern Illinois University reported good control with Lightning with Clearfield corn. For soybeans, glyphosate appears to be the best option; although it is not highly effective on this species. In non-Roundup Ready soybeans, Synchrony was fair in our results (but requires STS-soybeans) or FirstRate which was only fair in the SIU trial.

Postemergence Control of Glyphosate-Resistant Horseweed

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Options for controlling horseweed resistant to glyphosate after the soybeans have emerged are very limited. FirstRate or Classic are only effective on small, newly emerged seedlings. However, neither FirstRate nor Classic, will consistently kill large horseweed plants nor plants that were "burned off" and are recovering. These herbicides may provide some suppression, but results have been quite erratic the past few years. Horseweed plants are generally not very tolerant of shade and most soybeans will begin to canopy over the horseweed and out-compete them. In most cases, I have recommended to not spray emerged horseweed plants with another herbicide. Rather, make postemergence applications of glyphosate based on need to control other weed species. Additional glyphosate applications will provide some suppression of horseweed and give the soybeans a chance to outcompete them.

Troubleshooting Sweet Corn Stand & Early Vigor Problems

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This year has been challenging for early planted sweet corn and a number of fields have reduced stands and poor seedling growth. There are many causes for poor sweet corn stands and low vigor in emerging seedlings. The following is a list of possibilities from my observations over the years:



- Often farmers are pushing the limits and are planting sweet corn too early. While field corn will start to germinate at 50°F, many types of sweet corn need much warmer soils. This is especially true of supersweets and

other shrunken types which perform best at soil temperatures 65°F or higher.

- One of the obvious issue is early planting in cold soils. Sweet corn that takes more than 10 days to emerge is at great risk of injury due to insects and diseases as seed treatments dissipate. It is also at risk to damage from soil applied herbicides due to prolonged exposure of the mesocotyl to the chemicals.
- Seedling blights can be an issue, especially in overly wet soils. A recent article on seedling blights from the Iowa State Integrated Pest Management News relating to field corn applies well to sweet corn (<http://www.extension.iastate.edu/CropNews/2009/0519robertson.htm>). The following are some excerpts:

Survival of young corn seedlings depends on a healthy kernel and mesocotyl which should remain firm and white through at least growth stage V6. Damage to the kernel or mesocotyl prior to establishment of the nodal root system can result in stunted, weak or dead seedlings. A developing corn seedling relies on the kernel endosperm for nourishment until the nodal root system has fully developed, usually around the 6-leaf stage. Thus the mesocotyl acts as the "pipeline" for translocation of nutrients from the kernel and seminal roots to the seedling stalk and leaf tissues.

Seedling diseases of corn (seed rots, seedling blights and/or root rots) are caused by numerous fungi including Pythium, Fusarium, Rhizoctonia, Aspergillus, Penicillium, and Trichoderma, all of which are common inhabitants of soils. In addition, these fungi also can be seed-borne in corn, except Pythium. Seedling susceptibility to infection increases the longer the seed sits in the ground, and the more stress germinating corn undergoes. Corn germinates well at soil temperatures above 68°F. When soil temperatures are below 55°F, germination is greatly retarded. Thus seedling disease often is more severe in early planted or no-till/reduced tillage fields because of cool soil temperatures.

Typical below ground symptoms associated with seedling disease include rotting seed and brown discoloration (rotting) of the mesocotyl and seminal roots. It is sometimes possible to determine in the lab which fungus is the culprit, however this information is not crucial since management options are the same for all seedling disease: plant high quality fungicide-treated seed, plant when soil temperatures are above 50°F, and ensure planting depth is not too deep.

- A number of times, I have found that stand issues are related to poor vigor in seed lots. Ideally, a cold germination test should be run on all seed lots to be used for very early plantings. Never used year old seed - this is especially critical for early plantings.
- Soil compaction and crusting over will lead to delayed emergence. The coleoptile and mesocotyl will be thickened and may "snake" or "corkscrew" below ground. Often you will also see the corn seedling leafing out underground in these conditions. Rotary hoes can be used to break up the crust in severe cases. If seedlings are underground for

extended periods or leaf out underground, they may never resume normal growth. Sidewall compaction in the seed slot due to smearing when planting in soils that are too wet will restrict early root growth to the slot and cause stunting.

- Waterlogging and compaction will lead to low oxygen conditions. In these conditions, the seedling root system will be intact but small and the corn shoot will also be smaller than normal with poor color. Seedlings will be thin and weak. Low oxygen restricts the mobilization and movement of reserves from the seed. Seedlings can sustain direct injury as cells in the mesocotyl and coleoptile die from oxygen starvation. This will appear as a water soaked area and the seedling will eventually collapse.
- Insect, slug, and bird damage is often a cause of poor stands. Seed corn maggots and wireworms can feed on the seed directly causing stand losses. Grubs feed on seedling roots causing stunting. Wireworms and certain grubs will also feed on the mesocotyl, causing seedlings to collapse. Cutworms will eat seedlings at the ground level. Slugs can feed heavily on emerging seedlings and are especially damaging when seed slots are open (due to planting in wet soils). Birds can pull out seedlings and eat the seed. In larger seedlings, stink bugs can pierce the growing point of emerged plants, killing the main shoot.
- Problems with planter fertilizer applicators may lead to fertilizer being placed too close to the seed resulting in salt damage to seedlings and reduced stands.
- I have often seen pH and nutrient deficiencies lead to dead spots or stunted seedlings in sweet corn. If the pH of the soil drops below 5.2, corn will often emerge and then die. This may be due to aluminum toxicity or to severe magnesium deficiencies induced by the low pH. In addition, roots will not grow in soils with this low of pH. High pH (above 6.5) can lead to chlorotic seedlings and stunting in some soils, due to manganese and/or zinc deficiency.
- Finally, I have seen sweet corn fields with dead areas and poor stands due to certain species of nematodes. In troubleshooting, this is another possibility to consider, especially in very sandy soils.

No-till Shows Benefits When Switching From Grasses to Corn

Dennis O'Brien
May 27, 2009

The national push for biofuels may encourage farmers to plant corn where environmentally friendly grasses are now grown. But those making the switch can still sequester soil carbon and reduce greenhouse gas emissions by not tilling the soil, according to [Agricultural Research Service](#) (ARS) scientists.



Photo courtesy of the Natural Resources Conservation Service, USDA.

In a six-year study, when no-till corn was planted into bromegrass sod, the levels of carbon stored in the soil remained the same, so the switch from grass to corn didn't contribute to greenhouse gases by releasing carbon to the atmosphere as carbon dioxide.

[Ron Follett](#), a senior supervisory scientist at the ARS [Soil Plant Nutrient Research Unit](#) in Fort Collins, Colo., spent six years monitoring levels of soil organic carbon in a Nebraska field where bromegrass was grown for 13 years and the field then was converted to no-till corn.

The effort is one of the most comprehensive field studies yet to address a major issue in agriculture: the effects of replacing native grasses with corn. Bromegrass became a popular alternative in the 1990s for Midwestern farmers trying to save erodible soils, enhance habitats and increase soil organic carbon. Under conventional tillage, much of this carbon is released into the atmosphere as carbon dioxide, a greenhouse gas that contributes to global warming. Nationwide, there are 35 million acres of bromegrass and other plants grown in exchange for \$1.8 billion in annual payments as part of USDA's [Conservation Reserve Program](#) (CRP).

But as demand for biofuels raises corn prices and CRP contracts end, farmers may replace grasses with corn. Follett and his team used herbicide to kill the grass in the fall of 1998 and planted no-till corn the following spring. They collected soil samples at three depths to analyze the total amount of soil carbon at each depth and determine whether the carbon was previously sequestered by bromegrass or newly sequestered by the corn.

Follett's results, recently published in [Agronomy Journal](#), show the benefits of no-till when making the switch. The researchers found yields were decreased because of extended drought conditions, but the total amount of carbon didn't change. The rates of loss of soil organic carbon previously sequestered in the top two depths by the bromegrass were offset by similar rates of increase in newly sequestered carbon from the corn. There also was little or no change in the amount of soil organic carbon from either the bromegrass or the corn at the third depth.

ARS is the principal intramural scientific research agency of the [U.S. Department of Agriculture](#).



Honey bee pollinating an almond flower. Photo courtesy of Jeff Pettis, ARS.

Survey Reports Latest Honey Bee Losses

Kim Kaplan

May 19, 2009

WASHINGTON--Honey bee colony losses nationwide were approximately 29 percent from all causes from September 2008 to April 2009, according to a survey conducted by the [Apiary Inspectors of America](#) (AIA) and the [U.S. Department of Agriculture](#).

This is less than the overall losses of about 36 percent from 2007 to 2008, and about 32 percent from 2006 to 2007, that have been reported in similar surveys.

"While the drop in losses is encouraging, losses of this magnitude are economically unsustainable for commercial beekeeping," said [Jeff Pettis](#), research leader of the [Agricultural Research Service](#) (ARS) [Bee Research Laboratory](#) in Beltsville, Md. ARS is USDA's principal intramural scientific research agency.

The survey was conducted by Pettis; Dennis vanEngelsdorp, president of AIA; and Jerry Hayes, AIA past president.

About 26 percent of apiaries surveyed reported that some of their colonies died of [colony collapse disorder](#) (CCD), down from 36 percent of apiaries in 2007-2008. CCD is characterized by the sudden, complete absence of honey bees in a colony. The cause of CCD is still unknown.

As this was an interview-based survey, it is not possible to differentiate between verifiable cases of CCD and colonies lost as the result of other causes that share the "absence of dead bees" as a symptom.

However, among beekeepers that reported any colonies collapsing without the presence of dead bees, each lost an average of 32 percent of their colonies in 2008-2009, while apiaries that did not lose any bees with symptoms of CCD each lost an average of 26 percent of their colonies.

To strengthen the beekeeping industry, ARS recently began a five-year area-wide research program to improve honey bee health, survivorship and pollination. Honey bee pollination is critical to agriculture, adding more than \$15 billion to the value of American crops each year.

For further reading

- [Coordinated research aims to improve honey bee health](#)
- [MegaBee nourishes beleaguered honey bees](#)
- [USDA announces colony collapse disorder research action plan](#)

The survey checked on about 20 percent of the country's 2.3 million colonies.

A complete analysis of the survey data will be published later this year. An abstract of the data is available on line at: <http://maarec.cas.psu.edu/pdfs/PrelimLosses2009.pdf>.



A new Mastering Marketing Highlight is now available "Direct Marketing Feeds-"Buy Local" has been posted to the web:

http://www.agmarketing.umd.edu/Pages/051909_MMHighlight_Buy_Local.pdf

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.



The Summer 2009 issue of the "Mastering Marketing" quarterly newsletter has been posted to the web at:

<http://www.agmarketing.umd.edu/Newsletters/AgMktgNwsSummer2009.pdf>

Topics in this issue include:

- ✓ Maryland Niche Meats and Poultry Producers' Collaboration
- ✓ Avoid Speaking "Farmese" to Consumers
- ✓ Community Supported Agriculture - the Ultimate "Buy Local" Marketing Model
- ✓ Maryland Rural Enterprise Development Center
- ✓ Vendor Tips for increasing Your Sales
- ✓ The Inside Quote
- ✓ Web Site on Local Foods

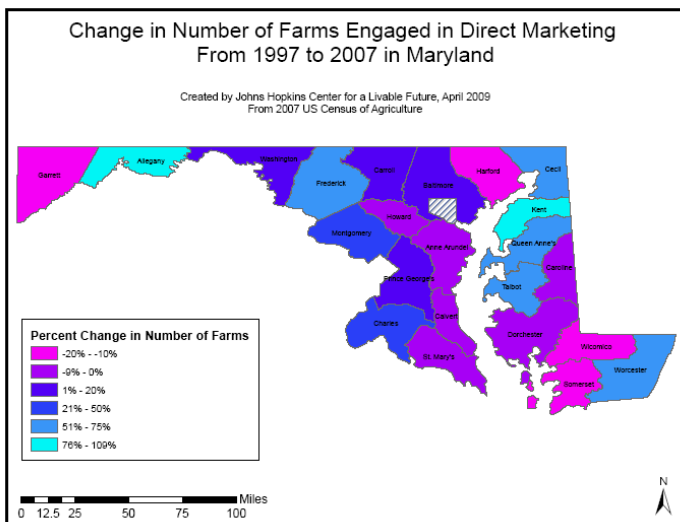
If you have any questions or comments about this publication or have clients or colleagues that would value receiving it as well, please contact Ginger Myers at: gsmyers@umd.edu or sbarnes6@umd.edu

Direct Marketing Feeds “Buy Local”

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Grocery stores and brokers have been purchasing “in-season” produce for years. As the season progresses, a glut of product drives down prices, allowing stores to capitalize on lower inventory costs. One solution to these falling prices was for farmers to try to get local produce into more stores. But, the problem with local into retail is mainly about distribution. Distributors usually work with brokers, not directly with producers.

Over the past 10 years there has been a significant increase in “direct marketing” farm produce in Maryland, putting a face and a story on locally grown or processed foods. The following graphic shows the dramatic increase in the number of farms engaged in direct marketing in Maryland since 1997.



Locally grown foods and products are now unique and “special” to consumers simply because by buying direct (e.g., local), consumers feel they can short circuit the industrial production and distribution systems, a source of food safety concerns and debatable production practices. The popularity of “local” is based on authenticity—real products, from real farmers.

Producer-only markets, transparency in sourcing products or livestock, accurate labeling, attention to food safety issues and concerns, and always offering high quality products are not just cornerstones of customer service, but form the keystone in the “buy local” trend. Directing marketing through farmers markets, agri-tourism operations, CSAs, and on farm retail stands provides an advantageous link in the distribution chain between consumers and producers.

New Maryland Niche Meats and Poultry Producers Directory

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Maryland’s niche meats and poultry producers have formed a new collaboration to foster the success of highly differentiated farm-raised meat and poultry value-chains that are profitable, that incorporate farmer ownership and control, and contribute to improved environmental stewardship and rural communities.

The Collaborative and the Ag Marketing Program of the University of Maryland Extension have joined together to produce the first, “Maryland Niche Meats and Poultry Producers’ Directory”. The purpose of this directory is to help restaurants, consumers, food brokers, producers, or anyone looking to purchase the freshest, best quality farm-raised meats available directly from Maryland farmers who raise it.

Farmers’ Market Masters can use the directory to locate and recruit vendors for Maryland’s rapidly growing number of farmers’ markets.

This directory has been organized by product for ease of aggregating suppliers. Many producers offer multiple products. The list is always growing and expanding, so the latest listings will be available on-line at:
www.agmarketing.umd.edu

The directory is available in PDF form at this website or a hard copy is available upon request. Directory application forms are also on this website.

Collaborative members are invited to participate in regularly scheduled conference calls to discuss marketing, processing, and educational opportunities.

For more information about the Collaborative, please contact:

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Maryland Department of Agriculture News

Celebrating Maryland Agriculture May 2009

GOVERNOR O'MALLEY SWEARS IN EARL "BUDDY" HANCE AS SECRETARY OF AGRICULTURE

"I am proud to swear in Buddy Hance as Secretary to Maryland's Department of Agriculture. Buddy is highly respected in both the environmental and agricultural communities and I am confident that he will continue the work that Secretary Richardson has done to build our vision for a smarter, greener, more sustainable State, while protecting our family owned farms, and Maryland's rich agricultural heritage." -- [Governor Martin O'Malley](#)

USDA, Gov. Sign New CREP Agreement

U.S. Department of Agriculture Secretary [Tom Vilsack](#) and Governor Martin O'Malley signed a revised Conservation Reserve Enhancement Program agreement (CREP) for Maryland at the Richard Soper, Jr., farm near Westminster on April 24.

With enhanced financial incentives, the new agreement is designed to encourage new enrollment and re-enrollment of expiring CREP contracts to protect soil and water quality in the Chesapeake Bay and its tributaries.

Under the new Maryland CREP agreement, the federal government may provide Maryland agricultural producers up to \$198 million in rental payments, incentive payments, and cost-share payments to install, maintain, or improve conservation practices over the next 15 years.

Maryland was the very first state in the nation to enter into a CREP partnership with the federal government back in 1997. Click [here](#) to learn more.

"Grow It, Eat It"- Plant a Food Garden!

Maryland is one of the first states in the nation to have a backyard food garden at the Governor's home. First Lady [Katie O'Malley](#) partnered with the [University of Maryland Extension](#) to promote their new campaign, "Grow It Eat It," which encourages Maryland families to improve health and save money by growing fresh vegetables, fruits and herbs using sustainable practices.

The campaign hopes to encourage one million Marylanders to produce their own affordable, healthy food. More information on the campaign and the University of Maryland's Master Gardener program can be found at www.growit.umd.edu. Click [here](#) to read more.

Burn It Where You Buy It! Stop the Spread of the Beetle

Governor Martin O'Malley has declared May 17-23 to be [Emerald Ash Borer Awareness Week](#) in Maryland. The



proclamation is part of an ongoing effort to inform residents about ways to help stop the spread of the emerald ash borer, a destructive pest that kills ash trees. Because the insect can be transported through firewood, the focus of the campaign is to encourage outdoor enthusiasts to leave firewood at home, buy it at their destination and burn it completely.

Ongoing surveys are crucial to understanding the emerald ash borer's impact in Maryland and determining the best course of action. Currently, MDA is hanging up to 4,000 purple triangular purple insect traps in trees statewide to determine the presence of the emerald ash borer. This year, the battle to stop the spread of the emerald ash borer will also include limited tree removal and a promising new chemical treatment of ash trees.

Bright red yard signs (much like campaign signs) are available to anyone who wants to raise awareness at their workplace, playground, or neighborhood. Just call 410-841-5920 or e-mail ppwmm@mda.state.md.us to receive any number of signs.

Log onto www.stopthebeetle.info to learn more about the emerald ash borer and ways that everyone can help stop its spread. Click [here](#) for more info.

"Take it From Maryland Farmers" Campaign Underway

As the gardening season ramps up, MDA wants to inform homeowners about practical gardening strategies to protect the Chesapeake Bay. ["Take it From Maryland Farmers: Backyard Actions for a Cleaner Chesapeake Bay"](#) highlights various conservation measures - best management practices - that farmers use to produce healthy crops and protect water quality in the Chesapeake Bay and its tributaries. By applying similar measures to home, lawn and garden projects, homeowners can join Maryland farmers working to protect the Bay.

Seven Ways to Fight Mosquitoes at Home

As the weather begins to warm, homeowners are reminded that their regular spring cleaning activities can help reduce mosquito populations and make spring outdoor activities more pleasant.

[Maryland's Mosquito Control Program](#) provides direct service to approximately 2,100 communities in 22 Maryland counties and Baltimore City. In addition to the state program, homeowners can take the following seven simple steps to help reduce standing water and resulting mosquito populations:

1. Remove any buckets, cups, bottles, plastic bags, etc. that may have accumulated outside.
2. Clean roof gutters (after the oak trees have finished flowering).
3. Check rain barrels to make sure they are completely screened (including around the down spout).
4. Remove any old tires (or drill holes in those used for playground equipment). Store usable tires in a shed or garage so they will not accumulate water.
5. Fix dripping outdoor faucets.
6. Introduce fish to ornamental ponds, even those with fountains or bubblers. Most fish will eat mosquito larvae.
7. Make sure outdoor trash cans have tight-fitting lids. If lids are not available, drill holes in the bottom of the can.





MDA ANNOUNCES NEW SPECIALTY CROP GRANT PROGRAM

Application Deadline is July 10

ANNAPOLIS, MD (May 29, 2009)

The Maryland Department of Agriculture (MDA) today announced a new grant program to fund projects that solely enhances the competitiveness of specialty crops. The Specialty Crop Block Grant Program was established by the 2008 Farm Bill.

MDA has set up a competitive grant process to award these federal funds in 2009. The Department will be administering funds totaling \$500,623 for the development of projects that will benefit Maryland's existing specialty crop producers. MDA intends to fund projects that can produce the highest degree of measurable benefits to Maryland specialty crop producers in relation to each dollar spent. Grants will be issued from \$25,000 to \$200,000 per project in Maryland.

Specialty crops are defined by the U.S. Department of Agriculture as fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops. Visit www.ams.usda.gov/AMSV1.0 for a comprehensive list of eligible specialty crops.

MDA is seeking applications from eligible non-profit organizations, government entities, for-profit organizations and universities for projects that aim to promote or enhance the production of and access to Maryland specialty crops. Applicants must reside or their business or educational affiliation must be in Maryland.

Electronic grant applications must be submitted by 5:00 p.m. on July 10, 2009. Paper applications must be postmarked by July 10, 2009. MDA will conduct a conference call on June 10 to go over details of the program for interested applicants. For questions about the grant application, to register for the conference call, or to download the application, visit: www.mda.state.md.us/pdf/specialtycrop.pdf or contact Karen Fedor at FedorKM@mda.state.md.us

Karen Fedor, Maryland Department of Agriculture
Direct: 410-841-5773, Fax: 410-841-5987

VALUE ADDED PRODUCER GRANTS AVAILABLE FROM USDA AND MARBIDCO

We just want to be sure that everyone in the rural business community is aware of the availability of grant funding from USDA-Rural Development, as well as MARBIDCO, for value added processing activities. This is a tremendous financing opportunity for farmers looking to diversify their enterprises that is only made available once each calendar year.

The grant funding being offered by MARBIDCO is designed to encourage Maryland's independent agricultural producers to enter into value-added activities and pursue financial support from the U.S. Department of Agriculture's Value Added Producer Grants Program (USDA-VAPG). The USDA-VAPG is a highly competitive nationwide funding program with approximately \$18 million available for distribution in 2009. These grant funds can be used for planning or working capital, and eligible purposes include determining appropriate marketing techniques and creating business plans, or paying operating costs before a business has sufficient cash flow from operations.

MARBIDCO will make available through its Maryland Value Added Producer Grants Program (MVAPG) matching grants of up to 20% of the amount of an USDA-VAPG award to help an eligible applicant meet the non-federal financial matching requirement. A MVAPG monetary award from MARBIDCO will only be provided to an applicant that is actually selected to receive USDA-VAPG funding.

The previously announced USDA-RD deadline for "non-reserved funds" USDA-VAPG applications is July 6, 2009, and for "reserved funds" is June 22, 2009. The deadline for submission of MARBIDCO MVAPG applications is June 8, 2009 for "reserved funds", and June 22, 2009 for "non-reserved funds". Alternatively, applications may be received in the mail with a June 5, 2009 postmark (for reserved funds) or June 19, 2009 (for non-reserved funds). However, we recently learned from USDA-RD officials that the reserved funds application submission deadline is likely going to be moved back to July 6. If this is in fact the case, all MVAPG applications will be due to be submitted to MARBIDCO by June 22 (hand-delivered) or June 19 (post-marked).

For more information about the USDA-VAPG and the MVAPG, or visit MARBIDCO on the web at: <http://www.marbidco.org/business/mvapg.html> "Growing Rural Ventures", Maryland Agricultural and Resource-Based Industry Development Corporation www.marbidco.org

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New Growing Degree Days Calculator Offered

In a partnership between Monsanto Company and The Weather Channel Interactive, the two have launched the Growing Degree Days calculator on [The Weather Channel's Web site](#).



The Web site section, launched in January, has been a success with the agricultural community. As growers began using the site, they also offered feedback about future

designs, including the addition of a growing degree day calculator. The Weather Channel Interactive and Monsanto have worked together to create the online tool available to compute growing degree days (GDD), a measurement that relates to anticipated crop growth by calculating the amount of accumulated heat over a specific period of time. Farmers enter location, select a base temperature and choose start and end dates to get their GDD result.

"The growth and development of crops is directly impacted by the growing degree days, and having this information available can help farmers make better informed management decisions," said Boyd Carey, lead of technology development for Monsanto. "TWCi has created an easy way for growers to run those calculations to compare different years at a given location. In a spring like this one where we've had so much rain and so many cloudy days across our agricultural production areas, this tool could prove useful immediately."

Farmers can compare two different years' GDD (as far back as 2003) for the same date range and location. Additionally, each calculation — one of the most complex on weather.com — includes the 30-year-average GDD for the selected dates and location, alerting farmers to the typical GDD for the selected time frame and location. The calculator uses both forecast and 30-year climatology data from The Weather Channel, allowing for past, present or future calculations. The calculator draws from the most accurate weather data available, using proprietary TruPoint technology created by The Weather Channel. TruPoint forecasts allow for future weather information accurate up to 2 kilometers (1.24 miles). This technology combines traditional weather observations with even more data to create forecasts for more than 1.9 million locations — literally filling in the gaps of the reporting systems used by other providers.

Source: Monsanto and The Weather Channel news release

Grain Marketing Highlights

Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu



June Supply and Demand Highlights

The seasonal rally is expected to resume based upon a favorable June supply and demand report. Bear in mind that the planted acreage estimates for this month's report are based upon the earlier March 31 Prospective Plantings report. The next planted acreage estimates will not be released until June 30. These estimates should be viewed as very preliminary but headed in the right direction.

Corn Analysis

Due to late planting in the Eastern Corn Belt, USDA lowered the projected yield for '09 U.S. corn production to 153.4 bushels per acre, a two bushel per acre decline from a month ago. Beginning stocks were unchanged, as were the projection for harvested acres, and imports resulting in a total supply projection of 11.935 billion bushels, 155 million bushels less than the May estimate.

On the demand side of the equation, USDA lowered the estimate for feed use 100 million bushels. All other demand items were left unchanged from last month, now projecting total demand at 12.460 billion bushels. Ending stocks for U.S. corn for the '09/'10 marketing year are now projected at 1.090 billion bushels, 50 million bushels less than last month. The season average farm price estimate was increased 20 cents per bushel on both ends of the price range, now estimated at \$3.90 to \$4.70 per bushel.

World corn ending stock estimates were lowered 3.75 MMT from the May estimate, due primarily to increased demand. World corn ending stocks for the '09/'10 marketing year are now estimated at 125.46 MMT as compared to 138.54 MMT for the '08/'09 marketing year and 130.7 MMT for '07/'08.

Soybean Analysis

The U.S. soybean production estimate was left unchanged from a month ago at 3.195 billion bushels. At this point in time, there were no changes made in planted, harvested acreage, and/or projected yield. Those numbers will be updated in the July supply and demand report.

The only change to the supply and demand projections for U.S. soybeans is attributed to the lowering of the beginning stocks number, reduced 20 million bushels from last month. This reduced the total supply projection by 20 million bushels, now placed at 3.317 billion bushels.

Ending stocks for U.S. soybeans for the '09/'10 marketing year are now estimated at 210 million bushels, 20 million bushels less than last month. The season average farm price was increased on both ends of the price range, now estimated at \$9.00 to \$11.00 per bushel.

World ending soybean stocks were reduced from last month's estimate of 51.88 MMT and are now projected at 51.02 MMT. World ending soybean stocks for the '08/'09 marketing year were 41.85 MMT and 52.92 for the '07/'08 marketing year.

Wheat Analysis

U.S. wheat production was decreased due to a drop of 2/10th per bushel in the per acre yield estimate for all wheat, placing production at 2.016 billion bushels, down 10 million bushels from a month ago. Imports and beginning stocks were left unchanged, bringing the estimate for total supply in at 2.8 billion bushels. The demand for feed wheat was reduced 20 million bushels while all other demand items were left unchanged.

Ending stocks for all U.S. wheat are now estimated at 647 million bushels, a 10 million bushel increase from a month ago. The season average farm price is now estimated at \$4.90 to \$5.90 per bushel, an increase of 20 cents per bushel on both ends of the price range from last month.

World ending wheat stocks were increased slightly from last month, now estimated at 182.65 MMT. World ending wheat stocks are projected to be 14.25 MMT larger than last year and 62.68 MMT larger than the '07/'08 marketing year.

Marketing Strategy

The summer commodities market will be marked by price volatility. Several factors will contribute to keeping commodity prices bouncing around. First, weather developments will play a major role in the direction that commodity prices take considering the lateness of planting in the Eastern Corn Belt. Commodity traders will be watching crop development throughout the season. Ideal weather would lead to lower prices, while weather problems would obviously lead to higher pricing opportunities.

Second, outside market forces e.g., value of the dollar, price of oil, the stock market, and noncommercial fund trading will all have a significant impact on commodity prices as the summer progresses. With the SRW wheat harvest just around the corner and large stockpiles of wheat in the world, new crop SRW wheat could now be on a trek to making a harvest low before resuming more normal pricing patterns.

Technically speaking, resistance for new crop Dec corn futures is now at \$4.72, support at \$4.33; resistance for new crop Nov soybeans is at \$11.77, support at \$10.47; and new crop July SRW wheat resistance is at \$6.76, support at \$5.63. Currently, Dec '09 corn futures are trading at \$4.64; Nov '09 soybean futures at \$10.76; and July '09 SRW wheat at \$6.01 per bushel. For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

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www.webixi.com/grainguide and *Farm Fresh Retail/Wholesale Marketing Web Site* www.agriculturehealth.com



The screenshot shows the Farmdoc e-news website interface. At the top, there is a logo for 'farmdoc e-news' and 'UNIVERSITY OF ILLINOIS' on the left, and 'Agricultural and Consumer Economics' with the website URL 'www.farmdoc.uiuc.edu' and the date 'June 2009' on the right. Below the header, there is a 'Latest Publications' section with a red background. Underneath, there are several categories of news: 'Weekly Outlook Newsletters' with links to 'Will the U.S. Run Out of Soybeans?' and 'Marketing the 2009 Soft Red Winter Wheat Crop'; 'Marketing and Outlook Briefs' with a link to 'Early Prospects for 2009 Corn Yields in Illinois, Indiana, and Iowa'; 'Marketing and Outlook Research Reports' with links to 'Poor Convergence Performance of CBOT Corn, Soybean and Wheat Futures Contracts: Causes and Solutions' and 'Illinois Farm Economics: Facts and Opinions (FEOs)'; and 'Agrinews Columns' with links to 'Evaluating Economic Alternatives For Late Plant', 'Late Planting and Crop Insurance', 'Average Cash Rents per County in 2008', 'Five-Year Olympic Average Yields and ACRE', 'Updated 2009 Budgets: Return Projections, 2010 Cash Rents, and Planting Decisions', 'GRIP Provides Superior Price Protection to CRC or RA', 'The Financial Crisis: Linkages and Impacts in Agriculture', 'Farm-Level Yields and ACRE Payment Eligibility', and 'New Crop Basis Much Stronger Than That of a Year Ago'. To the right of the publications, there is a small image of a field and a subscription form with buttons for 'SUBSCRIBE', 'UNSUBSCRIBE', 'PRINT E-NEWS', 'EMAIL FARMDOC', and 'SPAM/PRIVACY'. Below the form, there is a copyright notice for 2009 and a tip for forwarding e-news to others.

Farmdoc e-news

A new Marketing and Outlook Brief entitled "Early Prospects for 2009 Corn Yields in Illinois, Indiana, and Iowa" is available on the *farmdoc* website at: www.farmdoc.uiuc.edu/enews :

New NRAES Publication: *Crop Rotation on Organic Farms: A Planning Manual,* NRAES-177

Crop Rotation on Organic Farms: A Planning Manual, NRAES-177, will be available in July 2009. This new 150-page book will be a boon to organic farmers, farm advisors, and educators interested in learning how to plan and manage an effective crop rotation system. Working with expert organic farmers, the authors have developed crop rotation guidelines and strategies that can be applied under various field conditions and with a wide range of crops. Through June 15, NRAES is offering pre-printing prices that are 30-40% off the \$24 list price. For more information on this book and to place a secure order online, visit <<http://www.nraes.org/>>www.nraes.org

For 35 years, NRAES has published practical, science- and experience-based books on a variety of subjects including fruit and vegetable production; natural resources; landscaping; personal finance; composting; and livestock and dairy. SARE, <<http://www.sare.org/>>www.sare.org, provided funding that made this book possible.

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Weed Control Laws and the Woods in Your Backyard

The development of more natural landscapes in a major initiative in many locales because it reduces the environmental impacts of herbicides and fertilizers and encourages natural areas that benefit wildlife, water quality, recreation and the connection to the outdoors. There are a number of federal, state, county, and local programs that encourage converting old fields on public and private properties into trees and natural areas.

The parcelization of the landscape into small lot subdivisions has created many rural and exurban ownerships under 10 acres in size that are either woods, fields or a mix of the two. In Maryland, the number of woodland owners that own from 1-9 acres has increased from 55% of the total in 1977 to 85% of the total in 2006. This parcelization has come from the breaking up of larger properties.

The challenge is how to educate small acreage woodland owners about how to make informed decisions about enhancing or creating woodland, so they can gain greater enjoyment for recreation, aesthetics, wildlife, and water quality. A key resource for the program is the self-assessment manual, *The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home*.

Unfortunately, local weed control laws can make it difficult for a landowner who wants to transition an existing lawn area to woodland, since most weed control laws set a maximum height beyond which the owner must cut the vegetation. The trends mentioned above have created a type of new land ethic that can be in conflict with local weed control laws. This fact sheet will provide some background of weed control laws and suggest modifications and principles that should be considered by local governments to have their weed control and natural areas too.

Definitions:

- *Natural Area* - self-sustaining areas with native vegetation, water, or natural features.
- *Natural landscaping* – the practice of cultivating plants which are native to the region without resorting to artificial methods.
- *Weed* – A plant considered undesirable, unattractive or troublesome, especially one growing where it is not wanted.
- *Weed law* – A federal, state, county and local, statute, regulation or ordinance which limits the type or size of vegetation which grows or is cultivated on land within a jurisdiction.

History of Weed Control Laws and Significant Legal Battles

- *Why Have Weed Control Laws?* To protect the public from neglectful landowners whose littered yard could attract rats, mosquitoes or present a fire hazards. Enforces a certain type of aesthetic conformity.
- *What is the Problem?* Local weed laws tend to protect and proliferate turf and the resulting environmental consequences, while hindering natural area development.

Arguments for Weed Control Laws

- *Fire prevention* – grass fires do not sustain fires. Burning laws can better control fire problems.
- *Vermin* – naturally vegetated areas do not sustain rats and other vermin
- *Mosquitoes* – they require standing water which is not usually a problem in natural areas
- *Pollen* – wind-borne pollen may travel hundreds of miles so local weed ordinances have virtually no effect on reducing allergy causing pollens (*Board of Supervisors of Fairfax Co, VA v. Wills and Van Metre, Inc, 1976*). Ragweed is a problem but this species is quickly succeeded by grasses.
- *Aesthetics* – natural areas don't look nice to some and appear messy. Beauty is in the eye of the beholder.

Court Cases

- *Lorrie Otto* – 1950's. Suburban Milwaukee 1.5 acre property. Created field with aster, goldenrod, and ferns. Convinced public officials natural landscaping a public good and not a health hazard.
- *City of Berlin vs. Hagar* – several acre meadow. No proof of health, fire or pollen hazard, or effect on property values.
- *Montgomery Co, MD vs. Stewart* – 1987 – six-acre natural landscape. Weed ordinance citation issued. No danger to safety or health of residents. County changed ordinance.
 - Modification: Allow meadows as long as there is a 15-foot buffer maintained at 12 inches or less, and species on a noxious weed list are controlled.
- *Little Rock, AK v. Allison* – 1/2 acre in Little Rock – violation of 10-inch weed ordinance. Testimony that natural landscapes do not attract rats or pest snakes, but attract songbirds.
- *The "Chicago 5"* – 1991 - battle to convince city to permit residents to allow natural landscaping, something the state, county and park district actively practice on public lands. "Chicago 5" included Natural landscapers, North Branch Prairie Restoration Project, Bob-O-Link Prairie Reconstruction Project, etc
 - Fed up with continuous threats of citation for violating the weed ordinance, filed federal suit to declare Chicago Weed Ordinance unconstitutional.

Modified Weed Control Laws

The following two modification clauses can be used in weed control laws to accommodate natural area development but retain the traditional prohibition of growing "weed" or "rank vegetation":

1. *Setback ordinance* – setback from a property line with a maximum vegetation height
 - Distance could depend on land use
2. *Natural landscape exception clause* in ordinance to protect natural landscapes
 - Native plantings, wildlife, erosion control, programs, parks and open space, wooded areas

Principles to Consider for Developing Local Weed Laws

1. The ordinance should protect the fundamental right of residents to choose their own landscaping;
2. The ordinance should apply equally to all residents as well as the City, County and State, if possible;
3. Any restrictions in the ordinance should have a rational basis; *i.e.*, a legitimate interest in public health, safety or welfare;
4. The ordinance must not legislate conformity or aesthetics nor allow residents of the jurisdiction to exercise control over their neighbors' landscapes;
5. The ordinance should not require the filing of an application, statement of intent, joining a program, or management plan; and there should be no review or approval process or fees assessed against residents who intend to engage in legitimate natural landscaping;
6. In order to avoid harassment of natural landscapers, the "weed commissioners" who will enforce the Natural Landscaping Ordinance, and thereby differentiate between those people who are growing permitted natural landscapes versus those with unpermitted growth, should be able to distinguish between the two;
7. Enforcement of the ordinance should be undertaken through due process of law which guarantees individuals the right to fair adjudication of their rights; and,
8. The ordinance should address the problems of environmental degradation brought about by proliferation of high maintenance monocultural landscapes, and the indiscriminate use of toxic chemicals in landscape management. It should encourage the preservation and restoration of diverse, biologically stable natural plant communities, and environmentally sound practices. This would reduce not only contaminants to the environment such as pesticides, fertilizers, pollutants and noise, but would help reduce the accumulation of yard waste

Educating Landowners - The Woods in Your Backyard Program

The *Woods in Your Backyard* program is targeted to small acreage landowners who are interested in enhancing woodland or creating woodland, so they can gain greater enjoyment and make more informed decisions for recreation, aesthetics, wildlife, and water quality. A key resource for the program is the self-assessment manual, *The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home*. Since the release of the manual in fall 2007, almost 4000 books have been sold nationally and over 1400 landowners have received training - 70-80% indicate they have transitioned lawn to natural areas. Weed control laws need to be reviewed to make sure they are counterproductive to educational efforts. More information on the publication and program is available at: www.naturalresources.umd.edu

References

Green Landscaping: Greenacres, The John Marshall Law Review, Vol. 26, Summer, 1993, No. 4

<http://www.epa.gov/greenacres/weedlaws/index.html>

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<http://pubs.cas.psu.edu/freepubs/pdfs/uh142.pdf>

Kays, J. S., J. Drohan, A. Downing, & J. Finley. (2006). *The Woods in Your Backyard: Learning to Enhance and Create Natural Areas Around Your Home*. (NRAES-184). Ithaca, NY: Natural Resource Agricultural Engineering Service (NRAES). 138 pp.

<http://www.naturalresources.umd.edu/EducationalWBYS.html>

Model Modified Weed Ordinances examples: Natural Landscaping Ordinance 932, College Station Texas Proposed Natural Landscape Ordinance, and City of New Berlin v. Hagr

<http://www.epa.gov/greenacres/weedlaws/JMLRAPndx.html#APPENDIX%20A>

Compiled by Jonathan Kays, Natural Resources Extension Specialist, jkays@umd.edu – May 2009

This is a draft information sheet developed for the Western Maryland Local Government Exchange that still requires further peer review before it is finalized. *Primary Source: Green Landscaping: Greenacres, The John Marshall Law Review, Vol. 26, Summer, 1993, No. 4*

Department of Agriculture News

Celebrating Maryland Agriculture June 2009

Buy Local Week

This year, Buy Local Week will take place from July 18-26.

During this week, Marylanders are asked to eat at least one locally grown product each day.

Governor Martin O'Malley will kick off the challenge with a [cook](#)

[out](#) at Government House on July 16. The hope is that as people become more familiar with eating food in season, they will look for and buy local products all year long.

Farmers now get less than 10 cents of the retail food dollar. Buying local food helps local farmers take home more of the dollars we spend on food and promotes healthy eating habits, fresh food, local families, local economies, and is safer because you know where it is coming from.

The [Maryland's Best](#) and the Buy-Local-Challenge [website](#) have plenty of recipes from local chefs that will make you love your local produce even more and if you want to eat local all year round, including a [chart](#) of what is in season.

People Profile: Tom Hartsock

Tom Hartsock, the new Chair for the Maryland Agricultural Commission, has a lifetime of experiences with agriculture. He grew up on a dairy farm in central Pennsylvania where he was involved in 4-H. Throughout his college years, Hartsock focused his studies on swine and researched ways to adapt swine facilities to natural behaviors in order to assist pork producers in overall management. He received a Ph. D. in Animal Nutrition from Pennsylvania State University where he wrote his dissertation on the "Behavior and Nutrition of Newborn Domestic Swine." He is a recently retired professor at the University of Maryland where he taught a variety of courses, although in his last years he mostly specialized in teaching livestock management of beef, sheep, goats and swine. While there, he also served as Director of the Institute of Applied Agriculture (IAA).

As Chairman, Hartsock hopes to help the citizens of Maryland understand full breadth of the term "agriculture." He wants to instill the idea that agriculture is a part of daily life and encompasses more than just swine and soybeans. He wants to reinforce that many other fields such as forestry and wildlife are also included in the umbrella term "agriculture."

Another goal Hartsock has is to help secure the future of agriculture in Maryland. He believes one way to do this is to increase profitability of agriculture, which will ensure that people who have an interest in an agricultural profession are able to make a profitable living and follow through with these dreams. He also hopes to minimize the development

of farmland, an unfortunate trend that results from an expanding population and high land prices.

Hartsock has an abundance of experiences that equip him for his new position. On a personal level, Tom owns and operates Porky Pines Farm in Clarksburg, Maryland, which currently produces hay that he sells and feeds his horses.

Hartsock serves on the Maryland Pork Producers Association Board of Directors, the Montgomery County Farm Bureau Board of Directors and served on the Maryland Organic Certification Advisory Committee.



NRCS Extends Sign-Up for New Organic Conservation Initiative to June 26

The Natural Resources Conservation Service (NRCS) in Maryland has extended the application period for the new Organic Initiative under the Environmental Quality Incentives Program (EQIP) to June 26, 2009. NRCS Maryland received \$376,000 in financial assistance funds under the initiative.

Farmers interested in this program need to contact their local NRCS office right away to begin the application process. Although NRCS accepts program applications on a continuous basis, only applications received by June 26, 2009 will be considered for funding under this special EQIP Organic Initiative.

The 2009 Organic Initiative is a nationwide special initiative to provide financial assistance to National Organic Program (NOP) certified organic producers as well as producers in the process of transitioning to organic production. Organic producers may also apply for assistance under general EQIP.

There are six core practices eligible through this initiative. They are Conservation Crop Rotation; Cover Crop; Nutrient Management; Pest Management; Prescribed Grazing; and Forage Harvest Management. Additional conservation practices will also be eligible under the EQIP Organic Initiative.

Interested producers should visit their nearest USDA Service Center to determine eligibility. When farmers come into NRCS offices to apply, they should bring proof of farm ownership or control of the land and their farm's Organic System Plan.

Additional information on the 2009 EQIP Organic Initiative is available at: www.nrcs.usda.gov/programs/eqip/

Nutrient Management Update

Krista Mitchell

Nutrient Management Advisor

Anne Arundel & Howard Counties

Existing clientele will be contacted this summer, especially horse operations, to get started on 2010 Nutrient Management Plan Updates. Due to Anne Arundel County's



Nutrient Management Advisor being shared with Howard County, and in order to accommodate all of our clients, 2010 plan updates must start now, so we can get to all the producers that need plan for the 2010 growing season. The goal is to have 2010 Nutrient Management Plans in your hands by January 1st, 2010. Some clients were turned away this year because they waited until February to call for their plan update and our waitlists were full. Soil

moisture levels are great for soil sampling right now, so if your soil analyses are set to expire before or during the 2010 growing season (soil analyses are good for 3 years); please sample your soil soon to be ready for your plan update.

Summertime for the Nutrient Management Program means that your nutrient management advisor is available to assist you with the Pre-Sidedress Nitrate Test (PSNT), manure spreader calibrations, tissue sampling, and yield checks. The MD Department of Agriculture (MDA) now requires that records be kept documenting equipment calibrations, in order to determine your rate of nutrient applications. For assistance and equipment needed to document your manure spreader's rate of application, contact your nutrient management advisor today.

If you grow corn and forage legumes in rotation, have a history of manure applications, and have applied less than 50 pounds per acre of commercial fertilizer nitrogen to your corn this season, you may benefit from the PSNT. The PSNT is an in-office analysis used to determine how much, if any, sidedress nitrogen is needed for your corn crop to achieve optimum yields. Call your nutrient management advisor when your corn is 6-12 inches tall to schedule your analysis.

For producers who grow tree fruit or small fruit, such as: grapes, blueberries, or brambles; tissue (& soil) sampling season is approaching and there is only a small window when samples can be taken. For assistance with tissue sampling and to obtain instructions on when and how to properly take a tissue sample (i.e. only one variety per sample & what part of plant to sample), contact your nutrient management advisor. Like soil samples, tissue samples are an integral part of a NMP, and are required content. Tissue and soil analyses taken in conjunction are needed in order to give fertilizer recommendations for fruit

crops and to keep you in compliance with Maryland's Nutrient Management Law.

If you have a self-sufficient farm and/or don't take your harvested crops to the grain elevator, in-field yield checks should be conducted. MDA requires producers to keep yield records to determine realistic yield goals (average of best 3 out of 5 years' yields) and is needed for your nutrient management plan development. Your nutrient management advisor is available to assist you with in-field yield checks for silage and grain corn. Yield checks are done as close to harvest as possible.

Check Out Our Updated County Website



Christie Germuth is our website designer. Christie has recently updated our website, and we hope that you find the additions helpful.

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/>

Attention! Attention!

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/agbulletins.cfm>

Ag Web Modules

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

4-H News

Patrick Thompson, 4-H FEA,
University of Maryland



Are you between 8 and 18 or know someone who is? If so have you considered joining 4-H? The Anne Arundel County 4-H program is growing and is always looking for new members and volunteers. The program has community clubs located throughout Anne Arundel County but is also looking for volunteers and members to lead new groups. There are a variety of projects members can participate in including animal science, environmental sciences and human sciences. We are also looking for adults to do seminars or presentations to help 4-Hers learn how they can further their projects. To receive more information, please contact Patrick Thompson in the Anne Arundel Extension Office at 410-222-6759 or at: pet@umd.edu.

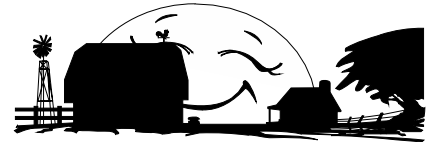
If you are not currently receiving my newsletter electronically, you missed out on six additional announcements last year in addition to the quarterly newsletters!

I encourage you to get on our email list so you can stay informed of program updates and new information. You can subscribe to receive emails by going to our website:
<http://annearundel.umd.edu/AGNR/agnews.cfm>

Thanks for Partnering

Thanks for partnering with the Maryland Cooperative Extension, and supporting our programs. I also hope you enjoy this newsletter.

If you are no longer interested in receiving this newsletter, please call or write the office for the removal of your name from the mailer.



Prosper & Give!

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

NACAA Communication Award
Individual Newsletter
2002 National Winner



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