



# HORTICULTURE TECHNOLOGY NEWSLETTER

## MID-ATLANTIC FRUIT AND VEGETABLE CONVENTION

Dr. Joseph Fiola, Specialist in Viticulture and Small Fruit, University of Maryland Extension

The 2013 Mid-Atlantic Fruit and Vegetable Convention program is held each year to provide the latest updates and important information to fruit and vegetable growers from Maryland, New Jersey, Pennsylvania, and surrounding states. The conference will be held at the Hershey Lodge and Convention Center in Hershey, PA on January 29-31, 2013.

The program will consist of six or more concurrent educational sessions offered during the three days. Sessions on tree fruits, small fruits, wine grapes, organic and general vegetables, pesticide safety, wholesale marketing, and too many others to mention.

This year, Jeff Manning will

make the keynote presentation entitled, *"GOT MANNING?"*, on the opening day. The full program is provided at the end of the newsletter.

As usual, there will be an extensive trade show, including displays of horticultural equipment, marketing merchandise, packaging, seed companies, fruit nurseries, as well as pesticides and other supplies and services for commercial growers. Pesticide applicator credits will be available for Maryland, Pennsylvania, and New Jersey growers attending the sessions. Please see the details included in this newsletter.

The program is jointly sponsored by Maryland State Horticultural Society, University of Maryland

Extension, State Horticultural Association of Pennsylvania, Pennsylvania Vegetable Growers Association, Pennsylvania State University Cooperative Extension, New Jersey State Horticultural Society, and Rutgers Cooperative Extension.

Maryland growers are reminded to pre-register through the Maryland State Horticultural Society. Pesticide credits will be available at the meeting.

I look forward to seeing you in Hershey and I hope you find this newsletter informative!

Merry Christmas!

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in cooperation with  
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Extension



## Special Points of Interest:

Calendar of Events

Passages

University of Maryland Experimental wines receive medals from American Wine Society

Mid-Atlantic Fruit & Vegetable Convention Information and Registration

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## The 2012 Season Spotted Wing Drosophila Situation

Bryan Butler, Extension Educator, University of Maryland Extension— Carroll County & Mid-Maryland Tree Fruit Agent



SWD adult female

In the spring of 2011, I was asked to give a talk at an out of state meeting on the impact of BMSB and Spotted Wing Drosophila (SWD) on brambles. My reply was that I could certainly address BMSB in brambles, but I had no experience with SWD and that we did not have that pest in this area.

Well, late summer 2011, Dr. Jerry Brust made the first positive identification in Maryland and since then it has been game on. I began monitoring, in cooperation with Dr. David Biddinger at Penn State, in August 2011 and what was interesting was all I had to do was put a trap out and basically SWD was there. To make it more inter-

esting the number of SWD in the traps continued to go up well into November. It did not seem to matter what the crop was we saw the same thing, increasing numbers in the traps well after the crops were gone.

Data collected from Maryland was consistent with the data collected by Dr. Biddinger and Kathy Demchak in Pennsylvania. There was a need for us to monitor season long to get a better handle on the pest in 2012. We also felt it was important to get as much information to growers as we could, so over the winter we developed four fact sheets on Spotted Wing Drosophila:

## The 2012 Season Spotted Wing Drosophila Situation—continued from page 1

### Spotted Wing Drosophila

#### Part 1: Overview and Identification:

<http://pubs.cas.psu.edu/FreePubs/PDFs/xj0045.pdf>

#### Part 2: Natural History:

<http://pubs.cas.psu.edu/FreePubs/PDFs/xj0046.pdf>

#### Part 3: Monitoring:

<http://pubs.cas.psu.edu/FreePubs/PDFs/xj0047.pdf>

#### Part 4: Management:

<http://pubs.cas.psu.edu/FreePubs/PDFs/xj0048.pdf>

Our monitoring efforts began in early April and I attempted to cover as many types of soft fruit as I could, so I selected 6 orchards with the most crop diversity I could logistically handle and recruited Chuck Schuster from UME - Montgomery County to add four more operations that were highly diverse. Traps were deployed and monitored on a weekly basis until the fruit was gone or October 1<sup>st</sup>.

The good news from 2012, was that it appeared well managed crops like tart cherries, sweet cherries, strawberries (both plasticulture and matted row), and black raspberries made it through with little to no damage in Central and Western Maryland. Having said that, I would like to address the term "well managed". In plantings that were not harvested in a timely fashion, or received little or no insecticide applications, problems were identified. Another important point here is to be sure there is positive identification of this pest. In all of the early cases where SWD was first detected it could be associated with a management issue. Although SWD was identified in the samples, there were significant numbers of other types of fruit flies that were found in the fruit when the larva were reared in a laboratory.

Now as for blackberries, blueberries, and primocane bearing raspberries, even well managed plantings began to run into trouble particularly as the season progressed. Our first trap detection was June 14<sup>th</sup>

in Central Maryland and there were already larva in the fruit in blackberries. At this point it is important to note that the vinegar traps are not very good. They are a tool that helps, but in the end I found myself simply breaking up a lot of fruit and looking closely for the larva in the fruit if I really wanted to know what was going on in a planting. Populations generally increased all summer and into the fall with what appeared to be drops during extended very hot periods.

The take home message is that SWD is going to pose a serious challenge to small fruit producers, but is not the end of the world. The intensity of management in small fruit will certainly increase in order to produce fruit without "worms". It appears to be critical from my personal experiences and those shared with me from other states that this pest must be addressed early and not allowed to get a good foothold in your planting. Through trapping, scouting, timely harvest, sanitation, consistent insecticide applications that provide thorough coverage, including the lower part of the plant once the infestations are identified, production and quality can be maintained. In the long run, hopefully sooner than later, research will identify beneficials and predators that will create a more natural balance with this pest that will help reduce pesticide application. However, for now it is important to remember to be on the lookout in small fruit as soon as fruit begins to show color because it appears this is a pest that is more readily held to acceptable levels if caught early. If it becomes very established in a planting, control can become almost impossible.

For more detailed information please refer to the four SWD factsheets noted on page 2.

These scouting efforts were made possible in substantial part through funding by the Maryland State Horticulture Society (MSHS). MSHS provided the bulk of the money required to cover the travel needed to these sites each week and to take samples for positive identification to the Penn State Fruit Lab in Biglerville, Pa.

## Raspberry Fertility Trial at the Western Maryland Research & Education Center (WMREC), Keedysville, Maryland

Bryan Butler, Extension Educator, University of Maryland Extension— Carroll County & Mid-Maryland Tree Fruit Agent



Over the last two seasons a number of bramble producers have approached me regarding concerns over the Nitrogen rate recommendations for both primocane and florican producing raspberries. Many growers have been applying about 30 pounds of actual N per acre per year and do not feel they are getting an adequate response. The nutrient management guidelines are a little vague, but they do make recommendations on altering your application rate based on tissue testing, but they do not provide clear guidelines for rates. I have been told by growers

that they are concerned with the lack of vigor in black raspberries and have concerns over the longevity of the stand. With primocane bearing varieties, growers have expressed concerns that the plants seem to weaken prematurely in the late summer and early fall and that possible additional application of nitrogen during the season may help to develop a plant that can produce further into the fall.

I am seeking input from growers on this issue as we develop an experiment to examine this con-

## ANNIE'S PROJECT FARM MANAGEMENT CLASSES FOR WOMEN



The University of Maryland and Delaware Cooperative Extension will conduct Annie's Project during the winter of 2013 at five sites in Maryland. Annie's Project focuses on the many aspects of farm management and is designed to empower women in overall farm decision making and to build local networks throughout the state. The target audience is farm-women with a passion for business, agriculture and involvement in the farm operation. Topics for the sessions cover the five areas of Risk Management – Production, Marketing, Financial, Legal Risk, Human Resources. This course is open to anyone interested in farm management

practices.

The course will be 8 sessions held at a variety of sites in Maryland. Locations include:

- > Cecil County Administration Building, Elkton MD
- > Washington County Extension Office Boonsboro MD
- > Wor-Wic Community College Salisbury MD
- > Harford Community College, Bel Air MD
- > Baltimore County Ag Center, Cockeysville MD.

Classes will begin in January 2013. The cost of the course including meals and materials is \$75. Please register by January 15th, space is limited. For more information visit the website [www.anniesproject.umd.edu](http://www.anniesproject.umd.edu) or call 410-758-0166. If you require special assistance to attend the classes please contact the site at least two weeks prior.

### HOLD THE DATE!

Thursday, February 21, 2013

8:30 AM to 4:30 PM

Western Maryland Regional Fruit Meeting

Significant time will be allotted toward Brown Marmorated Stink Bug (BMSB) and Spotted Wing Drosophila (SWD)

### RASPBERRY FERTILITY TRIAL – CONTINUED FROM PAGE 2

cern. Below is the preliminary protocol we are developing and I would like to hear from growers to make sure I'm on the right track. First is N rate an issue for you in bramble production and second how and when would you want to make additional application of N to your planting? Any feedback would be greatly appreciated. You can e-mail me at [bbutlers@umd.edu](mailto:bbutlers@umd.edu) or call at 410-386-2760.

#### Fertility Trial Plan

##### ◆ Nitrogen

Four rates, 0, 30, 75, 150 lbs. per acre, source: calcium nitrate.

##### ◆ Two varieties:

**Jaclyn** a Primocane producer, fruit is a distinct dark red when ripe, quite vigorous and erect, growing to 4 to 5 feet tall. Ripening time is late summer early fall.

**Jewel** a Floricane black raspberry Mid-season (mid-June) ripening. Firm, glossy fruit with good flavor. Vigorous, erect plants.

##### ◆ Trial begins

The trial will be established in the spring of 2013. Treatments and data collection will be taken in 2014, 2015, and 2016.

##### ◆ Planting

Plants will be planted 18 inches apart, 36 inches between reps, 5 plants per rep. Row spacing based on available equipment. Plants will be established in the first year with 30 lbs. of N per acre rate.

##### ◆ Treatments

4 Treatments x 4 replications = 16 x 2 Varieties = 32 reps

##### ◆ Data

Data will be collected on growth (height and # of canes), overwintering/winter damage, marketable yield, and tissue samples

## INCORPORATING SURROUND INTO AN IPM PROGRAM FOR CONTROL OF BMSB IN APPLES

Bryan Butler, Dr. Greg Krawczyk, Doug Price, and Hannah Elizabeth Nealis

Basically we are trying to return to pre-2009 timing, interval, and material selection by using Surround® as a tool to combat our newest and most insidious pest Brown Marmorated Stink Bug (BMSB).

Current recommendations for the control of BMSB in apples include the use of Synthetic Pyrethroids, Organochlorines and Organophosphates. These chemical families have been replaced in orchard spray programs in recent years by products with more specific modes of action that are generally less harmful to beneficial organisms. The use of the more general insecticides that appear to reduce the level of BMSB damage may potentially lead to the destruction of Integrated Pest Management (IPM) programs that have been in place for nearly thirty years as beneficial populations are decimated. The purpose of this experiment is to determine if the addition of Surround® (an organically certified kaolin clay product) to insecticide materials used to control traditional orchard pests can reduce the level of damage to fruit caused by BMSB.

The insecticide applications were made based on an IPM program using traditional monitoring tools for lepidopteron pests with visual observations for BMSB being added to the program and material selection being based on need for control of the pests present. Pheromone traps for Coddling Moth, Tufted Apple Bud Moth and Oriental Fruit Moth were placed in the block and monitored weekly to determine need for application.

BMSB were monitored using three minute surveys of five trees weekly to determine presence and damage to fruit. Half of the trees received the program without Surround® added and half received the program with Surround® added. Although we are in the process of evaluating the data, initially it appears that there was about 30% less damage by BMSB on the fruit that received the program with Surround®. Although it is still too early to definitely say how effective the Surround® is, stayed tuned and I will have the data prepared for the Winter Meeting in Keedysville this winter.

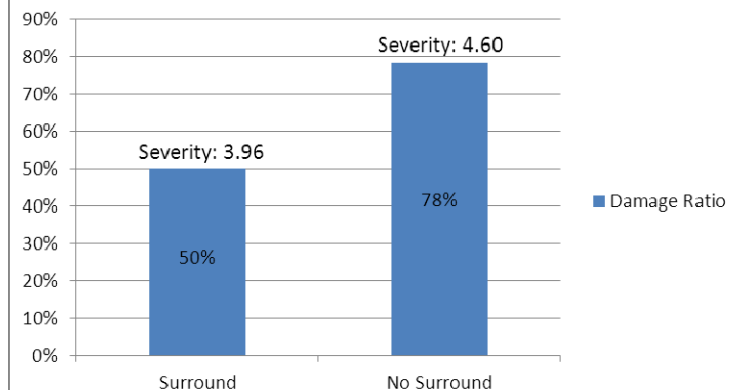
### 2012 Apple Timeline

3/12/12	Late dormant/silver tip – Lorsban Advanced + Tenn Cop 5E + Dam Oil
3/22/12	Tight cluster – Manzate Pro-Stick + Vintage SC
4/03/12	Bloom – Manzate Pro-Stick + Rally 40WSP + Agri-Mycin 17
4/16/12	Late Bloom – Syllit 65W + Captan 50W + Agri-Mycin 17
4/25/12	Petal fall – Manzate Pro-Stick + Vintage SC + Assail 30SG
5/04/12	Rally 40WSP + Syllit 65W + Imidan 70W + Agri-Mycin 17 + Surround WP*
5/16/12	Penncozeb 75DF + Rally 40WSP + Assail 30SG + Surround WP*
5/24/12	Penncozeb 75DF + Flint + Actara + Surround WP*
6/04/12	Rally 40WSP + Captan 50 + Altacor + Surround WP*
6/14/12	Captan 50 + Delegate + Surround WP*
6/22/12	Rally 40 WSP + Captan 50 + Delegate + Surround WP*
7/02/12	Ziram 76DF + Assail 30SG + Surround WP*
7/12/12	Rally 40WSP + Captan 50 + Assail 30SG + Surround WP*
7/24/12	Pristine + Ziram 76DF + Actara + Surround WP*
8/03/12	Captan 50 + Topsin M WSB + Assail 30SG + Surround WP*
8/13/12	Pristine + Topsin M WSB + Captan 50W + Altacor + Surround WP*
9/07/12	Pristine (Goldrush/Enterprise only)
9/07/12	Pristine + Brigade WSB (Granny Smith/Pink Lady only)



\*Surround WP was not applied to designated blocks of Goldrush and Enterprise

### Damage Ratio



## ARTHUR H. THOMPSON TRAVEL FELLOWSHIP

The purpose of the Thompson Travel Fellowship is to expose young people, working in the Maryland fruit industry, to ideas on fruit production in other areas of the world. In order to do this, the Maryland State Horticultural Society has established a fellowship of up to \$1,000. This fellowship can be awarded annually to young people working in the fruit industry to promote leadership within the Society.

**Recipient:** The recipient will be a fruit grower or someone else associated with fruit production in Maryland, to be given to young persons aged 18 to 30, to encourage travel outside the state of Maryland. The recipient

would be expected to make a short presentation to the membership at the annual meeting concerning the information learned in the travel.

**Application and Procedure:** To apply, a brief explanation of the proposed trip should be submitted in writing. The application letter should include the name, age, and potential trip being considered by the applicant. Applications should be **submitted by January 22, 2013** to be considered for use during the subsequent year.

Applications for the award should be submitted to:

**Lynn Moore, Secretary, c/o MSHS  
Nominating and Awards Committee,  
2415 Woodbine Road, Woodbine, MD 21797,  
410-489-7034.**

The Awards and Nominating Committee will consider the nominations and make its recommendation to the Executive Committee, which will make the final decision. The Thompson Fellowship will be presented at the Awards Banquet held during the Mid-Atlantic Fruit and Vegetable Convention in Hershey, PA.

## 2012 RESEARCH REPORT

Lynn Moore , MSHS Secretary

Each year the Maryland State Horticultural Society contributes funds for research supporting the Maryland fruit industry. This year we funded 5 projects.

- Bryan Butler — is continuing to monitor the Brown Marmorated Stink Bug and the Spotted Wing Drosophila throughout the state of Maryland. This requires a lot of traveling around the state and the Maryland State Horticultural Society voted to fund some of his traveling expenses.
- Mike Newell — at the Wye Research and Education Center has two projects that are funded. He is investigating "Nutrient Management in Annual Strawberry Plasticulture System for Improved Fruit Quality" and he is looking into "Alternatives to Chemical Fumigation for the Annual Strawberry Plasticultural System."
- Dr. Joe Fiola at the Western Maryland Research and Education Center also has two projects. He is continuing his study of "Alternative Crops Research and Demonstration Trail". This study looks at blueberries, beach plums and seedless table grapes. Dr. Fiola also proposed a "New Planting Block to Evaluate Alternative Apple Varieties for Processing. This new planting contains eight alternative varieties that are trellised.
- Dr. Chris Walsh — reported on a long term apple breeding project that the Maryland State Horticultural Society has helped fund over the years. He is applying for patents for 2 apple selections. They are both late season, good flavored varieties that require minimal pruning. On their own roots they are 30% efficient, like M9. He hopes these new varieties will be available soon.

## UNIVERSITY OF MARYLAND EXTENSION EXPERIMENTAL WINES RECEIVE MEDALS FROM AMERICAN WINE SOCIETY



Wines from the University of Maryland Viticulture & Enology and Research Extension Program were entered in the 2012 National American Wine Society Amateur (non-commercial) Wine Competition that took place on November 6-8 in Portland, Oregon

7 wines were entered and 7 received medals including a Double Gold for a wine made from a table grape variety!

Year	Name of Wine	Research Center	Medal
2009	Himrod	CMREC	Double Gold
2009	54 36 34 (Spanish White)	WREC	Silver
2010	Cabernet Sauvignon	WMREC	Silver
2009	Linae Ice Wine	WREC	Silver
2010	Cabernet Sauvignon	WMREC	Bronze
2010	Chardonel	WREC & CMREC	Bronze
2009	Linae	WREC	Bronze

WMREC - Western Maryland Research & Education Center, Keedysville, MD  
 WREC - Research & Education Center, Queenstown, MD  
 LESREC - Lower Eastern Shore Research & Education Center, Salisbury MD Location  
 CMREC - Central Maryland Research & Education Center, Upper Marlboro, MD Location

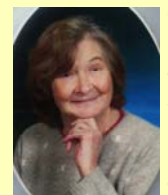
More information about University of Maryland Research Centers go to: <http://agresearch.umd.edu/RECs/index.cfm>

## PASSAGES



Mr. John Harvey Rinehart, (85), of Smithsburg, Md., died Friday evening, Feb. 3, 2012, John partnered with his father in the family orchard business, currently operating as Rinehart Orchards Inc. To view the online obituary you

can go to: [http://articles.herald-mail.com/2012-02-06/obituaries/31032540\\_1\\_funeral-services-smithsburg-high-school-rinehart-orchards](http://articles.herald-mail.com/2012-02-06/obituaries/31032540_1_funeral-services-smithsburg-high-school-rinehart-orchards)



Catharine Hollen Mackie, (72,)of Elkton, MD passed away on Saturday, June 2, 2012.

Catharine worked in the insurance business and for Peebles Department Store from which she retired. Upon her retirement, she focused her passion and energies to her greatest loves, her family and baking. Her pies became a favorite at the Milburn Orchards and she often baked for donations to various local charity events and fundraisers. Catharine especially enjoyed the role of grandmother, caring and loving her many

grandchildren, who will miss her much. She had a strong faith throughout her life and was a life member of Rock Presbyterian Church. To view the online obituary you can go to: [http://www.rtfoard.com/obits/obituaries.asp?listing\\_id=184598](http://www.rtfoard.com/obits/obituaries.asp?listing_id=184598)



Don Balderston, 88, of Colora Maryland, died January 10, 2012. Don was born on May 13, 1923 in Colora, Maryland and was a lifelong resident. He graduated from West Nottingham

Academy in Colora and received a Bachelor of Science degree in Agriculture Economics from University of Maryland, College Park.

Don farmed with his cousin Lloyd Balderston and purchased Colora Farm from him in 1968. In 1983, Don and Steve worked closely together to re-engineer the farm from a dairy farm to a fresh fruit market now known as Colora Orchards. To view the online obituary go to: <http://rtfoard.tributes.com/show/Donald-Balderston-94388319>

## THE 2012 SUMMER ORCHARD TOUR

Lynn Moore, MSHS Secretary

This summer the Maryland State Horticultural Society toured four operations in Adams County, PA.

In the morning we arrived at Three Springs Fruit Farm. The Wenk family, David, John and Ben, has a diverse operation growing many specialty crops for the farmers markets. They showed us their fields of table grapes, currants, gooseberries, and many vegetables, as well as peaches, apples, cherries, apricots and pears. They planted a strip of wild flowers to sustain the native pollinating insects. Farming on 350 acres, Three Springs emphasizes sustainability and food safety- gaining their [Food Alliance](#) certification in 2010.

Next we traveled to Hollabaugh Fruit Farm and Market to visit the new retail barn. It is an impressive sight. The new barn sits back off the road to allow for safer access and plenty of parking. The new barn incorporates a room for their educational tours, a portion of their services that they are passionate about. They treated us to donuts from the new bakery. Many thanks! Then we toured the orchards where we viewed trellised apples and pilot plantings designed to use the new autonomous, multi-tasking electric vehicle designed by Carnegie Mellon. Hollabaugh's grow apples, pears, peaches, nectarines, apricots, Asian pears, blueberries, raspberries, asparagus, corn, tomatoes, strawberries, and plums.

For lunch, we stopped at the National Apple Museum. Opened in 1990, the



museum is housed in a restored pre-Civil War bank barn and is owned and operated by the Biglerville Historical and Preservation Society. The museum's mission is to preserve and exhibit the history and attendant artifacts pertaining to the Apple and Tree Fruit Industry's history and contributions to the development and growth of Adams County. Exhibits include early picking, packing, and shipping of fruit, pest management, commercial fruit processing equipment, early orchard photographs and a recreated 1880's farm kitchen and a General Store.

The last stop of the day was at Adams County Nursery. We toured the new packing facility with the new automated tree sorter that John Baugher helped design. They have "gone green" and installed solar panels on all the roofs. They are keeping pace with the still growing tree fruit industry. We toured the bud wood orchards for apples and peaches. It was very exciting and delicious sampling new varieties and comparing them to standard varieties.

## Private Pesticide Certification and Recertification & Nutrient Management Voucher Training Calendar

**1/07/13: MD PVT PESTICIDE APPLICATOR CERTIFICATION TRAINING**  
Time: 6-8 PM, Location: Davidsonville Family Rec Center, Davidsonville, MD. Registration: UME-Arundel County (410) 222-6759

**1/14/13: MD PRIVATE PESTICIDE APPLICATOR TEST REVIEW**  
Time: 6-9 PM, Location: UME-Garrett Co., 1916 Maryland Highway, Suite A, Mt. Lake Park, MD 21550, Registration: Willie Lantz 301-334-6960

**1/09/13: PRIVATE PESTICIDE APPLICATOR TRAINING**  
Time: 6:30-8:30 PM, Location: UME-Kent Co., 709 Morgnec Road, Chestertown, MD 21620, Registration Required: 410-778-1661

**1/23/13: PRIVATE PESTICIDE APPLICATOR TRAINING EXAM**  
Time: 6:30-8:30 PM, Location: UME-Kent Co., 709 Morgnec Road, Chestertown, MD 21620, Registration Required: 410-778-1661

**1/28/13: MD PRIVATE PESTICIDE APPLICATOR TEST EXAM**  
Time: 6-8 PM, Location: UME-Garrett Co., 1916 Maryland Highway, Suite A, Mt. Lake Park, MD 21550, Registration: Willie Lantz 301-334-6960

**1/28/13: MD PRIVATE PESTICIDE APPLICATOR CERTIFICATION EXAM**  
Time: 6 PM - 8 PM, Location: Davidsonville Family Rec Center, Davidsonville, MD, Registration: UME-Arundel Co. (410) 222-6759

**2/26/13: NEW PRIVATE APPLICATOR CERTIFICATION TRAINING**  
Time: 9 AM - 11:30 AM, Location: UME-Baltimore Co., 1114 Shawan Road, Suite 2, Cockeysville, MD 21030, Registration: (410) 771-1761

**2/26/13: RE-CERTIFICATION TRAINING**  
Time: 1 PM - 3:30 PM, Location: UME-Baltimore Co., 1114 Shawan Road, Suite 2, Cockeysville, MD 21030, Registration: (410) 771-1761

**2/27/13: PESTICIDE PRIVATE APPLICATOR TRAINING FOR EXAM**  
Time: 6 PM - 7 PM, Location: UME-Dorchester Co., 501 Court Lane, Room 208, Cambridge, MD  
Registration: Sudeep Mathew(410) 228-8800

**3/05/13: NEW APPLICATOR CERTIFICATION TEST**  
Time: 9 AM - 11:30 AM, Location: UME-Baltimore Co., 1114 Shawan Road, Suite 2, Cockeysville, MD 21030, Registration: (410) 771-1761

**3/6/13: PESTICIDE PRIVATE APPLICATOR RE-CERTIFICATION**  
Time: 6 PM - 9 PM, Location: Talbot Co., Agriculture Center, Easton, MD  
Registration: Shannon Dill (410) 822-1244

**3/6/13: PESTICIDE PRIVATE APPLICATOR EXAM**  
Time: 6 PM - 9 PM, Location: UME-Wicomico Co., 28647 Old Quantico Rd Salisbury, MD 21801  
Registration: Ginny Rosenkranz (410) 749-6141

**3/6/13: PESTICIDE PRIVATE APPLICATOR TRAINING FOR EXAM**  
Time: 1PM - 3 PM, Location: UME-Dorchester Co., 501 Court Lane, Room 208, Cambridge, MD  
Registration: Sudeep Mathew (410) 228-8800

**3/13/13: PESTICIDE PRIVATE APPLICATOR EXAM**  
Time: 1 PM - 3 PM, Location: UME-Wicomico Co., 28647 Old Quantico Rd Salisbury, MD 21801  
Registration: Ginny Rosenkranz (410) 749-6141

**4/12/13: ON-LINE NUTRIENT MGMT VOUCHER RECERTIFICATION**  
Time: 4 PM - 6 PM, Registration: UME-Anne Arundel Co. (410) 222-6759 (Deadline: April 10)

**4/19/13: ON-LINE PVT PESTICIDE APPLICATOR RECERTIFICATION**  
Time: 4 PM - 6 PM, Registration: UME-Anne Arundel Co. (410) 222-6759 (Deadline: April 17)

### REMINDER MSHS MEMBERS MEETING!

Wednesday, January 30, 2013  
4:30 PM

Tower Board Room

All members are welcome and encouraged to attend.

## AFRICAN FIG FLY: ANOTHER INVASIVE DROSOPHILID FLY DISCOVERED IN PENNSYLVANIA

David Biddinger and Neelendra Joshi, Penn State Department of Entomology; Kathy Demchak, Penn State Department of Plant Science Young Grower Alliance—Posted: November 16, 2012



Spotted Wing *Drosophila* (SWD) male in comparison with the

African Fig Fly (AFF) and its black-bordered, white

*Zaprionus indianus* Gupta (Diptera: Drosophilidae), commonly known in Brazil as the African Fig Fly (AFF), is an invasive species recently found in Pennsylvania for the first time. First discovered by the Pennsylvania Department of Agriculture in early October in Grape and Tomato Pest Survey traps, it was found immediately after by Dr David Biddinger at the Penn State Fruit Research and Extension Center in Biglerville. Adult flies were found in apple cider vinegar traps used for the seasonal monitoring of Spotted Wing *Drosophila* (SWD), another recently introduced invasive pest of small fruit crops in Pennsylvania that Dr. Biddinger first detected in Pennsylvania and Maryland in July of 2012.

Reviewing SWD samples from 2011, Dr. Biddinger also found it had been present in Adams county in the fall of 2011, so it has been here for at least two seasons. For what is considered to be a tropical pest, this is important because they not only survive the extremely mild winter of 2011-12, but also the more typical previous winter. Of note, however, is that while SWD trap catches have greatly increased in the last two weeks despite heavy frosts, the same vinegar traps are no longer catching AFF. AFF is now recorded from Adams, York, Dauphin, and Clearfield counties according to the Pennsylvania Department of Agriculture.

*Z. indianus* adults are easily distinguished from all other fruit flies in our region because of a pair of silvery-white stripes from antennae to thorax tip that are outlined along both sides by black stripes. A humorous nick-name given to the fly by PDA has been the "Speed Racer Fly" since it has prominent "racing stripes." Adults of this species are slightly larger in size than the Spotted Wing *Drosophila* and the background color of the body is lighter than most other drosophilid flies we commonly find in our SWD vinegar monitoring traps.

Native to Africa, the Middle East, and Eurasia, it is now found in much of

South and Central America where it is mainly a pest of figs. It was first found in Florida in 2005, where it quickly spread and out-competed other fruit flies. New records were found for Michigan, North Carolina and Connecticut in September of this year and it appears to be spreading throughout the South as far west as Texas. *Z. indianus* is considered as a generalist insect feeding on various tropical fruits, but it has potential to damage small fruits (cherries, blueberries, blackberries, strawberries, and raspberries). In Pennsylvania, so far it has been found later in the season and mostly in grapes, but has also been found in SWD monitoring traps in cherry, raspberry and blackberry plantings. Its presence and damage potential in grapes and other crops is under investigation by Dr. Biddinger's lab and Penn State small fruit specialist, Kathy Demchak. Monitorings effort throughout the state will continue next season by PDA and Penn State and records for new hosts and new county records should be forwarded to either institution.

Since it does not have a large, sharp ovipositor like SWD females, AFF appears to only attack damaged and over-ripe fruit and the harsher winters of Pennsylvania may prevent it from establishing as aggressively here as it did in Florida. Indeed, so far numbers of adults collected in vinegar traps have been only a fraction the number of SWD collected. An exception, however, has been from net collected samples in a grape vineyard where numbers of AFF greatly outnumbered SWD. While it appears from our samples that grape is not a preferred host of SWD, it may be that grape is preferred by this new fruit fly. There is also concern in the South that it will become a pest of blueberries.

## 2013 CALENDAR OF EVENTS

Date/Time	Event
1-10-13 thru 1-13-13	<u>Southeast Regional Fruit and Vegetable Conference</u> , Savannah International Trade and Convention Center, Savannah, GA. <a href="http://www.seregionalconference.com/index.html">http://www.seregionalconference.com/index.html</a>
1-18-13 thru 1-19-13	<u>Future Harvest - CASA 13th Annual Conference - "Farming for Profit and Stewardship Conference"</u> , National Conference Center, Landsdowne, Virginia. <a href="http://www.futureharvestcasa.org/">http://www.futureharvestcasa.org/</a>
1-21-13 thru 1-23-13	<u>Ohio Produce Growers and Marketing Association</u> , Sandusky, OH. <a href="http://www.opgma.org/?q=node/49">http://www.opgma.org/?q=node/49</a>
1-22-13 thru 1-24-13	<u>Empire State Fruit and Vegetable Expo &amp; Farmers' Direct Marketing Conference</u> , Oncenter Convention Center, Syracuse, NY. Information: <a href="http://nysvga.org/expo/info">http://nysvga.org/expo/info</a>
1-25-13 8:15 AM to 3:15 PM	<u>Central Maryland Vegetable Growers Meeting</u> , Friendly Farm Inn, Foreston Road, Upperco, MD For more information or registration contact: 410-771-1761
1-27-13 thru 1-30-13	<u>2013 North American Raspberry &amp; Blackberry Conference (NARBA's Annual Conference)</u> Doubletree Hilton Portland, Portland, Oregon; This is a joint conference with the North American Strawberry Growers Association. It will start with a day-long tour on Monday January 28, followed by two days of educational sessions and networking on January 29 and 30. Information & Registration: <a href="http://www.raspberryblackberry.com/local.cfm?doc=webdocs%2FNorthAmericanBerryConference2013.htm">http://www.raspberryblackberry.com/local.cfm?doc=webdocs%2FNorthAmericanBerryConference2013.htm</a>
1-29-13 thru 1-31-13	<u>2013 Mid-Atlantic Fruit and Vegetable Convention</u> , Hershey Lodge & Convention Center, Hershey, PA. <a href="http://www.mafvc.org/html/">http://www.mafvc.org/html/</a>
2-01-13 thru 2-06-13	<u>28th Annual NAFDMA Convention</u> , Doubletree by Hilton Hotel Lloyd Center, Portland, Oregon For more information: <a href="http://www.nafdma.com/PNW2013/">http://www.nafdma.com/PNW2013/</a>
2-06-13 8:00 AM to 4:00 PM	<u>Southern Maryland Vegetable &amp; Fruit Production Meeting</u> , Location—TBA For more information: 410-222-6759 (Registration deadline Feb ?, 2013)
2-13-13 8:00 AM to 3:30 PM	<u>Dorchester Eastern Shore Vegetable Meeting</u> , Caroline County 4-H Park, 8314 Detour Road, Denton, MD 21629. For more information contact University of Maryland Extension—Dorchester Co. at 410-228-8800
2-20-13 8:30 AM to 4:00 PM	<u>Bay Area Fruit School</u> , Wye Research and Education Center, Queenstown, MD For more information contact Debby Dant at 410-827-8056 ext. 115
2-21-13 8:30 AM to 4:00 PM	<u>Western Maryland Regional Fruit Meeting</u> , Western Maryland Research & Education Center, Keedysville, MD <a href="http://www.grapesandfruit.umd.edu/calendar.htm">http://www.grapesandfruit.umd.edu/calendar.htm</a> For more information or registration, please call (301) 432-2767 x301 or sbarnes6@umd.edu
2-23-13 thru 3-1-13	<u>56th International Fruit Tree Association Annual Conference &amp; Intensive Workshop</u> , Copley Marriott, Boston, Massachusetts, For more information go to: <a href="http://www.ifruittree.org/?page=2013AnnualConference">http://www.ifruittree.org/?page=2013AnnualConference</a>

### Harry G. Black Distinguished Service Award

This award will be given, when deemed appropriate by the Executive Board, to a person who is a member of the Maryland State Horticultural Society making a significant contribution in the state of Maryland this year and in years past. The Award and Nominations Committee, consisting of three members appointed by the President, shall recommend to the Executive Board such an award.

Although primarily intended to be given to a fruit grower or those involved in fruit production, it may be given to a person in an allied industry such as processing, a state employee, a county agent, university personnel, or to any other person making a special contribution to the fruit industry. The committee will annually review the list of nominees, if any, to determine its recommendation to the Executive Board.

Previous recipients are:  
Lloyd Balderston III, 1976  
Dr. Castillo Graham, 1976  
Professor A. F. Veirheller, 1976

S. Herman Todd, 1977  
William C. Main, 1978  
Theodore Stegmaier, 1978  
M. N. "Nick" Pope, 1979  
Dr. L. O. Weaver, 1980  
Dr. Ben L. Rogers, 1981  
Dr. Arthur Thompson, 1982  
Harry G. Black, 1985  
George H. Butler, Jr., 1986  
William M. Allenberg, 1996  
Evan B. Milburn, 1997  
John H. Rinehart, 1999  
Dr. Paul W. Steiner, 2000  
I. Bruce Barr, 2005  
Henry R. Passi, 2008  
Allan Baugher, 2011



# 2013 MID-ATLANTIC FRUIT AND VEGETABLE CONVENTION

Jan. 29-31, 2013

Schedule  
&  
Registration



## HERSHEY LODGE HOTEL RESERVATIONS



Hershey Lodge, an official Resort of Hersheypark - <http://www.hersheylobby.com/>

For reservations, call 1-800-HERSHEY — be sure to mention you are with the Mid-Atlantic Fruit and Vegetable Convention group code number 546616 to get the special convention rate of \$132.00 (plus taxes) per night per room with single, double, triple or quad occupancy.

For additional information about the Hershey Lodge and Convention Center including directions go to: <http://www.hersheylobby.com/>

## MARYLAND STATE HORTICULTURAL SOCIETY MEETINGS HELD AT CONVENTION

The Maryland State Horticultural Society will have the following meetings during the convention:

**EXECUTIVE COMMITTEE MEETING**  
Tuesday, January 29, 2013 - 4:15 PM  
Cocoa Suite #2

**BUSINESS MEETING**  
Wednesday, January 30, 2013 - 4:30 PM  
Tower Board Room

## EDUCATIONAL PROGRAM (AS OF DEC 10, 2012 - UPDATES DAILY GO TO: WWW.MAFVC.ORG)

### PRE-CONVENTION WORKSHOPS

**MONDAY, JANUARY 28, 2013** (pre-registration is required)

#### CHALLENGES AND OPPORTUNITIES FOR OBTAINING CAPITAL

9:00 a.m. – 4:00 p.m. The program aims to help new, young and minority farmers navigate the complex terrain of obtaining and managing capital for their agricultural business venture. This Penn State Cooperative Extension workshop will be presented in collaboration with the State Horticultural Association of Penna., the Young Grower Alliance, and Ag lenders.

Participants will gain valuable tips on what pitfalls to avoid, how to choose an ag lender and what those lenders are looking for in a first-time borrower. Panel discussions will include local industry representatives and young growers who have firsthand experience and in depth knowledge. The audience is encouraged to contribute to the conversation on the following topics to be addressed by the panels:

A workshop highlight will include guest speaker Clark Seavert, Oregon State University Professor of Agricultural Economics, who has been instrumental in developing AgTools™, a suite of software programs that helps agricultural producers make better decisions to manage financial risk, plan orchard renewal and decide on technology investments. Lunchtime and panel discussions will allow you to make contacts and ask questions! **Registration is \$60** and includes lunch.

#### VEGETABLE GRAFTING – (fee \$25 – PRE-REGISTRATION REQUIRED)

1:00 to 4:30 p.m. This workshop will focus not only on the mechanics of grafting but particularly emphasize the care and conditions needed for the plants after grafting to ensure a successful result. Presented by Skip Paul, Wishing Bone Farm

#### IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF SOILBORNE PLANT PATHOGENS IN VEGETABLE PRODUCTION SYSTEMS (fee \$25.00 fee (includes lunch) - PRE-REGISTRATION IS REQUIRED)

9:00 am to 4:00 pm Through funding from NE-SARE, this day-long workshop has been designed to train growers as well as agriculture service providers (extension educators, regional specialists, crop consultants, IPM practitioners, etc.) in the identification, assessment and management of soilborne plant pathogens in vegetable crops. The topics to be covered via PowerPoint presentations and hands-on activities include: 1) understanding pathogen biology and ecology; 2) how to identify soilborne diseases on major vegetable crops in the Northeast; 3) methods for assessing soil pathogens and crop loss; and 4) disease management options. Participants will receive lunch and snack breaks, a 3-ring binder of resources as well as a trowel for examining crop roots. By attending this workshop, participants will be more aware about soilborne plant pathogens, recognize the signs and symptoms of common diseases caused by soilborne plant pathogens, learn how to scout fields, collect plant and soil samples for assessment and tools used for diagnosing diseases and understand available management options. Workshop facilitators will include Beth Gugino (Penn State), George Abawi (Cornell) and Jim LaMondia (The Connecticut Agricultural Experiment Station).

#### DEVELOPING A FARM FOOD SAFETY PLAN – (fee \$30 – PRE-REGISTRATION REQUIRED)

10:00	Produce Food Safety, Introduction
10:30	Water
11:15	Animals and Manure
12:00	Lunch (on your own)
1:00	Health and Hygiene
1:45	Harvest and Post Harvest
2:30	Traceability and recall
3:30	Adjourn

**2013 Mid Atlantic Fruit and Vegetable Convention Educational Programs** Continued from Page 9

**MAIN CONVENTION PROGRAM**

**TUESDAY MORNING, JANUARY 29, 2013**

**TREE FRUIT - NIGERIAN ROOM**

- 9:00 Invocation –
- 9:05 President's Address – Carolyn McQuiston
- 9:15 \*\*Worker Protection Standards - James Harvey, Penn State Univ.
- 9:45 George Goodling Memorial Lecture Pre and Postharvest Handling of Honeycrisp for Maximum Storage Life and Quality - Dr. Chris Watkins, Cornell University
- 10:30 Adjourn to Keynote Session

**SWEET CORN – TRINIDAD ROOM**

- 9:00 Sweet Corn Cultivar Trial – Dr. Elsa Sanchez, Thomas Butzler, Lee Stivers, Dr. Timothy Elkner, Penn State Extension
- 9:30 Industry Show and Tell
- 9:45 Resistance and Resistance Management \*\* - Dr. Shelby Fleischer, Penn State Univ.
- 10:30 Adjourn to Keynote Session

**AG EDUCATION ON THE FARM – MAGNOLIA ROOM BCD**

- 9:00 Tours, Workshops and Summer Camps - Julie Flinchbaugh, Flinchbaugh's Orchard and Farm Market
- 9:30 Industry Show and Tell
- 9:45 Agricultural Awareness and Education: Curriculum, Learning and Partnership – Penna. Friends of Agriculture Foundation
- 10:30 Adjourn to Keynote Session

**SNAP BEANS - WILD ROSE ROOM**

- 9:00 Strategies for Controlling White Mold - Dr. Helene Dillard, Cornell Univ.
- 9:30 Industry Show and Tell
- 9:45 Snap Bean Weed Control is there a Need for Postemergence Herbicides- Dr. Mark VanGessel, Univ. of Delaware
- 10:30 Adjourn to Keynote Session

**SOIL HEALTH – CRYSTAL ROOM**

- 9:00 Taking Crop Roots to New Depths- David Myers, Univ. of Maryland Extension
- 9:30 Industry Show and Tell
- 9:45 Cover Crops for Soil Health –Charles White, Penn State Univ.
- 10:30 Adjourn to Keynote Session

**ORGANIC VEGETABLES – EMPIRE ROOM AB**

- 9:00 Whole Farm Profit Management Tool: Veggie Compass - Erin Silva, Univ. of Wisconsin
- 9:30 Industry Show and Tell
- 9:45 Using Cover Crops to Manage Soil Borne Diseases - Tianna Dupont, Penn State Extension
- 10:30 Adjourn to Keynote Session

**SWEET POTATOES – EMPIRE ROOM CD**

- 9:00 Sweet Potato Varieties – Dr Becky Sideman, Univ. of New Hampshire
- 9:30 Industry Show and Tell
- 9:45 Sweet Potato Production – Dr. Melvin Henninger, Rutgers Univ.
- 10:30 Adjourn to Keynote Session

**MUMS – COCOA SUITE 1**

- 9:00 Garden Mum Cultural Issues and What to do about Them, - Ed Higgins, Ball Chrysanthemums
- 9:30 Industry Show and Tell
- 9:45 New Varieties and Top Varieties for 2013 - Ed Higgins, Ball Chrysanthemums
- 10:30 Adjourn to Keynote Session

**KEYNOTE - NIGERIAN AND TRINIDAD ROOMS**

- 10:45 Mid-Atlantic Legislative Affairs Update – Gary Swan, Pennsylvania Farm Bureau
- 11:00 Keynote Presentation – Jeff Manning, GOT MANNING?

**TUESDAY AFTERNOON, JANUARY 29, 2013**

**TREE FRUIT - NIGERIAN ROOM**

- 1:30 Orchard Renewal Decisions - Dr. Clark Seavert, Oregon State Univ.
- 2:00 The USDA-NRCS Partnership with the Mid-Atlantic Specialty Crop Industry - Dr. David Biddinger, Penn State Univ.
- 2:30 Industry Show & Tell
- 2:45 Vacuum Assisted Harvest for PA Orchard Conditions and Systems - Dr. Paul Heinemann, Penn State Univ., Phil Brown, Phil Brown Welding Corp.
- 3:30 Comprehensive Automation for Specialty Crops – Looking Ahead after 4 Years of SCRI Funding - Dr. Marcel Bergerman, Carnegie Mellon Univ.
- 4:15 Adjourn
- 4:15 MSHS Executive Committee Meeting—Cocoa Suite #2
- 4:30 SHAP Annual Business Meeting

**SWEET CORN – TRINIDAD ROOM**

- 1:00 Questions and Answers on the Pennsylvania Vegetable Marketing and Research Program
- 1:30 \*Bt and Herbicide Tolerance, and Weed Management \* - Dwight Lingenfelter, Penn State Univ.
- 2:00 Deep Thoughts on Deep Zone Tillage - Robert Shenot, Shenot Farm and Market
- 2:30 \*Slugs: Biology, Biocontrol, and Management \* - Dr. John Tooker, Penn State Univ.
- 3:00 Industry Show and Tell
- 3:15 Wildlife Damage Management for Sweet Corn Producers – Kyle Van Why, USDA-APHIS-Wildlife Services
- 4:00 Adjourn

**WHOLESALE MARKETING – MAGNOLIA ROOM BCD**

To Be Announced

**NUTRIENT MANAGEMENT – CRYSTAL ROOM**

- 1:30 Why is Nutrient Management Critical- Dr. Douglas Beegle, Penn State Univ.
- 2:00 Cover Crops for Nitrogen Management- Charlie White, Penn State Univ.
- 2:30 Minimum Tillage and Zone Tillage- David Myers, Univ. of Maryland Extension
- 3:00 Industry Show and Tell
- 3:15 Erosion and Sediment Control Plan- Gwendolyn Crews, NRCS - USDA
- 4:00 \*\*Fate of Pesticides in the Environment- John Esslinger, Penn State Extension
- 4:30 Adjourn

**VALUE ADDED PRODUCTS – WILD ROSE ROOM**

- 1:30 Programs for Farmers Considering Value-Added Products – Bernard Linn, USDA Rural Development
- 2:00 Regulatory and Food Safety Considerations for Value-Added Producers – Dr. Larry Grunden, Penn State Univ.
- 2:30 Tips for Selecting and Working with a Co-Packer for Value-added Producers – Calvin Riggleman, Gourmet Central
- 3:00 Industry Show and Tell
- 3:15 Jack's Hard Cider – Increasing the Value of Pennsylvania Apples – Jonathan Patrono, Hauser Estate Winery and Jack's Hard Cider
- 4:00 Grower Experiences with Value Added Products – Gary Lambert, Lambert Mountain Acre
- 4:30 Adjourn

**ORGANIC VEGETABLES – EMPIRE ROOM AB**

- 1:30 Compost and Row Covers for Nutrient and Cucumber Beetle Management

Continued on page 11

## 2013 Mid Atlantic Fruit and Vegetable Convention Educational Programs Continued from Page 10

### TUESDAY AFTERNOON, JANUARY 29, 2013 CONTINUED...

- 2:00 The Basics of Organic Certification: Why and How to Get Certified – Lee Reinhart and Heather Donald Penna. Certified Organic  
 2:30 \*Organic Disease Management, Dr. Margaret McGrath, Cornell Univ.  
 3:00 Industry Show and Tell  
 3:15 Using Winter Cover Crops to Enhance the Organic Vegetable Industry - Cerruti Hooks, Univ. of Maryland  
 4:00 Wishing Stone Organic Farm: Growing Winter Greens, Skip Paul, Wishing Stone Farm  
 4:30 Adjourn

### LABOR/FARM MANAGEMENT – EMPIRE ROOM CD

- 1:30 Increase Your Revenues through Value Added- Miguel Saviroff, Penn State Extension  
 2:00 Business Planning - Michael Hosterman, AgChoice Farm Credit  
 3:00 Industry Show and Tell  
 3:15 Using QuickBooks Classes to Analyze Farm Enterprises- Keith Dickinson, Penn State Extension  
 3:45 Leadership by Knowing Your Employees- Miguel Saviroff, Penn State Extension  
 4:15 Adjourn

### BOTTOM LINE TRAINING

**Additional \$25 fee required to participate. Space is limited!**

2:30 - 4:00 Bottom Line Training - Zing Train, Ann Arbor, MI

All training we do should impact one of our three bottom lines (great service, great food, or great finance). If it doesn't impact a bottom line, it isn't worth our resources. Join us for this great interactive experience!

### BEDDING PLANTS – COCOA SUITE 1

- 1:30 Penn State Flower Trials 2012 - Dr. Robert Berghage, Associate Professor, Penn State Univ.  
 2:30 \*Greenhouse Aphid ID and Control Options - Suzanne Wainbright-Evans, Buglady Consulting  
 3:00 Industry Show and Tell  
 3:15 Virtual Grower Software Program, Jonathan Franz, USDA-ARS  
 4:00 \*Thrips in the Greenhouse and Their Management - Suzanne Wainbright-Evans, Buglady Consulting  
 4:30 Adjourn

### TUESDAY EVENING, JANUARY 29, 2013

- 6:00 Fruit and Vegetable Grower Reception – Trinidad and Nigerian Rooms (ticket required)  
 7:00 Fruit and Vegetable Growers Banquet - Trinidad and Nigerian Rooms (ticket required) – buffet dinner, recognitions and awards

### WEDNESDAY MORNING, JANUARY 30, 2013

### TREE FRUIT - NIGERIAN ROOM

- 9:00 Favorite Cherry Varieties - A Grower Panel - Win Cowgill, Moderator, Gary Mount, NJ, Evan Millburn, MD, Justin Weaver, PA, Tom Haas, PA  
 9:45 Common Mistakes to Avoid in Training Tall Spindle Trees- Mario Miranda Sazo, Cornell University  
 10:15 Industry Show & Tell  
 10:30 \*Use of SmartFresh on Different Varieties - Dr. Chris Watkins, Cornell University  
 11:15 New Fire Blight Resistant Pear Cultivars - Dr. Richard Bell, USDA  
 12:00 Lunch

### PEACHES – TRINIDAD ROOM

- 9:00 \*Late Season Fruit Rots on Peach - Dr. Norm Lalancette, Rutgers Univ.  
 9:30 Ernie Christ Lecture A Look at the Past and the Future of Peach Varieties - Jerome Frecon, Rutgers Coop. Extension  
 10:15 Industry Show & Tell  
 10:30 \*Using a Phenological Model and Border Spray for brown Marmorated Stink Bug - Dr. Anne Nielsen, Rutgers Univ.  
 11:15 \*Bacterial Spot on Stone Fruit - Sarah Bardsley, Penn State Univ.  
 12:00 Lunch

### MARKETING 101 – MAGNOLIA ROOM BCD

- 9:00 This session will cover: Produce Science, Crisping and Trimming, Customer Service, and Merchandising - Carla Snyder and Brian Moyer, Penn State Extension  
 12:30 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### SESSION IN SPANISH - MAGNOLIA ROOM A

- 9:00 \*Conceptos Básicos de Enfermedades de Plantas - Ilse Huerta, Penn State Univ. (Basic Concepts of Plant Disease)  
 9:45 \*Plagas, Pesticidas y la Salud del Publico: La importancia del Manejo Integrado de Plagas - Maria Gorgo-Gourovitch, Penn State Extension (Pests, Pesticides and People's Health: Why IPM is Important)  
 10:30 \*Manejo de Insectos Orgánico en Verduras - Tianna Dupont, Penn State Extension (Organic Insect Management in Vegetables)  
 11:15 Asegurando la Inocuidad de los Alimentos en Frutas y Hortalizas de EEUU y América Central - Donna Pahl, University of Maryland (Ensuring Food Safety in US and Central American Fruits and Vegetables)  
 12:00 Lunch

### TOMATOES - CRYSTAL ROOM

- 9:00 \*\*What Growers Need to Understand About GMOs and How Others Perceive Them - Dr. Beth Gugino, Penn State Univ  
 9:30 \*Update on Late Blight and Use of Host Resistance for Disease Management – Dr. Beth Gugino, Penn State Univ.  
 10:00 Industry Show and Tell  
 10:15 Refining Tomato Nutrition: Better Nutrition for Improved Packouts – Steven Bogash, Penn State Extension  
 11:00 \*Development of Biopesticides for Tomato Production – Dr. Timothy Johnson, Marrone Bio Innovations  
 11:30 PVGA Annual Meeting – Crystal Room  
 12:30 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### GROWING AND STORAGE FOR WINTER MARKETS – EMPIRE ROOM AB

- 9:00 Storage Basics in a Flash- Lee Stivers, Penn State Extension  
 9:15 Successes, Innovations, and Current Research in New England – Ruth Hazzard, Univ. of Massachusetts  
 10:00 Industry Show and Tell  
 10:15 Grower/Marketer Panel on Growing and Storage for Winter Markets - Michael Kilpatrick, Kilpatrick Family Farms, NY; Laura Tangerini, Tangerini's Spring Street Farm, MA;  
 11:30 PVGA Annual Meeting – Crystal Room  
 12:30 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### POTATOES – EMPIRE ROOM CD

- 9:00 Update from the US Potato Board- Alexandra Inhof, US Potato Board  
 9:30 New Directions in the Penna. Co-Operative Potato Growers - Roger Springer, David Sagle and Robert Leiby, Penna. Co-Operative Potato Growers  
 10:00 Industry Show and Tell  
 10:15 What's New in the Michigan State Potato Breeding Program – Dr. David Douches, Michigan State Univ.  
 11:00 \*Insect Control for Potatoes – Dr. Thomas Kuhar, Virginia Tech. Univ.  
 11:30 PVGA Annual Meeting – Crystal Room  
 12:30 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### WINE GRAPES – WILD ROSE ROOM

- 9:00 \*Challenges of Disease Management on Wine Grapes in the Mid-Atlantic - Dr. Noemi Hallbrendt, Penn State Univ.  
 9:45 What You Need to Know to Start A Winery - Robert Green, Harrisburg Area Community College  
 10:30 Industry Show & Tell  
 10:45 The Relationship Between Climate and the Quality of Cabernet Sauvignon from 1976 to 2011 - Dr. Daniel Ward, Rutgers Univ.  
 11:15 \*Phenology-Based Degree Day Model for Grape Berry Moth Management - Dr. Michael Saunders, Penn State Univ.  
 12:00 Lunch

Continued on page 14

## 2013 Mid Atlantic Fruit and Vegetable Convention Educational Programs Continued from Page 11

### WEDNESDAY MORNING, JANUARY 30, 2013 CONTINUED...

#### GREENHOUSE SYSTEMS – COCOA SUITE 1

- 9:00 Scheduling Bedding Plants into Flower - Dr. Erik Runkle, Michigan State Univ.
- 9:30 Using Controlled Release Fertilizer in Greenhouse Production - Dr. Fred Hulme, Everris NA
- 10:00 Industry Show and Tell
- 10:15 LED's: A New Technology for Plant Applications - Dr. Erik Runkle, Michigan State Univ.
- 11:00 \*Downy Mildew on Impatiens and Other Bedding Plants - Dr. Gary Moorman, Penn State Univ.
- 11:30 \*\*Innovations in Spray Technology for Greenhouse Growers - Thomas Ford, Penn State Extension
- 12:30 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### WEDNESDAY AFTERNOON, JANUARY 30, 2013

#### TREE FRUIT - NIGERIAN ROOM

- 1:30 Maintaining Native Pollinator Habitat and Managing Blue Orchard Bees - Dr. David Biddinger, Penn State Univ.
- 2:15 Industry Show & Tell
- 2:30 \*\*Pesticide Record Keeping Options - Dr. Kerry Richards, Penn State Univ.
- 3:00 US Apple Association Working to Help the Industry - Nancy Foster, US Apple Association
- 3:30 Pennsylvania Apple Marketing Board Program Update
- 4:00 Adjourn
- 4:30 MSHS Business Meeting—Tower Board Room

#### PEACHES – TRINIDAD ROOM

- 1:30 National Peach Council Update - Kay Rentzal, National Peach Council
- 2:00 Peach Training System Trial - Dr. James Schupp, Penn State Univ.
- 2:45 Industry Show & Tell
- 3:00 \*Peach Rusty Spot Management - Dr. Norm Lalancette, Rutgers Univ.
- 3:30 Plum and Stone Fruit Hybrids - Jerome Frecon, Rutgers Univ.
- 4:00 Adjourn

#### SESSION IN SPANISH - MAGNOLIA ROOM A

- 1:30 Trabajando Eficientemente en el Huerto de Manzanos - Mario Miranda-Sazo, Cornell Extension (Working Efficiently in the Apple Orchard)
- 2:15 \*Manejo Integrado de las Principales Plagas de Insectos del Arándano - Dr. Cesar Rodriguez-Saona, Rutgers Univ. and Dr. Carlos Garcia-Salazar, Michigan State University (co-author) (Integrated Management for Major Insect Pests of Blueberries)
- 3:00 \*\*Equipo Para la Protección Personal - Maria Gorgo-Gourovitch, Penn State Univ. (Personal Protection Equipment)
- 3:45 Hermanamiento de Cultivadores Jóvenes de EEUU y de Nicaragua - Catherine Lara, Penn State Extension & Members of the Young Growers Alliance/Project Gettysburg-León Agricultural Delegation (Young Grower Alliance Partnership with Nicaraguan Community)
- 4:15 Adjourn

#### THE ART OF GIVING GREAT SERVICE – MAGNOLIA ROOM BCD

- 1:30 This half day session will cover the following topics: Building a Culture of Great Service, Why Give Great Service? Zingerman's Vision of Great Customer Service
  - 3 Steps to Giving Great Service
  - 5 Steps to Handling Customer Complaints
 Living Great Service  
 Measuring and Rewarding Great Service  
 This session, presented by Zing Train of Ann Arbor, MI, is one complete presentation. To get the most - please - be there at the beginning and stay to the end.
- 5:00 Adjourn

#### GENERAL VEGETABLES – CRYSTAL ROOM

- 1:00 Questions and Answers on the Pennsylvania Vegetable Marketing and Research Program
- 1:30 \*Crop Rotation for Weed Control – Dr. Bradley Majek, Rutgers Univ.
- 2:00 Biodegradable Mulch – Dr. Michael Orzolek, Penn State Univ.
- 2:30 Water Management – Dr. Stephen Reiners - Cornell Univ.
- 3:00 Industry Show and Tell
- 3:15 Leafy Green Production – Dr. Gordon Johnson, Univ. of Delaware
- 4:00 Deer and Bird Control – to be announced
- 4:30 Adjourn

#### ONIONS – EMPIRE ROOM AB

- 1:30 \*Integrated Pest Management of Onion Thrips - Dr. Brian Nault, Cornell Univ.
- 2:00 Onion Fertility: Observations from the Field - Jeffrey Stoltzfus, Eastern Lancaster County School District
- 2:30 \*Bloat Nematode: A Re-emerging and Damaging Pest of Garlic and Other Hosts - Dr. George Abawi, Cornell Univ.
- 3:00 Industry Show and Tell
- 3:15 \*Factors Associated with Bacterial Diseases of Onion in Penna. - Dr. Beth Gugino or Emily Pfeufer, Penn State Univ.
- 4:00 What's New with Onion Varieties and the Simply Sweet Onion Program - Dr. Michael Orzolek, Penn State Univ.
- 4:30 Adjourn

#### POTATOES – EMPIRE ROOM CD

- Session Chair – William Lamont, Penn State Univ.
- 1:30 \*Potato Disease Update - Dr. Beth Gugino, Penn State Univ.
- 2:00 Colored Potatoes-How We Used Them in Our Market - Jennifer Coombs & Amanda Coombs Shimp, Jim Coombs Farms & Coombs Barnyard
- 2:30 What Potato Growers need to know about Potato Seed - Robert Leiby, Penna. Co-Operative Potato Growers
- 3:00 Industry Show and Tell
- 3:15 Breeding for Late Blight and Scab Resistance - Dr. David Douches, Michigan State Univ.
- 4:00 Regular Potato Growers Experiences with Growing Fingerlings—Dr. Melvin Henninger, Rutgers Univ.
- 4:30 Adjourn

#### WINE GRAPES – WILD ROSE ROOM

- 1:30 Crop Insurance for Wine Grapes - Dr. Jayson Harper, Penn State Univ.
- 2:00 \*\*Vineyard Sprayer Calibration - George Hamilton, Univ. of New Hampshire
- 2:45 Industry Show & Tell
- 3:00 Captan with an Emulsifiable Concentrate Causes Phytotoxicity on Many Grape Varieties - Dr. Dan Ward, Rutgers Univ.
- 3:30 The Nature of Frost and What You Can Do About It - Dr. Robert Crassweller, Penn State Univ.
- 3:45 Observations on 2012 Vintage - Denise Gardner, Penn State Univ.
- 4:15 Adjourn

#### SMALL FRUIT – COCOA SUITE 1

- 1:30 Berry Marketing: Results of a Consumer Survey – Dr. Kathy Kelley, Penn State Univ.
- 2:00 \*Management of Anthracnose Diseases of Strawberries – Dr. Mahfuzur Rahman, West Virginia Univ.
- 2:30 New Strawberry Varieties from Rutgers Univ. – Dr. Peter Nitzsche, Rutgers Univ.
- 3:00 Industry Show and Tell
- 3:15 High Tunnel Berries: Results of a Grower Survey – Kathleen Demchak, Penn State Univ.
- 3:45 \*Integrated Management of Major Pests of Blueberries – Dr. Cesar Rodriguez-Saona, Rutgers Univ.
- 4:30 Adjourn

Continued on page 13

## 2013 Mid Atlantic Fruit and Vegetable Convention Educational Programs Continued from Page 12

### Wednesday Evening, January 30, 2013

#### SOCIAL/EDUCATIONAL

- 5:00 Reception for Pennsylvania Apple Growers - Cocoa Suites – hosted by the Pennsylvania Apple Marketing Board and International Paper
- 7:00 Ice Cream Social for All Convention Attendees – Great Lobby – hosted by the Pennsylvania Vegetable Growers Association – ice cream served until 8:00 p.m.
- 7:00 Musical Jam Session – Great Lobby - bring your instrument and join in
- 7:00 **CUT FLOWER ARRANGEMENT WORKSHOP – WILD ROSE ROOM (\$10.00 FEE)**
- 7:00 **SEED HEAT TREATMENT WORKSHOP - (\$10.00 FEE)**  
**PRE-REGISTRATION IS REQUIRED**  
Through funding from NE-IPM this two-hour workshop will combine formal PowerPoint presentations with hands-on demonstrations to train participants in the use of seed heat treatment for the management of bacterial pathogens in vegetable crops. Participants will be given the opportunity to treat their own seed however we will also provide some seed to practice for those who do not bring their own seed. Depending on the number registered, we may need to limit the amount of seed each person can treat. Multiple workstations will be set-up and participants will have the opportunity to make their own drying screens to take with them. Participants in this workshop will be introduced to the valuable practice of seed heat treatment, and will be able to use the techniques and knowledge acquired to help reduce potential bacterial problems on their farm or on the farms of their stakeholders.

### THURSDAY MORNING, JANUARY 31, 2013

#### TREE FRUIT - NIGERIAN ROOM

- 9:00 Young Growers Alliance (YGA) on the Move – panel - Catherine Lara (moderator) Mark Boyer, Ben Lerew, Ben Wenk and Katie Epstein.
- 9:45 Industry Show & Tell
- 10:00 \*Pear Psylla Management in Oregon. - Dr. Peter Shearer, Oregon State Univ.
- 10:45 Finding a Good Crop Insurance Program - panel—Eugene Gantz, RMA/USDA, Moderator, Sherry Heidinger-Magnan, Rural Community Ins. Serv., Jack Singer, Rain and Hail Ins. Serv., Terry Maddox, Rain and Hail Ins. Serv.
- 12:00 Lunch

#### PEACHES - TRINIDAD ROOM

- 9:00 \*\*Is Your Air Blast Sprayer Calibrated for Your Peach Trees or Apple Trees? - George Hamilton, Univ. New Hampshire
- 9:45 \*Use of Entomopathogenic Nematodes for Borer Control - Dr. John Halbrendt, Penn State Univ.
- 10:15 Industry Show & Tell
- 10:30 Training Young Peach Trees - Dr. Richard Marini, Penn State Univ.
- 11:00 Strategies to Boost Retail Sales - Dr. Kathy Kelley, Penn State Univ.
- 11:30 Grower Experience with Mechanical Blossom Thinning – Panel - Dr. Tara Baugher – moderator: Henry Allenberg, MD; David Wenk, PA; Eddie Rankin, PA
- 12:15 Adjourn

#### CUT FLOWERS –MAGNOLIA ROOM A

- 9:00 Fall Fruiting Plants for Fall Bouquets - Dr Chris Wien, Cornell Univ.
- 9:30 Herbaceous Perennials for Cut Flowers - Scott Aker, U.S. National Arboretum
- 10:00 Industry Show and Tell
- 10:15 ASCFG Variety Trials - Alicain Carlson, North Carolina State Univ.
- 11:00 Maximizing Sunflower Performance - Dr. Christopher Wien, Cornell Univ.
- 11:30 Woody Cuts at the U.S. National Arboretum - Scott Aker, U.S. National Arboretum
- 12:00 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

#### BRINGING CUSTOMERS TO YOUR FARM – MAGNOLIA ROOM BCD

To Be Announced

#### HIGH TUNNELS – CRYSTAL ROOM

- 9:00 Maintaining Soil Health in High Tunnels-Dr. Matthew Kleinhenz, Ohio State Univ.

- 10:00 Industry Show and Tell
- 10:15 Growing Ginger in High Tunnels – Mitch Wapner, Paradox Farms
- 11:00 Root and Shoot Zone Heating Options with Low and High Tunnels- Dr. Matthew Kleinhenz, Ohio State Univ.
- 11:30 Update on NRCS High Tunnel Program- Gwendolyn Crews, NRCS
- 12:00 Luncheon Buffet

#### VINE CROPS – EMPIRE ROOM ABCD

- 9:00 Pollinizer and Seedless Watermelon Variety Trials – Dr. Gordon Johnson, Univ. of Delaware
- 9:30 To Be Announced
- 10:00 Industry Show & Tell
- 10:15 \*Recent Developments in Managing Diseases of Edible Cucurbits – Dr. Margaret McGrath, Cornell Univ.
- 11:00 Controlling Hollow Heart in Watermelon – Dr. Gordon Johnson, Univ. of Delaware
- 11:30 \*\*What Growers Need to Understand About GMOs (Genetically Modified Organisms) and How Others Perceive Them – Lee Stivers, Penn State Extension

#### GENERAL VEGETABLES – WILD ROSE ROOM

- 9:00 Three Season Lettuce Trials – Dr. Lewis Jett, West Virginia Univ. Extension
- 9:30 Garlic Production - Arthur King, Harvest Valley Farms
- 10:00 Industry Show and Tell
- 10:15 \*\*Air-Blast Sprayer Calibration - George Hamilton, Univ. of New Hampshire Extension
- 11:00 Ornamental Corn Production - Dr. William Lamont, Horticulture Dept., PSU
- 11:30 Hot Pepper Production - Dr. Elsa Sanchez, Penn State Univ.
- 12:00 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

#### SMALL FRUIT – COCOA SUITE 1

- 9:00 \*\*The Impact of Water Quality on Pesticide Performance – Lee Stivers, Penn State Extension
- 9:30 Experiences with Gooseberries and Currants – Tony Ricci, Green Heron Farm
- 10:00 Industry Show and Tell
- 10:15 \*Table Grape Varieties and Managing Diseases in the Mid-Atlantic – Steven Bogash and Noemi Halbrendt, Penn State Univ.
- 11:00 A New USDA Strawberry and Strawberry Season Extension with Low Tunnels - Year 2 – Dr. Kim Lewers, USDA-ARS, Beltsville
- 11:30 Raspberries-by-Color: Fruit Quality and Performance in Storage – Julia Harshman and Dr. Chris Walsh, Univ. of Maryland; Wayne Jurick II, Dr. Kim Lewers\*, and Shiw Wang, USDA-ARS, Beltsville
- 12:00 Luncheon Buffet - Great Lobby and Cocoa Suite Lobby (cash)

### THURSDAY AFTERNOON, JANUARY 31, 2013

#### INVASIVE SPECIES - TRINIDAD ROOM

##### Special joint session with PVGA and small fruit program

- 1:30 \*Brown Marmorated Stink Bug - Panel\* - Dr. Tracy Lesky; Dr. Greg Krawczyk, Penn State Univ.; Dr. Dean Polk, Rutgers Univ.
- 2:30 \*Spotted Wing Drosophila - Dr. Peter Shearer, Oregon State Univ., Kathy Demchack, Penn State Univ.
- 3:15 \*Invasive Weed Species - Tracy Harpster, Penn State Univ.
- 3:45 \*Invasive Insect Species - Dr. Shelby Fleisher, Penn State Univ.
- 4:15 Adjourn

#### DIGITAL MARKETING TOOLBOXES – MAGNOLIA ROOM BCD

- 1:30 Success Stories and Best Practices for Farm and CSA Websites - Simon Huntley, Small Farm Central
- 2:00 Email Marketing - Connecting to Your Customers - Arthur King, Harvest Valley Farms
- 2:30 2013 Consumer Food Trends, and How to Market your Products with the Info - Heather Mikulas, Penn State Extension
- 3:00 Credit Cards, Online Sales, and Demystifying the Tangled Web of Paying by Card - Simon Huntley, Small Farm Central
- 3:30 Social Media Platform Overview - Ginger Meyers, Univ. of Maryland Extension

Continued on page 14

**2013 Mid Atlantic Fruit and Vegetable Convention Educational Programs** Continued from Page 13

**THURSDAY AFTERNOON, JANUARY 31, 2013 CONTINUED...**

**HIGH TUNNELS - CRYSTAL ROOM**

- 1:30 High Tunnel Production in the City of Philadelphia – William Shick, SHARE, Philadelphia, PA
- 2:00 Tree Fruit Crops in High Tunnels – Dr. Greg Lang, Michigan State Univ.
- 2:30 Economics of High Tunnel Production– Adam Montri, Michigan State Univ.
- 3:15 How Tunnels Help Us Make Over \$3,000 a Weekend all Winter– Michael Kilpatrick, Kilpatrick Family
- 3:45 Adjourn

**PUMPKINS – EMPIRE ROOM ABCD**

- 1:30 \*Management of Pumpkin Fruit Rots – Dr. Beth Gugino, Penn State Univ.
- 2:00 Pumpkin Chunkin’ – Joshua Collins, Stahl Sheaffer Engineering
- 2:30 \*Keys to Successfully Managing Phytophthora Blight in Cucurbits - Dr. Margaret McGrath, Cornell Univ.
- 3:15 Pumpkin Pollinators – Sheena Sidhu, Penn State Univ.
- 3:45 \*Using IPM in Pumpkin Production – Dr. Gerald Brust, Univ. of Maryland

**FARM TAXES/ESTATE PLANNING – WILD ROSE ROOM**  
To Be Announced

**SMALL FRUIT – SEE INVASIVES SESSION**

**FOOD SAFETY – WILD ROSE ROOM**

- 1:30 Update from PDA – Lydia Johnson, Penna. Dept. of Agriculture
- 2:15 Surviving a Third Party Audit- grower panel to be announced
- 3:00 Adjourn

**Penn State Extension**

**Challenges and Opportunities for Obtaining Capital**

— Special Mid-Atlantic Fruit and Vegetable Convention Pre-Conference Workshop —

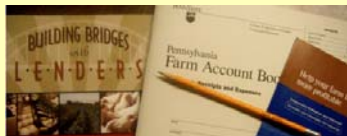
**Monday, Jan 28, 2013 from 9am - 4pm**

**Hershey Lodge and Convention Center, 325 University Drive, Hershey, PA 17033**

**with special guest speaker Dr. Clark Seavert**

Professor at Oregon State, Director of Northwest Agribusiness Executive Seminar & Instrumental in Developing AgTools™

**Are you a young, new or minority farmer? Gain insight into ag loans and business**



**Approaching a new ag business venture can be confusing. Let experts help you navigate this complex but important terrain:**

- Common Pitfalls for the First-Time Borrower
- Tips for Choosing an Ag Lender
- Programs for Young, Beginning and Minority Farmers
- What Are Ag Lenders Looking For?
- Business Planning, Financial Records & Opportunities
- AgTools™ for Building a Sustainable Business
- Using AgFinance™ on a Farm Case Study
- Obtaining a Loan - What are the Options?

Lunchtime and panel discussions will allow you to make contacts and ask questions! Registration is \$60

**Partnering Organizations**

**REGISTRATION FORM—MAFVC Pre-Conference Workshop**  
**Registration Deadline—January 21, 2013; Space is Limited!**

Name \_\_\_\_\_ Business \_\_\_\_\_

List additional persons attending \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Evening Phone \_\_\_\_\_

E-mail \_\_\_\_\_

**Registration Fee:** \$60 (Includes lunch)  
**Total Enclosed:** \$60 x \_\_\_\_\_ = \$ \_\_\_\_\_

**Please make checks payable to:**  
**State Horticultural Association of Pennsylvania**

**Please return registration form and payment to:**  
Maureen Irvin, Executive Secretary  
State Horticultural Association of Pennsylvania  
480 Mountain Road  
Orrtanna, PA 17353

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ADVANCE REGISTRATION  
**Maryland State Horticultural Society Annual Meeting**  
 at the Mid-Atlantic Fruit & Vegetable Convention Hershey Lodge and Convention Center – Hershey, PA

January 29 - 31, 2013

Please list name (s) registering:

*(Check the names who are renewing MSHS membership or would like to become a member of the Maryland State Horticultural Society)*

<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____

Farm & Business Name: \_\_\_\_\_

Address: \_\_\_\_\_ Email Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Please check the following:

- Add my name to the e-mail subscriber list (receive program information from MSHS & UME)  
 I do not have e-mail and wish to receive program information via U.S. Mail

**Mid-Atlantic Fruit & Vegetable Registration Fees**

**MEMBER'S REGISTRATION**

Advanced Registration (must be postmarked by **Jan. 22, 2013**) \_\_\_\_\_ @ \$60.00 = \_\_\_\_\_  
 Walk-in Registration (after Jan. 22, 2013) \_\_\_\_\_ @ \$75.00 = \_\_\_\_\_

**NON-MEMBER'S REGISTRATION** (join MSHS save money and enjoy member benefits)

One Day (at the door) \_\_\_\_\_ @ \$100.00 = \_\_\_\_\_  
 Three Day (at the door) \_\_\_\_\_ @ \$140.00 = \_\_\_\_\_

**2013 FRUIT & VEGETABLE GROWERS DINNER** (Tuesday, Jan 29, 2013 - Nigerian Room)

Grower Reception - Door Prizes - Awards \_\_\_\_\_ @ \$35.00 = \_\_\_\_\_

**MARYLAND STATE HORTICULTURAL SOCIETY MEMBERSHIP DUES**

2013 MSHS Membership Dues \_\_\_\_\_ @ \$30.00 = \_\_\_\_\_

**PVGA WORKSHOPS (Mon., Jan 28) PRE-REGISTRATION REQUIRED**

Vegetable Grafting \_\_\_\_\_ @ \$25.00 = \_\_\_\_\_  
 Identification, Assessment and Management of Soilborne Plant \_\_\_\_\_ @ \$25.00 = \_\_\_\_\_  
 Pathogens in Vegetable Production Systems (includes lunch) \_\_\_\_\_ @ \$30.00 = \_\_\_\_\_  
 Developing a Farm Food Safety Plan (lunch on your own) \_\_\_\_\_ @ \$30.00 = \_\_\_\_\_

**SHAP WORKSHOP (Mon., Jan 28) PRE-REGISTRATION REQUIRED**

Challenges & Opportunities for Obtaining Capital (includes lunch) — form for registration is on page 14 or go to:  
<http://extension.psu.edu/fruit-production/yga/events/challenges-and-opportunities-for-obtaining-capital-1>

**BOTTOM LINE TRAINING (Tue., Jan 29)** \_\_\_\_\_ @ \$25.00 = \_\_\_\_\_

**CUT FLOWER ARRANGEMENT WORKSHOP (Wed., Jan 30)** \_\_\_\_\_ @ \$10.00 = \_\_\_\_\_

**SEED HEAT TREATMENT WORKSHOP (Wed., Jan 30)** \_\_\_\_\_ @ \$10.00 = \_\_\_\_\_

**TOTAL AMOUNT ENCLOSED**..... \$ \_\_\_\_\_

**For more Information please call  
 Robert Black at 301-271-7491 or email  
 HBGala@aol.com  
 Thank you for  
 registering in advance!**

*Please make your check payable to:*  
**MARYLAND STATE HORTICULTURAL SOCIETY**

You may use one check for convention registration  
 and your 2013 membership dues.

**Mail check (payable MSHS) and registration form**

Your registration includes a FREE 1 yr. subscription to **Country Folks Grower**. Check box if you would like to receive publication.

**University of Maryland Extension — WMREC  
 Attention: Susan Barnes  
 18330 Keedysville Road  
 Keedysville, MD 21756**

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Due to the rising costs for printing and mailing, we are sending the Horticulture Technology Newsletter and other program information from the Maryland State Horticultural Society and University of Maryland Extension via email.

Of course, if you do not have online access, we will be happy to send you a hard copy.

A check box is provided on the Mid-Atlantic Fruit & Vegetable Convention Registration form to indicate your preference (email or snail mail).

If you are not attending the convention, we ask that you fill out your membership information, mailing preference, and send it back to:

Robert E. Black  
15308 Kelbaugh Road  
Thurmont, MD 21788

Please note, we are obligated to update our mailing list periodically. Please fill out and return the form to ensure you do not miss important information from the Maryland State Horticultural Society and University of Maryland Extension.

If you have any questions about the change, please contact Robert E. Black at HBGala@aol.com (301-271-7491) or Susan Barnes at sbarnes6@umd.edu (301-432-2767 x301)