

PENNSYLVANIA
VEGETABLE GROWERS

NEWS

November 2017 / Volume 40 Number 11

for the commercial vegetable, potato and berry grower

Plan Now to Attend the 41st Annual

MID-ATLANTIC *fruit & vegetable convention*

*January 30 to February 1, 2018
Hershey Lodge and Convention Center*



*See the
Convention Section
on page 13 to 28*

*Pre-Convention
Workshops
January 29
Biocontrols
FSMA Grower Training
Urban Community
Farming
Computer Record
Keeping
Managing Your Farm
Business
Managing Your
Retail Market
PA Pesticide Applicators
Basic Training
Fruit & Vegetable
Industry Bus Tour
YGA Orchard Trellis
Construction
UK Cider*



NEWS



Pennsylvania Vegetable Growers Association

An association of
commercial vegetable,
potato and berry growers.

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Three Springs

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Waterford

Timothy Weiser '19

York Springs

Executive Secretary

William Troxell

Richfield

PVGA Membership - A Bargain Too Good to Pass Up!

Nearly 3,000 people who are not members of PVGA will be receiving this Special Convention Issue of the **Pennsylvania Vegetable Growers News** compliments of PVGA. We want you to join our Association. We're putting our best foot forward by inviting you to the 2018 Mid-Atlantic Fruit and Vegetable Convention and by giving you the opportunity to see a copy of our monthly newsletter. Together they represent the key educational opportunities the Association offers to its members. And member education is one of the primary missions of the Association.

We believe one of the best ways to see the vegetable, potato and berries industries of Pennsylvania prosper is to have growers who are knowledgeable and up-to-date in their production practices. Therefore, we have worked hard to offer one of the most comprehensive educational programs for growers on the East Coast at the Mid-Atlantic Fruit and Vegetable Convention. In addition, each month the **Pennsylvania Vegetable Growers News** provides PVGA members with valuable information on current issues affecting growers as well practical production information from experts at Penn State and other universities. Each week, members with email receive the **PVGA Update** with links to news and event announcements online. PVGA also sponsors field days, field tours and twilight meetings to allow growers to visit fellow growers' farms or research plots in person during the growing season.

A \$50 annual membership in PVGA brings you the monthly newsletter plus saves you from \$50 (for a one-day registration) to \$90 (for a three-day registration) at the Convention. That's a hard bargain to beat but, wait, there's more!!!

Last year, through the efforts of PVGA volunteers at the Association's booths at the Farm Show and Ag Progress Days, the Association was able to contribute over \$72 per member to vegetable and small fruit research at Penn State. We are proud to be able to help our industry stay on the cutting-edge of technology. Over the past 29 years, PVGA has given over \$1 million to Penn State research.

PVGA is the organized voice of the vegetable, potato and berry industries in the Commonwealth and works to represent your interests in Harrisburg and Washington. Consequently, when legislation that affects the industry is considered, the industry has an organized voice ready to protect your interests.

PVGA owns the trademark for the "Pennsylvania Simply Sweet" onion to provide Pennsylvania growers with the opportunity to market a branded crop at a premium price.

You, if you are involved in the vegetable, potato or berry industries in Pennsylvania (or nearby states), can be a part of the PVGA team by joining today. Until February 1, dues are only \$50 – a real bargain. Membership also includes a free subscription to the *American Vegetable Grower* magazine and the *Vegetable Growers News*. Use the form on page 28 to join and/or register for the Convention.

Special Notices for PVGA Members

Fruit and Vegetable Growers Banquet – This annual event at the Mid-Atlantic Fruit and Vegetable Convention on January 30 will include the presentation of PVGA's nineteenth Annual Award to an individual who has a longstanding record of service and dedication to the Pennsylvania vegetable, potato or berry industries.

Annual Meeting – The Annual Meeting of the General Membership will be held on January 31, in the Crystal Room of the Hershey Lodge and Convention Center at 11:30 a.m. Policy Resolutions will be adopted and various annual reports made.

Ice Cream Social – PVGA will host its seventeenth annual old-fashioned Ice Cream Social from 7:00 to 8:00 p.m. on January 31 at the Mid-Atlantic Convention. This year's social will again be open to all in the Great Lobby of the Convention Center.

The **Pennsylvania Vegetable Growers News** is the official monthly publication of the Pennsylvania Vegetable Growers Association, Inc., 815 Middle Road, Richfield, PA 17086-9205
phone and fax - 717-694-3596, email - pvga@pvga.org website - www.pvga.org

Our Mission:

The Pennsylvania Vegetable Growers Association serves Pennsylvania's commercial vegetable, potato and berry growers through education, research, advocacy and promotion.

Our Vision:

The Pennsylvania Vegetable Growers Association will be the driving force in ensuring the future viability of the commercial vegetable, potato and berry industries in Pennsylvania.

Inquiries about membership, this publication or advertising rates should be directed to William Troxell, Executive Secretary, at the above addresses.

12th Annual PA Produce Month Celebrated

The Pennsylvania Vegetable Marketing and Research Program conducted its twelfth annual celebration of August as Pennsylvania Produce Month this season. The promotion is designed to focus extra attention on Pennsylvania vegetables at the height of your season. This year the Program again collaborated with Kitchen Table Consultants to help direct our promotions and build upon our past successes.



Public Relations

The Program sent out a series of weekly press releases on specific topics pulled from the custom content created for the website, in addition to weekly emails to farmer members which included items from the "toolkit" like a marketing calendar, ready-to-share social media graphics, eblast graphics, a summer infographic, and editorials to help farmers develop content for customer engagement. Between mid-July and mid-September, a total of 72 articles were published throughout the state on PA Produce Month. The total estimated impressions for this time period is 1,912,124 - 600,000 more than last year. (PR jargon: Impressions are the number of times your content is displayed.) With over 54 different publication sources, the estimated media value is \$122,512. This data is important, but not the only metric used to judge the success of a promotion. The Program also wanted to focus on engagement, and that is where the custom website content, pop up events and social media campaign come into play. (PR jargon: Engagements are the number of interactions people have with the content.)

To help highlight the abundance of fresh Pennsylvania produce available in August, the Program also worked with the

We Need Your Help at the Farm Show!

Each year over 200 PVGA members and friends volunteer at the PVGA Food Booth at the Pennsylvania Farm Show in Harrisburg. We need at least 25 volunteers in the booth at all the times. Since the Farm Show runs from 8:00 a.m. to 9:00 p.m., we need two shifts to completely cover each day from January 6 to 13, 2017. That translates into a lot of volunteer hours. Plus, this year we will again be open the afternoon of Friday, January 5, from noon to 9:00 p.m.

You say you don't come to the Farm Show? Why not break tradition and come for once? It's worth the trip just to volunteer your time to the Association and any farmer is bound to see at least a few things of interest at the Farm Show. There is a wide array of exhibits throughout the Complex. Are you really too busy in the middle of the winter to take a day off to help support vegetable and small fruit research? Last year we earned about \$170 for each volunteer shift enabling the Association to give over \$72 per member to Penn State research.

We are grateful to the many PVGA members who help out each year but we need new volunteers each year. If YOU have never helped before, PLEASE call us today at 717-694-3596 and volunteer for 2017. You'll be helping your Association besides having an enjoyable time.

Pennsylvania Department of Agriculture, Feeding Pennsylvania, and the Greater Pittsburgh Community Food Bank to recognize Southwestern Pennsylvania growers who donate produce to food banks. Secretary of Agriculture Russell Redding as well as representatives from the other partner organizations were featured at the press event held at the Mount Lebanon Lion's Club

Farmers Market on August 9 to highlight the scope of need in Pennsylvania and honor those growers making a difference. Feeding Pennsylvania affiliated food banks serve nearly two million food insecure people each year, half of whom are children. Fresh produce from local growers is a valuable resource for the food banks.

New Website Content

Custom content was developed for the PA Veggies website in celebration of PA Produce month. This included:

- Features on four well-known chefs around Pennsylvania sharing their favorite summertime veggie recipes. <http://www.paveggies.org/vegetable-information/tips-pennsylvanias-finest-chefs/>
- 2017 PA Veggies Consumer Tips Infographic <http://www.paveggies.org/vegetable-information/veggie-info-overview-infographic/>
- The 2017 Toolkit for Farmers <http://www.paveggies.org/2017-toolkit/>
 - Shareable social media images
 - Talking points for promos, consumer excitement, marketing "cheat sheet"
 - Shareable email images
 - Marketing calendar for guiding farmers
- Preparing for Produce Month mailer <http://www.paveggies.org/preparing-produce-month/>

(continued on page 4)

PVGA Young Grower Award Applications Being Accepted

The "PVGA Young Grower" award was a new award established this year. Brandon Christner was the first recipient at the 2017 Mid-Atlantic Convention. The winner is chosen each year by the PVGA Leadership and Recognition Committee. PVGA members are asked to nominate a young grower (someone they know or themselves) who meets the criteria for the Award. The criteria are as follows:

- is a PVGA Member who is 35 years old or younger;
- has been successfully growing vegetables, potatoes or berries for less than five years; and
- has contributed to advancing or promoting the Pennsylvania vegetable, potato or berry industry.

The prize for the winner will be free registration and lodging for the 2018 Mid-Atlantic Fruit and Vegetable Convention. To nominate someone or yourself, send a brief but comprehensive description of the farm operation and the nominee's qualifications to PVGA at pvga@pvga.org or 815 Middle Road, Richfield, PA 17086, by December 31, 2017.

NEWS

12th Annual PA Produce... (continued from page 3)

- Editorials to share, based on themed press releases
<http://www.paveggies.org/5-tips-get-kids-veggie-bandwagon-tricks-included/>

Pop Up Events

These events were so well received by consumers in 2016, that the Program did it all over again in 2017. This year's pop up educational events featured three different elements, with one to two of these programs at nine community special events and farmers' markets in the Central and Southeastern regions.

- Dirt Therapy – Kids love to dig in the dirt and this interactive activity allowed youngsters to dig up buried veggies out of a container of soil while Program representatives worked with them to identify the produce and talk about the many ways to enjoy them.
- Tomato Tasting Trail – This farmer's market activity allowed consumers to taste new tomato varieties and discover perfect food pairings as they strolled around the market filling their baskets with August's bountiful produce offerings. They were encouraged to ask farmers about their favorite tomatoes and which varieties would be best for their recipes!
- Chopped Salad Demo - This activity was designed to inspire even the busiest person to load up their market basket with an assortment of fresh veggies - not so they can be laid to rest in the crisper drawer, but instead be quickly prepped into a delicious, raw salad bursting with flavor. Consumers were provided with recipes along with veggie combination suggestions.

With potential exposure to over 30,000 consumers, 1,000 direct connections were estimated - direct meaning there was a conversation and personal interaction like sharing recipes, tips for cooking seasonally, kids programming and information about PA Veggies. Many more were reached indirectly through hand-outs provided at the pop up events. (These stats on connections do not include social media engagement, which was a focal point for creating excitement about the activities.)

Social Media and Web Campaign

Kitchen Table Consultants drove consumer reach this year by continuing to build an audience for PA Veggies through social media engagement. The August is PA Produce Month (PA Veggies) social media campaign pages continue to be maintained throughout the year. Facebook took the role as the most popular site for all of the different markets, farms, customers and potential customers, with Instagram at times showing even more farmer and consumer activity. The team shared engaging posts throughout the month, sharing custom content from the PA Veggies website, tips for vegetable storage and preparation, and their good cheer and enthusiasm for PA Produce Month to keep followers engaged and excited about what was to come.

PA Produce Month social media sites are as follows, with Facebook and Instagram as the targeted platforms for promotion:

- www.facebook.com/PAVeggies
- www.instagram.com/PAVeggies
- www.twitter.com/PAVeggies
- www.pinterest.com/PAVeggies

Facebook stats for mid-July to mid-September were:

- 71 New page likes
- 1,797 Unique users saw PA Veggies content at least 3 times

- 28,324 People saw content
- 1,184 People were engaged

The Facebook post with the broadest reach (3,781 unpaid/392 paid) read as follows with the 2017 infographic: *"Veggie knowledge is a powerful thing! Here are a few important and fun facts to send you into the weekend. Now go connect with your local farmers and veg on! #paveggies #paproducemonth"*

Website Directories Updated

Using information submitted by growers this spring, the Program updated the directory of retail Farm Markets, Farmers' Markets and CSA's that is posted on the Program's website. The directory lists the markets in ZIP code order allowing consumers to search for markets near them. The Program also updated its directory of wholesale growers that lists growers by the crops they produce at the wholesale level. In this directory, the growers are divided into three or four groups based on the acreages they produce. The website also features a directory of the state's produce auctions.

Growers are encouraged to check out these directories and make sure they are listed and are listed correctly. Please note that the directories only contain information which you as a grower submitted to the Program this spring or in previous years. We would like to list all growers and their markets, so let us know if you were not listed. To obtain the forms to be listed in the directories, call the Program at 717-694-3596 or email us at pvmrp@embarqmail.com.

Other Produce Month Efforts

Over 200 Produce Month kits were shipped to the various produce auctions across the state where they were available to growers and to the non-grower marketers who purchase produce at the auctions while 52 kits were ordered from the Program by growers.

The Program again offered PA Produce Month point-of-purchase materials to supermarket chains in the state. Posters and price cards were requested for about 250 stores by Acme, Supervalu, Four Seasons Produce, Lancaster Family-Owned Markets, and Karns Quality Foods.

House Passes Tax Reform

The U.S. House has passed a Farm Bureau supported overhaul to federal tax laws, moving tax reform, a longtime priority for farmers-a step closer toward becoming reality. The bill, known as the Tax Cuts and Jobs Act, has the potential to lower tax rates for many farm families and businesses and preserves many of the deductions farmers take to offset business expenses. While the bill would continue the allowance of like-kind exchanges for buildings and land, it would eliminate them for livestock and equipment. However, that would be temporarily offset by the expansion of immediate expensing. Farm Bureau hopes to see the expanded expensing provision, which would end after five years, made permanent. The Senate is in the process of developing its own tax reform proposal, which must be passed before lawmakers can draft a final, combined version of the bill to be approved by each chamber.

From Farm Bureau Express, Penna. Farm Bureau, November 17, 2017.

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NEWS

State News Briefs

Bill Easing Construction Rules for Roadside Stands Becomes Law

A bill that would exempt seasonal farm stands from the burden of complying with regulations that govern construction of permanent buildings is now law.

House Bill 176, sponsored by Rep. Tina Pickett of Bradford County, passed the General Assembly and was signed recently by Gov. Tom Wolf.

Some municipalities have required that even seasonal farm stands meet the requirements of the Uniform Construction Code. The new law exempts from those rules farm stands that are 1,000 square feet or smaller and open on at least 25 percent of the perimeter when in use. A related bill that would exempt maple sugar houses from such codes cleared the House and awaits action by the Senate Labor and Industry Committee.

From the Penna. Agricultural Alliance Issues Update, Penna. Farm Bureau, November 2017

Bill Easing Regulations on High Tunnels Passes House

A proposal to exempt certain high tunnel structures used to extend the growing season of locally grown produce from stormwater management planning has passed the state House.

House Bill 1486, sponsored by Rep. David Zimmerman of Lancaster County, passed the House with bipartisan support and now heads to the state Senate for consideration.

The bill would prevent municipalities from requiring that farmers submit stormwater management plans on high tunnel structures that meet common sense guidelines clearly identified in the legislation. More and more farmers are using high tunnels to extend the growing season to meet increasing consumer demand for fresh, local fruits and vegetables and local regulation can be burdensome, increase costs and cause delays.

From the Penna. Agricultural Alliance Issues Update, Penna. Farm Bureau, November 2017

Noxious Weeds Law Update Becomes Law

An update to the state laws governing control of noxious weeds is now official.

House Bill 790, by Rep. Eddie Day Pashinski of Luzerne County, cleared the General Assembly and was signed by Gov. Tom Wolf.

Scam Alert: Do Not Email Form I-9

U.S. Citizenship and Immigration Services (USCIS) is warning employers of a new scam in which identity thieves attempt to steal employees' sensitive information by posing as the agency and requesting Form I-9 by email. USCIS will never request Form I-9 by email. The fraudulent messages have been coming from email addresses set up to look like they came from USCIS. The agency recommends that if employers receive emails, they delete them and do not respond or click links. All employers are required to complete Form I-9, which is used to verify employment eligibility, when they hire new workers.

From Farm Bureau Express, Penna. Farm Bureau, November 17, 2017

The measure adds to the list of noxious weeds to be controlled several new species that are adversely affecting agriculture. It also, by default, includes weeds that are on the federal list and allow the state Controlled Plant and Noxious Weed Committee to conduct studies to add or delete plants from the list. The bill allows beneficial weeds with the potential to become invasive — such as *Miscanthus*, which is used for bio-fuel — to be cultivated in a controlled environment with a permit for research.

From the Penna. Agricultural Alliance Issues Update, Penna. Farm Bureau, November 2017

Spotted Lanternfly Quarantine Zone Expanded

The Pennsylvania Department of Agriculture has expanded the quarantine zone, created to halt the spread of the invasive spotted lantern fly. With the latest expansion, the state has shifted to imposing quarantines at the county, rather than municipal, level and including areas where the insect's presence has not yet been confirmed but there's a high risk of spread. The quarantine area now covers 13 entire counties: Berks, Bucks, Chester, Carbon, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Philadelphia, and Schuylkill. "This invasive insect threatens to destroy \$18 billion worth of agricultural commodities here like apples, grapes and hardwoods, inflicting a devastating impact on the livelihoods of our producers and businesses," Agriculture Secretary Russell Redding said. Businesses in the quarantine area must obtain a Phytosanitary Certificate or compliance agreement from the department to move items outside the area and need a permit to move items within the quarantine zone. People who live within or are traveling through quarantine zones should check vehicles for egg masses before leaving an infested area, buy firewood locally instead of moving it between areas, check outdoor items and trees for egg masses, not transport brush, yard waste or construction waste outside the quarantine area. For more information, visit <http://bit.ly/PDASpottedLanternfly>.

From Farm Bureau Express, Penna. Farm Bureau, November 17, 2017

State Funding Available for Agricultural Plans in Chesapeake Bay Watershed

Farmers in the Chesapeake Bay Watershed can get funding from the state to help cover the cost of developing water-quality-related plans for their farms.

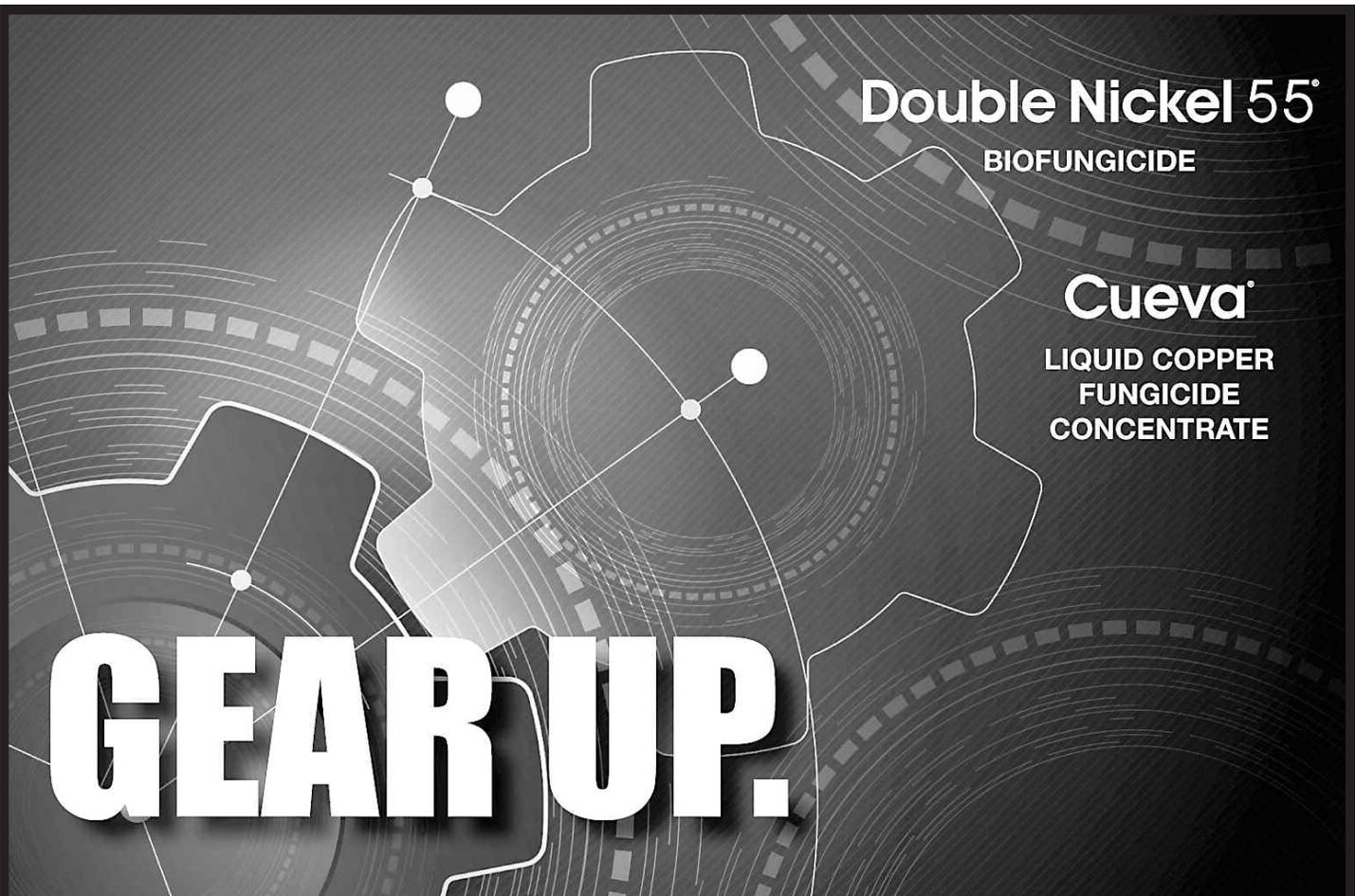
Farmers in the watershed are required to implement one or more plans for manure management, nutrient management,

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Local Events Calendar

December 12-13, 2017. **Pennsylvania Organic Conference** at the Sheraton Harrisburg Hershey in Harrisburg. Visit <https://gpopconference.org/> or call 717-787-5319

December 13-14, 2017. **High Tunnel Production Basics and Bio-Intensive Tomato Production School** at the Penn State Extension office in Mercer Co., 463 N. Perry Hwy in Mercer. For information contact Lee Stivers at 724-228-6881 or ljs32@psu.edu. For registration information, visit <http://tinyurl.com/HighTunnelBiointensive> or call 724-627-3745.



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NEWS

State News Briefs (continued from page 6)

and agriculture erosion and sediment control. Enlisting technical experts to help develop those plans can cost \$500 to \$1,500 per plan depending on the size of the farm.

"We know it can be a challenge, especially for small operations, to afford fees for technical help on plans for pollutant reduction in local streams and rivers," said state Environmental Protection Secretary Patrick McDonnell. "Through reimbursements to farmers, our Agricultural Plan Reimbursement Program will cover the cost of preparation of at least 800 and as many as 2,200 plans."

Farmers can seek reimbursement for plans developed during 2017 or later. The deadline to register to participate is April 1, 2018.

"Farmers recognize the importance of conservation stewardship because they depend on clean water and healthy soil," said state Agriculture Secretary Russell Redding. "Throughout the watershed—and throughout the state—there are countless farmers who want to do the right thing when it comes to protecting our natural resources."

Farmers in Bradford, Cameron, Carbon, Centre, Clearfield, Clinton, Columbia, Elk, Jefferson, Lackawanna, Luzerne, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Sullivan, Susquehanna, Union, Tioga, Wayne, and Wyoming counties should contact Sara Bolton of Larson Design Group at 570.374.5700 or sbolton@larsondesigngroup.com.

Farmers in Adams, Bedford, Berks, Blair, Cambria, Chester, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Indiana, Juniata, Lancaster, Lebanon, Mifflin, Perry, Somerset, and York counties should contact Jedd Moncavage of TeamAg at 717.721.6795 or jeddm@teamaginc.com.

From the *Penna. Agricultural Alliance Issues Update*,
Penna. Farm Bureau, November 2017

Information Technology Offers Opportunity in Agriculture

Career opportunities are growing in agricultural information technology to meet the demands of the high-tech food production system employed in the United States.

Information technology is used to optimize crop performance, manage water use, improve livestock performance and manages agricultural production data. Advanced skills in information technology are needed as agricultural producers contin-

ue to utilize systems in precision agriculture and embraces the emerging technologies associated with agricultural drones.

From the *Penna. Agricultural Alliance Issues Update*,
Penna. Farm Bureau, November 2017

Former Pennsylvania Agriculture Secretary Recognized for Service

Former Pennsylvania Agriculture Secretary Sam Hayes was recognized recently for his work promoting Pennsylvania agriculture and the dairy industry.

Hayes, of Huntingdon County, received the Obie Snider Award at the 54th All-American Dairy Show at the Pennsylvania Farm Show Complex. Named for a founding father of the show, the award recognizes an individual who places significant value in service to the industry and community.

"Secretary Sam Hayes embodies the very best of public service, always listening and searching for ways to solve problems, making our state and nation stronger," Agriculture Secretary Russell Redding said. "His work ethic, leadership and passion for the agriculture industry have had a profound impact on Pennsylvania, inspiring many and benefiting us all." Hayes is a Vietnam veteran and former state legislator.

From *Penna. Agricultural Alliance Issues Update*,
Penna. Farm Bureau, October 2017.

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Vegetable Program Referendum Coming in March 2018

Every five years, the vegetable growers of Pennsylvania must vote whether to continue the Pennsylvania Vegetable Marketing and Research Program. This referendum is required by the Pennsylvania Agricultural Commodities Marketing Act under which the Program is established. The last review referendum was held in March 2013 so the five-year period is up in March 2018.

As stated in the Program's mission statement, the Program's sole purpose is to serve the growers of Pennsylvania by promoting Pennsylvania-grown vegetables and funding practical vegetable research. Since the Program was established in 1988, it has devoted over \$620,000 in assessment dollars to research funding and \$550,000 for promotion activities.

Working cooperatively with the Pennsylvania Vegetable Growers Association which has contributed an additional \$750,000 to vegetable research, the Program and Association have funded over 350 projects in the last 30 years. The research projects have included numerous cultivar, herbicide and fungicide trials; disease forecasting and insect pest monitoring systems; development of disease resistant tomato varieties; evaluation of various production methods; and others. The reports of these projects have been made available to growers each year. Currently the reports for the last eight years are available on the Program's website at www.paveggies.org. Historically, the Program has tried to give special research emphasis to projects that benefit processing snap bean, tomato and sweet corn growers since processing growers do not benefit from the marketing activities of the Program.

Besides the \$550,000 in assessment dollars used to promote Pennsylvania vegetables, the Program has received an additional \$400,000 in state and federal grants for promotion activities. Since 1990 the Program has provided growers who retail their produce with professionally printed point-of-purchase materials. It has also maintained a press relations effort to get stories about local, Pennsylvania vegetables on the food pages of newspapers across the state. A vegetable recipe contest was sponsored for ten years that produced exciting recipes for the press releases and the Program's website. Billboards, radio advertising and, more recently, social media have been used to urge consumers to buy fresh, local Pennsylvania produce. For the last 12 years, the Program has celebrated August as Pennsylvania Produce Month to highlight the height of the local season. Retail fresh market growers are able list their roadside farm markets, their CSAs or the community farmer's markets they attend in the Program's online directory. Wholesale fresh market growers have the opportunity to list their farms in an online directory of wholesale growers arranged by crop, also housed on the Program's website.

The continuation of all these activities that support a vibrant vegetable industry in Pennsylvania is dependent on growers voting to continue the Program in March 2018. One of the issues the Program has faced from the beginning has been identifying the names and addresses of all the growers in the state. No complete list exists other than the Ag Census list which is by federal law confidential and not available to the

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NEWS

Penn State Offers FSMA Food Safety Training

The Food Safety Modernization Act (FSMA) Produce Safety Rule in §112.22(c) requires that at least one supervisor or responsible party from the farm successfully complete food safety training at least equivalent to that received under a standardized curriculum recognized as adequate by the Food and Drug Administration. This one-day training course, developed by the Produce Safety Alliance (PSA), is intended for those who grow produce covered under the Produce Safety Rule, work with wholesale buyers that require this course as a condition of sale, or are just interested in learning about produce safety.

To learn more about the FSMA Produce Safety Rule and find out if your produce growing operation is covered under the regulation, visit extension.psu.edu/fsma.

Approximately seven hours of instruction time will be spent on the following modules:

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training
- Soil Amendments
- Wildlife, Domesticated Animals, and Land Use
- Agricultural Water (Part I: Production Water; Part II: Postharvest Water)
- Postharvest Handling and Sanitation
- How to Develop a Farm Food Safety Plan

After attending the entire course, participants will be eligible to receive a certificate from the Association of Food and Drug Officials verifying that they have completed the training. To receive a certificate, participants must be present for the entire training and submit the appropriate paperwork to their trainer at the end of the course.

Cost and registration: Funding for this training was provided through the Pennsylvania Department of Agriculture. Registration cost is \$150 with a \$130 discount for the first registrant from a Pennsylvania farm (or \$20 per participant.) To register, go to extension.psu.edu/fsma-grower-training.

The training will be offered at the following locations on the dates listed:

- Columbia County | December 13, 2017

- Columbia County Extension Office, 702 Sawmill Rd., Bloomsburg, PA, - 570-988-3950
- Berks County | January 18, 2018
Berks County Ag Center, 1238 County Welfare Rd., Leesport, PA - 610-378-1327
- Mid-Atlantic Fruit & Vegetable Convention | January 29, 2018
Hershey Lodge, Hershey, PA - 717-694-3596 (registration for this location is through PVGA – see page 28)
- Westmoreland County | February 13, 2018
Donohoe Center, 214 Donohoe Rd., Greensburg, PA - 724-627-3745
- Philadelphia County | February 13, 2018
Philadelphia County Extension Office, 675 Sansom Street, Philadelphia, PA - 215-471-2200
- Lehigh County | February 20, 2018
Penn State Lehigh Valley, 2809 Saucon Valley Rd., Center Valley, PA - 610-391-9840
- Lancaster County | February 28, 2018
Lancaster County Farm & Home Center, 1383 Arcadia Rd., Lancaster, PA - 717-394-6851
- Centre County | March 6, 2018
Penn State University Park Campus, 252 Erickson Food Science Bldg., University Park, PA - 814-865-4027
- Adams County | March 8, 2018
Penn State Fruit Research and Education Center (FREC), 205 University Dr., Biglerville, PA -717-334-6271 ext 0

Penn State Extension is also offering Food Safety Plan Writing training on the following dates:

- Erie County | December 19, 2017
- Lancaster County | February 22, 2018
- Westmoreland County | February 27, 2018
- Berks County | March 27, 2018

For more information go to <https://extension.psu.edu/developing-a-farm-food-safety-plan>.

Vegetable Program...

(continued from page 9)

Program. Periodically the Program and the Department of Agriculture have reached out to various sources to update the list, most recently in 2017. By contacting produce auctions, chain store buyers, wholesalers, processors, brokers and other wholesale buyers, the Program has been able to add about 700 growers to its list of growers this year. The Program is designed to provide a structure for the entire Pennsylvania vegetable industry to work together to cooperatively fund vegetable research and promote locally grown vegetables. Thus collecting the annual assessment from all the state's growers allows the Program to be more effective in funding research and promoting growers crops.

The Board asks growers to vote "Yes" to continue the record of 30 years of support for the Pennsylvania vegetable industry.

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Are your labels compliant with the Food Safety Modernization Act?

Now it is possible to create and print your own FSMA compliant labels even if you don't own a computer

The government is requiring all fruit and vegetable companies to label their products, including information such as when the product was packed, the grower number, field location, and other information.



The Texpak FSMA labeling system consists of a small printer that can either be operated with a computer or can be used as a stand-alone system with an optional keyboard.

Texpak can help create and design up to four label formats for you, at no charge, to fit your specific needs. Below are samples of some of the labels we have created for fruit and vegetable growers. In addition, Texpak can provide fully pre-printed labels should you be looking to brand your products.

Frecon Fruit Farm Inc
231 Powdermill Hollow Rd.
Boyertown Pa 19512

Variety: _____

Block: _____

Date: _____

Picker(s): _____

Amount: _____

LARGE # 2 TOMATO
JOE MARTIN #1277
PACKED: 06/06/16

Growers #1400 Field # 2

Size: **Large Tomatoes**

Steven Martin Packed Date
Shippensburg PA 8/11/16

Apple Cider
Keep Refrigerated

No Preservatives

FAIRMOUNT ORCHARD
558 GOODS ROAD
EPHRATA PA 17522

WARNING: This product has not been pasteurized and therefore may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune systems.

1 GALLON

Texpak will be exhibiting at the **Mid-Atlantic Fruit and Vegetable Convention** (1/30 – 2/1 in Hershey, PA) where we will have the system in operation and you can see how it works. If you would like more information before the show, please feel free to contact us either by e-mail or phone as indicated below.

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NEWS

PDA to Offer FSMA On-Farm Readiness Reviews

Lydia Johnson

The on-farm readiness review is a concept that NASDA (National Association of State Departments of Agriculture) members developed along with the FDA (Food and Drug Administration). The review gives produce growers the opportunity to receive a pre-assessment of how they stand in terms of produce safety rule compliance. Growers participate on a voluntary basis.

The program will assess growing, pre-harvest, harvest, and post-harvest activities.

The Pennsylvania Department of Agriculture applied for and secured an FDA Cooperative Agreement, making the department the regulatory entity in the state. In meetings to gather feedback, stakeholders in the Pennsylvania produce industry clearly voiced their preference for this arrangement.

What's Your Exit Strategy?

How will your family farm business operate in the future when the owner retires or is gone? Are you currently working with another generation who may be questioning their role in the future of the farm business or are you yourself questioning your current role?

To help farm families start their succession planning process, Penn State Extension is offering a new interactive program, "What's your exit strategy?" This program provides many of the tools and resources for producers who want to begin the succession planning process.

This program is being offered in six locations across Pennsylvania. Contact John Berry at 610.391.9840 or johnberry@psu.edu for information on a workshop near you or visit our web site at: <https://extension.psu.edu/succession-planning-what-s-your-exit-strategy> for more information.

The program will be offered on the following dates at these locations:

- November 29 & December 6, 2017 - Dutch Way Restaurant, 365 PA-41, Gap, PA 17527
- December 7 & 12, 2017 - Montoursville Presbyterian Church, 205 Tule St, Montoursville, PA 17754
- January 4 & 11, 2018 - Hoss's Steak & Seafood, 1198 Wayne Ave, Indiana, PA 15701
- January 5 & 12, 2018 - Burch Farms Country Market & Winery, 9210 Sidehill Rd, North East, PA 16428
- February 8 & 15, 2018 - Meadow Hill Family Restaurant, 2935 E Prospect Rd, York, PA 17402
- February 9 & 16, 2018 - PSU-Lehigh Valley, 2809 Saucon Valley Rd, Center Valley, PA 18034

As part of this cooperative agreement, department staff will begin offering on-farm readiness reviews to produce growers once the department receives the FDA's on-farm readiness guidance document for regulators.

The Department looks forward to partnering with growers in this added assurance that Pennsylvania produce is safe for consumers.

Dr. Johnson is Director of the Pennsylvania Department of Agriculture Bureau of Food Safety.

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 2018

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	4% Cash discount on orders prepaid from Jan. 5 to Jan. 31, 2018
	3% Cash discount on orders prepaid in Feb. 2018
	2% Cash discount on orders prepaid Mar. - Nov. 2018

CONVENTION

MID-ATLANTIC

fruit & vegetable convention

The 2018 Mid-Atlantic Fruit and Vegetable Convention will be held January 30 to February 1, 2018, at the Hershey Lodge and Convention Center in Hershey, Pennsylvania. Over 2,400 fruit, vegetable, and berry growers and other industry persons from throughout the mid-Atlantic region and beyond are expected to attend. This year's convention will again feature several pre-convention workshops, a farm market bus tour, and a trade show with over 170 exhibitors plus three full days of seven or more concurrent educational sessions. This year's keynote speaker is Charlie Arnot, a recognized thought leader in food and agriculture and CEO of The Center for Food Integrity, who will speak on "Values, Trust and Science: Building Trust in Our Post-Truth Tribal World". He will provide unique, research based insight into building trust with today's consumer. Growers will leave the session knowing three things they should start doing, and three things they should stop doing to make their conversations about their fruit and vegetable operations 100% more effective.

Charlie Arnot is highly regarded as both a writer and sought-after speaker who engages audiences across the globe. Charlie has more than 25 years of experience working in communications, public relations and issues management within the food system. He serves as CEO of The Center for Food Integrity, a non-profit organization dedicated to building consumer trust and confidence in today's food system.

One client said of Charlie's work, "Others help us talk about our business, you help us think differently about who we are and what we do." His commitment to excellence, innovation and integrity have positioned him as a trusted counselor to CEOs, government leaders and executives, and as a respected industry advisor on critical issues within the food system. Clients and food and farm industry leaders seek his unique expertise in applying the peer-reviewed trust model developed in 2007 to help them build trust in their processes and products.

Charlie spent ten years as a corporate officer for a leading food company. He also worked for a public relations agency, was an award-winning radio journalist and worked in video and film. Charlie grew up in southeast Nebraska and graduated from the University of Nebraska with a Bachelor of Journalism degree.

The Mid-Atlantic Convention has been jointly sponsored by the State Horticultural Association of Pennsylvania, the Pennsylvania Vegetable Growers Association, the Maryland State Horticultural Society and the New Jersey State Horticultural Society for the past 40 years making this year's Convention the 41st meeting. In 2014, the Virginia State Horticultural Society also began meeting at the Convention. The Pennsylvania State University, University of Maryland, Rutgers University Cooperative Extension and Virginia Tech University all assist in organizing the three days of educational sessions.



Charlie Arnot

The Convention has become one of the premier grower meetings in the Northeast. The Great American Hall and the Aztec Room at the Hershey Lodge and Convention Center will host most of the Trade Show with several additional booths being located in the Confection Level Lobby. Specialized horticultural equipment, farm market merchandise, and packaging will all be on display along with information on the latest seed varieties, fruit varieties, pesticides and other supplies and services for the commercial grower.

Many pesticide applicator update training credits will be available to Pennsylvania, Maryland, New Jersey and Virginia growers attending the sessions. The program covers nearly every aspect of fruit, vegetable, potato and berry production. Commercial growers should not pass up this terrific educational opportunity.

The twelfth annual Mid-Atlantic Cider Contest will be conducted during the Convention to determine the best tasting cider produced in the region. On January 30, fruit and vegetable growers will gather for the annual Fruit and Vegetable Growers Banquet which will include awards and recognitions. On January 31 there will be an Ice Cream Social in the evening.

Registration is required for all persons attending the Convention trade show or educational sessions. Registration with any of the five sponsoring organizations allows one to attend any of the sessions although there are additional charges for some workshops and meals.

The Convention is not all business. It is a wonderful opportunity to take a short vacation in Chocolatetown, USA, with fellow vegetable and fruit growers. Arrangements for babysitting can be made by calling the Hershey Lodge at 717-533-3311 and asking for Guest Services. There is a cost per hour and per child.

The Hershey Lodge is the ideal place for you to be January 30 to February 1, 2018. Take advantage of the special reduced room rate of \$145 in effect for the Convention. To make a room reservation, call 1-855-729-3108 and ask for the Mid-Atlantic Fruit and Vegetable Convention block or go the "Lodging" page on the Convention website at www.mafvc.org. Be sure to make your reservation early as the Lodge has filled up the last several years. Whether you stay overnight or not, it will be well worth your while to drive to Hershey, even if you just stay for the day. Pennsylvania vegetable growers need to be informed about the newest and best in their industry and most of us could use some reminding about the basics.

The 2018 Convention program continues our standard of a world-class grower educational meeting. So do yourself a favor and make a sound investment in your business by attending the 2018 Mid-Atlantic Convention.

Please let us know about your plans. Advance registration can save you money and exempt you from waiting in a registration line. Advance meal reservations also help our planning greatly.

Hope to see you in Hershey. If you can't make to Hershey, you can still order a copy of the Proceedings so you won't miss out on the educational opportunities of the Convention.

CONVENTION

2017 Convention Overview

Monday, January 29		
FSMA Grower Training	Managing Your Farm Business	YGA Orchard Trellis Construction
Biocontrols	Managing Your Retail Market	Fruit & Vegetable Industry Bus Tour
Computer Record Keeping	Urban Community Farming	
Pesticides Lic. Training	UK Cider	
Tuesday Morning, January 30		
Tomatoes	Tomatoes	Grower Reception
Organic Veg. Prod.	Organic Veg. Prod.	Grower Banquet
Rhubarb	Cut Flowers	
Kale/Brussels Sprouts	Root Vegetables	
Application of Drones	Ethnic/Specialty Vegetables	
Micro Greens	Farm Management	
Food Trends	Agritourism	
Tree Fruit	Tree Fruit	
Keynote Presentation		
Tuesday Afternoon, January 30		
Tuesday Evening, January 30		
Wednesday Morning, January 31		
Pumpkins/Vine Crops	General Vegetables	Apple Reception
Greenhouse Ornamentals	Greenhouse Ornamentals	Forming Peer Discussion Groups
General Vegetables	Cover Crops	Ice Cream Social
Soil Health/Reduce Tillage	Educating Consumers & Media	
Farm Market Development	Wholesale Marketing	
Small Fruit	Small Fruit	
Wine Grapes	Wine Grapes	
Tree Fruit	Tree Fruit	
Spanish	Spanish	
Wednesday Afternoon, January 31		
Wednesday Evening, January 31		
Thursday Morning, February 1		
High Tunnels	High Tunnels	
Sweet Corn	Third Party GAP Audits	
Potatoes	Potatoes	
General Vegetables	Farm Labor	
Alternative On-Farm Mktg Activities	Marketing on Social Media	
Small Fruit	Small Fruit	
Asparagus		
Tree Fruit		
Thursday Afternoon, February 1		

2018 Educational Program Details

* indicates topic expected to qualify for a category pesticide update training credit

** indicates topic expected to qualify for a core pesticide update training credit.

Monday, January 29, 2018 – Pre-Convention Workshops

FSMA Grower Training- (\$150 with a \$130 discount from PDA for PA farmers - one discount per farm – includes lunch and required training materials) (8:00 a.m. to 5:00 p.m.)

Intended for fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA) Produce Safety Rule, and Good Agricultural Practices (GAP). The Produce Safety Alliance (PSA) Grower Training Course will satisfy the FSMA Produce Safety Rule requirement outlined in § 112.22(c), which states:

“At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration.”

Approximately seven hours of instruction time will be spent on the following modules:

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training

- Soil Amendments
 - Wildlife, Domesticated Animals, and Land Use
 - Agricultural Water (Part I: Production Water; Part II: Postharvest Water)
 - Postharvest Handling and Sanitation
 - How to Develop a Farm Food Safety Plan
- After attending the entire course, participants will be eligible to receive a certificate from the Association of Food and Drug Officials verifying that they have completed the training.

If you are unable to attend the Convention, you can purchase a copy of the Proceedings which will contain summaries of many of the vegetable, small fruit and marketing sessions. Use the form on page 28.



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CONVENTION

Educational Program *(continued from previous page)***Biocontrols** – (fee \$75) (9:00 a.m. to 4:00 p.m. includes lunch)

Biocontrols offer growers tools to better control many insects, mites and plant diseases. This one day school will focus on indoor production of vegetables and herbs. Many of the concepts and techniques will be applicable to outdoor production.

- 9:00** *How and Why Biocontrol Systems Can Break Down - Alex Traven, Peace Tree Farms,
10:00 *Managing Soil-Borne Diseases with Biocontrols - Steven Bogash
10:45 Break
11:00 *Managing Foliar, Flower and Fruit Diseases Using Biocontrols - Steven Bogash
11:45 Lunch
12:45 *Implementing a successful Banker Plant Program, Alex Traven
1:30 *Aphid Management Using Beneficial Insects and Mites - Suzanne Evans, Buglady Consulting
2:30 Break
2:45 *The Promise and Peril of Using Bio-Insecticides in Protected Culture - Thomas Ford, Penn State Extension
3:30 *Mite Management using Beneficial Insects and Mites - Suzanne. Evans, Buglady Consulting
4:30 *Realities of Starting with Biocontrols - Lloyd Traven, Peace Tree Farms
5:00 *Adjourn

Computer Record Keeping – (fee \$30) (12:00 noon to 4:30 p.m.)

This workshop presented by Penn State Extension Educator Robert Goodling will be an overview of computer software and apps on other electronic devices that can help growers better manage their farm operations. It will cover the following:

- Using financial records to make business decisions (1 hour)
 - a. Using Quickbooks/classes and inventories to track sales and COP
 - b. Using spreadsheets/pdfs to do the same (using some of the PSU already have available).
 - c. Predicting the future (models series for vegetables or fruits from start Farming)
- Using software to maintain pesticide application records (1 hour)
- Making the most of your spreadsheets (1 hour)
 - a. Other useful spreadsheets
 - b. Being aware of what is needed/time invested
- Using the smartphone in the field and other useful apps (1 hour)
 - a. Extension scouting app
 - b. Other essential apps (beyond weather)
 - c. Participant group share

If you are attending the Convention, plan to stay at the Hershey Lodge for the special convention rate of \$145 (plus taxes) for single, double, triple or quad room. Call the Lodge at 1-855-729-3108 and tell them you are attending the Mid-Atlantic Fruit and Vegetable Convention. Or you can register online at www.mafvc.org under "Lodging".

PA Pesticide License Training – (fee \$65 includes lunch and required training materials) (9:00 a.m. to 4:00 p.m.)

A presentation of the information needed by pesticide applicators to be able to successfully pass the required test to become a licensed pesticide applicator in Pennsylvania. The test will be administered on the morning the following day, January 30, 2018.

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CONVENTION

Educational Program *(continued from previous page)*

Urban Community Farming, A Cornucopia of Opportunity (fee \$75) (9:00 a.m. to 4:00 p.m, includes lunch)

All across America entrepreneurs and community groups are working to eliminate food deserts in urban areas through the establishment of urban farms. This day-long course featuring some of the Mid-Atlantic's top experts will provide a primer for new and experienced urban farmers on a variety of topics that are central to the success and growth of their urban farm.

- 9:00 **Registration**
 9:30 **Soil Health and the Urban Farmer** - Neith Grace Little, Univ. of Maryland Extension
 10:15 **Crop Scheduling for a Continuous Harvest** - Amy Cook, Educator/Consultant
 11:00 **Break**
 11:15 **Nutrient Management on the Urban Farm** - Neith Grace Little, Univ. of Maryland Extension
 12:00 **Lunch**
 12:45 **Pollination Basics for the Urban Farmer** - Thomas Butzler, Penn State Extension
 1:15 **Irrigation Design & Management on the Urban Farm** - William Wolfram, Toro Micro-Irrigation
 2:00 **Season Extension Techniques for Urban Farmers** - Thomas McCann, Penn State Extension
 2:30 **Utilizing Biocontrols for Insect & Disease Management** - Dr. Carla Burkle, Penn State Extension
 3:15 **Postharvest Food Safety and The Urban Farmer** - Justine Beaulieu, Univ. of Maryland Extension
 4:00 **Adjourn**

Managing Your Farm Business (fee \$45) (9:00 to 11:45 a.m.)

- 9:00 **Leadership** - Jason Weigle, Penn State Extension
 9:45 **Tracking Costs Across All Enterprise** - Peter Hicks, Hicks Brothers, LLC
 10:30 **Break**
 11:00 **Financial Management Tools** - Michael Sciabarrasi, Univ. of New Hampshire Extension
 11:45 **Adjourn**

Managing Your Retail Market (fee \$45) (1:00 to 4:30 p.m.)

- 1:00 **Business Development** - Jason Weigle, Penn State Extension
 1:45 **Evaluating a New Enterprise** - Ginger Myers, Univ. of Maryland Extension
 2:30 **Break**
 3:00 **Working to Maximize Sales Per Square Foot** - Joshua Smith, Frecon Orchards
 3:45 **Market Forecasting and Analysis** - Michael Sciabarrasi, Univ. of New Hampshire Extension
 4:30 **Adjourn**

Vegetable Marketing Roundtables – join Kitchen Table Consultants staff for roundtable discussions over lunch on how you can better promote your vegetable products using the “tools” they have created for the Vegetable Marketing and Research Program for PA Produce Month. The roundtables will be in the Great Lobby at the top of the escalators on January 31 and February 1.

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CONVENTION

Educational Program (continued from previous page)**Best Practices for Orchard Trellis Construction – (fee \$20) (1:30p.m. – 3:30p.m.)**

To be held at the Penn State Fruit Research and Extension Center (FREC), 290 Univ. Drive, Biglerville, PA 17307

Have you had to repair a trellis that failed due to a wind storm or heavy crop load? Do you struggle with decisions on cost-effective trellis materials and design features? Do you have trouble-shooting questions for a trellis you've already installed?

Join us for this workshop held the afternoon prior to the start of the Mid-Atlantic Fruit and Vegetable Convention. Our speakers are John Wall, John Wall, Inc., who will provide a field training on trellis design principles, and Lynn Kime, Penn State Extension, who will discuss trellis economics.

John Wall, originally from New Zealand, introduced high tensile smooth wire from for U.S. fencing and trellises, and he has taught courses at 48 universities and numerous contractor schools. John designed and built the largest assembly in the world of international trellis systems and developed a construction manual on design specifications. This manual continues to be the "go-to" reference for engineering trellises that will last. Focused on safety, simplicity, and ease of installation, John's company has more than 13 patents. John will focus on the key components of a strong trellis system, including treatment of posts, coating of wires, methods of wire attachment, and end-post assemblies. The workshop is intended to be interactive, so bring any trouble-shooting and other questions you have!

UK Cider – (fee \$150) (1:00 to 4:00 p.m.)

To be held at Wyndridge Farm, 885 S. Pleasant Ave., Dallastown, PA

Guest speakers Tom Oliver from Oliver's Cider and Perry in Herefordshire and Gabe Cook, the Ciderologist, will cover the following topics:

U.K. Cider—Tradition & Today Statistics show that the U.S. cider industry follow U.K. trends. Find out if this holds true for English Cider & Perry traditions and what the industry is up to today.

Wild Fermentation Have you tried your hand at wild fermentation? Learn tricks of the trade from Tom Oliver on his preferred methods, lessons learned and why using wild yeast is his preference.

Blending—Structure & Practice Try your hand at blending techniques popular in the U.K. and discuss how to best use the delicate balance between acids, tannins and sweetness.

Sensory Analysis Hone your olfactory skills as The Ciderologist and Tom Oliver walk you through the nuances of tasting English and North American ciders.

Your Cider Analyzed Drop off a cider sample at the workshop and we will supply you individual tasting notes from the Ciderologist via postal mail following the event. Use this information to assist in refining your product, developing your own tasting vocabulary or enhancing your labels.

Fruit and Vegetable Industry Bus Tour – (fee \$60) (includes bus and lunch)

This all-day bus tour will feature stops at several fruit and vegetable industry businesses including Hess Brothers Fruit Company in Lancaster and Harvest Lane Farm Market in Lititz. More details will be announced.



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Jacto backpacks are ergonomically designed for ease of operator use and comfort. These backpacks are ideal for the smaller grower who does not want to use a tractor mounted sprayer or for use in cold frames, greenhouses and spot spraying. 4 models to choose from including two with paddle agitation for wettable powders such as Surround.

For more information or the name of your local dealer contact JS Woodhouse

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CONVENTION

Educational Program *(continued from previous page)*

Tuesday Morning, January 30, 2018

Tomatoes – Trinidad Room

- 9:00 **Growing Good Neighbors Through Stewardship and Communication**– Stephanie Regagon, Fieldwatch
- 9:45 ***Best Management Practices for Tomato Bacterial Diseases** – Dr. Beth Gugino, Penn State Univ.

Organic Vegetable Production - Empire Room AB

- 9:00 **Impacts of Conventional Pest Management Practices on Organic Farming** - Galen Dively, Univ. of Maryland
- 9:45 **Managing Weeds in Organic Vegetables** – Alan Leslie, Univ. of Maryland

Rhubarb - Empire Room CD

- 9:00 **How We Grow Rhubarb in Colorado** – Dennis Duncan, High Altitude Rhubarb
- 9:45 **How We Grow Rhubarb Year Round in Ontario** – William French, Lennox Farms

Kale/Brussels Sprouts - Crystal Room

- 9:00 **Increasing Success with Brussels Sprouts: Varieties, Topping and Insect Management** – Dr. Rebecca Sideman, Univ. of New Hampshire
- 9:45 **How We Do Kale** – grower panel: David Miller, Miller Plant Farm; Richard Calimer, Scenic View Orchards

Application of Drones and Mapping – Where is This Going?

- Magnolia Room AB
- 9:00 **Drone Mapping and Scouting - AgVue Technologies** – Paul Caskey, Drone Imaging Services
- 9:45 **Veris Mapping - Why Should We Do This?** - Justin Croner - GrowMarkFS

Microgreens - Wild Rose Room

- 9:00 **Selection Criteria and Use of Microgreens by Chefs** - Zach Ford, U.S. Hotel Restaurant & Tavern
- 9:45 **Microgreens Production II** - Dr. Robert Berghage, Penn State Univ.

Food Trends - Cocoa Terrace/Cocoa 1

- 9:00 **2018 Food Trends to Keep Your Customers Engaged**- Heather Manzo, Penn State Extension
- 9:45 **2018 Direct Marketing Silver Bullets** – Heather Manzo, Penn State Extension

Pome Fruit - Nigerian Room

- 9:00 **Invocation** – Ed Weaver, Weavers Orchard
- 9:05 **President's Address** – Tad Kuntz, Masonic Homes
- 9:15 ****Core category presentation** – to be announced
- 9:45 **George Goodling Lecture: How to Optimize Light Management in the Canopy** - Dr. Stefano Musacchi, Washington State Univ.

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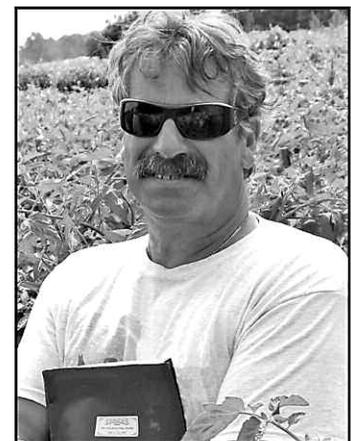
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CONVENTION

Educational Program *(continued from previous page)*

Keynote - Nigerian/Trinidad Room

- 10:45 **Federal Legislative Update**
 11:00 **Keynote: Values, Trust and Science – Building Trust in Our Post-Truth Tribal World** – Charlie Arnot, The Center for Food Integrity

Tuesday Afternoon, January 30, 2018

Tomatoes - Trinidad Room

- 1:30 **Nanotechnology – Smaller is Better-** Yin-Yu Lao, Univ. of Florida
 2:00 ***New Bio-Pesticides for Tomato Production- Uses and Applications** – Timothy Johnson, Marrone Bio Innovations
 2:30 **Tomato Variety Trial – Year Two, Any Trends?** – Dr. Timothy Elkner, Penn State Extension
 3:15 **Getting Micronutrients in the Zone for the Best Tomatoes** - Steven Bogash
 4:00 ****Drift Management** – to be announced

Organic Vegetable Production - Empire Room AB

- 1:30 **Toigo Organic Farms: How we grow tomatoes** – Kevin Mathews, Toigo Organic Farms
 2:00 ***Using Biocontrols to Manage Aphids in High Tunnels** – Elsa Sánchez, Penn State Univ., Margaret Skinner and Cheryl Frank, Univ. of Vermont
 2:30 **Growing Organic Belgian Endive for Winter Markets** - John Eisenstein, Jade Family Farm
 3:15 ***Heat Treating Seed** –Dr. Beth Gugino, Penn State Univ.
 4:00 **911 – High Tunnel Rescue** – Dr. Elsa Sánchez, Penn State Univ. and Thomas Ford, Penn State Ext.

Cut Flowers - Empire Room CD

- 1:30 **New and Exciting Cut Flowers Introductions for Mid-Atlantic Growers** - Tom Caan, Fred C. Gloeckner Co.
 2:00 ***Weed Management in Field Grown Cut Flowers** - Thomas Ford, Penn State Extension
 2:30 **Butterbee Farm Sustainably Grown Flowers for Baltimore** - Laura Beth Resnick, Butterbee Farm
 3:15 ***Utilizing Biocontrols in High Tunnel and Field Grown Cut Flowers** - Dr. Lily Calderwood, Cornell Cooperative Extension
 4:00 **Factors that Influence Stem Length in Cut Flowers** - Dr. Robert Berghage, Penn State Univ.

Root Vegetables - Crystal Room

- 1:30 **How We Grow and Market Root Crops** - Chris Brittenburg, Who Cooks for You Farm
 2:00 **Sweet Potato Production in Pennsylvania** - Dr. Michael Orzolek, Penn State Univ.
 2:30 ***Insect and Disease Pests of Carrots and Beets** - Dr. Carla Burkle, Penn State Extension
 3:15 **Healthy Soils for Roots, Tubers and More** – Dr. Sieglinde Snapp, Michigan State Univ.
 4:00 **Production of Overwintered Bulbing Onions in Low Tunnels** - Dr. Rebecca Sideman, Univ. of New Hampshire

Ethnic/Specialty Vegetables - Magnolia Room AB

- 1:30 **Best Hot Pepper Varieties** - James Weaver, Meadow View Farm
 2:00 ****Sprayer Cleanup** - William Riden, Penn State Extension
 2:30 **Outstanding Specialty Melons for the Mid-Atlantic Region** - Pam Guigley, Seedway
 3:15 **Growing Ethnic Vegetables and Attracting the People Who Buy Them** - Leonard Burger Jr., Burger Farms
 4:00 ***Managing Phytophthora: 2017 Research Results** - John Esslinger, Penn State Extension

Farm Management - Wild Rose Room

- 1:30 **Communicate to Lead** – John Wodenhouse, Penn State Extension
 2:15 **Using the Records You Have to Make Decisions** – Robert Goodling, Penn State Extension
 3:15 **What Your Employees Want** – John Berry, Penn State Extension
 4:00 **Retiring From the Farm** – Juliette Enfield, Penn State Extension

Agritourism - Cocoa Terrace/Cocoa 1 – to be announced

- 1:30 **Agritourism at High Altitude Rhubarb** – Donna and Dennis Duncan, High Altitude Rhubarb
 2:30 **To be Announced**

Tree Fruit - Nigerian Room

- 1:30 **Current Options for Frost Control in Orchards** - Dr. Hemant Gohil, Rutgers Univ.
 2:00 **Grower Use of Frost Protection Strategies – Grower Panel** - Dr. Hemant Gohil, Rutgers Univ.
 3:00 ***Trials & Tribulations of 2017 Chemical Thinning** - Dr. James Schupp
 3:30 **Penn State Ag & Biological Engineering Update** - Dr. Dana Choi and Dr. Long He

Tuesday Evening, January 30, 2018

- 6:00 **Reception** - Chocolate Lobby – sponsored by Farm Credit (ticket required)
 7:00 **Banquet** – Nigerian Room – awards, recognitions, door prizes (ticket required)

Wednesday Morning, January 31, 2018

Pumpkins/Vine Crops - Magnolia Room ABCD

- 9:00 **Pumpkin Variety Trial Results** – Dr. Elsa Sanchez and Dr. William Lamont, Penn State Univ.; Dr. Timothy Elkner, Thomas Butzler, and Robert Pollock, Penn State Extension
 9:30 ***The Squash Bees of Pennsylvania** - Dr. Margarita López-Urbe, Penn State Univ.
 10:15 **Why Are My Cucurbits Collapsing** – Dr. Beth Gugino, Penn State Univ.
 11:00 **Managing Cucumber Beetles While Conserving Pollinators** – Dr. Shelby Fleischer, Penn State Univ.
 11:30 **PVGA Annual Meeting** – Crystal Room

CONVENTION

Educational Program *(continued from previous page)*

Greenhouse Ornamentals - Empire Room AB

- 9:00 ****Pesticide Application Equipment Selection and BMP's for Greenhouse Operators** - Thomas Ford, Penn State Extension
- 9:30 **Best Annuals of the PSU Flower Trials** - Sinclair Adam, Penn State Extension
- 10:15 **Ornamental Plant Nutrition** - Fred Hulme, Everris NA
- 11:00 ***Mealybug Management** - Dr. Raymond Cloyd, Kansas State Univ.
- 11:30 **Marketing Your Business as No One Will** - Maria Zampini, UpShoot, LLC

General Vegetables - Crystal Room

- 9:00 ***Biopesticides: What We Have Tried and What Has Worked** - Abby Seaman, NYS Ag Experiment Station
- 9:30 **Using Shade Cloth to Increase Marketable Yields of Tomatoes and Peppers** - Dr. Gerald Brust, Univ. of Maryland
- 10:15 **High Tunnel Tomato Nutrient Management: Lessons Learned** - Dr. Rebecca Sideman, Univ. of New Hampshire
- 11:00 ****Sprayer Calibrations** - Robert Pollock, Penn State Extension
- 11:30 **PVGA Annual Meeting** - Crystal Room

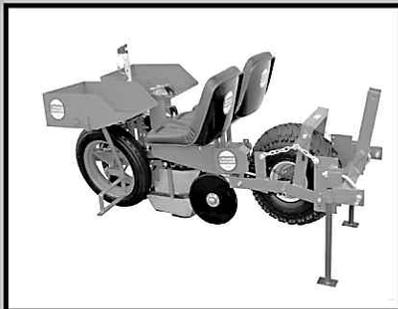
Soil Health/Reduced Tillage - Empire Room CD

- 9:00 **Challenges and Opportunities for Soil Health in Organic Vegetables** - Dr. Franklin Egan, PA Assoc. for Sustainable Ag (PASA)
- 9:30 **No-till vs Plastic Bed Vegetables (title tentative)** - Drs. Elsa Sanchez and Sjoerd Duiker, Penn State Univ.
- 10:15 **Biological Aspects of Soil Health Related to IPM** - Dr. Mary Barbercheck, Penn State Univ.
- 11:00 **Trials, Tribulations and Triumphs in Weed Control in No-Till Vegetable Systems** - Dr. Gerald Brust, Univ. of Maryland
- 11:30 **PVGA Annual Meeting** - Crystal Room

Farm Market Development - Trinidad Room

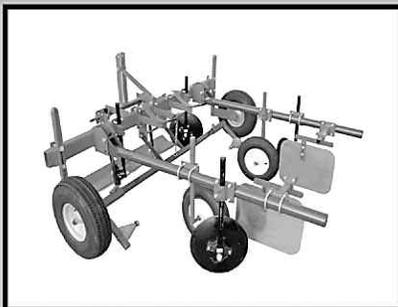
- 9:00 **From the Ground Up** - Mike & Barb Dietrich, Oley Valley Organic
- 10:15 **Location, Location, Location** - Charles Smith, T.S. Smith & Sons
- 11:00 **"From The Ground Up", Starting a Retail Farm Market** - Jen Brodsky, Kitchen Table Consultants

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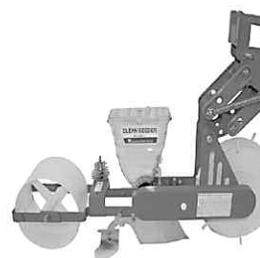
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CONVENTION

Educational Program *(continued from previous page)*

Small Fruit - Wild Rose Room

- 9:00 **Fluctuating Temperatures and Effects on Berry Crops** – Dr. Richard Marini, Penn State Univ.
- 9:30 ***Insect and Mite Pests of Brambles** – Dr. Carla Burkle, Penn State Extension
- 10:15 ***What's New in SWD Management?** – Dr. Kelly Hamby, Univ. of Maryland
- 11:00 **The Strawberry Virus Situation of 2012-13: What Went Wrong, and How We're Avoiding a Repeat!** – Dr. Robert Martin, USDA-ARS, Corvallis, OR
- 11:30 ****Keeping Pesticides from Groundwater** – Megan Chawner, Penn State Extension

Wine Grapes - Cocoa 1

- 9:00 **Should You Be Growing Grapes? Pros, Cons, and Site Selection** – Dr. Gary Pavlis, Rutgers Univ.
- 9:40 **How To Protect Grapevines From Spring Frost Damage** - Dr. Michela Centinari, Penn State Univ.
- 10:20 ***Etiology and Management of Sour Rot in Grapes** – Dr. Megan Hall, Cornell Univ.
- 11:00 **Clonal Choices – Factors and Methods** – Hemant Gohil, Rutgers Univ.
- 11:30 ***Herbicide Injury to Grapes: Awareness and Prevention** – Andrew Muza, Penn State Univ.

Tree Fruit - Nigerian Room

- 9:00 To be announced
- 9:30 **Ernie Christ Memorial Lecture: The Effect of Early Season Temperatures on Peach Fruit Size** - Dr. Daniel Ward, Rutgers Univ.
- 10:30 **Delayed Harvest & Storage Performance of Firm-Fleshed Peaches** - Dr. Daniel Ward, Rutgers Univ.
- 11:15 ***The Whys & Whens of Basic Arthropod Pests in Peaches** - Dean Polk, Rutgers Univ.

Spanish - Cocoa Terrace

- 9:00 **Actividad de Apertura (Welcome and Ice-Breaker)**
- 9:15 **Producción Integrada de Frutas/ MIP para Insectos, Enfermedades y Malezas (Integrated Fruit Production)** - Grupo de discusión (Round Table Discussion led by Growers)
- 9:45 ***Manejo Ecológico de Plagas en la Agricultura (Ecological Framework for Pest Management)** - Beth Sastre, VCE-Loudon Extension
- 10:30 **Establecimiento de Hortalizas en el Campo (Vegetable Crop Establishment)** - Dr. Anamaria Gomez, Independent Consultant
- 11:15 **Empezando un Huerto (Starting an Orchard)** - Maria Gorgo-Gourovitch, Penn State Extension

Wednesday Afternoon, January 31, 2018

General Vegetables - Magnolia Room ABCD

- 1:30 **Enhancing Microbial Populations for Optimizing Vegetable Yields** - Dr. Michael Orzolek, Stoller/Penn State Univ.
- 2:00 ***Allium Leafminer: Life Cycle, Location and Management** - Dr. Shelby Fleischer, Penn State Univ.
- 2:30 ***Managing Flea Beetles in Both Cole Crops and Eggplant** - Dr. Thomas Kuhar, Virginia Tech Univ.
- 3:15 **Emended Tillage Techniques** – William Reiss, BDI Machinery Sales
- 4:00 **Vegetable Stand Establishment** - Lee Stivers, Penn State Univ.

Greenhouse Ornamentals - Empire Room AB

- 1:30 ***Chemical Control of Ornamental Diseases** - Virginia Brubaker, Griffin Greenhouse Supplies
- 2:00 **Results of the PSU Perennial Plant Trials** - Sinclair Adam, Penn State Extension
- 2:30 **Using Consumer Trends to Market your Business** - Maria Zampini, UpShoot, LLC
- 3:15 ***Managing Western Flower Thrips** - Raymond Cloyd, Kansas State Univ.
- 4:00 ***Biological Controls for Ornamental Growers** - Matthew Krause, BioWorks, Inc.

Cover Crops (and Other Soil Amendments) - Crystal Room

- 1:30 **Cover Crops - Practical Methods for Vegetable Farms** - Matt Steiman, Dickinson College
- 2:00 **Using Leaf Mulch as an Organic Amendment (tentative title)** - Robert Muth, Muth Family Farm
- 2:30 **Designer Cover Crops for Multiple Uses** – Dr. Sieglinde Snapp, Michigan State Univ.
- 3:15 ***Nitrogen and Weed Management in Cover Crop-Based Crop Production** - Dr. Steven Mirsky, USDA-ARS Beltsville
- 4:00 **Are Cover Crops Improving Soil Health Indicators? What We've Learned from On-Farm Demonstrations** – Megan Chawner, Penn State Ext.

Educating Consumers and Media to Your Advantage - Trinidad Room

- 1:30 **Communicating Food Safety Issues to Your Advantage** - Meredith Melendez, Rutgers Coop. Ext.
- 2:00 **Creating a Positive Message for Hot Topic Issues** - William Hlubik, Rutgers Cooperative Extension
- 2:30 **Keeping in Contact with Consumers Through Web-based Marketing** - Gillian Armstrong, Rutgers Ext.
- 3:15 **Building your Farm Brand and Identity** – TBA
- 4:00 **Planning for Success During Large Events through Public Relations** - Tim VonThun, VonThun Farms

Wholesale Marketing - Empire Room CD – to be announced

- 1:30 **Retailer Buyer Panel** – to be announced
- 2:30 **Wholesaler Buyer Panel** – Ben Rice, Rice Fruit Co.; Anthony Tomasic, Paragon Produce and other to be announced
- 3:30 **Using PA Preferred to Your Benefit** – to be announced

Small Fruit - Wild Rose Room

- 1:30 ***Using Disease Forecasting to Monitor and Manage Strawberry Fruit Rots in the Mid-Atlantic** – Justine Renee Beaulieu, Univ. of Maryland
- 2:00 **The Clean Plant Network: What Is It and What Does It Do?** - Dr. Robert Martin, USDA-ARS, Corvallis, OR
- 2:30 **Strawberry Production in Containers – Tips for Success** – Kathy Demchak, Penn State Univ.
- 3:15 ***Integrated Management of Black Root Rot Complex and Crown Rots of Strawberry** – Dr. Mahfuz Rahman, West Virginia Univ.
- 4:00 **Virus Testing – How & When to Sample & Ship Samples** - Dr. Robert Martin, USDA-ARS, Corvallis, OR

CONVENTION

Educational Program *(continued from previous page)***Wine Grapes** - Cocoa 1

- 1:30 **Cane versus Cordon/Spur Pruning: Comparison of Pros and Cons** – Dr. Joseph Fiola, Univ. of Maryland
- 2:10 **Tools for Vineyard Vigor Management** – Dr. Daniel Ward, Rutgers Univ.
- 2:50 ***Grape Disease Management Review and Research Update** – Bryan Hed, Penn State Univ.
- 3:30 ***Grape Berry Moth Management** – Jody Timer, Penn State Univ.

Tree Fruit - Nigerian Room

- 1:30 to be announced
- 2:00 **Update on ROSBREED**
- 2:45 **Apple Variety Showcase** – Moderators: Rob Crassweller, Jim Schupp, Chris Walsh

Spanish - Cocoa Terrace

- 1:30 ****Insectos Benéficos (Beneficial Insects/Pesticides)** - Dr. Margarita López-Uribe, Penn State Extension
- 2:15 **Estamos Contigo (We are with You)** - Alicia Kerber-Palma, Mexican consul, and consulate staff
- 3:15 **Evaluación (Survey)**

Wednesday Evening, January 31, 2018

- 5:00 **Apple Growers Reception** - Cocoa Suites
- 7:00 **Ice Cream Social** – Great Lobby – for all Convention attendees, ice cream served until 8:00 p.m.
- 7:30 **Forming Peer Discussion Groups**
We all learn from peers that we respect. Peer to peer discussion groups consist of farmers that meet regularly to discuss and exchange ideas of concern to their operations. The power of these groups is they are self-directed and rely on shared knowledge. Discussing the pros and cons of an idea or practice allows for idea sharing, offering advice and formulation of opinions on practices that can be implemented at the home farm. We are all better for having a strong network of peers.

The concept for this Round Table is to discuss the features of Peer Discussion Groups, and gauge interest in piloting this method of learning in a few locations across Pennsylvania. John Berry is leading the round table and brings twenty years' experience utilizing this unique adult education technique. From vegetable grower study circles, novice farmer discussion groups, grain marketing clubs, and facilitating small group activities countless times; John brings a wealth of understanding and skill centered on effectively using peer discussion groups to strengthen and grow your business.



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CONVENTION

Educational Program *(continued from previous page)*

Thursday Morning, February 1, 2018

High Tunnels - Magnolia Room ABCD

- 9:00 **Indoor Cukes in Bags**, David King, Harvest Valley Farms
- 9:30 ****Pesticide Calculation and Sprayer Calibration for High Tunnels**, Steven Bogash
- 10:15 ***Managing Early Season Insects in HT with a Biological Focus**. Steven Bogash
- 11:00 **Learning the Potential of Grafted Indeterminate Tomatoes in HT** - Kaitlin Horst, Re Devined
- 11:30 **Update on Colored High Tunnel Bell Peppers** - Dr. Timothy Elkner, Penn State Extension

Sweet Corn - Trinidad Room

- 9:00 **Sweet Corn Varieties and Genotypes: Where We are Headed** - Blake Meyers, Seigers Seed
- 9:30 ***Weed Control and the Transition to No-till** – H. Grant Troop, AgXplore
- 10:15 ***Managing Sweet Corn Insects and Resistance Problems with Today's Options** – Dr. Galen Dively, Univ. of Maryland
- 11:00 **Bird Damage in Sweet corn: Risk Factors and Management Strategies** – Dr. Catherine Lindell, Michigan State Univ.
- 11:30 ***Organic Sweet Corn Without the Worms: It Can Be Done!** – Jennifer Glenister, James and Moie Crawford, New Morning Farm

Potatoes - Empire Room AB

- 9:00 **Update on Programs at the Potatoes USA** - Bryan Bender, Bender Potato Farms
- 9:30 **The 2017 Potato Growing Season in Review** – Robert Leiby, Pa Co-operative Potato Growers
- 10:15 **The Colorado Potato Breeding and Selection Program** – Dr. David Holm, Colorado State Univ.
- 11:00 ***Insect Control Update** – Dr. Tom Kuhar, Virginia Tech Univ.
- 11:30 ***Potato Disease Update** – Dr. Beth Gugino, Penn State Univ.

General Vegetables - Crystal Room

- 9:00 **Supporting Bee Populations for Cucurbit Crops** - Dr. Shelby Fleischer, Penn State Univ.
- 9:30 **Basics of Drip Irrigation for Vegetable and Small Fruit Production** - Dr. William Lamont, Penn State Univ.
- 10:15 **Tillage and Cover Crops in Snap Bean/Pea Production** - Dr. Gordon Johnson, Univ. of Delaware
- 11:00 ***Mildew Management in Cucurbits** - Dr. Beth Gugino, Penn State Univ.
- 11:30 ***How to Control Gyphosate Resistant Weeds** - Dwight Lingenfelter, Penn State Univ.

Alternative Activities for On-Farm Marketing - Cocoa

- Terrace/Cocoa 1
- 9:00 **Practical Safety Considerations with On-Farm Activities** – William Bamka, Rutgers Coop. Extension
- 9:30 **Hunting and Fishing Activities for Guests on the Farm** – Stephen Komar, Rutgers Coop. Extension
- 10:00 **Athletic Activities on Agritourism Farms** – Michelle Infante-Casella, Rutgers Coop. Extension
- 10:30 **Agritourism Offerings: If We Plan it, Will They Come?** - Ginger Myers, Univ. of Maryland Extension
- 11:00 **Gleaning to Fight Hunger and Reduce Food Waste: The Role of the Farmer** – Brian Strumfels and Elyse Yerrapathruni, NJ Agricultural Society, Farmers Against Hunger

Small Fruit - Wild Rose Room

- 9:00 ***Practical Approaches to Spotted Wing Drosophila Management** – Dean Polk, Rutgers Univ
- 9:30 **Bird Damage in Blueberries: Risk Factors and Management Strategies** – Dr. Catherine Lindell, Michigan State Univ.
- 10:15 **Blueberry Production in Florida: A Different Way of Growing** – Dr. Carla Burkle, Penn State Extension
- 11:00 ***National Blueberry Virus Survey: Pennsylvania Results and What They Means for Virus Management** – Dr. Robert Martin, USDA-ARS, Corvallis, OR
- 11:30 **Mulches and Amendments for Blueberry Production** – Kathy Demchak and Dr. Richard Marini, Penn State Univ.

Asparagus - Empire CD

- 9:00 ****Core Credit** – To be announced
- 9:30 **Asparagus Production, Management & Marketing** – Carl Cantaluppi, North Carolina Extension retired
- 10:30 ***Controlling & Managing Important Diseases of Asparagus** – Dr. Andrew Wyenandt, Rutgers Coop. Extension
- 11:00 **Asparagus Growers Roundtable** – Carl Cantaluppi, Carl Cantaluppi, North Carolina Extension retired

Tree Fruit - Nigerian Room

- 9:00 **Rapid Apple Decline Status** - Dr. Kari Peter, Penn State Univ.
- 9:30 **Orchard Training Systems for Apples & Pears** - Dr. Stefano Musacchi, Washington State Univ.
- 10:30 **Controller Peach Rootstocks for Stone Fruits** - Dr. Ted DeJong, Univ. of California - Davis
- 11:00 ***Postharvest Pome Disease Problems** - Dr. Keith Yoder, VPI & SU
- 11:30 **Vertically Integrated Fruit Production** - Mr. Chalmers Carr, Titan Farms

If you are attending the Convention, plan to stay at the Hershey Lodge for the special convention rate of \$145 (plus taxes) for single, double, triple or quad room. Call the Lodge at 1-855-729-3108 and tell them you are attending the Mid-Atlantic Fruit and Vegetable Convention. Or you can register online at www.mafvc.org under "Lodging".

CONVENTION

Educational Program *(continued from previous page)*

Thursday Afternoon, February 1, 2018

High Tunnels - Magnolia Room ABCD

- 1:30 **Heirloom Tomatoes in High Tunnels** - Chris Brittenberg, Who Cooks For You?
- 2:00 **Reconditioning High Tunnel Soils** - grower panel
- 2:45 ***Challenges of Soilborne Disease Management in High Tunnels** - Dr. Beth Gugino, Penn State Univ.
- 3:15 **High Tunnel Economics** - Arthur King, Harvest Valley Farms
- 3:45 **New Introductions of Parthenocarpic Cucumbers for HT Growers** - Steven Bogash

Third Party GAP Audits - Crystal Room

- 1:30 **3rd Party Audits – Where We’ve Come From and Where We are Headed** – Steve Strub, Wegmans
- 2:00 **5 Things an Auditor Won’t Tell You** - John Mast, Audit Solutions, LLC; Christine Shearer and Brenda Sheaffer, Penna. Dept. of Agriculture
- 2:45 **Collaborating for Food Safety Success** - Lindsay Gilmore, Food Safety Consultant
- 3:15 **I Survived a 3rd Party Audit-** Grower Panel

Potatoes - Empire Room AB

- 1:30 **Strategies for Incorporating Value-Added Traits in New Potato Cultivars-** Dr. David Holm, Colorado State Univ.
- 2:00 **Variety Licensing and Its Implications-** Dr. Walter DeJong, Cornell Univ.
- 2:45 **2017 Potato Trials in Pennsylvania and Promising Varieties-** Robert Leiby, Pa Co-operative Potato Growers and Dr. Xinshun Qu, Penn State Univ.
- 3:15 **How to Conduct On Farm Potato Research-** Dr. Curtis Frederick, Sterman Masser

Farm Labor – Nigerian Room

- 1:00 **Update on US DOL Regulations** – Lou Nieves, Jr., US Dept. of Labor
- 1:30 **Current Labor Situation: What Can Be Done** - Chalmers Carr, President USA Farmers
- 2:15 **Mexico’s “We Are With You Program”** - Mexican Consulate
- 2:45 **Getting the Labor Situation Moving** - U.S. Apple Association
- 3:15 **Current Labor Situation in the Mid-Atlantic** - Mr. Sean High – Penn State Center for Agricultural & Shale Law
- 3:45 **Questions for all the Speakers**

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CONVENTION

Educational Program *(continued from previous page)***Marketing on Social Media** - Cocoa Terrace/Cocoa 1

- 1:30 **Creating a Digital Marketing Kit** – Kim Rush Lynch, Univ. of Maryland Extension
- 2:00 **Farm Approach to Social Media** - Kelly Jackson, Emily's Produce
- 2:45 **Social Media Marketing for Green/Ag/Hort Businesses** – Kathy Jentz, Washington Gardener Magazine
- 3:15 **Tricks of the Trade – Moderator** - Shannon Dill, Univ. of Maryland Extension

Small Fruit - Wild Rose Room

- 1:30 ***Diagnosing Blueberry Problems** – Dr. Gary Pavlis, Rutgers Coop. Extension
- 2:00 **Pruning Blueberries: The Art and the Science – Concepts, Principles, and Practices** – Dr. Mark Ehlenfeldt, USDA-ARS
- 2:45 ***Strategies for Successful Weed Control in Highbush Blueberries** – Baylee Carr, Rutgers Univ.
- 3:15 **Cover Crops for Blueberries** – Kate Brown, Rutgers Univ.

If you are unable to attend the Convention, you can purchase a copy of the Proceedings which will contain summaries of many of the vegetable, small fruit and marketing sessions. Use the form on page 28.

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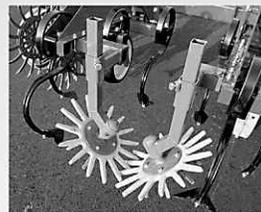
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CONVENTION

2018 Exhibitors

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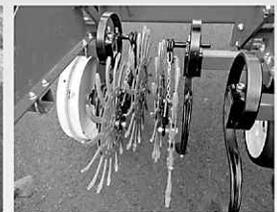
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Adams County Nursery, Inc.	DuBois Agrinovation Inc.	Lambert Peat Moss	Seminis
Ag Choice/MidAtlantic Farm Credit	Durand-Wayland, Inc.	Lee Rain Inc.	Shawnee Canning Company Inc.
Ag Risk Management by Weller & Associates, Inc.	Dutch Bakers Associated	Lentz Milling Company	Siegers Seed Company
Agro Research International	Eileen Pabody Agency	Macro Plastics	Signs of the Seasons
AgXplore, Int'l	EnviroKure Inc.	Marrone Bio	Slimline Manufacturing Ltd.
Arctic Refrigeration Co.	Evans Manufacturing Co.	Martin's Produce Supplies	Southern Container Corporation of Wilson, Inc.
Arendtsville Garage	Evergreen Creations LLC	Mayerfeld Supply Company	Stauffer Huling Farms
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Autrusa Sales Company	Farmer's Choice Foods	Messick's	Stokes Seeds Inc.
Avian Enterprises, LLC	Flamin' Fury Peaches	Miller Chemical and Fertilizer LLC	Stoller
Baker Lime	Frey Group, LLC	Monsanto	Summit Tree Sales
Ball Seed Company	Full Circle Mushroom Compost, LLC	Monte Package Company	Superb Horticulture
N. M. Bartlett Inc. & Provide Agro Corp.	Glacier Valley Ent., LLC	Morrissey Insurance	Superior Wind Machine Service
BASF Corporation	Goodson Farm and Nursery	N. E. Seed	Syngenta
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BCS/Wes Stauffer Equipment	Gowan USA	Nourse Farms, Inc.	Target Sales Associates, LLC
BDI Machinery Sales Inc.	Green Star Cooperative Inc.	Ocean Organics Corp.	Tew Mfg. Corp.
Binkley & Hurst LP	Growers Equipment Center Inc.	OESCO, INC.	Texpak, Inc.
Bio Safe Systems	Growers Mineral Solutions	Organix Solutions	Timac Agro USA
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Associate Regular Membership Includes newsletter subscription. \$30.00 _____

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REGISTRATION IS REQUIRED FOR EACH PERSON, including spouses. Registration fees allow one to attend both fruit and vegetable sessions as well as enter the exhibit area. Each registrant also receives a copy of the Proceedings. Students and children 16 and under receive free registration. No refunds of pre-registration fees will be made unless canceled by January 26 in writing, by phone (717-694-3596) or by email (pvga@pvga.org). No confirmation will be mailed prior to the Convention.

PLEASE LIST THE NAME OF EACH PERSON ATTENDING (for use in preparing nametags)

Member Registration *one fee whether you are attending for 1, 2 or 3 days - per person*

Advance *for the first person from a family, farm or business* (\$90 after Jan. 22) _____ @ \$75.00 _____

Advance *for additional persons from a family, farm or business* (\$90 after Jan 22) _____ @ \$60.00 _____

Non - Member Registration - (family and employees of PVGA members will be admitted at the above member's rates.)

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GENERAL

Worker Protection Standard – Make Sure to Implement Changes Required in 2017

Gordon Johnson

Recently, growers in the region have been inspected by the EPA for compliance with the Worker Protection Standard (WPS) and significant fines have been imposed for non-compliance. The WPS was changed in 2017 and those changes are now in effect.

One most notable change has been in the training requirement. The following is a summary from the University of Florida Extension: It is required that the full safety training for workers and handlers be conducted annually. Previously, the training was necessary only once every five years. There is no grace period for when workers may be trained; they must be trained prior to working in an area where a pesticide has been used or a restricted-entry interval (REI) has been in effect in the past 30 days. Formerly, there was a five-day grace period for the required training. For handlers, as previously required, training must be conducted prior to performing any handling activity. Only those who are certified applicators, state/tribal/federal-approved trainers, and persons who have completed an EPA-approved train-the-trainer course are qualified to administer training. The training content for both workers and handlers has been expanded to include more items. Formerly, there was no requirement for keeping records of the training. The revised standard dictates that records be kept for 2 years, and a copy of the training record must be provided to workers and handlers upon their request.

When working with labor contractors it cannot be assumed that workers have been trained. Each farm operator should take it upon themselves to make sure all workers are trained each yearly harvest season, all new workers are trained before entering fields, and that records of those trainings are kept.

A second area is regarding notification of treated area. It is required that warning signs be posted if Re-entry Interval (REI) is greater than 48 hours (outdoor applications) or 4 hours (enclosed space applications such as greenhouses). Pesticides with lower REI's allow for posting or oral notification unless the label requires both. Oral notification can be difficult to reach all employees and hard to document. For most farms, posting would be the most efficient way to comply with the WPS and to keep workers out of treated areas until the REI is past. Posting should be at common entry points into each field. Specific no-entry signs must be used.

A third area within the WPS that has changed is regarding Hazard Communication. Employers must display application information and safety data sheets (SDSs) at a central location within 24 hours of the end of a pesticide application and before workers enter the treated area. The application information and SDSs must be displayed for 30 days after the REI expires, must be kept for 2 years from the end of the REI, and must be made available to workers, handlers, designated representatives (identified as such in writing), or treating medical personnel upon request. Previously, the posting and recordkeeping of SDSs was not required.

In addition changes have also been made in a number of other areas within the WPS:

Minimum age for handlers and early entry workers (18)

Entry restrictions during applications for outdoor production (zones around fields where workers cannot be during an application are designated)

Handler suspends application in certain situations (if there is danger of contacting workers i.e. drift)

Exemptions and exceptions (mostly regarding crop advisors and commercial applicators)

Basic pesticide safety information (required at central locations and decontamination areas)

Personal protective equipment (changes to respirator requirements and need for medical clearance)

Decontamination supplies (requirements have changed)

Emergency assistance (must be able to promptly provide the SDS, product information – name, EPA Reg No and active ingredient).

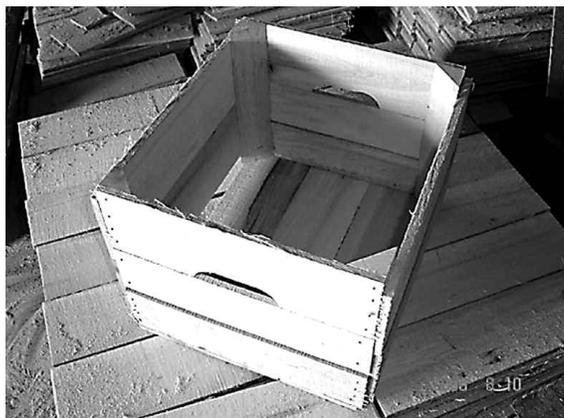
Definitions of “family” and “employer” (family exemptions have been expanded, employer defined and clarified in regards to contracted labor)

*Dr. Johnson is the Extension Vegetable and Fruit Specialist at the Univ. of Delaware. From the **Weekly Crop Update**, Univ. of Delaware Extension, Vol. 25, Issue 19, August 4, 2017.*



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First Variety from Penn State Breeding Program



Valentine Grape Tomato Photo: All-American Selections

The first commercially released variety resulting from Dr. Majid Foolad's tomato breeding program at Penn State University is being released by Johnny's Selected Seeds. PVGA and the Pennsylvania Vegetable Marketing and Research Program have been supporting Dr. Foolad's work since the beginning and are grateful to see the release of this variety. Dr. Foolad's discovered the high-lycopene trait contained in this tomato. His work also contributed to the early blight resistance in Valentine.

Both of these traits and other tomato improvements are contained in the parent lines that Dr. Foolad has worked on developing and that will be useful in the creation of many additional new varieties, including slicing and processing varieties.

Below is the distribution of Valentine on Johnny's Selected Seeds website:

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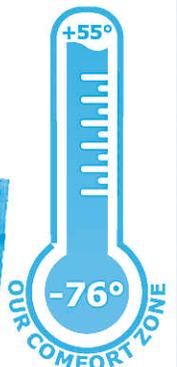
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VEGETABLE PRODUCTION

Tools in the Battle Against Phytophthora

John Esslinger

The impact of *Phytophthora capsici* or Phytophthora blight continues to expand every year, and growers across the state tell me that they also have phytophthora on their farms. Phytophthora can last in the soil for seven or more years. It infects a wide range of vegetable crops but the crops most severely impacted have been pumpkins, winter squash, watermelon, and peppers.



Figure 1. *Phytophthora capsici* is an oomycete plant pathogen that causes blight and fruit rot of important commercial crops such as pumpkins, winter squash, watermelon, and peppers.

Photo: John Esslinger, Penn State

Educational efforts have focused on keeping phytophthora off the farm and aimed at cultural practices that minimize the impact of an infection. In 2016 a new fungicide was used with success in pepper fields on a Luzerne County farm. This farm has a long history of battling phytophthora. The fungicide, Orondis, appeared to stop the spread of a phytophthora infection despite weather conditions that favored the disease. Research was conducted in 2017 to determine if the apparent benefits of Orondis could be repeated, if there are other control options that offer equal or better control, and if control can be obtained at a lower cost per acre. One of the treatments was an application of manure-based compost (Figure 2). The hope was that the biological activity stimulated by the compost would out-compete phytophthora in the soil. This control option could provide a viable phytophthora management option for organic vegetable growers.



Figure 2. Compost treatment. Photo: John Esslinger, Penn State

The Pennsylvania Vegetable Growers Association and the Pennsylvania Vegetable Marketing and Research Program provided a grant that made the research possible. A plot

was planted on June 14, 2017, in Columbia County. The field in Benton, Pennsylvania was selected based on its history of phytophthora blight. Irrigation was available but due to adequate rainfall was not used until August 25, 2017.

A soil sample was taken, and recommended lime was applied on May 26, 2017. Black plastic mulch on 6ft. centers was laid on June 12, 2017 (Figure 3). Three randomized replications of each of the four treatments were established. The manure compost was worked into the soil in the compost treatment replications on May 22, 2017. The plot was planted on June 14, 2017. The peppers were planted in a double row 25' long. One of the double rows was planted to the cultivar Zsa Zsa and the other row was planted to the cultivar Playmaker. Zsa Zsa was selected because of its susceptibility to phytophthora and Playmaker was selected because of its resistance to phytophthora.

Treatments

The four replicated treatments were (1) Orondis, (2) Revus Nu-Cop HB rotated with Tanos Nu-Cop HB, (3) manure compost, and (4) untreated check.

Treatment 1: Orondis Gold was applied one time only as a drench at the rate of 2.4 oz./acre on June 28, 2017. The label on the Orondis used in the research recommended is 2.4 oz. to 9.6 oz. per acre. Current Orondis labels recommend 4.8 oz. to 9.6 oz. per acre.

Treatment 2: The Revus and Nu-Cop rotated with Tanos and Nu-Cop treatments were applied to the treatment 2 areas on a weekly rotating basis starting July 27 through September 12, 2017. Revus and Nu-Cop were applied in alternating weeks with the Tanos and Nu-Cop. Tanos was applied at 8 oz. /acre and Revus was applied at 8 oz. /acre (label recommendation) and the Nu-Cop was applied at 1 lb./acre. The Revus and Nu-Cop tank mix was applied on August 4, August 17, and September 1.

(continued on page 33)

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VEGETABLE PRODUCTION

Tools in the Battle... (continued from page 32)

Treatment 3: The manure (dairy) compost was applied broadcast at the rate of 3 tons/acre on May 22, 2017. The compost was shallowly worked into the soil immediately after application.

Treatment 4: The check did not receive any fungicide or soil treatments.

The plot received 1.5 tons of high calcium lime based on soil test recommendations. The plot was fertilized with 80-80-80 on June 1, 2017. The plastic mulch was laid on June 11, 2017. Phytophthora was not observed in the plot from the time of planting through the mid-



Figure 3. First infection on Zsa Zsa. Photo: John Esslinger, Penn State



Figure 4. Photo: John Esslinger, Penn State

dle of August, so the plot was irrigated on August 25th and inoculated with phytophthora on August 28th. Phytophthora was first observed on Zsa Zsa fruit in the untreated check on September 15, 2017 (Figure 4). On September 21, 2017 each plant was evaluated for the presence of phytophthora (Figure 5).

Results

The table below indicates the number of plants that had at least one fruit with phytophthora symptoms out of the 75 plants that made up each treatment.

(continued on page 34)

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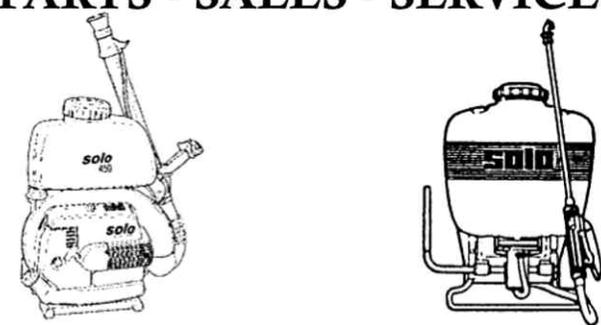
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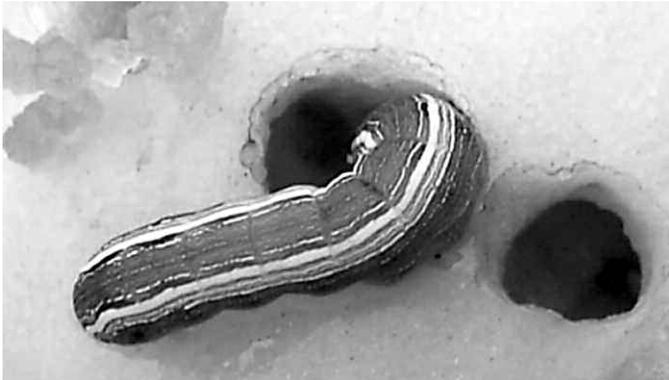
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VEGETABLE PRODUCTION

Yellow Striped Armyworm is on the March

Thomas Ford



The first killing frost may have brought an end to the growing season for some growers, but to many high tunnel and greenhouse vegetable growers the season is far from over. On some farms, high tunnel tomatoes are just starting to produce and in some area greenhouses the growers are continuing to lean and lower their indeterminate tomato plants in an effort to keep them producing through Thanksgiving.

While many growers believe that the first killing frost reduces the threat of insect pests in protected culture this assertion is not necessarily rooted in fact. In all actuality, high tunnels and greenhouses provide a rather attractive environment for pests as our days draw shorter and our nights get cooler.

In Central PA we have been receiving phone calls and requests for farm visits by vegetable growers who are noticing that the foliage and fruits of their tomato plants grown in protected culture are being fed upon by an often unseen enemy. Growers observing this damage are often reluctant to apply pesticides indiscriminately for fear of impacting the populations of beneficial insects and mites that they had introduced, managed and protected through the growing season.

On a recent trek out to an area tomato grower I observed the damage to the fruit and foliage of his greenhouse tomatoes. While the pest was not readily visible on the majority of the

plants the size and consistency of the frass (excrement) that was deposited on the leaf was characteristic of a Lepidopteran pest like an armyworm. Armyworms by their very nature tend to hide during the day and feed at night. In the field they often conceal themselves between clods of soil or under the plastic mulch that surrounds the plant. Scouting in the early morning and evening is often necessary to detect and identify this pest in field and protected culture settings.

As I made my way through the greenhouse tomato planting I paid very close attention to damaged fruits that were partially obscured by the tomato foliage. Finally, the "Eureka" moment took place and I detected a fruit where the lepidopteran culprit could be clearly seen. The pest in question was a yellow striped armyworm.



Photo: Thomas Ford, Penn State

Yellow striped armyworm are a common agronomic pest in our region with 3-4 generations observed in our state annually. The fourth generation typically is observed in the August to November period and is known to feed on the fruit and foliage of tomato plants.

Yellow Striped Armyworm Management

Yellow striped armyworm can overwinter in the soil as pupae. In tomato greenhouses and high tunnels there is a possibility that overwintering pupae could mature and emerge from soil in the greenhouse as adults in the early spring resulting in significant plant injury to newly set spring tomato plants.

(continued on page 35)

Tools in the Battle...

(continued from page 33)

Treatments:	Zsa Zsa	Playmaker
Orondis	13 b	22 b
Tanos & Copper, Revus & Copper	2 a	1 a
Manure compost	35 c	25 b
Untreated check	24 c	38 c

The Tanos Copper, Revus Copper treatment out-performed the other treatments. The Orondis treatment was second best. The manure compost had less disease than the untreated check with the Playmaker variety but not with the Zsa Zsa treatment.

Cost Comparison of the Treatments

Treatment 1 consisted of Orondis applied at 2.4 oz./acre which cost \$65.00/acre.

Treatment 2 consisted of Tanos Nu-Cop (July 27, Aug. 8, Aug. 25 and Sept. 12) rotated

(continued on page 35)

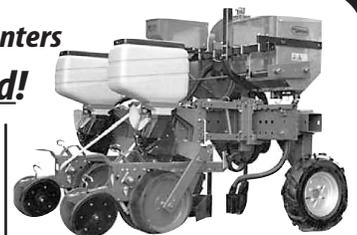
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VEGETABLE PRODUCTION

Tools in the Battle... (continued from page 34)

with Revus Nu-Cop (Aug. 4, Aug. 17, Sept. 1) applied as tank mixes and sprayed over the top. Tanos was applied at the rate of 8.0 oz./acre, Revus was applied at 8.0 oz./acre, and Nu-Cop was applied at 1 lb./acre.

- Tanos cost per/acre \$19.33 X 4 applications = \$77.32/acre
 - Revus cost per/acre \$21.64 X 3 applications = \$64.92/acre
 - Copper cost per/acre \$6.00 X 7 applications = \$42.00/acre
 Total cost of treatment 2 per acre was \$184.24. (does not include the cost of 7 applications)

Treatment 3 consisted of 3 tons of manure compost/acre which cost approximately \$180.00/acre.

Treatment 4 had no additional costs.

Conclusions

Treatment 1 did a good job but there was enough diseased fruit to cause concern. Since Orondis was only applied once and at the lowest labeled rate the cost per acre was significantly lower than the other treatments. Syngenta has increased the lowest labeled rate from 2.4 oz./acre to 4.8 oz./acre. The 4.8 ounce rate gives better season-long control and would still be the lowest cost treatment.

Treatment 2 performed very well. While the treatment did not totally prevent disease development, it did keep disease to a manageable level. The cost was relatively high.

The treatment 3 compost had little or no benefit in managing the disease. The treatment cost was high compared to the fungicidal benefit.

There was not a significant difference in susceptibility of the Zsa Zsa and the Playmaker. This may be explained by the fact that since the Playmaker is a large fruited bell pepper. Due to the weight of the fruit (no harvesting was done) the plants tended to lean over allowing the fruit to come in contact with the soil

(Figure 6). The Zsa Zsa is a smaller fruited pepper that tended to hold the fruit up off the soil.

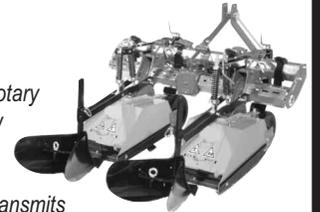
Figure 5. Photo: John Esslinger, Penn State



Mr. Esslinger is with Penn State Extension in the Central Susquehanna Counties. From Penn State Extension, <https://extension.psu.edu/vegetable-disease-research-tools-in-the-battle-against-phytophthora>, November 2, 2017.

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Yellow Striped ... (continued from page 34)

Biocontrol of yellow striped armyworm can be accomplished through the release of generalist predators like the minute pirate bug and the bigeyed bug. If you are not utilizing biological control and are using conventional insecticides to manage yellow striped armyworm consider using registered formulations of insecticides containing: bifenthrin (Bifenture 2EC or Sniper), spinetoram (Radiant SC), spinosad (Entrust SC), and zeta-cypermethrin (Mustang Maxx). All of the listed controls for yellow striped armyworm are labeled for field use which means that they can be applied legally when the sides of the high tunnel are rolled up.

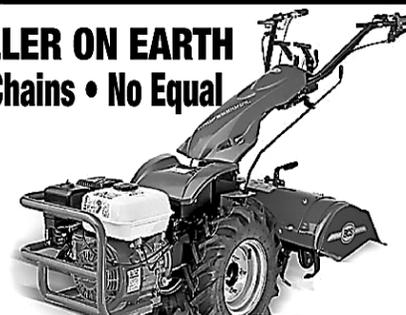
In addition, there are a very limited number of insecticides labeled for use in the greenhouse on food crops like tomatoes. As per the 2016 Mid-Atlantic Vegetable Guide, Pylon is the only registered insecticide listed for caterpillar pests other than *Bacillus thuringiensis var aizawai* (Xentari and Agree) which is primarily effective on early instar caterpillars. The insecticide chlorfenapyr (Pylon) is labeled for use in greenhouses on tomato plants for managing caterpillars when the harvested fruits will exceed one inch in diameter (cannot be applied to cherry tomatoes).

Thomas Ford is with Penn State Extension in Cambria County. From Penn State Extension, <https://extension.psu.edu/yellow-striped-armyworm-is-on-the-march>, October 25, 2017.



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Tanner Delvalle



Grape leaves exhibiting phenoxy-type herbicide damage in 2017. Photo: T. Delvalle, Penn State

Herbicide drift. It is probably not the first time you have heard of it, and it won't likely be the last. But I can assure you, that if you cause a substantial amount of drift-related damage, you may be getting a call from the Department of Agriculture, or potentially even a lawyer. It is likely that you wouldn't even know that you caused the damage until someone knocks on your door. The most important thing to remember is that you (the applicator) are responsible for pesticide drift, even if environmental conditions are the cause. And despite what you may think, it does not take much chemical to cause damage onto a nearby crop. For example, grapes can be damaged by 2,4-D at up to 100 times less than the labeled rate for controlling weeds!

Herbicide drift onto vegetable and fruit crops unfortunately occurs regularly across Pennsylvania, especially in the spring. Why? Because spring is the time of year herbicides are applied to various crops to kill newly emerged weeds; both on farms and in lawns. This also coincides with the time of year that certain crops (i.e. grapes and tomatoes) are most susceptible to herbicide damage.

Drift can occur in two ways; particle drift or vapor drift. When small spray droplets move long distances due to wind, it is called particle drift. To minimize particle drift, it is recommended to use air induction nozzles, and/or low pressure nozzles, in addition to spraying in low winds. Vapor drift is when a pesticide volatilizes or evaporates into the atmosphere and moves off site and damages non-target plants. It is suggested to use amines instead of esters in warm temperatures for this reason.

Field crops are not the only place where drift comes from. Documented drift has come from many sources; including vegetable fields, lawn care applications, right of way and industrial areas, forest weed control applications, aquatic weed applications, and even homeowner-related lawn and garden applications. Certain plants are more susceptible to herbicide drift. These include (but are not limited to) grapes, tomatoes, fruit trees, watermelons, tobacco, sweet potatoes, and certain ornamentals. In fact, some plants are up to 20 times more sensitive to 2,4-D or other auxin-related herbicides than to glyphosate.

When drift occurs, depending on the crop, damage may take several weeks to show up. Additionally, a single case of

drift can effect plant growth and harvests for several years. For example, a single instance of 2,4-D drift onto a grape plant can minimize or prevent a harvest for two or three years. An applicator may be summoned to court for lost income if this happens (and it does).

The following herbicides are typically associated with increased risk for drift-related damage to non-target crops: 2,4-D, MCPA, MCPP, triclopyr, dicamba, picloram, clopyralid, aminopyralid, and quinclorac. Whether you are a crop grower, a lawn care professional, or right of way professional, you have likely used or continue to use products that contain one or more of these ingredients.

Remember that drift—especially vapor drift—can travel in excess of one mile, especially when ester products are used in warm temperatures (drift is not always caused by high winds). Be sure to read the label, and use common sense. Take note of air temperature and the formulation you are using, look at the wind speed and wind direction, and finally, understand what type of crops are nearby, especially downwind of your intended application. If there is a vineyard nearby, you should pay close attention to your product choice and environmental conditions.

Speak with your local farmers, and develop a relationship with them. By taking the initiative to go through these steps, you could save yourself or company from fines, or potentially even a lawsuit.

(continued on page 38)



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Stress May Lead to Snap Bean Quality Problems and Yield Reduction

Gordon Johnson

Snap beans are very susceptible to quality reductions and yield losses when under stress during flowering and early pod development. This is a common problem in hot weather where pollination is affected leading to split sets. We are currently evaluating varieties of snap beans for heat tolerance at the University of Delaware's research farm at Georgetown with early May and mid-June plantings.

May snap bean plantings commonly avoid hot weather and produce high yields with good quality. However, in 2017, cold, wet weather after planting and high incidence of root rot in our trials has resulted in reduced plant vigor, shorter plants, reduced yield, and poor pod quality.

Early season stress is not uncommon and typically we recommend the use of seed already treated with an approved seed treatment with a fungicide for Rhizoctonia and Fusarium control such as Maxim 4FS, a second fungicide for Pythium control such as Apron XL LS and



Caprice' snap beans, an industry standard. Note the small plant size in early-May planted beans

an improved insecticide for seed corn maggot control. It is also recommended that April and early May snap bean plantings go into in lighter soils with good drainage.

Dr. Johnson is the Extension Vegetable & Fruit Specialist at the Univ. of Delaware. From the Weekly Crop Update, Univ. of Delaware Extension, Vol. 25, Issue. 14, June 30, 2017

(continued on page 38)



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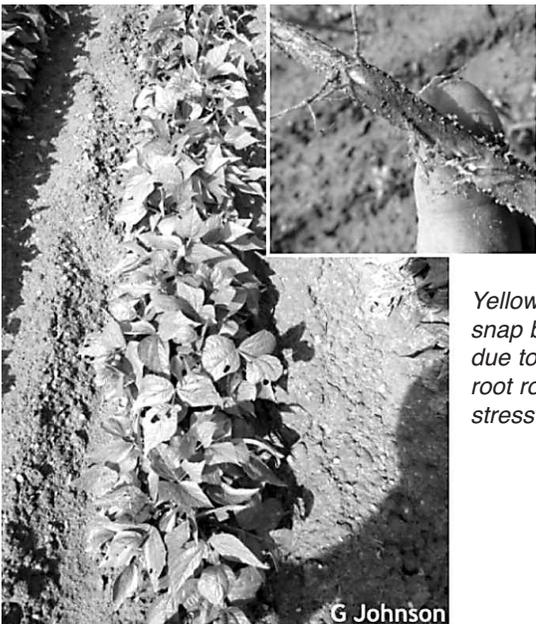
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VEGETABLE PRODUCTION

Stress May Lead... (continued from page 37)



Yellow stunted snap bean variety due to *Fusarium* root rot and cold stress in May.

G Johnson

Poor pod quality in harvested snap beans due to stressful May conditions.



G Johnson

Herbicide Drift... (continued from page 36)



Grape cluster showing phenoxy-herbicide damage in 2017. Every plant on several acres exhibited this symptom. You can imagine how poor the harvest will be this year, and probably next year as well. Photo: T. Delvalle, Penn State

Mr. Delvalle is with Penn State Extension in Schuylkill County. From Penn State Extension, <https://extension.psu.edu/herbicide-drift-and-drift-related-damage>, age, September 13, 2017.

Plastic Mulch Beds and Dry Soils

Gordon Johnson

Due to dry weather, a significant amount of plastic mulch [in some years is laid] in dry soils and in soils with more clods than normal. This can be problematic for a number of reasons. The first is related to bed heating. For effective heat transfer, plastic mulch should be laid tight on a firm bed and the soil should be moist. It is hard to fully wet beds with the drip system once they have been laid, especially in sandy soils. Moisture is also critical for heat accumulation, because water absorbs more heat than soil minerals. In dry and cloddy soils much of the heating benefit of the mulch is lost. Root growth will be slowed and crops will be delayed. Another issue is water movement in the bed. Clods create large air spaces that limit capillary water movement thus reducing how much of the bed that can be wetted during an irrigation event as drip irrigation is started. Where overhead irrigation is available, irrigating soils prior to working ground and laying plastic is an option in dry conditions.

Dr. Johnson is the Extension Vegetable and Fruit Specialist at the Univ. of Delaware. **Weekly Crop Update**, Univ. of Delaware Coop. Extension, Vol. 25, Issue 4, April 21, 2017.



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BERRY PRODUCTION

CLASSIFIEDS

North American Raspberry & Blackberry Conference is Feb. 21-24

The North American Raspberry & Blackberry Conference will be held February 21-24 in Ventura, California — a prime vacation destination and a major berry production region. After an opening reception on February 21, the conference features a full-day tour of farms and research on February 22 followed by two days of educational sessions, posters, and trade show on February 23-24. Featured speakers include Miles Reiter of Driscolls and Diego Martinez, president of the Mexican berry exporting organization Aneberries. Educational breakouts include sessions on pest and disease control, tunnel production, trellising/pruning, food safety, plant breeding, and more. The conference will be at the Ventura Beach Marriott (805-643-6000). Reservations may also be made at the nearby Comfort Inn (805-653-5000). For registration, program details, hotel/travel information and more, visit <http://www.raspberry-blackberry.com/north-american-raspberry-blackberry-conference-2018/> or contact the North American Raspberry & Blackberry Association at 919-542-4037 or info@raspberry-blackberry.com. Exhibitor inquiries are also welcome.

NEWS

Winter Convention Calendar

- December 5-7, 2017. **Great Lakes Expo and Michigan Greenhouse Growers Expo** at the Devos Place Conference Center in Grand Rapids, MI. Visit www.glex-po.com or call 734-239-8027
- December 12-14, 2017. **New England Vegetable & Fruit Conference** at the Radisson Hotel in Manchester, NH. Visit www.newenglandvfc.org or call 603-862-2717
- January 11-14, 2018. **South East Regional Fruit and Vegetable Conference** in Savannah, GA. Visit www.seregionalconference.com.
- January 10-12, 2018. **Illinois Specialty Crops, Agritourism, and Organic Conference** at the Crowne Plaza and Convention Center in Springfield, IL. Visit www.specialty-growers.org or call 309-557-2107.
- January 15-17, 2018. **Ohio Produce Growers and Marketers Association Congress** at the Kalahari Convention Center in Sandusky, Ohio. Visit www.opgma.org or call 614-221-1900.
- January 16-18, 2018. **Empire State Producers Expo** at the OnCenter in Syracuse, NY. Visit www.nysvga.org or call 585-993-0775.
- February 7-10, 2018. **PASA's Farming for the Future Conference** at the Penn Stater in State College, PA. Visit www.pasafarming.org or call 814-349-9856.
- February 1-7, 2018. **North American Farm Direct Marketers Association Convention** in Mystic, CT. Visit www.farmersinspired.com.
- February 6-8, 2018. **New Jersey Agricultural Convention and Trade Show** at the Harrahs's Waterfront in Atlantic City, NJ. Visit www.njveggies.org or call 856-358-2064.

Equipment

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Publications

NEW ASPARAGUS PUBLICATION NOW AVAILABLE

Carl Cantaluppi, recently retired Area Horticulture Agent with the NC Cooperative Extension Service has written a new publication entitled, "Asparagus Production from A to Z", a 68-page regional bulletin that covers every aspect of asparagus production. It features 25 color photos of insects, diseases, and planting techniques to aid the grower. The author has over 30 years of applied research experience, working with asparagus throughout the northeast, southeast, and Midwest.

To order, send a check or money order in U.S. dollars for \$25.00, payable to Carl Cantaluppi and mail to:
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The background of the central text area is a collage of images. On the left, there's a field of rows of vegetable plants under a cloudy sky. On the right, there's a food booth display with several white bowls filled with different types of cherry tomatoes. Each bowl has a small white sign with a name written on it, such as 'Monica', 'Roma Grande', 'Yo', 'Katrine', 'Corinto', 'Maraherit', and 'Bucky'.

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See pages 2 & 28 for further details on how you can join.

**This is in addition to the \$620,000 the PA Vegetable Marketing and Research Program has contributed to vegetable research.*