

Dave's Ramble

Spring 2011

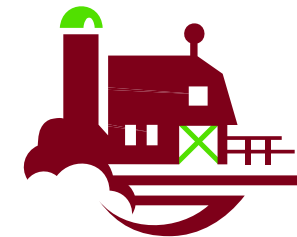
"It isn't easy being green" declared the wise frog Kermit with famous words cultivated in the academic halls of the University of Maryland.

Did you know that farmers possess the keenest eye for determining the most subtle shades of green? I can close my eyes, even today fourteen years removed from farming on a daily basis, and in my mind still see absolute differences in the green of an alfalfa or corn or wheat or barley or soybean or tomato or pumpkin field. Every year we watch in amazement as a wave of green develops from south to north across our countryside. The shades of green unfold as crops emerge, overtaking the bareness of winter. Watching our crops grow we become overwhelmed with optimism, sometimes we may even find ourselves chanting, "Dollar! Dollar! Dollar!"

Maybe we are the most pitied of creatures, unable to photosynthesize; we must submit to the same yearly struggle of cultivation in abundance the green necessities of life. Merely, seeing green makes our mouths water; It's not coincidental that green is the color of the garden of life and the color of money, although coveted, neither come easy and both subject to sudden loss.

The exhilarating green of spring is necessary each year to prepare us for the labor of summer, the harvest of fall and the weariness of winter. For no matter how hard we labor to keep the world green, the trials of pests, drought and seasons will prevail again.

A farmer sees shades of green much greater than color of the money in his pocket: In his eyes, it's generations of green, an environmental green, and a feed the hungry green. The power to build great nations is green. "If a man does not work, neither should he eat?" No matter how difficult the task; "America! Here's to your staying green this year! Forever!"



Inside This Issue

- Spring & Summer Meetings
- Agronomic Weed Control
- Spray Programs for Multi-Tree-Fruit Orchard
- Spray Program for Multi-Small Fruit Plantings
- Fumigant Laws and Options
- Radiation Fact Sheet
- Pesticide Education & Safety Program
- Meadow Orchard (Streuobstwiese)
- Splitting Spring N Application on Winter Wheat
- Spring Cover Crop Management
- Mid-Atlantic Orchardgrass Survey Results
- Grain Marketing Highlights
- Pesticide Information
- EPA News
- MDA News
- New Energy Website
- Branching Out
- Welcome Matt Parker, MD Sea Grant

Calendar of Events

Mark Your Calendars --- Plan To Participate

- ◆ April 13 - Strawberry Twilight Meeting
- ◆ May 4 – Vineyard Twilight Tour
- ◆ August 4 – Crops Twilight Tour & BBQ

Spring & Summer Meetings

Mark your calendars now and plan to be a part of the winter and spring meetings.



2011 Strawberry Twilight Meeting

Wednesday April 13th

6:00 – 8:00 PM

Wye Research and Education Center
211 Farm Lane, Queenstown MD

The **2011 Annual Strawberry Twilight Meeting** at the **WREC in Queenstown, MD**, will be held **April 13, 2011 from 6-8 PM, rain or shine.**

This year's program will focus on high tunnel trials, with both University of Maryland and USDA specialists discussing current research, other small fruit growing topics, and "programmed production" of small fruit.

Hear: University of Maryland and USDA specialists discuss current research and other small fruit growing topics and "programmed production" of small fruit. See: Four small fruit high tunnel trials.

We'll have refreshments and pre-registration is not necessary. If you need special assistance to attend this program, please call Debby Dant at 410-827-8056 X115, no later than April 6, 2011.

For additional program information, contact Michael Newell, Horticulture Crops Program Manager, 410-827-7388 or mnewell@umd.edu.



Vineyard Twilight Tour

May 4th

Location: TBA

Review of Canopy Management and IPM for Local Vineyards

Dr. Joe Fiola, University of Maryland Viticulture expert, will be leading a vineyard field day event in our area on Wednesday, May 4.

This will include a "twilight tour" of a local vineyard with focus on current vineyard conditions and canopy management activities for this time of year. There will also be an indoor slideshow presentation. This event is OPEN to anyone in the local region who is currently

growing or plans to grow grapes. This is an exciting opportunity to interact with one of the preeminent viticultural experts in Maryland and the Eastern United States. Dr. Fiola works out of Western Maryland, so getting him here in Southern Maryland for a day is something not to be missed. Joe is also the top UMD resource for wine making, so come prepared with your enology questions.

Contact the Port of Leonardtown Winery Cooperative or the St. Mary's Extension Office for more information.

Crops Twilight Barbecue & Ice Cream Social

August 4, 2011

CMREC Upper Marlboro Farm

You are invited to attend a **Field Crops Research Twilight, Barbecue and Ice Cream Social at the Central Maryland Research & Education Center, Upper Marlboro Farm on Thursday, August 4, 2011 from 4:30 pm to 9 pm.** A barbecue dinner will be served at 4:30 pm followed by homemade ice cream prior to the evening tour! The research farm is located at **2005 Largo Road, Upper Marlboro, Maryland.**

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

Vegetable integrated pest management and reduced risk control methods; Field crops research updates; Meadow orchard concept and Fruit research update for apples, peentos, blueberries and beach plums; and a vineyard research update for wine grapes.

Barbecue Begins at 4:30

Ice Cream Served at 5:15

Crops Twilight at 6:00



**Please arrive on-time as the will start promptly at 6:00 pm.*

tour

This event is free. However, a reserved meal ticket is required.

If you need special assistance to participate, please contact the Anne Arundel County Extension office at 410-222-6759 by August 2, 2011.

For full meeting details, and registration information contact any of the Southern Maryland Extension offices. For more information contact David Myers at the Anne Arundel County Extension office at 410-222-6759.

What's New for Agronomic Weed Control: 2011

Dwight Lingenfelter and William Curran
Department of Crop and Soil Sciences
Penn State University

Websites: <http://www.weeds.psu.edu>
<http://cmeg.psu.edu/>

CORN

Corvus 2.63SC (Bayer CropScience) is a newer corn herbicide premix that includes a novel corn safener to reduce the potential of crop injury. Corvus contains two active ingredients: isoxaflutole (HPPD-inhibitor in Balance Flexx) and thien carbazon (ALS-inhibitor) plus the corn safener. This safener called cyprosulfamide safens corn both pre and post and is reported by Bayer to increase corn metabolism of isoxaflutole. Corvus is a pre or early post herbicide that has a broader weed control spectrum than Balance Flexx since it also contains thien carbazon which controls several grass and broadleaf weeds. Corvus can be applied either pre or early post (up to the V2 growth stage) at the typical rate of 5.6 fl oz/A. It will likely not provide adequate control of severe problem annual grasses (foxtails and panicum, etc.), so it is recommended that these herbicides be used in a planned pre followed by post program that include additional grass control. The addition of atrazine will also improve the weed control spectrum. Corvus can also be used to help with no-till burndown and provide some residual control of weeds including triazineresistant species. Penn State research has looked at Corvus over the past few years and noted limited crop injury and good weed control. Corvus contains herbicides in WSSA groups 2 and 27 (see discussion below about WSSA herbicide groups).

Prequel 45WG (DuPont) contains two herbicide modes of action, isoxaflutole (Balance, HPPD-inhibitor) plus rimsulfuron (Resolve, ALS-inhibitor). This is a similar product to Corvus, but Prequel does not contain a safener and must be applied before corn emergence. It provides some burndown and residual control of common broadleaves and some grasses when applied at the labeled rate of 1.66 to 2.5 oz/A. At labeled rates, it will either need to be mixed with other herbicides to provide better grass control or requires a post herbicide program to control escaped weeds. It is primarily designed for use in two-pass programs in GMO corn. Prequel contains herbicides in WSSA groups 2 and 27.

TripleFlex 4.25L (Monsanto) is a premix identical to SureStart (Dow AgroSciences) for control of annual weeds and contains acetochlor (TopNotch), flumetsulam (Python), clopyralid (Stinger), and a corn safener. It can be applied from pre to the early post stage (11-inch tall corn) and is intended to be used with Roundup Ready or Liberty Link field or silage corn hybrids. When applied pre, it is designed to provide early season control of

common annual grasses and broadleaf weeds to allow better timing of the in-crop application of glyphosate or glufosinate.

The use rate on medium-texture soils ranges from 1.5 – 1.75 pints/A. TripleFlex does not contain atrazine, so it provides a nonatrazine alternative for atrazine-sensitive areas. However, atrazine, glyphosate, 2,4-D, and other herbicides can be tank-mixed with TripleFlex to broaden the weed control spectrum. Make sure to plant corn 1 ½ inches deep and be cautious of interactions with certain OP insecticides that may cause crop injury. Wheat may be planted 4 months after application; alfalfa, soybeans, barley, oats, and rye can be planted the following spring; sorghum after 12 months. TripleFlex contains herbicides in WSSA groups 2, 4, and 15.

CORN and SOYBEAN

Kixor (BASF) is a new active ingredient called, saflufenacil, a PPO-inhibitor herbicide similar to Valor and Authority herbicides. Much of the interest in Kixor in our region has been focused on the potential burndown activity of saflufenacil for glyphosate resistant horseweed or marestail in no-till soybean and the opportunity to use a new mode of action (PPO) preemergence in corn. Relative to summer annual weeds, Kixor-powered products will provide burndown and residual activity on several broadleaf weeds including pigweed, lambsquarters, and nightshade. Kixor will not control grasses and the current labeled rates target small seeded broadleaves and shorter residual control. Additional herbicides may need to be tank-mixed with saflufenacil or applied post to control escaped weeds or to increase the control spectrum. BASF has developed prepackaged herbicide mixtures to supplement this need. These products will primarily be used as pre, "setup" herbicides since they typically will be used in a planned pre followed by post herbicide program. Although Kixor is a BASF trademark, saflufenacil products will include:

- Sharpen (saflufenacil alone) can be used in field corn, soybeans or small grains. The use rate in corn is 2 to 3 fl oz/A and in soybean it is 1 fl oz/A. Sharpen is a WSSA group 14 herbicide.
- Verdict (formerly Integrity) [saflufenacil + dimethenamid-P (Outlook)] can be used in corn and soybeans as a burndown/pre and this premix provides some annual broadleaf and grass residual activity but at the labeled rate, post herbicides will likely be necessary to control escapes. The typical medium-soil use rate is 13 fl oz/A for corn and 5 fl oz/A for soybean. The lower use rate in soybeans results in less residual activity. Verdict contains herbicides in WSSA groups 14 and 15.
- Optill [saflufenacil + imazethapyr (Pursuit)] is designed as a "setup" herbicide for use in soybeans but it will likely need to be followed by glyphosate or other post herbicides. The targeted use rate is 2 oz/A. Optill contains herbicides in WSSA groups 2 and 14
- Warrant 3CS (Monsanto) contains encapsulated acetochlor and is designed to be used postemergence in soybeans and corn to provide residual control of later-emerging annual weeds. It provides residual control of foxtails, panicum, crabgrass, lambsquarters, pigweed, smartweed, and black

nightshade. Warrant does NOT control emerged weeds so it must be tank-mixed with glyphosate (RR soybeans or corn) or Ignite (LL soybeans or corn) to control existing weeds. The typical use rate is 1.5 qt/A. Warrant is a WSSA group 15 herbicide.

SOYBEAN

Authority XL 70WG (FMC) is a premix of sulfentrazone (Authority, PPO inhibitor) and chlorimuron (Classic, ALS-inhibitor) and is similar to the old Canopy XL. Authority XL contains a higher rate of sulfentrazone than Canopy XL, so it should provide improved residual control of horseweed and eastern black nightshade while also controlling lambsquarters, pigweed, mustards, velvetleaf, and ragweed. In a two-pass system, apply 3.2 oz/A (typical medium soil rate) followed by glyphosate (RR soybeans) or Ignite (LL soybeans) as an in-crop application. The typical medium soil rate for full season control is 6.5 oz/A. Authority XL can be applied in the fall or at soybean planting time as a preplant or preemergence treatment. Be cautious of crop rotation restrictions: in general, wheat-4 months, field corn 10 months, and alfalfa-12 months. Higher soil pH greatly increases recropping intervals. Authority XL contains herbicides in WSSA groups 2 and 14.

Ignite 280 2.34SL (Bayer CropScience), formerly known as Liberty, is a newer higher-load formulation of glufosinate. Ignite is a post, broadspectrum herbicide that controls many annual broadleaf and grassy weeds and provides some suppression to biennials and perennials. The typical use rate for Ignite is 22 to 29 fl oz/A; include ammonium sulfate (AMS) at 3 lb/A to the spray solution (use only 1.5 lb/A if temperatures are expected to exceed 85°F). Do not apply more than 44 fl oz total/A/season. Keys to success with the LibertyLink soybean program include:

- Start clean. In no-till settings, a burndown program that kills all weeds before planting is essential. A pre application or a post application with a residual product may be required for broader spectrum and extended control in problematic fields. The use of soil residual herbicides before crop emergence can reduce the number of post applications required or provide a larger window for later season control.
- Include residual herbicides. Include an effective residual herbicide with the burndown followed by a timely post application of Ignite about 4 weeks after planting. Ignite can be slightly less effective on grasses than glyphosate such as yellow foxtail, shattercane, and barnyardgrass, but is more effective on some of the broadleaf weeds such as annual morningglory, eastern black nightshade, and smartweed. In the program, is best to include residual herbicides such as, Authority MTZ, Boundary, Valor, Sonic, Prefix, Pursuit, Envive, Prowl, Outlook, Optill, Intro, among others. Dual Magnum, Reflex, and Warrant can be tank-mixed with Ignite and applied postemergence.

- Use in glufosinate resistant soybeans. Ignite can be used on all LibertyLink soybean varieties from emergence up to bloom stage and has some limited utility for burndown situations (i.e. horseweed). If Ignite is used in the burndown program, no in-crop application of Ignite is allowed.
- Size matters. Although weed size is important with glyphosate, is it more critical with Ignite and spray applications should be made when weeds are no more than 4 to 6 inches tall.
- Uniform coverage necessary. Since it is a contact herbicide, it is weaker than glyphosate on perennials and requires uniform spray coverage to achieve consistent weed control. Use a minimum spray volume of 15 gallons/A and nozzles that provide a uniform distribution of medium sized spray droplets.
- Weather and timing impact effectiveness. Warm temperatures, high humidity, and bright sunlight improve the performance of Ignite. Do not apply when heavy dew or mist/rain are evident. For more consistent lambsquarters and velvetleaf control apply between dawn and 2 hours before sunset (9 am to 6 pm is best).
- No extended control. Ignite does not have residual activity and will not control weeds not yet emerged. In studies at Penn State and other universities, some occasional temporary crop injury was observed to soybean, however no yield reductions were observed. Currently, there are no soybean varieties that have stacked gene traits of glyphosate and Ignite. This will likely be a benefit when it does occur. Ignite and the LL system are marketed as an alternative to a Roundup Ready (glyphosate resistant) system. It allows rotating herbicide modes of action to reduce the potential of developing glyphosate resistance biotypes of weeds. Unfortunately for Bayer and glyphosate resistance management, current low cost glyphosate will likely limit the utility of Ignite and Liberty Link crops. Ignite is a WSSA group 10 herbicide.

SMALL GRAINS

Huskie 29.6L (Bayer CropScience) contains pyrasulfotole (an HPPD-inhibitor) plus bromoxynil (Buctril) and controls broadleaf weeds in wheat, barley, and triticale. Huskie controls common chickweed, wild buckwheat, mustards, prickly lettuce, lambsquarters, pigweed, smartweed, ragweed, and velvetleaf. Apply 11 oz/A (plus AMS or UAN) to the small grains between 1 leaf and up to flag leaf emergence and to actively growing weed that have 1-4 leaves. Do not apply to crops undersown with legumes. Huskie can be tank-mixed with certain herbicides, insecticides and fungicides. In wheat, liquid nitrogen may be used as the carrier. Soybeans can be planted 4 months after application; alfalfa, corn, and potatoes after 9 months. Penn State researchers plan to test this product in wheat next spring. Huskie contains herbicides in WSSA groups 6 and 27.

PowerFlex 7.5WDG (Dow AgroSciences) is a new ALS-inhibitor herbicide that contains pyroxsulam. It controls annual ryegrass, downy brome and cheat plus a few annual broadleaves such as chickweed (non-ALS resistant), mustards, henbit, wild buckwheat, and hairy vetch. When targeting grassy weeds, fall applications seem to provide the best

control. Apply 3.5 oz/A once wheat reaches the 3leaf stage. PowerFlex has a favorable crop rotation timeframe. Soybeans can be planted after 3 months while other crops can be planted after 9 months. Penn State researchers have limited experience with this herbicide on weed control and crop injury potential in wheat. PowerFlex is a WSSA group 2 herbicide.

GRASS FORAGE

Paramount 75WG (BASF) contains quinclorac and can be applied in cool-season grass pastures or hay. Paramount is currently the only herbicide labeled that controls some annual grasses in grass forages. According to the label it has activity on foxtails, large crabgrass, and barnyardgrass as well as broadleaves such as lambsquarters, ragweed, velvetleaf, annual morningglory, dandelion, and field/hedge bindweed. Paramount can be applied in bromegrass, tall fescue, Kentucky bluegrass, orchardgrass, and ryegrass. It is also labeled for use on several warm-season grasses. The typical use rate is 3 to 8 oz/A plus necessary adjuvants. A waiting period of 7 days is required before cutting. Paramount will severely injure or kill clovers, alfalfa, and other legumes. Be cautious of crop rotation restrictions. Paramount is a WSSA group 4 herbicide. PENDING PRODUCTS

Pyroxasulfone is an experimental herbicide (formerly coded as KIH-485) that is expected to be labeled in corn (all types), soybeans and wheat. It has annual grass activity similar to metolachlor (Dual) and acetochlor (Harness) but also provides good control of several annual broadleaves. The use rates are up to 8 times lower than Dual or Harness with comparable weed control. BASF will sell pyroxasulfone as Zidua 85WG, but will likely premix it with other active ingredients. Valent and FMC will also have some premixes. Fierce 76WG (Valent) contains pyroxasulfone plus flumioxazin (Valor SX) and will initially be labeled for burndown/residual use in field corn and soybeans. Anticipate EPA approval by early to mid 2011 with full scale marketing of products by 2012. Penn State has evaluated pyroxasulfone for the past several years in corn and has noted very good weed control performance and crop safety.

Realm Q (DuPont) contains rimsulfuron (Resolve, ALS-inhibitor), mesotrione (Callisto, HPPD-inhibitor) and the corn safener (isoxadifen). DuPont claims this safener allows more flexibility to apply the herbicides across a diversity of application conditions. The safener does not totally eliminate potential crop injury, just lessens the impact. Realm Q will likely be applied at 4 oz/A and can be tank-mixed and applied post with glyphosate, Ignite, or included in other post herbicide programs to improve weed control spectrum. Realm Q contains herbicides in WSSA groups 2 and 27.

GENERICIS

More and more generic products are being sold due to patent expiration and licensing agreements. Some of the

more commonly used generic products are those that strive to mimic Bicep and Harness products, Prowl, Cimarron, and Harmony. In most cases, generic herbicides cost less than name-brands. When looking to purchase generic alternatives, ask or search for the herbicide by its chemical name or active ingredient, for example, glyphosate, metolachlor, dicamba. Not all generics are equal to the original. Always read the label and be cautious of how it is formulated since it may not have equivalent amounts of active ingredients and therefore the quality and application rates may be different. Relative to quality, generic products may or may not be as sound as the original and there could be problems with mixing and compatibility with other pesticides. Some of the generics are not labeled for use on the same crops or allowed to be applied in certain situations. Watch out for offers that sound too good to be true or promise too much. In addition, most generics herbicides will not include product service or guarantees if weeds are not controlled or crop injury occurs. It is best to consider all factors such as product quality, rebates, warranties and not just price before purchasing a generic herbicide.

WSSA Herbicide Groups

As more weed species become resistant to herbicides, certain precautions such as tank-mixing, crop rotations, and a combination of weed management techniques, must be implemented to prevent resistance. Understanding herbicide modes of action is a key factor in this process. The Weed Science Society of America (WSSA) developed a grouping system to help with this process. Herbicides that are classified as the same group number kill weeds using the same mode of action. *Thus, it is best to select or combine herbicides that provide at least two different modes of action against the same weed.* Group numbers can be found on many herbicide product labels and can be used as a tool to choose herbicides in different mode of action groups so mixtures or rotations of active ingredients can be planned to better manage weeds and reduce the potential for resistant weed species. A useful chart can be found at:

<http://www.glyphosateweeds crops.org/Pubs.html>

Other News – Incoming Herbicide Resistant Crops DHT is the acronym for Dow AgroSciences Herbicide Tolerance traits that will provide overall tolerance in corn and soybeans to 2,4-D and some of the post-grass herbicides like Assure and Fusilade. These traits also will be stacked with glyphosate tolerant traits. Dow AgroSciences estimates launch timing for this technology at 2013 for corn and 2015 for soybeans.

Dicamba resistant soybeans are being developed by Monsanto and BASF to allow pre or post applications of dicamba (active ingredient in Clarity, Banvel, etc.) on soybeans. These varieties will likely be stacked with the Roundup Ready trait. Marketing of these soybean varieties is not expected until 2014 or later. In general, there are some benefits and risks associated with DHT and dicamba-resistant technologies. Overall, we can expect to see better annual and perennial broadleaf weed control in soybeans. Also these traits will offer some protection from drift and spray tank contamination. However, off-site movement of 2,4-D and dicamba to sensitive non-target plants is of great concern. In a diverse landscape like Pennsylvania,

this will be more of a concern than perhaps for our neighbors to the west. Over the next few years, we will see how these companies and universities devise ways to handle these issues.

Optimum GAT corn and soybean debut has been delayed. Optimum GAT confers resistance to glyphosate and ALS-inhibitor herbicides. DuPont and Pioneer have been working on this technology for the past several years, but no revised release date has been set.



Spray Programs for Multi-Small Fruit Plantings

R. David Myers, Extension Educator
myersrd@umd.edu

Many local farms are composed of multi-small fruit combinations producing for fresh market blackberries, raspberries, blueberries, strawberries and grapes. Aggressive fruit spray programs are required to achieve high quality fruit. These multi-small fruit plantings create many spray management challenges for the achievement of good pest control in accordance to label guidelines.

Therefore, the following multi-small fruit spray program for the control of major small fruit pests and diseases may offer some assistance: **Labeled as noted in 2011 for All Small Fruit – Strawberries, Brambles: Blackberries, Raspberries, Blueberries, and Grapes.**

2011 Spray Guide Available for download at:

[Spray Guide for Multi-Small Fruit Plantings, 2011](http://annearundel.umd.edu/files/MultiSmallFruitSpraySheet2011.pdf)
<http://annearundel.umd.edu/files/MultiSmallFruitSpraySheet2011.pdf>

Fumigant Laws & Options

R. David Myers, Extension Educator
myersrd@umd.edu

Since the addition in 1992 of methyl bromide to the Montreal Protocol, an international treaty established to regulate ozone depleting substances, a number of replacement fumigants and fumigation practices have been developed. Recently, a number of new fumigants have been marketed that may be applied through trickle irrigation systems. Farmers that utilize fumigants will be required to become certified and develop fumigation management plans that incorporate appropriate field buffers and rates; Neighbor notifications are also required. For further understanding of fumigant laws and options go to: [Fumigant Update](#)



<http://annearundel.umd.edu/files/FumigantUpdateLaw2010Myers.pdf>



Spray Programs for Multi-Tree Fruit Orchards

R. David Myers, Extension Educator
myersrd@umd.edu

Many local orchards are composed of multi-tree fruit combinations producing for fresh market apples, peaches, pears, plums, nectarines, and cherries. Aggressive fruit tree spray programs are required to achieve high quality fruit. These multi-tree fruit orchards create many spray management challenges for the achievement of good pest control in accordance to label guidelines.

Therefore, the following multi-tree fruit orchard spray program for the control of major tree fruit pests and diseases may offer some assistance: **Labeled as noted in 2011 for All Tree Fruit – Pomes: Apples & Pears Stones: Peaches, Plums, Nectarines, and Cherries.**

2011 Spray Guide Available for download at:

[Spray Guide for Multi-Tree Fruit Orchards, 2011](http://annearundel.umd.edu/files/MultiTreeFruitSpraySheet2011.pdf)
<http://annearundel.umd.edu/files/MultiTreeFruitSpraySheet2011.pdf>

Fumigant Options

Product	Disease	Nematodes	Weeds	Soil Injected	Chemigation
Methyl Bromide (MB 100%)	yes	yes	yes	yes	no
BRO-MEAN C-50 (MB 50% + CP 50%)	yes	yes	yes	yes	no
TELONE II (DP 97.5%)	yes	yes	no	yes	no
TELONE C-17 (DP 81% + CP 16.5%)	yes	yes	no	yes	no
TELONE C-35 (DP 63.4% + CP 34.7%)	yes	yes	maybe	yes	no
TELONE EC (DP 93.6%)	yes	yes	no	yes	yes
IN-LINE (TELONE DP 60.8% + CP 33.3%)	yes	yes	no	yes	yes
VAPAM HL (MS 42%)	yes	yes	yes	yes	yes
K-PAM HL (MK 54%)	yes	yes	yes	yes	yes
MIDAS 98:2 (IM 97.9% + CP 1.9%)	yes	yes	yes	yes	no
MIDAS 50:50 (IM 49.9% + CP 49.8%)	yes	yes	yes	yes	no
MIDAS 33:67 (IM 32.9% + CP 66.7%)	yes	yes	yes	yes	no
MIDAS 25:75 (IM 25% + CP 74.6%)	yes	yes	yes	yes	no
MIDAS EC Bronze (IM 49.9% + CP 44.8%)	yes	yes	yes	yes	yes
MIDAS EC Gold (IM 32.9% + CP 61.7%)	yes	yes	yes	yes	yes

Radioactive Decay – The process by which a radioactive material emits energy as it converts to a stable state. The term “half-life” is used to describe approximately how long it takes for half of a mass of radioactive material to undergo decay.

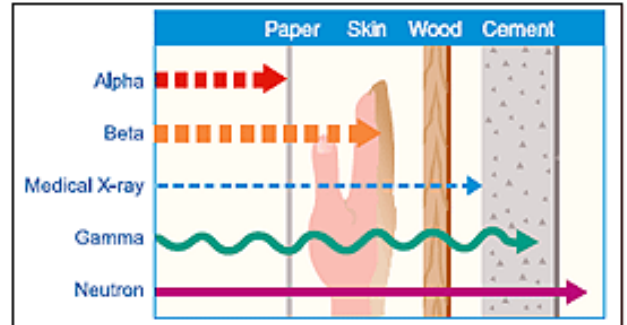


Image courtesy of the US Nuclear Regulatory Commission

Radiation Fact Sheet

Author: Curt Emanuel, Extension Educator, Purdue University Cooperative Extension Service and Extension Disaster Education Network Radiological Education Team Member

Radiation - Radiation is energy given off by matter in the form of high speed rays or particles. All matter is composed of atoms. These atoms constantly seek a strong, stable state. As they convert from an unstable to stable form they release excess atomic energy in the form of radiation.

Radiation Sources – Radiation can come from either natural or man-made sources. We are naturally exposed to radiation every day of our lives. Cosmic radiation reaches the Earth from the sun. The rock and soil of the Earth contain radioactive elements such as uranium and thorium. Our bodies also contain small amounts of radioactive elements which become incorporated into our tissues. Radioactive carbon originates in the atmosphere and radioactive potassium can be found in food and water. You may have heard of Carbon-14 testing used by scientists to determine the age of fossils. This is only possible because every living thing has radioactive carbon in its tissues. Most exposure to man-made radiation comes from medical uses, such as radiology.

NORM – This is the acronym for natural sources of radioactive materials and stands for **N**aturally **O**ccurring **R**adioactive **M**aterial. At normal levels, this radiation poses little threat to our health. Also, the fact that our bodies are constantly exposed to radiation helps us to be able to withstand elevated levels for short periods of time with no measurable effects.

Types of Radiation

There are four types of radiation released from atoms; alpha, beta, gamma and neutron radiation.

Alpha particles are highly charged and the heaviest of the nuclear radiations. Because of their size and weight they are unable to travel very far and have a limited ability penetrate. They cannot travel more than four to seven inches in the air and can be stopped by a sheet of paper or skin. They can be a hazard if they are inhaled or swallowed.

Beta particles are smaller and travel faster than alpha particles. They can travel several feet in the air and are able to penetrate skin, though they do not usually penetrate deep enough to reach vital organs. They can be stopped by a thin sheet of metal or plastic or a block of wood.

Gamma rays are not particles, but waves of radioactive energy. They travel much further and have more penetrating power than either alpha or beta particles. They can travel as much as a mile in open air and it takes several feet of concrete or several inches of a dense material such as lead to block them.

Neutron radiation occurs when nuclear particles collide with other materials. Neutrons have an exceptional ability to penetrate other materials and are extremely hazardous. Fortunately, this type of radiation is generally only found in a nuclear power plant where it is shielded by steel, concrete and several feet of water.

Radiation can enter the body in the following ways:

Inhalation—Gaseous or airborne particles, dust particulates, and matter with radioactive material may enter the body through the lungs. Remember that air itself is not radioactive; radiation is contained in particles carried by the air.

Ingestion—Internal radioactive contamination may enter the body through the gastrointestinal tract by way of contaminated food, drink, and by swallowing contaminated mucus from the nasal area.

Absorption—Radioactive material may be absorbed through the skin or mucous membranes.

Puncture or injection—Radioactive material can penetrate the body through cuts, wounds, and punctures in the skin.

Reducing Radiation Exposure

Time, distance and shielding are the three primary methods of reducing or eliminating exposure to radioactive materials.

Time - Minimize time spent near a radioactive source or radioactive contamination. The less time exposed to the source of radiation, the lower the dose received.

Distance - Maximize the distance from a radioactive source or radioactive contamination. Keep as much distance as possible between oneself and the source of radiation. The farther one is from the source, the lower the dose received.

Shielding - Shielding simply means having something that will absorb radiation between you and the source of the radiation. Keep as much protection between oneself and the source as possible.

What should I do if there is a radioactive incident near me?

The first and most important rule is: *Listen to and follow the instructions of your local emergency personnel.* Emergency personnel have been trained in how to respond in the event of an incident, including those involving radiological materials. They will provide instructions on how to keep yourself and your family safe.

Shouldn't I just try to get as far away from the radiation source as possible?

Not necessarily. In a radiological incident, quite often residents will be instructed to remain in their homes, a concept known as "shelter-in-place." The reason for this is that, if an incident involves alpha or beta particles, your home will provide a tremendous amount of safety as it will block the penetration of these particles. Move to an interior room with few windows or the basement. Turn off all air conditioners and ventilation systems. If you have the materials available, you should seal any cracks in your home where particles may be able to enter. Duct tape and plastic sheeting work well for this purpose. Although you will have to open up the room occasionally to allow fresh air in, you will likely receive much less exposure than if you left your home where

you might inhale radioactive materials. According to the Federal Emergency Management Agency (FEMA), "Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide build-up for up to five hours, assuming a normal breathing rate while resting."

How can I prepare for an emergency or disaster?

For all disasters, there are three steps you and your family can take which will be extremely helpful.

First, **put together an emergency kit.** Your emergency kit should contain enough materials to sustain you, your family, and those who may shelter with you for a minimum of three days. In addition to food, water and other supplies you should include a battery-powered or hand crank radio and a NOAA Weather Radio with tone alert, and extra batteries for both. At a minimum, you should check your emergency kit every six months. A printable list of recommended items to include in an emergency kit is available at:

<http://www.ready.gov/america/getakit/kit-print.html>

Second, **develop and practice** a family emergency plan. Know where in your home to go during an emergency and how to contact members of your family. For all emergencies you should have a plan for if you stay at home or if you evacuate.

Third, **be informed.** Learn about possible hazards and how to respond to each of them. Find out where shelters operate in your community. Be aware of the local emergency messaging and alert systems. Learn about the emergency plans that have been established by your state and local government.

For additional information on disaster preparedness including emergency kits and plans, visit: <http://www.ready.gov>

For additional information please see:

FEMA's Ready America page at: <http://www.ready.gov>

The US Nuclear Regulatory Commission (US NRC) Radiation Protection page at: <http://www.nrc.gov/about-nrc/radiation.html>

The US Centers for Disease Control and Prevention (US CDC) Radiation Emergencies page at: <http://emergency.cdc.gov/radiation/>

The United States Environmental Protection Agency (US EPA) Radiation Protection page: <http://www.epa.gov/radiation/>

The Extension Disaster Education Network at: <http://eden.lsu.edu/Pages/default.aspx>

Thanks to the United States Nuclear Regulatory Agency, the Federal Emergency Management Agency, the US Environmental Protection Agency and Ray Burden from the University of Tennessee for much of the information included here.



New Website

Respirator Fit Testing & Fumigation Law Compliance

R. David Myers,
Extension Educator, UME

2011 Fumigant Application Requirements:

- ✓ Effective 12/01/2010, EPA requires that all fumigant applications include: 1) Fumigation Management Plans; 2) Applicator Education; 3) Buffer Zones; and 4) Neighbor Notification.
- ✓ Effective 12/01/2010, EPA requires that at least two individuals from each farm applying fumigants be **respirator fit tested** and **medically cleared** for respirator usage.

Website Links:

Respirator Fit Testing & Fumigation Law Compliance – Including, “How to Conduct a Respirator Fit Test”
<http://anearundel.umd.edu/files/Respirator%20Fit%20Fumigation%20Law.pdf>

Respirator Fit Test Presentation, Bay Area Fruit School
[OACTV Respirator Fit Test](#)
[Bay Area Fruit School, WYEREC, 2/23/2011](#)

Respirator Fit test Card
<http://anearundel.umd.edu/files/Respirator%20Fit%20Test%20Card.pdf>

Respirator Fit test Record Form
<http://anearundel.umd.edu/files/Respirator%20fit%20test%20record%20form.pdf>

Respirator User Medical Questionnaire
<http://anearundel.umd.edu/files/Respirator%20Medical%20Questionnaire.pdf>

EPA on-line “Soil Fumigant Tool Box”
http://www.epa.gov/opp00001/reregistration/soil_fumigants/index.htm

EPA Fact Sheet
 2010 Site-Specific Fumigant Management Plans and Post-Application Summaries (PDF)
http://www.epa.gov/opp00001/reregistration/soil_fumigants/factsheets/sfm-sitespec-mgmt-plns-upd.pdf

Extra! Extra! Read All About it!

University of Maryland
Extension

Pesticide Education &
Safety Program

New Pilot Program

On-Line Farmer Course:

Pesticide Applicator Pre-Exam Self-Study



Course Description: This on-line self-study course will cover all thirteen chapters and appendices of the Maryland Pesticide Applicator Core Manual to fully prepare the student for successful completion of the Maryland Private Pesticide Applicators Examination. The following core manual chapters will be covered via on-line Adobe Connect modules and PowerPoint slide series:

- Chapter 1 – Fundamentals of Pest Management
- Chapter 2 – Federal Pesticide Laws
- Chapter 3 – Pesticide Labeling
- Chapter 4 – Pesticide Formulations
- Chapter 5 – Pesticide Hazards & First Aid
- Chapter 6 – Personal Protective Equipment (PPE)
- Chapter 7 – Pesticides in the Environment
- Chapter 8 – Transportation, Storage and Security
- Chapter 9 – Emergency and Incidence Response
- Chapter 10 – Planning the Pesticide Application
- Chapter 11 – Pesticide Application Procedures
- Chapter 12 – Professional Conduct
- Chapter 13 – Maryland Applicator Law & Regulations

Textbook: Maryland Pesticide Applicator Core Manual: This text is available at your local county Extension office. Be sure to acquire this text prior to beginning the self study course.




ELMS Blackboard & Adobe Connect

Modules: This course will be administered by the ELMS Blackboard student interactive system via prerecorded Adobe Connect modules and other interactive documents.


ELMS Blackboard is an on-line software program which is used for resident instruction and distant learning at the University of Maryland. On-Line interactive quizzes and examinations in ELMS Blackboard will gauge the student's progress and readiness for the state examination.

The address for ELMS Blackboard is www.elms.umd.edu. To access ELMS Blackboard each student will need to have a login ID and a password assigned by the University of Maryland. Internet access to ELMS Blackboard is a course requirement.


Course Registration: Contact Dave Myers at 410 222-6759 or myersrd@umd.edu



Southern Maryland Hay & Pasture Conference



Tackling the Orchardgrass Dilemma in Southern Maryland
January 19, 2011



R. David Myers
Extension Educator, Agriculture
www.annearundel.umd.edu

Slide Presentation now On-Line at:
[Tackling the Orchardgrass Dilemma in Southern Maryland](#)

The best pest resistant varieties of fruits and nuts were chosen for this study, being most suitable for this reduced risk pesticide approach.

Research Design:

- ✓ **3 Randomized Reps: 2 Trees/Rep, 14 Tree Varieties, 72 Total Tree Plots.**
- ✓ **Orchard Density: 18' Between Row Spacing X 15' In Row Spacing. (Note: Twice the number of Paw Paws per plot)**
- ✓ **Training Systems: Traditional**

Research Protocol:

- ✓ **Organic and soft pesticide canopy evaluations, with conventional orchard floor management utilizing herbicides and fertilizers.**
- ✓ **Tree growth, disease and yield assessments will determine viability.**



New Fruit Team Project
Streuobstwiese – Meadow Orchard



Streuobstwiese in Baden-Württemberg, Germany

Meadow Orchard 2011
CMREC, Upper Marlboro

Fruit & Nut Trees:

- 1) Breda Medlar
- 2) Lodi Apple
- 3) Brown Turkey Fig
- 4) Moon Glow European Pear
- 5) Hosoi & Shinko Asian Pear
- 6) Montmorency Tart Cherry,
- 7) Eastern Seedling & Collins PawPaw
- 8) American Persimmon
- 9) Fuyo Oriental Persimmon
- 10) Blue Damson Plum
- 11) Japanese Hearnut
- 12) American Filbert

Southern Maryland Fruit Team
CMREC, Upper Marlboro



Dave Myers
Ben Beale
Herb Reed
Joe Fiola
Chris Walsh



**Meadow Orchard:
A Sustainable Commercial
Fruit Production Approach**

New Research Project
CMREC, Upper Marlboro
By the Southern Maryland Fruit Team

This project will demonstrate a sustainable and reduced risk pesticide option for producing commercial fruits suitable for farmer market product expansion; offering an excellent Extension teaching venue, capable of incubating more small scale fruit and nut production by experienced and new growers in the region.

This study will follow organic production and reduced risk bio-pesticide method for canopy and fruit targeted pesticide spray, including applications of OMRI approved products; however, orchard floor management will be traditional, utilizing herbicides and commercial fertilizers.

Meadow Orchard (Streuobstwiese)

[Streuobstwiese](#) (pl. *Streuobstwiesen*) is a German word that means a meadow with scattered fruit trees or fruit trees that are planted in a field.^[2] *Streuobstwiese*, or a **meadow orchard**,^[3] is a traditional landscape in the temperate, maritime climate of continental Western Europe. In the 19th and early 20th centuries, *Streuobstwiesen* were a kind of a rural community orchard that were intended for productive cultivation of [stone fruit](#). In recent years, ecologists have successfully lobbied for state subsidies to valuable [habitats](#), [biodiversity](#) and [natural landscapes](#), which are also used to preserve old meadow orchards. Both conventional and meadow orchards provide a suitable habitat for many animal species that live in a cultured landscape. A notable example is the [hoopoe](#) that nests in tree hollows of old fruit trees and, in the absence of alternative nesting sites, is threatened in many parts of [Europe](#), because of the destruction of old orchards.^[4]

From Wikipedia, the free encyclopedia

Is It Time to Revisit Splitting Spring N Application on Winter Wheat

Dr. Richard W. Taylor, Extension Agronomist
University of Delaware
Email: rtaylor@udel.edu



For a number of years, the spring decision of whether to split the nitrogen (N) applied to wheat was often controlled by the price of wheat. When wheat prices were four to five dollars or less per bushel, the return on investment for split N applications was either barely at the breakeven point or below it. Wheat prices this year could encourage growers to again consider if the yield gain, generally about 5 to 7 bu/acre and the environmental and economic impact of less N applied at a single application and subject to leaching, volatilization, and denitrification losses will be enough to incur the risk associated with trying to time and succeed in applying a second N application.

Another factor to consider is whether fall N was applied or if there was adequate residual N available following the previous year's dryland crop. Even on irrigated ground, residual N could have been present to give the fall planted wheat an excellent start on tiller development. Where an irrigated corn crop was fertigated with N up until tasseling or in fields where a legume crop (soybean or lima bean) was grown, adequate residual N was likely present to give wheat a good start on growth and development.

For fields that didn't receive fall N and there was unlikely enough residual N present for good fall growth and development, an early application of N at first green-up is critical to obtain maximum tiller production and good yield potential in a small grain crop. In such a case, a split application not only can improve yield potential but can also protect the grower from the loss of a large portion of a large single early application of N due to weather events.

In a four year study in New Castle County that Bob Uniatowski, Research Scientist at the University of Delaware, and I conducted, we found that for high yield wheat a 40 to 60 lb N/acre first application followed by a second 60 lb N/acre application (total of 100 to 120 lb N/acre) was sufficient for maximum economic yield (MEY). The first application occurred between February 15th and March 15th depending on the weather and when wheat green-up occurred. The second application occurred when the tillers assumed an erect position just prior to the first node being visible above the soil surface. For the more typical 60 to 90 bu/acre yield potential crop, a split of 40 to 60 lbs N/acre at green-up followed by 20 to 40 lb N/acre at Feekes 4 to 5 (total of 80 lb N/acre) produced MEY.

With the excellent price for wheat this year, the typical yield increase seen with the split of N into two applications, and the potential environmental benefit associated with a lower N application rate at a single

point in time, I would encourage all growers to consider this option for maximizing your profitability in 2001.

Spring Cover Crop Management

Dr. Richard W. Taylor, Extension Agronomist
University of Delaware, Email: rtaylor@udel.edu

Although it seems like ancient history, many years ago when no-till technology was first beginning, Delaware and Maryland farmers were rapid adopters of cover crops for no-till grain production. Farmers mostly used cereal crops as winter cover crops. At the time, we learned some important lessons that we should remember this year because of the weather pattern that has occurred in a number of areas in Delaware.

Because there are a number of perceived environmental benefits with cover crops, government programs as well as many environmentally-conscious growers have moved production agriculture back into heavy reliance on cover crops. Wheat and cereal rye are two popular cover crops although some growers are using legumes, legume-cereal combinations, and even some other broadleaf crops such as the forage or Daikon radish. These cover crops are designed to protect the soil, add in organic residues, or supplement the soil with legume-derived nitrogen (N).

For any cover crop whether it's the grass cereals used for ground-covering, water-conserving mulch or legumes for spring N-fixation as well as for residue, I have found that there is a tendency to allow these crops to grow as much as possible by delaying herbicide or tillage or other cover crop control method as late as possible. In years when adequate rainfall occurs or good early season rainfall keeps the crop supplied, cover crops are not very harmful to soil moisture reserves or actually may be very helpful in drying out the surface soil. However, the season to be extra cautious in is the year when winter rainfall is below normal and this is followed by a dry early spring. The combination of lower than expected subsoil moisture level and rapid cover crop growth with heavy water use by the cover crop can lead to excessively dry sub-soil conditions.

The latter weather pattern seems to be developing in many areas of Delaware since winter rainfall has been below normal or the ground has been frozen during precipitation events. Growers need to monitor their subsoil moisture levels closely this spring and be prepared to terminate their cover crops earlier than normal if the subsoil becomes too dry. Early termination of the cover crop will allow time for subsequent rainfall to percolate into the subsoil and for the killed mulch to protect the soil from excessive water loss through evapotranspiration.

Growers or their consultants can check the subsoil moisture level with either the standard soil testing probe or with one that has an extended handle to make deep probing physically easier. It still is much of a "feel method" that depends on the experience of the person testing the soil. As a general rule if subsoil is formed into a ball by squeezing it together in one's hand and then the hand is opened and the ball easily falls apart with the least touch and no hint of moisture is present on the hand after making the ball, then the soil is on the dry

to very dry side. The cover crop should be killed before the subsoil drops to the very dry state.

Initial Results from the Mid-Atlantic Orchardgrass Survey

Dr. Ben Tracy
Department of Crop and Soil Environmental Sciences
Grassland Ecosystem Management Specialist
Virginia Tech
Email: bftracy@vt.edu

Growers across the Mid-Atlantic region have experienced problems with orchardgrass stands in recent years. Reduced forage yield, fewer hay harvests each year and premature death of orchardgrass stands have been reported and confirmed in University sponsored forage variety trials. Estimates suggest lower orchardgrass yields and premature death of stands may be costing hay producers over \$90 million a year. With the help of Extension agents in Virginia and other neighboring states, I organized a survey to help answer questions about this orchardgrass problem and perhaps find the path to a solution.

The survey contained 28 questions that covered a wide range of issues. Data were entered on-line by agents who interviewed growers – usually in the field. Soil samples from many fields were collected and analyzed for standard soil nutrients. By the end of 2010, 43 orchardgrass fields had been surveyed across 4 states and 22 counties. Below is a summary of the more significant findings:

- 74% felt their stands had declined faster than expected.
- 64% of the problem fields were planted in last 5 years.
- 53% harvest hay twice per year, 30% harvest hay three times each year.
- 86% cut stands to the recommended 3-4 inch stubble height.
- 63% reported no visible insect or disease problems.
- 86% apply nitrogen fertilizer every year.
- 79% had a soil test done within last 3 yr.
- P and K ratings for most fields were in the Low to Medium range.
- Cultivar type appeared unrelated to poor stand persistence.

Overall, most growers reported poor stand persistence and these included seemingly well-managed stands. None of the individual variables surveyed (e.g., pests, disease, cutting management, soil fertility) were well correlated with poor orchardgrass persistence.

So what might have caused these orchardgrass problems? Well, the evidence probably points to a combination of factors, and I suspect a major player was climate. For example, from June 2007 to April 2008, approximately 90% of Virginia was under drought. Drought conditions also were widespread in 2006, 2008

and 2009 but for shorter duration. Moreover, since 1960 mean air temperature has increased by 0.3 deg F each decade. Warmer temperatures and periodic droughts surely stressed many orchardgrass stands in recent years. When combined with other issues, like low soil fertility, these environmental stressors probably contributed to many problems observed by growers. If this climate hypothesis is correct and temperatures continue to rise, as they have been, growers in Virginia might consider switching to more stress tolerant forage species (e.g., novel tall fescue varieties) to replace declining orchardgrass stands.

Grain Marketing Highlights

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

ACREAGE REPORT

USDA's **prospective corn plantings** are modestly above pre-report expectations **projected at 92.18 million acres**. However, in order for ending stocks to use to gain in 2011-12, corn plantings would need to total 93.4 million acres. Farmers intend to plant **76.61 million acres of soybeans**. This is below the average pre-report estimate of 76.9 million and also below last year's actual planted acres of 77.4 million. At **58.02 million acres**, all **wheat acres** are higher than the expected average of 57.3 million. SRW winter wheat is pegged at 41.2; spring at 14.4 and durum at 2.4. Today's intentions report can't account for changes in spring wheat reductions due to flooding, which eventually may lead to a decrease in acres compared with the 13.7 million planted in 2010.

USDA's prospective plantings report shows farmers intend to plant 245 million acres of the five major crops, up from 236 million last year, and above USDA's Ag Outlook Forum estimate. Cotton acres, at 12.57 million, are up 15 percent from last year. Average pre-report trade expectations for cotton acreage was at 13.15 million. Prospective Plantings: <http://usda.mannlib.cornell.edu/>.

QUARTERLY STOCKS

Corn and bean stocks were below expectations; slightly more wheat and sorghum on hand than the trade was looking for. Pre-report estimates for **corn stocks** on hand at the end of February averaged 6.69 billion bushels, suggesting usage well above the five-year average pace for the second quarter. The actual number came in at **6.52 billion bushels**, indicating **December-February disappearance of 3.53 billion, up from 3.21 billion during the same period last year. This was stronger use than expected.**

Soybean quarterly stocks were expected to come in at 1.299 billion bushels, representing second-quarter usage near the five-year average. **Soybean stocks** were announced at **1.249 billion bushels**, slightly below the average and lowest expectations. This represents a 4 percent decrease in usage compared with the same period a year ago.

The average pre-report estimate for all wheat ending stocks was 1.399 billion bushels, slightly above the average usage pace. All **wheat stocks** were pegged at **1.425 billion bushels**, slightly above average pre-report expectations.

Wheat disappearance is up 20 percent from last year.
Quarterly Grain Stocks: <http://usda.mannlib.cornell.edu/>

Market Strategy

Non-commercial speculators and investment funds can be expected to rebuild long positions based upon the information contained in this report. If demand for **U.S. corn** increases in 2011-2012, ending stocks could fall to near 500 million bushels. This would equate to an ending stocks-to-use ratio of 3.8 percent (currently 5 percent). This takes into account **near-ideal planting and growing conditions**, resulting in a trend-line yield of 162 bushels per acre. Quarterly stocks were lower-than-expected at 6.523 billion bushels. Old-crop export sales were reported at 75.4 million bushels, well above the 21.6 million bushels needed to stay on pace with USDA's 1.95 billion bushel projection.

Planting intentions for **soybeans** were reported to be slightly below pre-report expectations. This means that domestic stocks could move below 100 million bushels and stocks-to-use near 3 percent in the next (2011/2012) marketing year. Quarterly stocks were reported to be less than expected, meaning domestic ending stocks for 2010-2011 could decline in the April supply and demand report. Export sales and shipments were bullish as old-crop sales of 5.3 million bushels and shipments of 30.4 million bushels were above the amounts needed to stay on pace with USDA's 1.59 billion bushel projection.

The Prospective Plantings and Quarterly Stocks reports were considered bearish for wheat. Spillover support tied to the rally in row-crops should provide support. Old-crop export sales of 10 million bushels were disappointing but above the 5.8 million bushels needed to stay on pace with USDA's 1.275 billion bushel projection. However, shipments of 32.6 million bushels fell short, meaning all wheat shipments will need to average 43 million bushels the last nine weeks of the marketing year.

Currently, Dec '11 corn futures are trading at \$6.25 (limit-up); Nov '11 soybeans at \$14.06 (up 42 cents); and July '11 SRW wheat is trading at \$7.84 (up 20 cents per bushel). For **technical assistance** on making grain marketing decisions contact:

Carl L. German, Extension Crops Marketing Specialist
Department of Food & Resource Economics
208 Townsend Hall, University of Delaware, Newark, DE
19716-2130, Phone: 302-831-1317 Fax: 302-831-6243

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

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

JUST-IN-TIME PESTICIDE INFO – EPA Seeks Public Comment on Petition for Bilingual Pesticide Labels

ACTION DATE: June 28, 2011

The U.S. Environmental Protection Agency has received a petition from the Migrant Clinicians Network, Farmworker Justice, and other farm worker interest groups asking the agency to require that manufacturers make their pesticide product labels available in both English and Spanish. EPA is requesting comment from all interested groups and members of the public before responding to the petition.

The petition focuses on requiring bilingual labeling for agricultural pesticides to increase protection for Spanish-speaking pesticide applicators and farmworkers. EPA recognizes, however, that Spanish-speaking workers in other occupations as well as consumers who use pesticides at home may also be affected by the availability of pesticide labels in Spanish. Therefore, the agency is requesting comment on whether to require bilingual labeling in English and Spanish for all types of pesticide products.

At present, EPA allows pesticide manufacturers to add labeling in other languages, in addition to providing pesticide product labels in English. For agricultural products subject to the Worker Protection Standard, EPA requires that certain parts of the pesticide label include words or phrases in Spanish. In response to the petition, EPA is considering whether to require bilingual labeling in English and Spanish for all pesticides or for only certain types of pesticides, certain pesticide use sites, certain pesticide active ingredients, pesticides in certain toxicity categories, or certain parts of pesticide labels. The agency is requesting comment from interested parties and the public on these options.

EPA's request for comment on expanding the bilingual labeling requirement for pesticides is consistent with an executive order issued in 2000, which directs federal agencies to improve access to programs and activities for persons who, as a result of national origin have limited English proficiency. The open comment period also reflects the agency's commitment to public participation in our pesticide regulatory decisions. EPA is inviting public comment until June 28, 2011. After the 90-day comment period ends, the agency will use the comments received in developing a decision on this petition. The Federal Register notice and petition are available in docket number EPA-HQ-OPP-2011-0014 at Regulations.gov. See also EPA's Web fact sheet on the petition at:

<http://www.epa.gov/pesticides/regulating/labels/bilingual-pesticide-labels.html>

HOW TO FIND THE DOCKET / DOCUMENTS:

To access documents on-line, go to the web site <http://www.regulations.gov>. <<http://www.regulations.gov/>> From the menu just under the banner at the top of the page, click on "Advanced Search" and then "Docket Search." This will bring up a page on which you can enter the Docket ID (see above). Once you have entered the Docket ID, scroll to

the bottom of the page and click on "Submit." When the next page comes up on your screen, click on the appropriate Docket ID. This will take you to a list of all the documents within the public docket for that chemical.

The above information is time-sensitive pesticide information provided by the Maryland Information Network for Pesticides and Alternative Strategies (MINPAS). Subscription to this service is free. To subscribe, send an email to listserv@listserv.umd.edu. The body of the email should contain the line: subscribe pesticide-notes 'your name'. Send this message from the email address to which you want the notices sent.

If you have any trouble subscribing or unsubscribing from the mailing list, please contact the Extension Administrative Assistant by sending email to peap@entomology.umd.edu.

Dr. Amy E. Brown, Professor
Coordinator, Pesticide Education & Assessment
Department of Entomology, 4112 Plant Sciences Bldg.
University of Maryland, College Park, MD 20742
301-405-3928, amybrown@umd.edu

EPA Warns Online Shoppers about Illegal, Harmful Pesticide Sales

WASHINGTON – The U.S. Environmental Protection Agency (EPA) announced today that it has warned more than 2,800 customers across the United States about risks associated with a banned pesticide in an ant-control product they purchased online through fastpestcontrol.com. The product, Fast Ant Bait, contained mirex, a pesticide that was banned in 1978 because it can cause liver, skin, reproductive and nerve damage.

"Illegal pesticides are often much more toxic than approved pesticides," said Steve Owens, assistant administrator for EPA's Office of Chemical Safety and Pollution Prevention. "When EPA takes a pesticide off the market, it means that pesticide was not safe. Consumers should use only EPA-registered pesticides and always follow the label directions to ensure their safety."

EPA became aware of the product after the Washington State Department of Health reported that a woman became ill after using it in her home. In response, EPA identified and warned three online companies, 2Checkout.com Inc., CCNow, Inc. and eBay Inc. to cease processing orders for the product that was produced and mailed from China. The three companies cooperated, immediately ceased processing orders and consumers can no longer purchase products from fastpestcontrol.com, the original site that offered the product for sale. The companies also worked with EPA

to provide sales information, which allowed the agency to contact customers directly about the dangers posed by the pesticide and proper disposal methods.

The letter EPA sent to customers who bought the product provides detailed directions on how to safely clean up and dispose of the illegal product and what to do if they believe they were exposed or harmed. For more information on mirex or other pesticides, consumers can call the Agency for Toxic Substances and Disease Registry Information Center at 1-888-422-8737 or the National Pesticide Information Center (NPIC) at 1-800-858-7378.

To view a copy of the letter:

http://www.epa.gov/region10/pdf/publications/notice_to_fastpestcontrol_customers_02_09_2011.pdf

Information on using pesticides safely:

<http://www.epa.gov/pesticides/health/safely.htm>

EPA Warns, "Children Act Fast...So Do Poisons," in Observance of Poison Prevention Week



WASHINGTON – In ongoing efforts to protect people's health, the U.S. Environmental Protection Agency is collaborating with the Poison Prevention Week Council to encourage the public to keep poisonous substances out of the hands of children. EPA recommends that locking household cleaners, disinfectants, solvents and other materials is the best way to reduce accidental poisoning among children.

"Because it takes only a split second for a child to be poisoned, we want everyone to remember the theme 'Children Act Fast...So Do Poisons.' Most exposures that occur in the home can be prevented or substantially reduced through proper and safe storage, use and supervision of all household products," said Steve Owens, assistant administrator of EPA's Office of Chemical Safety and Pollution Prevention. "Poison Prevention Week serves as a reminder for everyone to keep pesticides locked up and away from children, and to read and follow all labels to minimize the potential dangers from pesticides."

EPA promotes poison prevention each year to increase public awareness of the potential danger to children from pesticides and other household products. In 2009, the American Association of Poison Control Centers reported that more than half of the 2.4 million poisoning incidents each year involve children younger than six years old. Leading causes of poisonings include cosmetics such as perfume and nail polish, deodorant and soap, household cleaning products and medications.

Adults are also susceptible to poisoning (intentional or unintentional), but from generally different sources,

including pain medicines, sedatives (drugs to reduce anxiety), sleeping pills, antipsychotics used to treat mental illness, household cleaning products, antidepressants, cardiovascular drugs (drugs to treat heart disease) and alcohols.

Anyone who has been exposed to a pesticide or other toxic substance and may be experiencing non-life-threatening symptoms should call the National Poison Center hotline at 1-800-222-1222. In case of more serious exposures, call 911. In addition, EPA urges the public to report all pesticide exposures to the product manufacturer (including the registration number found on the product label of all pesticide products registered by EPA). Registered manufacturers are required to report these incidents to EPA, and the agency uses the data to decide whether additional regulatory action is needed.

More information on poison prevention:

<http://www.epa.gov/pesticides/health/poisonprevention.htm>

EPA Provides Public with Easier Access to Chemical Information

WASHINGTON – The U.S. Environmental Protection Agency has introduced a new web-based tool that will enable the public to search for and have easy access to health and safety studies on industrial chemicals. As part of Administrator Lisa P. Jackson's continued efforts to enhance EPA's chemical management program and increase transparency, the chemical data access tool allows users to conduct a chemical-specific search for health and safety studies that have been submitted to the agency under the Toxic Substances Control Act (TSCA). The tool will also be added to Data.Gov, a website developed by the Obama Administration to provide public access to important government information.

"The new tool will for the first time give the public the ability to electronically search EPA's database of more than 10,000 health and safety documents on a wide range of chemicals that they may come into contact with every day," said Steve Owens, assistant administrator for EPA's Office of Chemical Safety and Pollution Prevention. "This is just the latest in a series of significant steps the agency is taking to empower the public with greater access to critical information on the chemicals manufactured and used in this country."

Under TSCA, companies are required to submit health and safety studies to the agency when they show there may be a substantial risk, when chemical testing is required, or to facilitate EPA's review of new chemicals. The public now will be able to have easy access to these studies simply by searching for the name of a chemical or for a particular word or phrase, such as a health or safety concern addressed in a study.

In addition to making the health and safety studies more accessible, EPA is taking aggressive action to reduce companies' efforts to keep the identity of the chemicals confidential when health and safety studies are submitted to the agency.

More about the new web tool:

<http://www.epa.gov/oppt/existingchemicals/pubs/transparency.html>

More on chemicals:

<http://www.epa.gov/oppt/existingchemicals/>



A new issue of the "Ag Marketing News Update – March 16, 2011" – is now available at the link below:

<http://www.agmarketing.umd.edu/NewslettersPDF/AgMarketingNewsUpdate/March-16-2011.pdf>

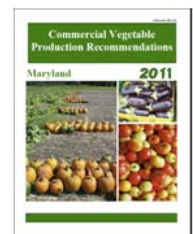
This article is by Ginger S. Myers and it contains "Marketing Strategies for Diversified Livestock Producers."

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

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

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

Commercial Vegetable Production Recommendations Maryland EB 236 On-Line at:



<http://extension.umd.edu/agriculture/mdvegetables/files/Maryland%20full%202010.pdf>

Also available in a new very interactive format at the Delaware Extension site at:

<http://ag.udel.edu/extension/vegprogram/publications.htm#vegrecs>

Maryland Phase 1 Watershed Implementation Plan For the Chesapeake Bay Total Maximum Daily Load

View On-line at:

<http://annearundel.umd.edu/files/MarylandWIP.pdf>



Agriculture News

FROM THE

Anne Arundel Economic Development Corporation

Lisa K. Barge

Agricultural Marketing & Development Manager

MD. Farmers Offer Spring Garden Planning Tips, Checklists

Spring is right around the corner and now is the time to plan for your gardens. Maryland farmers have initiated a homeowner education campaign, **"Take it from Maryland Farmers: Backyard Actions for a Cleaner Chesapeake Bay"** to help gardeners by offering tips and online resources.

The campaign highlights the importance of garden planning for stronger, healthier gardens and lawns in the upcoming growing season and a cleaner Chesapeake Bay. Additional topics include the wise use of fertilizers, trying pesticide alternatives and composting, controlling soil erosion and rainwater runoff, and conserving water. Click [here](#) to learn more.

Emerald Ash Borer Update

As part of a national survey for the emerald ash borer (EAB), the Maryland Department of Agriculture (MDA) has started hanging 2,600 14" x 24" triangular purple

insect traps in ash trees statewide. Surveys, which are continuous and ongoing, are crucial to understanding

the emerald ash borer's impact in Maryland and determining the best course of action. In Prince George's County, MDA will also be hanging about 80 new green prism traps where we expect to collect beetles as part of the national "trap trials" program.

This year, the battle to stop the spread of the emerald ash borer will include more intensive surveys in Western Maryland and on the Eastern Shore - including Wicomico, Worcester and Somerset counties for the first time. Additionally, MDA will use systemic insecticides to treat selected trees in and around the known infested area and release three biocontrol agents (beneficial wasps) at selected sites. Click [here](#) for more information.

Try Locally-Raised Meats Today!

From beef and pork to poultry, lamb, emu and many other meats, Maryland farmers have a wide variety of meats available for consumers who want to buy locally-raised products. [MDA is promoting local meats this month](#) through its [Maryland's Best](#) branding program. Maryland's Best, through its [website](#) and limited advertising, helps state producers sell their products and helps consumers locate the products.



Click [here](#) to find a producer near you.

Photo: Steve Isaacson of Sassafra River Beef in Cecil County. With him is chef Bruce Wetterau of the Kitty Knight House in Kent County, who uses Steve's beef products on his menu. *Photo credit: Edwin Remsberg*

Motorists, Farmers Can Share the Road Safely

The spring planting season has started throughout much of Maryland. That means motorists traveling Maryland highways and rural roads may find themselves sharing the road with the large, slow-moving farm equipment from one of Maryland's 12,800 farms.



Farmers are legally allowed to operate farm equipment on public roadways and there are times when farm vehicles must operate on highways to move between farm and field. Agriculture Secretary Buddy Hance encourages all motorists to be patient when traveling on roads near Maryland farms and drive with caution to ensure the safety of motorists and farmers. Click [here](#) for safety tips.

Total Crop Management for Greenhouse Production

with an emphasis on
Integrated Pest Management and
Nutrient Management



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EXTENSION
Solutions in your community

The New 2011 *Total Crop Management for Greenhouse Production Manual with an emphasis on IPM and Nutrient Management*

is available online. Obtain a copy at the **IPMNET** website: www.IPMNET.umd.edu and click on publications. The 295 page manual is downloadable as a PDF.

For information on how to obtain a printed copy contact sgill@umd.edu

This manual is a joint effort between specialist from the VPI, North Carolina State and the Karen Rane, Chuck Schuster, Andrew Ristvey and Stanton Gill. It should contain everything a greenhouse grower needs to operate using IPM and nutrient management BMP.



Check out our new energy website:

<http://www.conserveenergymd.umd.edu/>

The website is evolving and continues to be modified. so if you have any suggestions let me know.

Jennifer R. Timmons, Ph.D.
Extension Poultry Specialist
University of Maryland Extension
Lower Eastern Shore Research and Education Center
27664 Nanticoke Road, Salisbury, MD 21801
Ph. (410) 742-1178 ext. 309, Fax (410) 742-1922
Email: mdchick@umd.edu

A new issue of Branching Out, Volume 19 No. 1 / 2011, is now available at the link below.

<http://www.naturalresources.umd.edu/Publications/BranchingOut/2011vol19no1.asp>

For your convenience, a printer-friendly pdf version is available at:

<http://www.naturalresources.umd.edu/Publications/BranchingOut/2011vol19no1.pdf>

Branching Out is a forest stewardship quarterly newsletter published by the University of Maryland Extension and provides current information to private woodland owners, natural resource professionals and to the public. We encourage you to share this free newsletter with others and invite them to subscribe by visiting:

www.naturalresources.umd.edu/Publications/BranchingOut/About.html

Maryland Woodland Steward

In 2010, a survey of Maryland Woodland Stewards was taken. 61 Maryland Woodland Stewards participated in the survey. Thank you to those who took the time to participate. Your feedback is valuable to us. The report, *Maryland Woodland Stewards Survey Results 2010*, can be downloaded at the following link. This report is a sampling and also includes the type of activities that take place by trained cooperators. Please feel free to share this report with your family, friends and neighbors.

<http://www.naturalresources.umd.edu/Programs/MWS/2010/2010MWSSurveyFinal.pdf>

We are also working on a formal comprehensive report of the cumulative impacts of the MWS program. 2010 marks the 20th year anniversary for Maryland Woodland Stewards (previously called "Coverts"). During those 20 years, we have collected a lot of data from cooperators. Later this year we will be sharing these cumulative results with you in the hope that we can better inform you, as well as use the results to secure funding for future programs. More information will be coming soon about a Maryland Woodland Steward follow-up activity this spring. If you have any questions regarding the Maryland Woodland Stewards program, please feel free to contact Nevin Dawson by email (ndawson@umd.edu) or by phone, 410-827-8056 x125.

Thank you again for all your efforts and for your commitment to the Maryland Woodland Stewards program. Feel free to contact me for further information or questions you may have.

Ellen Green, Extension Program Assistant
University of Maryland Extension
18330 Keedysville Road, Keedysville, MD 21756
301-432-2767 x307, Fax: 301-432-4089
egreen13@umd.edu



I want to introduce everyone to the newest member of the Anne Arundel County Extension Office. **Matt Parker** joined us in February 2011 as an Aquaculture Business Specialist. He will be focusing on assisting interested persons get started in commercial shellfish aquaculture production. Matt's primary role in the promotion of shellfish aquaculture in Maryland is to help people write business plans and locating potential funding sources for start up and expanding aquaculture businesses.

Matt is a North Carolina native and comes to us after working with the North Carolina Department of Agriculture for the last 8 years as an Aquaculture Business Specialist. In NC, Matt assisted catfish, hybrid striped bass, freshwater shrimp producers, shellfish producers and tilapia producers with business planning, economics, and environmental issues. Matt has a BS in Fish and Wildlife Science from NC State University, a Master of Aquaculture and a Master of Business Administration both from Auburn University in Alabama. Matt is available to speak with local/statewide organizations and civic group about aquaculture in Maryland and its potential. In addition to aquaculture Matt can often be found discussing his favorite seafood recipes, Auburn University Athletics, home brewing, and showing off pictures of his son.

Matt can be reached by phone here at the office 410-222-6759 or by email at mparke11@umd.edu



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

Website features Anne Arundel County Agricultural Program Teaching Modules:

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



Farmer School



On-Line Farming Education Series “Tomorrow’s Farmers” Web Modules

Module 1: Introduction to Farming & Course
Orientation: “Tomorrow’s Farmers”

Future Module Topics:

- The Science and Stewardship of Soils
- Fundamentals of Farm Machinery
- Plants that Farmers Grow
- Integrated Pest Management
- Farm Business and Enterprise Development
- Modern Vegetable Farmer
- Modern Fruit Farmer
- Grain Farming
- Pasture and Hay Management
- Livestock that Farmers Raise

Whether you grew up on a farm or not, the web modules will open your eyes to the world of farming. A course designed for the young and old alike. It just may make a farmer out of a “city kid” or a “hayseed.”

After viewing the series in its entirety take the Final Exam. All participants receiving a final Exam Grade of 70% or above will receive a “Certificate of Farming Competency,” compliments of the Anne Arundel County Extension Office.



4-H News

Amanda Wahle, 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 Amanda Wahle in the Anne Arundel Extension Office at 410-222-6759 or at:
awahle@umd.edu

Bring Extension Into Your Life



Family & Consumer Sciences

For more information, contact Naeemah Raqib at nraqib@umd.edu or call 410-222-6756

Master Gardener Program

For more information, contact Mike Ensor at mentor@umd.edu or call 410-222-6757



4-H Youth Development

For more information, contact Amanda Wahle at awahle@umd.edu or call 410-222-6755

Nutrient Management

For more information, contact Krista Mitchell at kristaw@umd.edu or call 410-222-6759

Maryland Sea Grant

For more information, contact Matt Parker, Aquaculture Business Specialist, mparke11@umd.edu
Or call 410-222-6759 or visit <http://annearundel.umd.edu/seagrant.cfm>



Gardening questions? Pest problems?

The Home and Garden Information Center can help!

Consultants are available by phone Monday-Friday 8:00 AM - 1:00 PM. Call 1-800-342-2507 or 410 531-1757 or visit the HGIC website at: www.hgic.umd.edu.



Thanks for Partnering

Thanks for partnering with the University of Maryland 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.



Handwritten signature of R. David Myers.

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

NACAA Communication Award
Individual Newsletter
2002 National Winner

NACAA
National Association of
County Agricultural Agents



Prince George's County Extension
6707 Groveton Drive
Clinton, MD 20735
301 868-8783

Anne Arundel County Extension
7320 Ritchie Highway, Suite 210
Glen Burnie, MD 21061
410 222-6759 or 301 970-8250

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