

Dave's Ramble

Perhaps the summation of two lesser evils render a non-evil. Merriam Webster defines evil as *the fact of suffering, misfortune and wrong-doing; A source of sorrow or distress*. Unfortunately, history reminds us that the cultivation of our soil has led to great calamity. Therefore, the public is generally apprehensive concerning agriculture endeavors recognizing the importance of food; however, at what cost? Could certain agricultural practices be deemed evil? Will a hero be found; someone who challenges or conquers thereby replacing evil with practices of good? 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 or accept his statement that, "No one has ever advanced a scientific reason for plowing." His insights gave rise to the reduced tillage era. Hence reduced tillage, a lesser evil eventually evolved into no-tillage an agricultural practice of good. The agricultural world is good!

Recently, no-tillage coupled with the practice of surface manure applications has been deemed a lesser evil; thus evoking another practice of lesser evil, the recommendation of reduced tillage for manure incorporation. May we be cautioned not to abandon a practice of good for a lesser evil only to be humbled to the return of our good ways?

Here's the conclusion of this matter O Theophilis, If one's ground is prone to erosion continue no-tillage; plant a timely cover crop to keep the soil covered at all times; apply light applications of manure according to fertility requirements during active crop growth; plant with state of the art planters and drills utilizing row cleaners, zone tillage and strip tillage attachments and let herbicide take care of the weeds.

In so doing, by combining the agricultural practices of good and even sometimes an added lesser evil we are assured to pass the land to the next generation to their good fortune – May we all be heroes for someone!



Fall 2007

Calendar of Events

Mark Your Calendars --- Plan To Participate

- ◆ September 26 - Pumpkin & Sweet Corn Twilight - Wye REC
- ◆ October TBA - GPS Courses – Keedysville/Queenstown
- ◆ November 13-15 – Crop Mgmt. School - Ocean City
- ◆ December 5 - Grain Marketing Workshop- Hughesville
- ◆ December 7 & 14 – So. MD Crop Roundtables - DFRC
- ◆ December 10 - Alternative Crop Workshop NM/PAT - DFRC
- ◆ December 20 - Fruit/Veg PAT Recert. On-Line/Glen Burnie
- ◆ December 27 - Fruit/Veg NM Voucher On-Line/Glen Burnie
- ◆ January 9 - So. MD Forage Conference - Waldorf
- ◆ January 14 - Pesticide Certification Training - DFRC
- ◆ January 25 - Central Maryland Vegetable Meeting - Upperco
- ◆ January 28 - Pesticide Certification Exam – DFRC
- ◆ January TBA - Central MD Veg Meeting - Upperco
- ◆ February TBA - Grape Pruning Clinic - Upper Marlboro REC
- ◆ February 6 - So. MD Veg & Fruit Mtg - Davidsonville Ruritan
- ◆ March 10 - Pasture & Field Crop Workshop NM/PAT- DFRC
- ◆ March 20 - Field Crops PAT Recert. On-Line/Glen Burnie
- ◆ March 27 - Field Crops NM Voucher On-Line/Glen Burnie



Inside This Issue

- Fall & Winter Meetings
- CMREC Research Highlights
- Vegetable & Agronomic IPM Updates
- Grain Supply & Demand Report Highlights
- Organic Weed Control
- Nursery & Greenhouse IPM Reports
- Pesticide Notes
- Corn & Forage Drought Testing
- MDA's New Poultry Regulations
- SARE Farmer Grants
- Nutrient Management Update
- New Website Features

Fall & Winter Conferences

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



Pumpkin Twilight & Vegetable Roundup

WYEREC, Queenstown, MD
September 26, 2007

You are invited to attend the **2007 Pumpkin & Sweet Corn Twilight, Wednesday, September 26, 2007**, at the Wye Research and Education Center. The evening tour will **begin at 4:30 p.m. continuing till nightfall.**

- ◆ University specialists will be speaking about insects and diseases of pumpkin and sweet corn, along with current research on these crops.
- ◆ See 15 varieties of pumpkins
- ◆ See and taste four late season BT Sweet corn varieties
A light fare will be served.

Questions or directions, call Mike Newell 410-827-7388 or Debby Dant 410-827-8056. Pre-registration not required.

Mid-Atlantic Crop Management School

November 13-15, 2007



The **Mid-Atlantic Crop Management School** will be held at the Princess Royale Hotel in Ocean City on **November 13-15, 2007**. Individuals seeking advanced training in soil and water, soil fertility, crop production and pest management will have an opportunity at hands on, intensive sessions that also provide continuing education units (CEU's) for the Certified Crop Advisor (CCA) Program. You may also register on line at: www.mdcrops.umd.edu

Beginner & Advanced GPS Courses

Jonathan Kays, Extension Specialist, Natural Resources
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Nevin Dawson, Forest Stewardship Extension Educator
ndawson@umd.edu

Both beginner and advanced GPS courses will be offered this October in three locations: Keedysville, MD; Queenstown, MD and Dover, DE. They are designed for natural resource professionals and forest landowners, but hunters, fishers, and hikers are also likely to find them valuable. **Each course will run from 9:00 a.m. to 3:30 p.m. and will cost \$50 per person per course.** Garmin 76Csx GPS units and laptops will be provided for the training. For more course information or to preview the instructional materials used for the training visit our web site at: <http://www.naturalresources.umd.edu/GPS.cfm>

Also be sure to Visit forest stewardship web site at: <http://www.naturalresources.umd.edu>. It's a great resource for those interested in forest stewardship, wildlife management, and rural enterprises. Check out the calendar for more educational opportunities.

University of Maryland Annual Horse Conference

November 10, 2007



The University of Maryland will be hosting the **Annual MCE Horse Conference** to educate horse industry participants on a wide array of topics including horse health care, nutrition, pasture management, equine business management. This year's event will be held **Saturday, November 10, 2007** from **8:00 a.m. to 3:30 p.m.** at the Montgomery County Community College. For more information please visit: www.equinestudies.umd.edu.

Maryland Cooperative Extension presents its *Newest* Grain Marketing Workshop!

December 5, 2007

Winning the Game 4:
Launch and Land your
Post-Harvest Marketing Plan



Starting your post-harvest marketing plan can be a challenge. But once you have started, how do you finish? In the newest workshop in the Winning the Game series, you learn what questions to ask to better size-up the market after harvest.

You will write your own post-harvest plan and practice exit strategies during yet another marketing game simulation. How long will you hold onto your grain?

Attend the **Winning the Game 4 Workshop** on **December 5** in Hughesville, Maryland from **9:00 a.m. to 1:00 p.m.** to launch and land your post harvest plan. Contact Ben Beale 301-475-4484.

Registration Fee: \$10 (Includes Refreshments and Materials).

Pre-registration is required 5 days prior to the scheduled meeting. If special assistance is required please notify the contact 5 days prior to the meeting.

Sponsored By: Maryland Soybean Board, Maryland Grain Producers Utilization Board, Mid-Atlantic Farm Credit, Colonial Farm Credit, United States Department of Agriculture, Northeast Center for Risk Management, Local Sponsors

Southern Maryland Crop Round Tables

December 7 & 14, 2007



Join our University specialists to get your questions answered about crop production and pest control. Two identical sessions will be offered each day in two locations.

Crop Pest Roundtable

Featured speaker: Dr. Ron Ritter, Extension Weed Specialist
This session will satisfy the requirement for **Private Pesticide Applicator Recertification.**

Friday, December 7, 2007

*Morning Session: **9:30 – 11:30 am** Charlotte Hall Library, Charlotte Hall, MD (St. Mary's County)

*Afternoon Session: **2:00- 4:30 pm** Davidsonville Family Recreation Center, Davidsonville, MD (Anne Arundel County)

Crop Production Roundtable

Featured speaker: Dr. Bob Kratochvil, Extension Agronomic Crop Production Specialist

This session will satisfy the requirement for **Nutrient Management Voucher Training**.

Friday, December 14, 2007

*Morning Session: **9:30 – 11:30 am** Charlotte Hall Library, Charlotte Hall, MD (St. Mary's County)

*Afternoon Session: **2:00- 4:30 pm** Davidsonville Family Recreation Center, Davidsonville, MD (Anne Arundel County)

Registration is free; but please call the Charles County Extension Office to **reserve your place in a session, as seating is limited**. Make plans now to attend. Call Pam King at 301-934-5403.

Alternative Crops IPM Workshop Pesticide Recertification & Nutrient Management Voucher Training December 10, 2007



Make plans to attend the **Alternative Crops IPM Workshop, Monday, December 10, 2007** at

the Davidsonville Family Recreation Center (DFRC) from **6:00 p.m. to 9:00 p.m.** This workshop will explore advanced crop production concepts of alternative crops, fruits and vegetables for the Southern Maryland region from establishment to harvest.

Topics will include: ***Crop selection; integrated crop management; soil fertility; weed control; insect control; and disease control*** for alternative field crops, fruits and vegetables.

Private Pesticide Applicator Recertification & Nutrient Management Voucher Recertification will be awarded for full class participation.

To register for this event contact the Anne Arundel County Extension Office at 410 222-6759.

New Live or On-Line Sessions Fruit & Vegetable Private Pesticide Applicator Recertification

December 20, 2007

Field Crop & Pasture Private Pesticide Applicator Recertification

March 20, 2008

If you would like the opportunity to learn from home, yet still be engaged, then be sure to enroll in the ***New On-Line Private Pesticide Recertification Trainings***, scheduled for **December 20, 2007 and March 20, 2008 from 6:00 to 8:00 p.m.** The December session will focus on fruit and vegetable pesticide related topics; whereas the March session will focus on field crop and pasture pesticide related topics. You may also attend the sessions live at the Anne Arundel Extension Office in Glen Burnie, Maryland.

This CENTRA recertification session will be live via the internet directly from the University of Maryland. CENTRA is a student interactive system that will document your attendance. *To participate in a live CENTRA session a high speed cable or satellite internet connection is required.*

Private Pesticide Applicator Recertification credit will be awarded for full 2-hour session participation.

Registration by December 17 and March 17 is required in order to receive CENTRA login password information for the respective sessions.

To register for this on-line event contact the Anne Arundel County Extension Office at 410 222-6759.

New Live or On-Line Sessions Fruit & Vegetable Nutrient Management Voucher Recertification

December 27, 2007

Field Crop & Pasture Nutrient Management Voucher Recertification

March 27, 2008

If you would like the opportunity to learn from home, yet still be engaged, then be sure to enroll in the ***New On-Line Nutrient Management Voucher Recertification Trainings***, scheduled for **December 27, 2007 and March 27, 2008 from 6:00 to 8:00 p.m.** The December session will focus on fruit and vegetable fertility and production related topics; whereas the March session will focus on field crop and pasture fertility and production related topics. You may also attend the sessions live at the Anne Arundel Extension Office in Glen Burnie, Maryland.

This CENTRA recertification session will be live via the internet directly from the University of Maryland. CENTRA is a student interactive system that will document your attendance. *To participate in a live CENTRA session a high speed cable or satellite internet connection is required.*

Nutrient Management Voucher Recertification credit will be awarded for full 2-hour session participation.

Registration by December 24 and March 24 is required in order to receive CENTRA login password information for the respective sessions.

To register for this on-line event contact the Anne Arundel County Extension Office at 410 222-6759.

Become a Certified Private Applicator

If you have allowed your pesticide certification to expire or are a new applicant, then you are invited to attend the Private Pesticide Applicator Certification Training and Examination. **A Private Applicator Certification Training** will be conducted at the Davidsonville Family Recreation Center (DFRC) from **7:00 to 9:00 p.m.** on **January 14, 2008**. **A Private Pesticide Applicator Exam** will be given at the Davidsonville Family and Recreation Center (DFRC) from **7:00 to 9:00 p.m.** on **January 28, 2008**.

**Maryland/Delaware Forage Council Holds
Pasture & Hay Conference Series
Delmarva Hay & Pasture Conference
January 8, 2008
Southern Maryland Hay & Pasture Conference
January 9, 2008**

At both conference locations topics will be presented covering all aspects of hay and pasture production. The programs will address key issues and concerns facing hay and pasture producers. Topics will include designing grazing systems for small acreages, equine health impacts from grazing, managing sacrifice and heavy use areas, weed control in pasture and hay, and preparing for pasture establishment: taking soil samples and selecting species.

The conferences also feature displays and exhibits by numerous agribusinesses. Attendees will be able to obtain information on seed, fertilizer, equipment, fencing, etc. needed for hay and pasture production and management. *Conference program and register information will be available at local Extension offices by early December.*



**Central Maryland Vegetable Growers
Meeting**

January 25, 2008

This well sponsored, large grower meeting always offers a great deal of vegetable industry information. The **Central Maryland Vegetable Growers Meeting** will be held on **January 25, 2008** from **8:00 a.m. to 3:30 p.m.** at the Friendly Farm Inn, located on Foreston Rd. in Upperco, MD. Pesticide recertification credits are awarded for attending this meeting. For full meeting details, and to register call the Baltimore County Extension Office at 410 666-1024 today.



**Southern Maryland Vegetable
& Fruit Production Meeting**

February 6, 2008

Make plans to attend the **Southern Maryland Vegetable and Fruit Production Meeting** on **Wednesday, February 6, 2008**. This year the meeting will be held at the Davidsonville Ruritan in Davidsonville, Maryland.

This meeting will provide **Private Applicator Recertification & Nutrient Management Voucher Recertification**. Speakers will provide IPM updates and present on a broad range of production topics.

Also meeting sponsors will showcase their products and services, and state vegetable organization leaders will be present to recruit and answer your questions. Please attend and make this meeting the best ever. For full conference details, contact Dave Myers, Extension Agent, Anne Arundel County Extension Office at 410 222-6759. **Please register no later than February 4, 2008.**

**Field Crops & Pasture IPM Workshop
March 10, 2008**

Make plans to attend the **Field Crops & Pasture IPM Workshop, Monday, March 10, 2008** at the Davidsonville Family Recreation Center (DFRC) from **6:00 p.m. to 9:00 p.m.** This workshop will explore advanced concepts of pasture and field crop production in the Southern Maryland region from establishment to harvest, including animal utilization. Topics will include: Crop selection; integrated crop management; soil fertility; weed control; insect control; and disease control for soybeans, corn, wheat, barley and hay crops.

Private Pesticide Applicator Recertification & Nutrient Management Voucher Recertification will be awarded for full class participation.

To register for this event contact the Anne Arundel County Extension Office at 410 222-6759.

**Research Highlights Presented at the
CMREC Upper Marlboro Crops Twilight
Held on August 9, 2007:**

Pest Management Research Projects 2007

Galen P. Dively and Terry Patton, Department of Entomology, University of MD, College Park, MD

**1. Efficacy of Avitec™ Seed Treatment to
Repel Blackbirds and Crows from
Feeding on Corn Seed after Planting.**

With the withdrawal of lindane-based seed treatments, bird damage to corn during germination and seedling stage is expected to increase. The non-lethal bird repellent, Avitec™, containing the biopesticide 9,10 anthraquinone, recently received emergency use approval by EPA as a corn seed treatment to prevent damage by sandhill cranes in the Midwest. In support of a full registration, this project generates data on the repellency effects of Avitec™ on blackbirds and crows in Maryland and determines if it can prevent stand reduction under field conditions.



(Supported by Arkion Life Sciences and MD Grain Producers).

**2. Efficacy of Basamid (dazomet) for Control of
Weeds, Soil-borne Diseases, and Nematodes.**

Basamid® (dazomet) is a microgranular soil fumigant from Certis USA used to sterilize soil, as an alternative to methyl bromide. It has registered uses on turf, nursery crops, and strawberry. In support of future registrations on vegetable crops, this study evaluated the effectiveness of a fall application of Basamid to control weeds and soil-borne diseases using green beans as an indicator crop. Microgranules were applied on the soil surface by a Gandy spreader at the rate of 400 lbs per acre, tilled into the soil, and then plots were covered immediately with a polythylene tarp to seal in the methyl isothiocyanate (MITC) gas, the actual fumigant.

3. Evaluation of Management Practices for Insect Pests in Organic Crop Production. With changes in the USDA Organic Standards, new formulations of pesticides with novel active ingredients and approved inerts have been developed but their effectiveness is not well documented by scientific experimentation. This project tests several new formulations and rates of pyrethrum (PyGanic) and azadirachtin in comparison with standard products such as spinosad (Entrust). Specific crop-pest trials at CMREC includes potato – Colorado potato beetle, squash – squash bug and squash vine borer, pepper – fruitworms, and tomato – fruitworms. A focus is to determine the lowest rate, optimum timing, and minimum number of applications required for economic control. (Supported by the McLaughlin Gormley King Company).

4. Effect of Plant Stress on the Efficacy of Bt Sweet Corn. Bt sweet corn provides growers with a more targeted and sustainable tool to control insect pests and can significantly reduce the number of conventional insecticides. In the case of corn borers, control is virtually 100%. For corn earworm, Bt sweet corn usually provides 90% control of the larvae and significantly reduces the extent of kernel injury. However, under very high moth activity, 20-30% of the Bt ears can be infested and show minor tip damage. These higher levels of damage have been observed in ears with poor tip coverage, especially when plants are stressed by drought, fertility or high temperatures. This study examined the effects of moisture and fertility stresses on the effectiveness of Bt sweet corn to control ear-invading insects.



5. Honey Bee Colony Collapse Disorder Research. While the extent and causes of CCD are unknown, many believe that honey bees have reached a tipping point wherein the colony can no longer protect itself from a barrage of problems such as invasive mites, pathogens, exposure to pesticides, and increases in other stressors such as drought. This project focuses on possible pesticide effects on honey bees. Specifically, plantings of watermelon were treated with two labeled rates and application timings of imidacloprid. This neonicotinoid is the most widely used insecticide in the world, particularly on cucurbit crops. Samples of stamens with pollen and washings of flower surfaces were collected for analysis of imidacloprid. Knowing the levels of imidacloprid in watermelon pollen and flower surfaces will not lead to any cause-and-effect conclusion but will provide insight into potential environmental exposure doses. This information also provides a basis for designing realistic exposure regimes in future research with functional hives (Funded by the Foundation for the Preservation of Honey Bees, Inc.)



Seedless Table Grape and Elderberry Demonstration and Variety Trials

CMREC Upper Marlboro

Herb Reed Extension Educator, Calvert County
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- ◆ Red Grape Varieties: Concord Seedless, Candadice, Reliance, Vanessa
- ◆ White Grape Varieties: Himrod, Lakemont
- ◆ Hudson River High Wire Training System – Bilateral cordon umbrella.
- ◆ Plot Design: 4 reps, 3 vines/plot, 6 varieties: vine spacing 6', row spacing 10'

Timeline

2005

Planted bare root vines and bushes April 7.
 Herbicides Gramoxone® and Devrinol® applied May 3.*
 Bamboo stakes and high cordon wire installed at 6' in grape plots on May 27.
 Cordon selection began in mid-June.
 Fungicides and insecticides applied as required.

2006

Herbicides, fungicides, insecticides applied as required.
 Approximately 2/3 of grape bunches removed in July.

2007

Pesticides applied as required.

	Rep 1	Rep 2	Rep 3	Rep 4
	Plot #- Variety	Plot #- Variety	Plot #- Variety	Plot #- Variety
Row 1	01- Lakemont	07- Vanessa	13- Concord	19- Himrod
Row 2	02- Canadice	08- Himrod	14- Reliance	20- Lakemont
Row 3	03- Concord	09- Lakemont	15- Vanessa	21- Reliance
Row 4	04- Vanessa	10- Reliance	16- Canadice	22- Concord
Row 5	05- Himrod	11- Concord	17- Lakemont	23- Canadice
Row 6	06- Reliance	12- Canadice	18- Himrod	24- Vanessa

Nova	Nova	York	Nova	York	York
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Elderberry Plots (2 bushes/plot)

York & Nova elderberries are easily adapted to a wide variety of soils ranging from sandy to clay loams. Poorly drained soils should be avoided. Open fields with full sunlight located away from wooded and other obstructions will allow for ample air movement and decrease pressure from insects, disease and birds. Planting of two varieties is recommended for cross pollination. <http://www.inberry.com/elderberry.html>

Seedless Grape Variety Assessments

Concord Seedless though similar in flavor and texture to Concord, is unrelated. The clusters and berries are much smaller than those of Concord. The fruit matures earlier, has high flavor, and makes excellent pies and preserves. Productivity is erratic, and it is not recommended for commercial planting. In warm years, the variety produces fully developed seeds.



Candadice is more winter hardy than most seedless grapes, although trunk injury has occurred on some sites. It produces medium clusters with small red berries. With cordon training systems and careful management, Candadice clusters may average 0.5 lb., and the vines can be extremely productive. Fruit rot is a problem in wet years because the clusters are excessively compact. Cluster weight = 0.50 lb. Berry weight = 1.6 g.

Reliance produces large clusters of round, red, medium-sized berries. The skins are tender and the flesh is melting in texture, with a sweet labrusca flavor. Coloring may be poor in some years, and fruit often crack in wet seasons. Cold hardiness is among the highest of the seedless varieties. Cluster weight = 0.62 lb. Berry weight = 2 to 3 g. Vanessa is a red dessert grape of excellent quality. The vine is moderately vigorous and among the hardiest of seedless grapes. Grafting may be desirable on many sites to increase vine size. The seed remnant is usually large and soft; when noticeable it is sometimes a cause for limited marketability. Berries are medium in size on medium, well-filled clusters. Storage potential is good. The flavor is mild and fruity, and berry texture is firm. The fruit quality is among the best of the red seedless types.

Himrod produced from a cross between Ontario and Thompson Seedless, is the most successful table grape released from the Cornell University grape breeding program (1952). It produces large bunches of white seedless grapes with excellent, honey like flavor and melting, juicy texture. The brittle rachis may break when handled, and the berries may shell in storage. The rachis is also subject to bunch stem necrosis, a poorly understood disorder that causes a shriveling of the cluster stem, often just before harvest. Despite these cultural defects, Himrod is currently the most commercially important of the seedless grapes grown in New York. Cluster weight = 0.36 lb. Berry weight = 2.1 g.

Lakemont was produced from the same cross as Himrod but has a milder flavor and more compact clusters of small to medium-sized berries. Cluster thinning prevents over cropping. Bunch rot is often a problem. Cluster weight = .48 lb. Berry weight = 1.7 g.

Descriptions from Cornell University Website:

<http://www.nysaes.cornell.edu/hort/faculty/reisch/bulletin/table/tabletext3.html>

CMREC Research Vineyard Upper Marlboro Farm 2007 Cordon Establishment for Three-Year- Grapevines

Compiled By: Ben Margulies, Graduate Technician,
University of Maryland

Variety	Cordon Established with 6 x 10 ft spacing	Cordon Established with 4 x 10 ft Spacing
Carmenere	84%	81%
Chardoneel	78%	63%
Cynthiana	37%	50%
Negro Ammaria	100%	92%
Petit Manseng	94%	90%
Petit Syrah	69%	71%
Sauvignon Blanc	72%	58%
Touriga	94%	90%
Vignoles	84%	73%

All varieties are repeated four times in 24-ft blocks in randomized locations in the research vineyard.

Sangiovese and Tannat have not been included - No cordons have been established in either spacing system.

While cordon establishment is less for the 4-ft. cordons, the shorter cordons are bearing significant amounts of fruit for their third year, while the longer cordons are bearing very little fruit.

Powdery Mildew Resistance to Strobilurins and Losing Sensitivity to the Sterol Inhibitor at the CMREC Research Vineyard Upper Marlboro Farm

Vineyard Team Correspondence Anne DeMarsey,
Specialist, Fruit Pathology, University of Maryland and
Anton Baudoin Associate Professor, Plant Pathology,
Virginia Tech

Vineyard Team,

Here are the results so far on the powdery mildew (PM) isolates I sent to Anton Baudoin at Virginia Tech last fall for testing in his lab. Our isolates do appear to be resistant to strobilurins, as we suspected, and they may also be losing sensitivity to the sterol inhibitors (SIs), though this needs to be further tested. The latter result concerns me, and is a good reason to tank-mix SIs with sulfur. It seems odd that Rubigan and Bayleton, the oldest of the SIs, are more effective than newer SIs (I don't know which others Anton tested; I will find out), but these are preliminary results.

We didn't have any active downy mildew (DM) infections at the time I sent samples, so I don't know whether the DM is resistant to either class of fungicides. There are DM

strains in a vineyard near Annapolis that are resistant to strobilurins, so I think we need to continue to rely on other materials for DM control as well (at this point the best options: Captan and Phostrol).

Based upon Anne DeMarsay recommendations the following vineyard spays were made in 2007:

DATE	PRODUCT	RATE/ACREAGE
4/24/07	Pounce	6oz/Acre
4/24/07	Captan	2 lb/Acre
4/24/07	Topsin M	12oz/Acre
5/1/07	Nova	1oz/Acre
5/1/07	Dithane DF	1.0 lb/Acre
5/8/07	Sulfur	1.5lb/acre
5/8/07	Dithane	1.0lb/Acre
5/17/07	Sulfur	4lb/Acre
5/17/07	Dithane	4lb/Acre
5/30/07	Pristine	12oz/Acre
6/6/07	Nova	5oz/Acre
6/6/07	Captan	3lb/Acre
6/6/07	Sulfur	1.0lb/Acre
6/8/07	Pristine	12oz/Acre
6/21/07	Kaligreen	5lb/Acre
6/21/07	Captan	4lb/Acre
7/2/07	Captan	4lb/Acre
7/2/07	Sulfur	5lb/Acre
7/11/07	Sulfur	4lb/Acre
7/11/07	Phostrat	4pt/Acre
7/11/07	Sevin	1qt/Acre
7/23/07	Sulfur	4lb/Acre
7/23/07	Captan	4lb/Acre
7/23/07	Sevin	2qt/Acre

**2007
Vineyard
Fungicide and
Insecticide Spray
Schedule**

Maryland Pest Net Update

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Pest Net web report access:

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

Issue #3: Maryland and Delaware Downy Mildew Alert:

<http://www.mdipm.umd.edu/network/pestNet/reports/pestNetReport.cfm?id=2d33523c0a5a5a8f015b571e0f220c2c>

Issue #2: Damaging levels of Harlequin bugs in Crucifer Fields:

<http://www.mdipm.umd.edu/network/pestNet/reports/pestNetReport.cfm?id=276c16c00a5a5a8f015b571e2fc39560>

Additional Pest Net Updates for MD, DE, VA can be found at:

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



Vegetable Crop Insects

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Beet Armyworm

We are starting to see an increase in population pressure in a number of fall vegetables so be sure to select materials that are labeled for beet armyworm control. As a reminder, the pyrethroids have not provided effective beet armyworm control.

Cabbage & Crucifers

Continue to scout all fields for beet armyworm, cabbage looper, diamond back moth larvae and harlequin bugs. Be sure to apply treatments before larvae move deep into the hearts of plants.

Spinach

Both webworms and beet armyworm can be found feeding on small plants. Controls should be applied when worms are small and before they have moved deep into the hearts of the plants or produced webbing. Remember that both insects can produce webbing on the plants. Generally, at least 2 applications may be needed to achieve control of webworms and beet armyworm. If both species are present, Intrepid or Confirm are labeled for both species. Avaunt recently received a label for spinach for beet armyworm control (<http://www.cdms.net/LDat/ld4BD026.pdf>). Mustang Max also received a label for spinach this year (<http://www.cdms.net/LDat/ld67J028.pdf>). Please see the label for the list of insects controlled — webworm is not on the label. As a reminder, pyrethroids have not provided effective beet armyworm control.

Vegetable Crop Diseases

Bob Mulrooney; Extension Plant Pathologist;
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White Rust on Spinach

Symptoms of white rust include irregular, chlorotic areas on the upper leaf surface with white, blister-like pustules developing on the lower leaf surface. Development of white rust is favored by cool nights and mild day temperatures with prolonged periods of dew or fog which favor wet leaf surfaces. Control of white rust begins with crop rotations of 2 or more years. Some varieties have partial resistance and should be used if possible. A preventative fungicide schedule should begin 2 to 3 weeks after planting, and/or if weather conditions favor disease development. There are a number of fungicides labeled for the control of white rust on spinach. For more information on the control of white rust on spinach please see the **EB 236 2007 Commercial Vegetable Production Recommendations**.

Cucurbit Downy Mildew

Cucurbit downy mildew was reported on pumpkins from Maryland last week and this week it was identified on pumpkins in Sussex County near cucumbers that were infected. The incidence and severity were low and hard to see on leaves that were heavily infected with powdery mildew as well. From a diagnostic viewpoint, we also discovered that some infected areas on the underside of the leaf that look dark enough to be downy mildew are really infected with powdery mildew and *Alternaria* — which is producing the dark areas on the underside of the leaves. One of the best ways to check for downy mildew is to look at the infected leaves in the early morning while still covered with dew and look for water soaked angular spots (lesions) on the undersides of the leaves. If in doubt, bring in a sample to your county Extension office. See Kate Everts' article from last week's WCU for fungicide recommendations for downy mildew on pumpkin <http://www.rec.udel.edu/Update07/Volume15,Issue23.htm>.

The downy mildew forecast for spore distribution and survival is low until Monday depending on what the approaching cold front does. Continue to monitor the website <http://www.ces.ncsu.edu/depts/pp/cucurbit/index.php> if you still have cucurbits at risk.



R. Mulrooney
Downy mildew on the upper side of leaf — note the angular yellow spots



R. Mulrooney
When you turn the leaf over, on the corresponding lower surface you will see the purple fungus growth

Fruit Rot on Pumpkin

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

Note: The information in this article addresses fruit rot caused by fungi but **not** by *Phytophthora capsici* (see the following article **Fungicides for Late Season Management of Foliar and Fruit Diseases of Pumpkin**).

There are many fungi that cause fruit rot on pumpkin. Some examples are white speck caused by *Plectosporium* (formerly known as *Microdochium*), which causes white or tan "pimples" on the fruit (Fig.1); black rot, which is caused by the fungus that causes gummy stem blight on the foliage (*Didymella bryoniae*), results in large grey lesions (Fig. 2); and anthracnose, which causes smaller grey lesions on fruit (Fig. 3). Fusarium fruit rot is a relatively dry fruit rot that initially looks white or pink, but frequently becomes black or tan because of saprophytic growth (Fig. 4).

Because many different fungi cause of fruit rots, no single strategy will be sufficient to manage them. However the following are good practices that, when used together, can minimize damage.

Select well-drained fields for pumpkin production.

Select cultivars (varieties) that are less susceptible to fruit rot. For example, there are some cultivar differences in susceptibility to white speck.

Grow pumpkins on a no-till cover crop. No-till pumpkin production reduces several fruit rots and the reduction in rot is related to the amount of soil coverage that the cover crop provides. A hairy-vetch and rye mixture would provide nutrient benefits and improve fruit quality by reducing rot.

Follow a good fungicide management program in the field. The same fungi that cause white speck, black rot and anthracnose also cause lesions on the leaves. If the leaves are protected from disease, the fruit will be less likely to become diseased. A good fungicide program also will maintain foliage health and keep sunscald at a minimum.

Harvest mature fruit as soon as possible.

Discard damaged and diseased fruit.

Avoid wounding the fruit during harvest and transport. Store fruit in a cool, shaded and dry location.

What about washing fruit? Because many fungi infect fruit in the field (preharvest) or are seedborne (Fusarium fruit rot), washing the fruit won't eliminate the pathogens. Also, the wash water is an excellent way to spread the pathogen from fruit to fruit. However, previous research has shown that for cantaloupe, a field fungicide program combined with a one minute immersion of fruit in 135° F water was successful in reducing rot. Unfortunately no one has looked at this treatment on pumpkins.



Figure 1. White speck, caused by *Plectosporium*



Figure 2. Black rot, caused *Didymella bryoniae*



Figure 3. Anthracnose

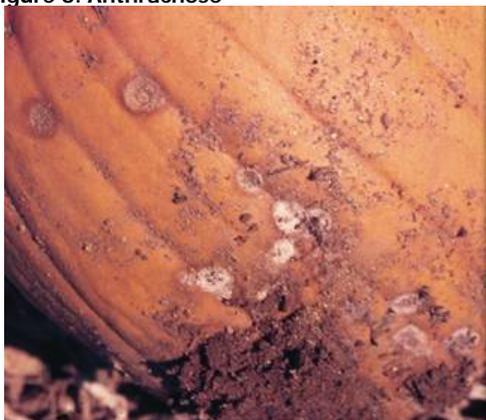


Figure 4. Fusarium fruit rot

Fungicides for Late Season Management of Foliar and Fruit Diseases on Pumpkin

Kate Everts; Vegetable Pathologist, University of Delaware and University of Maryland;
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If you do not plan to harvest pumpkins for several weeks, it is important to continue to protect pumpkin foliage. High levels of downy mildew and powdery mildew are present in the Mid-Atlantic. Downy mildew can cause very rapid defoliation and result in sunscald, and powdery mildew will damage handle and fruit quality. For management of **downy mildew** see Issue 23 of the Weekly Crop Update

<http://www.rec.udel.edu/Update07/Volume15,Issue23.htm>.

To manage **powdery mildew** apply a protectant such as chlorothalonil *plus* Nova at 5 oz/A or chlorothalonil *plus* Procure at 8 oz/A in *alternation* with either Sulfur 80W at 4 lb/A or chlorothalonil *plus* Pristine at 12.5 to 18.5 oz/A. Sulfur can cause phytotoxicity, so use caution and read the label. Remember that coverage of foliage is important for optimum results.

The following sprays may provide some suppression of the fruit rot phase of **Phytophthora blight**:

Forum 4.18 SC at 6.0 fl oz/A (tank mix with another fungicide that has activity on Phytophthora blight such as fixed copper)

Ranman 400 SC at 2.75 fl oz/A (tank mix with an adjuvant, do not tank mix with copper)

Tanos 50 WDG at 8 – 10 oz/A.

Fall Sanitation

In vegetable production it is not a good idea to leave old crop residue in the field any longer than necessary. If the crop is allowed to survive after harvest, fungi that cause many diseases continue to increase on the surviving plants. This allows higher numbers of the fungus to potentially survive until next season. Sanitation (plowing or disking the old crop) will help prevent pathogen carry-over.

Pumpkins Ready for Harvest?

Andy Wyenandt; Specialist in Vegetable Pathology;
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 Rutgers University

The fall is almost upon us and because of the hot, dry summer many pumpkin fields will be ready for harvest much sooner than expected. For most roadside markets pumpkin season begins shortly after Labor Day and extends through the end of October. For those keeping track, that's roughly an eight-week market. The question for many is "What to do with marketable fruit in the field until it's time for sale?" As long as there is good, healthy foliage present, the best place for a pumpkin is on the vine. Foliage helps protect fruit from potential sunscald injury and will help any late setting fruit size. However, keeping foliage around will also require additional fungicide applications. If the foliage cannot be maintained,

move the mature fruit to a dry, well ventilated area. Many growers will let powdery mildew take foliage out a few weeks before pumpkins are ready to be harvested. Why? Pumpkins are a lot easier to harvest without dense foliage in the field. Growers should be aware that the major drawback to this method is that powdery mildew can reduce stem quality by causing them to turn brown and become brittle prematurely.

Once foliage is gone, pumpkins can easily be stored and cured in the field by lopping them off the vine and placing them in un-stacked windrows as long as the weather cooperates. Temperatures of 80 to 85°F with relative humidity of 80 to 85% for 10 days after lopping are ideal. After this, temperatures between 50 to 60°F with 50 to 70% relative humidity will keep respiration and potential weight loss down. Cool, wet and frosty weather will do most of the damage to ripe fruit in the field by slowing down the curing process, exposing fruit to potential fruit rot pathogens and in the case of frosts, cause fruit to melt if temperatures get too low. Knowing your market, your crop and keeping an eye on the weather will help you to have successful pumpkin harvest season.

Tomato Fruit Disorders Recently Seen in the Mid-Atlantic Region

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

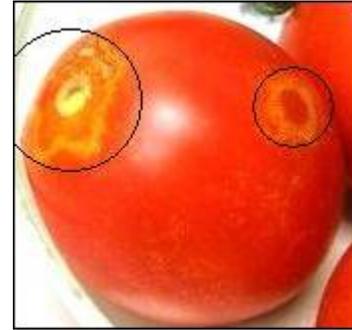
I have seen tomato fruit and have received many inquiries about ripe tomatoes that seem to be “sprinkled with gold dust” in the last few weeks. This disorder is called “gold fleck” or just “fleck” and it develops as small irregular green spots found randomly on the surface of green fruit which become yellow (gold) as the fruit ripens. Spots can vary from few to many.

There is evidence from NC that insecticide use may reduce flecking, however other work has shown fleck appearing when no thrips or sucking insects are present. Certain varieties show a predisposition to develop fleck, whatever its cause. In Florida fleck is not associated with thrips feeding even though they have thrips present in the field 8 or 9 months of the year.

Our flecking problem started about 1-2 weeks after we started having very high temperatures and has appeared all over the mid-Atlantic region. I have been monitoring thrips populations over the season and overall their populations have not increased over this same time period in tomato fields, which would indicate that fleck is a physiological disorder and not caused by thrips or other sucking insects. We see this disorder every year just around the end of July or the beginning of August when tomato plants have large fruit loads on them and are stressed from environmental factors.



Severe gold flecking



Flecking around stem end, and where two tomatoes touched

I have also seen a great deal of blossom end rot in tomatoes over the last two weeks. Blossom end rot begins with tan, water-soaked areas at or near the blossom end of fruit, which usually enlarge and turn black and leathery. This area is then prone to invasion from fungi such as *Alternaria*. This malady is caused by a localized shortage of available calcium as the fruit develops. While the problem usually occurs externally at the blossom end of the fruit it may also occur internally with no visible symptoms on the outside of the fruit.

There are several conditions that may increase the likelihood of blossom end rot. These include:

1. Widely fluctuating soil moisture, which can temporarily reduce calcium concentrations in expanding fruit. (Because calcium is carried through the plant in the water flow, those plant parts that are rapidly transpiring will have more than adequate levels of calcium, while fruit often receive just adequate levels of calcium. **Any moisture stress will reduce calcium uptake, and therefore concentration, in the plant.**)
2. Nitrogen in the form of ammonium can cause a reduction in calcium absorption and concentration in the tomato plant.
3. Damage to the root system can reduce uptake of calcium from the soil.

Foliar applications of calcium seldom reduce blossom end rot because the calcium taken up by the leaves is inadequately translocated to the fruit. This fruit problem can be most easily prevented with good water management and proper fertilization. Most of the fields with the problem this year had inadequate irrigation when the plants had large fruit loads and needed the water (and the calcium).



Blossom end rot



Internal blossom end rot

Some Mid-Atlantic Thrips Survey Results

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As I have alluded to in previous WCU articles I have been conducting a thrips survey on various vegetable and fruit (mostly strawberry, brambles and grapes) crops throughout the spring and summer in Maryland, southeastern Pennsylvania, eastern and southern Delaware and eastern Virginia. This study looked at the number and, maybe more importantly, the species of thrips on vegetables. There is a great deal of information and I am still looking at samples, but there are a few things that really stood out in the survey that I would like to quickly report.

Frankliniella tritici, Eastern flower thrips was the most common thrips species throughout the spring and the month of June making up $\geq 80\%$ of most samples. *F. fusca*, tobacco thrips, was the next most common species at about 12-15% of samples, and the remaining 5-8% was made up of various thrips species, including *Thrips tabaci*, onion thrips and *F. occidentalis*, Western flower thrips (WFT). However, in July there was a population shift that took place rather rapidly, i.e., over a few weeks, with Western flower thrips becoming the major thrips species found in vegetables like tomato, pepper, pumpkin, and watermelon, but not onion (onion thrips was still the most common species in onions). Populations of WFT went from 2-12% to 50-80% of the thrips found on the farms. Along with this population shift came problems with control in August. Most growers used pyrethroids that give good control of thrips and mites when these pests are at low to moderate populations, but once their populations increase or WFT becomes more prevalent other miticides or thrips controls should be used. This population shift did not take place everywhere in the survey area. It occurred in southern and eastern Maryland and Virginia with a few farm sites in southeastern Delaware. I did not see this shift take place north of Baltimore, MD, although a few specific farms in this area did have a small shift to WFT. The shift seemed to be

greatest on farms that had a number of high tunnels that were in constant use (i.e., growing strawberries early and then tomatoes or other crops later in the summer). WFT also were found earlier in the season in areas with many high tunnels. Growers at these shifted-population areas reported more problems with thrips damage than growers whose crops maintained a constant thrips species profile. Growers that used spinosad and, where allowed, Monitor saw a significant decrease in thrips problems.

Another surprising observation was the large number of thrips I found early in the spring on the foliage of vegetable plants. In most cases this was favored by the presence of pine pollen, a good source of food for thrips, in large quantities on the vegetable foliage, and the lack of spring rains to wash the pollen off the leaves (I discussed this in an article in Volume 15, Issue 10 of WCU at:

<http://www.rec.udel.edu/Update07/Voume15.Issue10.htm>.

I also found thrips (almost all were Eastern flower thrips) in large numbers in brambles (3-12/fruit) and grapes (10-40/cluster). How much damage, if any, they were causing is still up for discussion, and has prompted me to conduct a thrips/brambles study with some interested growers and consultants next year.

With the warmer winters we have been experiencing there is a high probability that thrips are over-wintering in our area. High tunnels then allow these small over-wintering populations access to some of their preferred host crops very early in the season. In areas where the shift to WFT populations appears to be taking place there is the potential for greater thrips problems in the coming years. This will be especially true on farms and in areas that spray frequently with insecticides. Vegetable growers should be watching for these potential problems with thrips in the coming years. I'll talk more about the results of the survey in upcoming winter meetings.

I would like to thank the Northeastern Integrated Pest Management Center for helping fund this survey. It is difficult to obtain funding for survey projects, but without these studies we lose valuable information that aids in our ability to anticipate potential problems.

Agronomic Updates



Fall Control of Perennial Weeds

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Fall is the most practical time to treat perennial weeds because it is the time that plants can move the herbicide to the roots where it will do the most good. When considering fall weed control the emphasis should be on what the patch of weeds will look like next spring or summer not the amount of dead stems this fall. In addition, it is important to consider that a fall application will not eradicate a stand of perennial weeds; rather, the fall application will reduce the stand size or the stand vigor the next year. Fall application of glyphosate is the most flexible treatment for most perennial weeds such as artichoke, bermudagrass, Canada thistle, common milkweed, common pokeweed, dock, hemp dogbane,

horsenettle and johnsongrass. A rate of 1.5X of the normal rate is the most economical; higher rates generally do not improve control (if 22 oz is normally used then 34 oz/A; if 1 qt is usually used then 1.5 qts/A). Banvel at 2 to 4 pints is also labeled for artichoke, bindweeds, dock, hemp dogbane, horsenettle, milkweeds, pokeweed, or Canada thistle. (Planting small grains must be delayed after Banvel application - 20 days per pint of Banvel applied.)

Fall herbicide applications should be made to actively growing plants. Allow plants to recover after harvest before treating them. Allow 10 days after treatment before disturbing the treated plants. Consider the options of spot treating in a standing crop; keeping the combine header as high as possible so the weeds are quicker to recover; or combining around the weed patches and then spraying those patches immediately after harvesting. Weed species differ in their sensitivity to frost; some are easily killed by frost (i.e. horsenettle) others can withstand relatively heavy frosts. Check the weeds prior to application to be sure they are actively growing.



Fall Planting and Cover Crop Considerations

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The recent rains have provided needed soil moisture. With significant crop-destruct acreage (corn and soybean), early corn harvest, drought stricken corn harvested for silage, and damaged forage fields (hay and pasture), decisions need to be made concerning late summer and fall plantings.

Wheat prices are encouraging looking towards the coming year. Even with the negative basis and issues surrounding quality, the price of wheat could be \$4.75 per bushel or better next harvest season. July 08 wheat on the CBOT is currently at \$5.90. A 70 bushel wheat crop at \$4.75 a bushel will produce a gross income of \$332.50. Generally, the risks with wheat versus barley or oats are less, barring a wet harvest season. If you are deciding whether or not to plant wheat (for grain) on more acres this fall, you first should consider how it will affect crop rotations and your marketing plans.

On the plus side, you can credit nitrogen (N) following a droughted corn crop so your fall fertilization should be based on soil test P and K values for the wheat and double-crop soybeans. In contrast, you should not credit N following a droughted soybean crop. There is always a tendency with open ground to plant wheat early; however, you need to wait until the Hessian fly-free date. This date varies from the northern part of the state to the southern areas. For New Castle County, do not plant until after October 3 and in Kent County the date is October 8 while in Sussex County the date is October 10. For highest yields, plant wheat by the end of October. Use varieties that have high yield, high test weights, and good disease resistance in local and regional trials.

Barley acreage has always been high in Kent County because soybean yields have been higher if following barley and because of double-crop processing vegetables such as lima beans and the presence of local buyers. The main issue to consider is avoiding very early plantings in the third and fourth week in September if growing barley for grain. Often, early-planted barley will be attractive to aphids which can also transmit barley yellow dwarf virus. Planting too early can lead to excessive top growth that creates problems with matting and smothering with winter ice and snow loads.

There should be ample time to plant cover crops early on a lot of acres this year. This will open up many more options. Winter small grains (barley, wheat, rye, triticale, and winter oats) all perform well as cover crops. Rye is the most winter hardy and research tends to show better N scavenging by rye than the other cover crops. However, the choice of cover crop usually is an economic decision – what seed is least expensive and available.

A spring oat crop is often used by vegetable farmers as a fall cover crop. It has the advantage of winter killing (in most years) so is less of a problem for tillage and planting when growing early spring vegetables such as peas, spinach and cabbage. Annual ryegrass used to be used on more acreage as a cover crop than it has recently. It has the advantage of requiring much lower seeding rates, a consideration when seeding by airplane but the potential of annual ryegrass to become a weedy pest or to dry the soil out too quickly in the spring has reduced its use. Rapeseed has been used by some farmers because of its potential as a natural control for nematodes when incorporated in the spring although to be most effective rapeseed needs to be planted before September 10. Recently, research on the use of oats and forage radish has shown benefits for reducing soil compaction and improving soil quality overall.

There will be more opportunity to use winter annual legumes: hairy vetch, crimson clover, or field peas (Austrian winter peas). This practice will be particularly useful for corn ground going back into corn next year, crop destruct or early harvested soybean acres going into corn next year, or for land going into late-spring planted vegetables. These legume crops will provide from 60-120 lbs. of N for the subsequent crop when killed in the spring. They have been used successfully to grow no-till crops of vegetables the following year including tomatoes, peppers, and pumpkins. If planted early enough, they can provide good soil mulching, weed control, as well as N.

Recommended planting rates for cover crops:

Rye and Triticale 100 lbs/acre

Wheat 100 lbs/acre

Barley 140 lbs/acre

Oats 100 lbs/acre

Rapeseed 8 lbs/acre

Annual ryegrass 20 lbs/acre

Crimson clover 20 lbs/acre

Hairy vetch 25 lbs/acre

Austrian winter peas 60 lbs/acre

Mixtures of cover crops such as rye and vetch or barley and crimson clover have worked very well. Reduce the rate of components when doing mixtures.

Early planted emergency forage options should also be considered for livestock producers as forage supplies will be limited and expensive if bought in. Rye, oats, or ryegrass planted after the ground dries from the recent rains will provide significant fall forage. Forage brassicas such as radish, kale, and turnips are another option, especially for pasturage but are best seeded with an accompanying annual grass such as oats. In hay or pasture fields that have been thinned or damaged by the drought, consider no-tilling in some crops to increase fall and spring tonnage. Triticale has worked no-tilled into alfalfa stands, rye is another possibility. Annual ryegrass no-tilled into a thin hayfield can help produce additional forage in the fall and spring.

Grain Marketing Highlights

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Commodity Trading is Risky Business

Commodity market volatility continues to make pricing commodities extremely difficult whether one is making cash or futures market sales. For example, now is not the time for the novice to enter the fray of outright commodity futures market trading. Extreme market volatility leads to extreme margin calls, regardless of whether one has taken a hedged or speculative position in the futures market. There should be a difference in how one executes hedged vs. speculative trading, although those differences may not be as rigidly marked as they once were. Futures trading should not be taken lightly. Accounts must be managed. If one plans to enter a futures contract for hedging and/or speculative purposes then an exit strategy must be planned. Just remember that sometimes the best made plans do not or can not be executed. In some cases this can further confound the commodity marketer's losses. One of the extenuating circumstances that commodity marketers must contend with from time to time is the production shortfall, resulting in the inability to honor previously drawn contracts. Delaware is experiencing a production shortfall this year for '07 corn and soybean production, the extent of which is not yet known.

What to do in Event of a Production Shortfall

In the case of options on futures, where one previously bought a put option to establish a minimum price and now realizes that production is short, all that remains to be done is to offset the option or to let the option expire worthless, depending upon whether the option is in the money, out of the money, or has any remaining time value. In the event the option expires worthless the cost to the grain seller is the amount of the option premium paid plus commission for a round turn. In the event of cash contracted sales the grain marketer essentially has three options: cancel the contract balance; buy in same amount for account customer; or roll the contract. Let's first consider buying in same amount for account customer. Assume the grain

marketer forward priced corn for harvest delivery at \$3.00 per bushel with a local grain buyer. The grain buyer in turn hedged the corn in the futures market at \$3.00 per bushel. It is now delivery time. Dec corn futures are at \$3.50 per bushel. The grain marketer is experiencing a production shortfall and can not make delivery to honor the contract. The grain marketer owes 50 cents per bushel to the grain buyer to cover the futures loss in order to settle the contract as long as the bushels are bought in. A second option is for the grain marketer to roll the contract to next year's harvest delivery. In this case, if the Dec '08 corn futures price is \$3.90 per bushel the grain buyer will offer $\$3.90 - 50 \text{ cents/bushel} = \3.40 per bushel for the same bushel amount to be delivered during next year's harvest.

The third option involves canceling the contract balance. In this case the forward contracted price for harvest delivery was \$4.00 per bushel and the Dec '07 corn futures price is now \$3.50 per bushel. A production shortfall has occurred and the grain seller cannot fill a portion or any of the contracted amount. The seller can elect to have a neighbor to fill the contract, if the bushels are available, or the grain seller can walk away. The grain buyer then must acquire the previously contracted bushels from another seller. If not available locally, the buyer then will pay the current futures price plus the cost of freight in order to replace the bushels previously contracted.

Both of the contract settlement options for cash contracting commodities require third party verification that the crop is short. There also may be some variations to the seller's delivery options discussed above that can only be deciphered on a case by case basis. It is recommended that the grain seller report any pending production shortfall to the grain buyer as soon as it becomes known. The specifics of what you can do need to be discussed with the grain buyer holding the contract in question. For technical assistance on grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

USDA's September Supply/Demand Report Highlights

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Corn Analysis

U.S. corn production for the '07/'08 marketing year is now forecast at 13.308 billion bushels, 254 million bushels larger than last month's estimate. The production forecast is based upon a national corn harvest of 85.4 million acres at 155.8 bushels per acre. The September report increased the national corn yield by 3 bushels per acre from the August estimate. The corn balance sheet reflects a 5 million bushel increase in beginning stocks, a 100 million bushel increase in the estimate for feed and residual use, a 100 million bushel increase for exports, a 100 million bushel decrease in food, seed and industrial use, and a 100 million bushel decrease in ethanol for fuel resulting in an increase in ending stocks for U.S. corn of 159 million bushels from one month ago, now placed at 1.675 billion

bushels. For comparison, the carry in from the '06/'07 marketing year was estimated at 1.142 billion bushels. The season average farm price estimate was left unchanged at \$2.80 to \$3.40 per bushel. The season average farm price for the '06/'07 marketing year was \$3.03 per bushel, as compared to the \$2.00 season average price from the '05/'06 marketing year when ending stocks were at 1.967 billion bushels.

Soybean Analysis

U.S. soybean production is now forecast at 2.619 billion bushels for the '07/'08 marketing year, 6 million bushels less than the August estimate. The '07 soybean harvest is expected to come from 63.3 million acres harvested at a national average yield of 41.4 bushels per acre, one-tenth of a bushel less than the previous month. Ending stocks for soybeans, now estimated at 215 million bushels, are 5 million bushels less than the August estimate. The estimate for the season average farm price was increased by 10 cents per bushel on both ends of the price range, \$7.35 - \$8.35 per bushel. For comparison, the season average farm price for the '06/'07 marketing year when ending stocks were at 555 million bushels was \$6.40 per bushel.

Soybean oil ending stocks are now projected at 1.735 billion pounds, down 490 million pounds from a month ago. Soybean oil ending stocks are currently projected to be about 845 million pounds less than ending stocks for the '06/'07 marketing year. Soybean meal ending stocks are projected at 300 thousand short tons, unchanged from last month and the same as last year.

Wheat Analysis

The changes made from August to the U.S. wheat balance sheet included a 15 million bushel decrease in imports (on the supply side), food and seed uses were increased by 10 million bushels, and 2 million bushels, respectively. Feed and residual use was reduced by 10 million bushels, and exports were increased 25 million bushels (on the demand side). As a result ending stocks were reduced by 42 million bushels from the August estimate. The season average farm price was increased 40 cents per bushel on both ends of the price range and is now placed at \$5.50 - \$6.10 per bushel.

World wheat production is projected to be lower this month and is now estimated at 112.36 million metric tons, a reduction of 2.4 mmt from last month. A year ago world wheat ending stocks were 125.08 mmt. In the '05/'06 marketing year world ending stocks for all wheat were at 149.16 mmt.

Marketing Strategy

Should one consider booking some of next year's crop at current price levels? New crop 2008 corn, soybean, and wheat prices are at historically high levels. An old marketing adage says that "when faced with high prices, sell early and sell often". Considering that Dec. '08 corn futures are currently trading at \$4.01; Nov '08 soybean futures at \$9.24; and July '08 wheat futures at \$5.90 per bushel an opportunity exists to get a portion of next year's crop prices locked in, if not done so already. The next question is generally how much? Answer: At these price levels the

answer to that question has to be around 20% of intended production. For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

"Organic" Weed Control

Dr. Joe Neal, NC State University

Many of you are interested in "organic" alternatives for weed control. While there are many options available to organic gardeners, one that is gaining popularity (and getting more press) is the use of acetic acid (vinegar). Researchers at Cornell University recently evaluated several formulations of acetic acid in comparison to Scythe (pelargonic acid) and Roundup (glyphosate) for landscape weed control. The acetic acid formulations evaluated were Nature's Glory (25% acetic acid), BurnOut Weed and Grass Killer (25% acetic acid), vinegar (20% and 5%).

The conclusions from this study were not surprising. Acetic acid kills weeds by contact action -- burning the green foliage very rapidly. One application provided quick burn down but did not kill the roots. Three applications at 7 day intervals did much better. 20% acetic acid was better than 5% acetic acid. Perennial weeds were suppressed but not killed. As one might expect, Roundup herbicide worked better on the perennial weeds and had better ratings at the end of the study. However, 3 applications of 20% acetic acid provided fairly similar levels of control.

Table 1. Percent weed control 1 day and 2, 5, 9, 13 weeks after treatment; acetic acid and Scythe applied three times, Roundup applied once.

Treatment	1 day	2 weeks	5 weeks	9 weeks	13 weeks
Acetic acid, 20%	98	99	99	98	81
Acetic acid, 5%	90	98	95	64	56
Scythe	98	99	95	52	45
Roundup	0	98	99	97	95

Another interesting aspect of this report was the cost comparison (but again it was no surprise). Costs for 20% acetic acid or one of the commercial formulations of acetic acid was about \$40 per 1000 sq. ft. Scythe cost about \$20 per 1000 sq. ft. The chemical herbicide, Roundup cost about \$.50 per 1000 sq. ft. If cost is the overriding issue then of course the answer is fairly clear -- Roundup works and is less expensive. However, for a bit more money, those interested in trying an organic product for landscape weed control, acetic acid-based products can work fairly well if the user will make multiple applications to prevent regrowth.

Source of this information: How Well Does Organic Weed Control Work? by David Chinery and Dr. Leslie Weston. In: Cornell University Turfgrass Times Vol. 13 #1 (Spring 2002).

Nursery/Greenhouse TPM/IPM Report



Weekly Report

University of Maryland Cooperative Extension
Central Maryland Research and Education Center

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Harlequin Bug, *Margantia histrionica*

We are still getting reports of harlequin bug damage on cleome and on ornamental cabbage and kale. Look for their distinctive black and white striped barrel-shaped eggs laid on the undersides of foliage.



Control: Neem, insecticidal soap, and synthetic pyrethroids like Talstar (bifenthrin), Astro (permethrin), or Orthene (acephate)

Bandedwinged Whitefly, *Trialeurodes abutiloneus*

We received an email this week from a grower who is finding bandedwinged whitefly on their 'Black & Blue' Salvia. They are migrating into greenhouses earlier than usual this year from field crops wiped out by the drought. The bandedwinged whitefly prefers to feed on soybeans and weeds, but will move into greenhouses as the weeds and soybeans dry down- usually in late-September to mid-October. Bandedwinged whitefly will feed on ornamental crops like cabbage and kale, asters, and poinsettia. We have also found them on petunia, geranium and hibiscus in previous years in the spring. Lance Osborne, University of Florida IFAS, says that whitefly are present in very high numbers on cole and cotton crops in Florida and Georgia now, but *Bemisia* is the main one being seen there.



Control: Control materials include Marathon, Safari, Celero, Flagship, Tristar, Judo, Astro, Talstar, Sanmite, Endeavor, Azatin.

Fire Ants (*Solenopsis*)

We received an email this week from a grounds supervisor who discovered several large colonies of fire ants in one of their landscape beds. Fire ants form mounds of soil over their colonies, and will swarm out and cover the mound within seconds if it is disturbed. Fire ants bite and inject formic acid into the skin, causing painful burning and blistering.



Photo by Forest and Kim

Fire ants are usually associated with the rootballs of container nursery plants that have been shipped into the state. This is not the first time that they have been found in Maryland-- in 2006 fire ants were

reported in Ocean City on plant material brought in from Florida. In this particular case, the mounds were isolated to one bed. All of the plants in that bed were also shipped in from Florida this spring.

Fire ant mounds are small and can easily go unnoticed until it is too late. Nursery and landscape managers need to stay alert. Watch for aggressive, biting ants that attack in large swarms.

Report any suspicious ant colonies to the Maryland Department of Agriculture – Plant Protection Division.

Pesticides to control fire ants: Permethrin Pro and Talstar (liquid and granular) give the best long term control when broadcasting large areas with a hose-end sprayer. Permethrin Pro calls for 1 ounce of concentrate per 1,000 square feet. Talstar uses only 1/8 to 1/4 ounce per thousand. If granular pesticides are preferred, use Talstar Granules or DeltaGard granules. Although it is used at very low rates, Talstar has given us the longest control; many customers state that no ants re-enter a treated area for as long as three months!

Using baits for fire ants: The use of professional baits is a very thorough method of control, slowly killing the entire colony. Baits work best when used outdoors in the spring and early summer. When the weather gets hot and dry, baits are generally ineffective for fire ant control. However, fire ant baiting has two drawbacks: cost and length of control time. For instance, baiting an entire area will kill the existing ant colonies but will not always control new ant colonies invading from nearby areas that were not baited properly. Also, most people with fire ant problems live on very large lots -- 2 acres or better. This involves a great deal of bait at a premium price. The most successful baiting practice for fire ant control on turf is to use granular baits such as Ascend or Maxforce Granular in the early spring followed by soil drenches 4 to 6 weeks later if needed.

Broadcast granular bait applications are most effective; however, it may take 4 to 6 weeks to give control. Early spring application is ideal because it controls recently developed queens before they leave on their nuptial flights and establish new colonies. Killing the queens is the only way to eliminate fire ant colonies. Follow-up granular bait applications usually are necessary in mid-summer and another one in the fall.

Apply baits when the ground is dry and when ground temperatures are between 70 and 90 °F with no forecast of rain. Apply baits around the base of mounds and also broadcast the entire areas where ants are seen foraging.

Baits are picked up by foraging ants looking for food. The ants take the bait back to the ant colony; it passes through the food chain and is fed to the queen ants. Granular bait recommendations are listed below.

In summer and fall, apply bait in the afternoon when temperatures are cooler because baits may rapidly degrade on hot, sunny days. By the time ants pick up the bait, the heat may have broken down the active ingredient, losing its effectiveness.

Pesticide Notes

This portion of the Pesticide Education and Assessment Program is partially sponsored by:



Pesticide Notes is a newsletter that addresses topical issues surrounding pesticides (insecticides, fungicides, herbicides, rodenticides, etc.). The newsletter concentrates on new regulations and policies; safety, health, and environmental issues; and other new pesticide developments. Pesticide Notes is edited by [Dr. Amy Brown](#), Coordinator of Pesticide Education and Assessment Programs (PEAP) at the University of Maryland. The current issue and back issues to 1996 are posted below. You can access an entire issue by clicking on the heading. Requires [Adobe Acrobat Reader](#)

If you would like to be notified by electronic mail when the latest issue of Pesticide Notes is published on the website please subscribe to the mailing list by sending email to listserv@listserv.umd.edu. The body of the email should contain the line: subscribe pesticide-notes 'your name'

[Volume 26, Number 8 \(August 2007\)](#)

- Proximity to Roundup-ready alfalfa
- Aerial application of pesticides on organic crops
- Organic farming builds soil organic matter
- Endangered species website updated
- Expanded labels for two insecticides
- Phenoxy herbicide will not undergo Special Review
- Opportunities for comment to public agencies

Expanded labels for two insecticides

EPA has granted Syngenta's request for expanded labels for the two thiamethoxam insecticides Actara and Platinum. The new instructions will allow higher application rates and use on additional vegetable crops. The new crops for Actara include fruiting vegetables, leafy vegetables, cucurbits, and brassica crops. New crops for Platinum include leafy vegetables and brassica crops. [*Syngenta Release, 06/19/2007 via Chem. Sp., 07/2007:5*]

Phenoxy herbicides will not undergo Special Review

EPA is announcing its final decision not to initiate a Special Review of 2,4-D, 2,4-DB, and 2,4-DP. Based on extensive scientific review of many epidemiology and

animal studies, the Agency found that the weight of the evidence does not support a conclusion that the related phenoxy herbicides 2,4-D, 2,4-DB, and 2,4-DP are likely human carcinogens – the basis for considering initiating a Special Review. The Agency has determined that the existing data do not support a conclusion that links human cancer to 2, 4-D exposure. This conclusion applies to 2, 4-DB and 2, 4-DP because they were considered for Special Review based solely on their similarity to 2, 4-D. In addition, because they are used significantly less than 2, 4-D, their contribution to exposure is minimal relative to 2, 4-D. [*EPA OPP Updates 08/10/2007, 08/14/2007*]

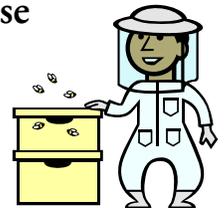
E.U. Bans Paraquat

A European Union court in Brussels banned the toxic weed killer Paraquat, accepting arguments from the Swedish government that it does not meet E.U. health standards. Paraquat is the main ingredient in Swiss-based Syngenta's Gramoxone - one of the world's three most widely used weed killers - but is also sold under other brand names. The Court of First Instance criticized E.U. regulators for not checking more carefully whether paraquat could harm humans and animals before authorizing its sale in 2003. Syngenta said more than half a million farmers use paraquat, and it has been approved for use in more than 100 countries, including the United States and Canada. (Source: *Washington Post, July 12, 2007, pg. D8 (back of Business section)*)

Beekeeping 101 Course

Mike Embrey, Entomology
University of Maryland

Mike Embrey will be starting another beekeeping class at the University of Maryland's, Wye Research and Education Center



on **Saturday, January 19, 2008 from 9am until noon.** The class will meet once a month through April and have another follow up class next September to prepare everyone for the winter.

There will be a textbook included and the registration cost will be \$100. Please call Ms. Debby Dant @410-827-8056 by December 15, 2007 to register.

Corn and Forage Testing Available

Maryland Department of Agriculture State Chemist
Section

Forage and Stored Grain Testing Program

The Maryland Department of Agriculture (MDA) is offering a free testing program to drought impacted Maryland farmers for nitrate and prussic acid in forage and for aflatoxin in corn grain. Prussic acid poisoning is mostly associated with sorghum and related species. The program is a cooperative effort between MDA and the Maryland Cooperative Extension (MCE). Testing is done by the MDA State Chemist's Section. The contacts in the State Chemist Section are Donald Lewis LewisDV@mda.state.md.us or

Ken McManus McManuK@mda.state.md.us who can be reached at 800-494-5590 x 2721 or 410-841-2721.

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

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

Taking corn samples for aflatoxin analysis:

- Collect 12 ears of corn from different areas of the field to get a representative sample.
- Keep cold as described above.

Taking silage samples for nitrate and prussic acid analysis:

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

[MDA News Release \(July 23, 2007\): Maryland Farmers Urged to Check Crop Insurance before Chopping Corn - MDA Offers Free Grain Testing to Farmers](#) , [University of Maryland Forages Program](#)

Nitrate Poisoning From Drought Stressed Forages

Many plants can accumulate nitrate under stressful conditions (excessive fertilization or water stress from rain after a drought). Sunflowers, corn, wheat, barley, rape, bromegrass, and sweet clover are some of the more common plants that can accumulate high levels of nitrates. High nitrates cause toxicity because once they are absorbed into the blood stream, they are converted to nitrites that binds to hemoglobin and reduces the oxygen carrying capacity of the blood. Acute poisoning can be observed within 6 hours of forage consumption and is characterized by dark-brown blood, labored breathing, tremors, and weakness. The following information is primarily aimed at the management of drought stressed corn silage but general concepts are valid for other forages as well.

Do not graze or feed green chopped forages that have been drought stressed.

Ensiling is the best method to manage forages with potentially high levels of nitrates.

Wait at least 4 to 5 days before chopping drought stressed forage if it is heavily rained on.

Although extremely high nitrate levels are rare, we recommend that you test your corn forage before chopping and after ensiling (before feeding).

Test for nitrates at chopping: If the levels of nitrates are extremely high (Table 1) you may want to raise your cutter bar during harvest and leave about 10-12 inches of stalk in

the field (this is because nitrates tend to accumulate in the stalk of the plant). We realize this will further lower yields, but high yields with toxic levels of nitrates are undesirable.

When sending samples into the lab, you must obtain representative samples from the field. It is best if this material is chopped. (Do not send in large pieces of plants and stalks.) Labs like Cumberland Valley Analytical, UPS/FEDEX: 14515 Industry Drive, Hagerstown, MD 21742 Phone: 1-800-282-7522 can return results of a nitrate test back to you within a 24 h period.

Test for nitrates before feedout: Although ensiling will decrease nitrate levels by about 50 to 60% we would recommend that you test your drought stressed corn silage feed according to the guidelines (Table 1). If nitrate levels are high in feeds, check for nitrates and nitrites in water as these can also contribute to toxicity issues.

Table 1. Safe and toxic nitrate (NO₃) levels in feeds.

Nitrate ion, % dry matter basis	Recommendations
0 – 0.44	Safe to feed.
0.45 – 0.88	Usually safe to feed with balanced diet. Limit to 50% of DM intake in pregnant animals.
0.89 – 1.50	Limit intake to 20-25% of DM intake. Use caution. Do not feed to pregnant animals.
> 1.50	Toxic!

Silo Gas Caution

Use extreme caution around silos because nitrogen oxide gasses that are generated during the first few days of ensiling are lethal to animals and humans! These gasses tend to accumulate in low areas and are colorless to reddish-brown. Run the blower for 15 to 20 minutes before entering an upright silo and use caution around vents in silo bags. Use a respirator before entering a silo. In severe cases, the gasses will stain forages and other items. In some instances patches of yellowish silage may be observed. If these spots of silage have a very low pH (1 - 3) it is possible that nitric acid was formed.

MDA Stepping Up Enforcement of Regulations on the Sale of Live Birds and Eggs Rules to Protect Human and Poultry Health

Anyone selling live birds, fertile hatching eggs, or table eggs in Maryland must have permits certifying that the birds and/or eggs meet certain criteria to protect human and poultry health. The Maryland Department of



Agriculture (MDA) is reaching out to live bird market operators and vendors as well as fair and show participants to remind them of the regulations and to let them know that MDA will be stepping up its enforcement after Sept. 6, 2007. MDA is providing free testing of birds before Sept. 6 to help producers meet the

regulations. After Sept. 6, testing will cost \$17 per farm visit. Anyone shipping eggs or live birds from another state to sell in Maryland must meet the rules in both states.

"It is important that all eggs and live birds sold in Maryland have appropriate permits so that their health is documented, safeguarding the bird population from diseases such as avian influenza and the human population from illnesses such as Salmonella," said Agriculture Secretary Roger Richardson. "While our regulations are not new, we have refocused our animal health staff to seek better compliance first through outreach and services and then with enforcement."

Anyone selling the following products must meet the corresponding requirements:

Table/shell eggs: Have a permit from MDA's Food Quality Assurance Program, participate in the National Poultry Improvement Plan (NPIP), have negative Salmonella enteritidis testing, proper packaging, proper labeling, proper grading/sizing, cleanliness, no cracks etc. Note: Check with the county health department for any local regulations, particularly regarding refrigeration. Contact: MDA Food Quality Assurance, 50 Harry S. Truman Parkway, Annapolis, MD 21401; 410-841-5769, 410-841-2750 (fax), weygansl@mda.state.md.us.

Fertile/Hatching eggs: Have the "Permit to Sell Hatching Eggs, Poultry, and/or Operate a Hatchery in Maryland" from MDA's Animal Health office. The permit requires annual testing with negative results for avian influenza, S. pullorum and S. enteritidis of all breeding birds. The same packaging and labeling rules for selling table eggs apply. Contact: MDA Salisbury Animal Health Laboratory, P.O. Box 2599, Salisbury, MD 21801; 410-543-6610, 410-543-6676 (fax). The application form is available online at: www.mda.state.md.us.

Live birds: Have the "Permit to Sell Hatching Eggs, Poultry, and/or Operate a Hatchery in Maryland" from MDA's Animal Health office. Permit requires annual testing of a portion of the birds in the flock (100% up to 30 birds, 10% if flock size above 30) for avian influenza, S. pullorum and S. enteritidis. Contact: MDA Salisbury Animal Health Laboratory, P.O. Box 2599, Salisbury, MD 21801; 410-543-6610, 410-543-6676 (fax). The application form is available online at www.mda.state.md.us.

Live birds or eggs from out of state: Requires the "Permit to Sell Hatching Eggs, Poultry, and/or Operate a Hatchery in Maryland" from MDA's Animal Health office and from the state of origin. All home-state rules must be followed in addition to MDA rules, including being able to show documents proving they have been tested and are negative. Contact: MDA Salisbury Animal Health Laboratory, P.O. Box 2599, Salisbury, MD 21801; 410-543-6610, 410-543-6676 (fax.). The application form is available online at www.mda.state.md.us.

Game birds: Permits are required from both MDA and a Game Husbandry Permit from the Maryland Department of Natural Resources. Contact: MDA Salisbury Animal Health Laboratory, P.O. Box 2599, Salisbury, MD 21801; 410-543-6610, 410-543-6676 (fax). The application form is available online at www.mda.state.md.us. Wildlife Permit

Coordinator, MD DNR- Wildlife and Heritage Service, 580 Taylor Ave, E-1, Tawes State Office Bldg., Annapolis, MD 21401; (410) 260-8540:

www.dnr.state.md.us/wildlife/gamehus.asp.

Exotic pet birds (psittacines, etc): An exotic bird permit is required by Maryland law to import, distribute and breed exotic birds. Applications are to be filed with the local health departments of Maryland.

Contact: Local City or County Health Departments. Listing is available at

www.dhmv.state.md.us/html/org-lhd.htm.

"With increasing attention on food safety and animal health, MDA and our state's producers want to assure consumers that protections are in place," said Maryland State Veterinarian, Dr. Guy Hohenhaus. "Proper permitting of eggs and live birds will help provide these assurances and help to identify the source of a problem should there be one. Maryland producers understand these concerns are cooperating with the regulations."



Maryland Farmers Reminded that They Can Chop or Graze Cover Crops to Provide Livestock Feed During Drought



The Maryland Department of Agriculture reminds farmers participating in the 2007-2008 Traditional Winter Cover Crop Program that they may graze their livestock in cover crop fields or cut and bale the crop for winter hay once the cover crop is fully established. Many livestock producers are already in a feed deficit because of reductions in hay and grain supplies and pasture grasses due to the drought.

"In addition to providing water quality benefits, the cover crop program will provide some measure of relief to farmers struggling to cope with the long term effects of this drought," said Governor Martin O'Malley.

Cover crops are widely recognized as one of the most cost-effective and environmentally promising ways to absorb unused nitrogen and control soil erosion in order to reduce potential nutrient impacts to the Chesapeake Bay and its tributaries during winter. The Maryland Agricultural Water Quality Cost-Share (MACS) Program provides grants to farmers who plant cover crops of rye, wheat and barley in the fall to slow down rainwater runoff and absorb any nutrients remaining in the soil from the previous summer crop. Cover crops become even more important in drought years when withering summer crops may not use all the nutrients available to them.

For a second year, MDA is providing a Commodity Cover Crop Program for farmers who want to harvest their cover crop. The Commodity program option is in addition to the Traditional Cover Crop Program which does not allow for harvest and provides stronger incentives to plant cover crops for their environmental and soil quality benefits. The use of manure and commercial fertilizer is restricted under both programs.

A record \$8.2 million was made available in this year's budget for the cover crop program.

"The cover crop program will be tremendously helpful to Maryland farmers, the Bay and local waterways in upcoming months," said Maryland Agriculture Secretary Roger L. Richardson. "We are grateful that so many farmers had the foresight to sign up for this year's program."

For more information, farmers should contact their local soil conservation district or the Maryland Agricultural Water Quality Cost-Share (MACS) program at 410-841-5864.

Grants Offered for Projects in Agricultural Sustainability

Northeast SARE nesare@uvm.edu

The Northeast Sustainable Agriculture Research and Education (SARE) program offers three different competitive grant programs, all with application deadlines in the late fall and early winter. These grants are capped at \$10,000 and should offer innovative approaches to sustainable agriculture.

Farmer grants are for commercial farmers who would like to explore a new practice or idea, often by conducting an experiment, trial, or on-farm demonstration. Projects can explore a wide range of topics such as pest management, soil health, adding value, marketing, or new production techniques, and funds can be used to pay for the farmer's time and for materials specific to the project.

The application deadline is December 18.

Partnership Grants are for Cooperative Extension, NRCS, and other agricultural professionals who work directly with farmers. Partnership Grants support on-farm research and demonstration projects in sustainable agriculture, and funds can be used to pay for personnel, materials, sampling, supplies, testing, and to compensate cooperating farmers for their time. The application deadline is December 4.

Sustainable Community grants are for projects that connect farming and rural economic development. Projects can address issues like finance, marketing, land and water use, enterprise development, adding value to farm products, or farm labor. Applicants must be affiliated with an organization such as a community nonprofit, Cooperative Extension, local government, an educational institution, a planning board, a farming cooperative, or an incorporated citizens' group. This grant is offered in partnership with the Northeast Center for Rural Development, and the application deadline is November 27.

Applications are posted on the Northeast SARE web site at www.uvm.edu/~nesare, or call 802/656-0471 to request a printed copy.

The Northeast SARE region is made up of Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and Washington, D.C.

Helen Husher, Publications and Public Information
Northeast Sustainable Agriculture Research and Education
Tuesday and Thursday: Hills Building, 105 Carrigan Drive
University of Vermont, Burlington VT 05405, 802/656-0554
Monday and Wednesday: 35 Loomis St., Montpelier, VT 05602,
802/223-7923



Small Grains Crop Insurance Deadline Fast Approaching

The Raleigh Regional Office of the USDA Risk Management Agency reminds farmers that September 30, 2007 is the final date to obtain crop insurance on wheat, barley, and oats. Current small grains policyholders also have until September 30 to make any changes to existing contracts. Price elections for the 2006 crop are \$2.80 per bushel for wheat, \$1.85 for barley, and \$1.33 for Oats. The Crop Revenue Coverage (CRC) plan of insurance is available for wheat in Delaware, Maryland, New York, North Carolina, Pennsylvania, and Virginia. The CRC plan offers guarantees against a drop in the market price. Insurance premium subsidies have been significantly increased in recent years, particularly at the higher levels of coverage. Farmers should contact a local crop insurance agent as soon as possible for premium quotes and other details. For a list of crop insurance agents, farmers may contact their local USDA Farm Service Agency office or log on to the Risk Management Agency web site at <http://www3.rma.usda.gov/tools/agents/>

Drought Recovery Loan Fund Established for Maryland

Farmers
Applications Are Due
December 15



Because of the severe drought and associated crop losses in Maryland this year, the Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO) has created a loan fund to help farmers with weather-related income losses. The 2007 Farm Drought and Weather Event Recovery Assistance Loan Fund aims to help agricultural businesses maintain viability and recover from production and revenue losses by offering low-interest operating loans to producers who have suffered significant crop, livestock, feed and/or dairy losses.

"We are pleased to offer this financial assistance to producers and rural businesses suffering from the affects of the hot, dry weather this summer," said Governor Martin O'Malley. "MARBIDCO is proving its flexibility by responding quickly to real needs in our rural communities. Together with the federal disaster designation, relaxed rules in the Conservation Reserve Program, and other assistance from the Maryland Department of Agriculture, we are working to provide the help our farmers need to get through this hardship."

Applicants may apply for this program to pay all or part of production costs associated with the adverse weather-related event and pay essential family living expenses. Loans of up to \$75,000 are available (\$150,000 if land is used as collateral) at a 5% fixed APR interest rate, and are made on a first come, first served basis. All loans must be fully collateralized and can be paid back over a period of up to five years (seven years if land is used as collateral). Interest-only payments can be made until January 2009.

At least \$1 million is currently available in the fund.

Applying for a low-interest loan is relatively easy. Producers or rural business owners must submit appropriate evidence of financial loss due to the 2007 drought or other weather-related event. Eligible circumstances include situations where there is an uninsured casualty loss or documented loss of production income. Applicants should be participating in some type of USDA Risk Management Agency-supported crop insurance coverage if it is available for the particular commodity; however, final settlement of insurance claims need not be completed prior to making an application. Applicants must also provide a referral letter - not a rejection - from the commercial lending institution with which they have a business relationship.

All applications must be mailed to "MARBIDCO Loan Programs," 1410 Forest Drive, Suite 28, Annapolis, MD 21403 and be **postmarked by Saturday, December 15, 2007** For more information, please call the MARBIDCO office at: 410/267-6807. Applications are available by calling the MARBIDCO office or by logging onto www.marbidco.org

Nutrient Management Update

Krista Mitchell, Nutrient Management Advisor
for Anne Arundel County



It's time for producers to start their 2008 Nutrient Management Plans. Nutrient Management Plans **MUST** be in producer's hands prior to any 2008 nutrient applications. Please don't delay in contacting your nutrient management advisor to get started on your 2008 plans! Nutrient Management Advisors in this area cover multiple counties, which means that Anne Arundel and P.G.

County each get a nutrient management advisor for only 10 days a month. In order to get all producers' plans completed before February or March, producers need to get started NOW. We usually start a wait-list in the fall, and if your name isn't on it, or if you're not prepared with current soil and manure analyses and field histories, you may have to hire a private consultant to compile your nutrient management plan. MD Cooperative Extension's nutrient management advisors are free, your tax-payer money at work, so utilize this free resource!

Soil samples are needed every three years under current nutrient management regulations, however; if you're planning on liming your fields this fall, you may want to take a soil sample prior to any lime application. Just send your soil test results to your Nutrient Management Advisor to find out your recommended lime application rate.

Soil sampling in the fall is great for two reasons: One, it has been about 6 months (for some producers) since they made their spring nutrient applications. It is a very good idea to monitor the residual nutrients in the soil at this point so you can know what will be left in the soil for next spring's crop. The second reason many producers choose to soil sample in the fall is to find out the pH of their soil. It normally takes 6-12 months, depending on the type of lime

that is used, for a lime application to take effect. Many people choose to soil-sample and lime accordingly in the fall because they want to have the pH adjusted to an optimal level by next spring.

Manure samples, according to current nutrient management regulations, are supposed to be taken twice per year, until a consistent nutrient content is established. Once four manure analyses taken in a two year period demonstrate a consistent baseline nutrient content, manure analysis is required only once every other year. Be prepared to provide your nutrient management advisor with at least one current manure analysis so you can get a new or updated nutrient management plan.

Your county Extension office has all the information you need on soil testing labs that can be used for the development of your new or updated Nutrient Management Plan. We also can loan soil probes out to those who will be taking soil samples for their Nutrient Management Plans. Remember, all producers that make greater than \$2,500 Gross Annual Income and/or those operations that have 8 or more animal units (1 animal unit = 1,000 lbs. live weight) at any time during the calendar year are required to have a current Nutrient Management Plan for their operation. Call Chris Dowell in P.G. or Calvert County, or myself in Anne Arundel or Howard County, for more information.

What is Marketing?

Ginger S. Myers, Regional Extension Specialist- Marketing,
Western Maryland Research and Education Center,
gsmyers@umd.edu, 301-432-2767

I'm not a salesman. Isn't marketing all about making sales?

Marketing can be defined simply as a transaction for profit - a sale. While you must make sales for your business to generate profits, making a sale is only part of marketing. A

sale is a one time event. This is **transactional marketing**. The transactional marketing approach seeks to make the largest number of sales possible. Transactional marketers increase profits by increasing sales and lowering costs. Think Walmart here.

While this works as a marketing strategy, it leaves very little room for expanding profits when markets are saturated or costs can't be lowered any further. An example of this is when dairymen can't lower their cost of production any further but the market is flooded with excess milk production. Prices paid to dairy farmers drop dramatically.

A second marketing approach is **relationship marketing**. This marketing approach seeks to cultivate loyal, repeat customers. Jay Conrad Levinson, author of "Guerrilla Marketing" and proclaimed business marketing expert states, "Marketing is EVERYTHING you do to promote your business, from the moment you conceive it



to the point at which customers buy your product or service and begin to patronize your business on a regular basis. The key words to remember here are *everything* and *regular* basis." This is relationship marketing at its best.

This approach seeks to grow a business exponentially by cultivating customer loyalty and by word of mouth advertising to help recruit new customers. Relationship marketing can provide a lower cost and a more sustainable approach to marketing for many small to mid-size businesses.

One example of relationship marketing is the success that subscription services for fresh produce have in the United States. Since the mid-1980s, many communities in the U.S. have banded together with local farms in food purchasing cooperatives. This practice, known as Community Supported Agriculture (CSA), matches consumers interested in purchasing safe, locally grown foods with small local farmers seeking stable markets for their crops.

Relationship marketing is appealing because you have more control over your sales initiative - a way to frame sales as part of a bigger picture. It implies that **EVERYTHING** you do and say from the time you finalize your idea to the time you have repeat customers **IS** marketing. These would include:

- Name & Image of your business
- Location
- What you are selling
- Packaging...Colors, size shapes of your products
- Advertising and Public Relations
- Marketing Strategies
- Sales Presentations
- How you handle telephone calls
- How you present yourself
- Problem solving
- Growth plan and the follow-up

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.

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



Check Out Our Updated County Website

Visit us in Cyberspace!!!

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

Anne Arundel County Extension

website:

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

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

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

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

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

New on the website in Fall 2007: Anne Arundel County Agricultural Program Teaching Modules - Streaming Video:

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

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

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

Thanks for Partnering

Thanks for partnering with 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.

Enjoy the Harvest!



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

NACAA Communication Award
Individual Newsletter
2002 National Winner

NACAA
National Association of
County Agricultural Agents



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