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Human Capital:
Now, Tomorrow and
the Next Generation

When we think of capital, it’s usually in the context of finances; capital gains, capital expenditures, investments; of our capacity to borrow and repay loans, to grow and ‘do business’. These are always dynamic and complex decisions, requiring us to assess our resources, markets and potential. We make these decisions many times with an assumption about the most important resource – our human capital – the people that we are entrusting to turn hope into reality - our family, employees and advisors. Just as we plan our financial capital to ensure we can meet the demands of our business, we want to give equal consideration to the human investments we need to remain competitive. This requires us to assess our own skills and abilities (never easy), to forecast our needs and then be intentional about filling in the gaps. As we plan for tomorrow and the next generation, what are the human capital needs of your business and agriculture?

Keynote Speaker
Russell Redding
Dean of Agriculture and
Environmental Sciences at
Delaware Valley College

For a complete and up-to-date listing of all the educational programs at the Mid-Atlantic Fruit and Vegetable Convention please go to the website at www.mafvc.org

PLAN TO ATTEND THE SHAP ANNUAL BUSINESS MEETING
TUESDAY, JANUARY 27th AT 4:30 PM
NIGERIAN ROOM
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Leonard Tate, Leonard L. Tate Orchards
4100 Carlisle Road,
Gardners, PA 17324 — (717) 486-3839

EXECUTIVE SECRETARY
Maureen Irvin
State Horticultural Association of PA
480 Mountain Road, Orrtanna, PA 17353
Phone (717) 677-4184 or Fax (717) 677-9636
E-mail address: shap@embarqmail.com
Website: shaponline.org

EDITOR
Dr. Rob Crassweller
102 Tyson Building,
Penn State University
University Park, PA 16802
Phone (814) 863-6163

EX-OFFICIOS
Carolyn McQuiston — Immediate Past President
SHAP
Department of Horticulture
Penn State University
Dr. Robert Crassweller
Penn State FREC
Dr. James Schupp
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Mark Shannon
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Editorial Views
By Dr. Rob Crassweller

The Winter Season

Believe it or not this time of year is actually my busiest season. Traditionally this is the time that I write and submit grants and prepare the reports on last year’s grants. It has become a reality that in order to function at a University, faculty must obtain money to operate. Gone are the days when a faculty member was given enough money to operate a research or extension program independently.

I have a half-time technician who as of this year will have been with me for 20 years. Those of you that took Horticulture 432 at Penn State know that Don Smith is an important cog of the tree fruit program here at Rock Springs, and I have been generating his salary for the past 10 plus years from grants. Up until this summer he worked 20 hours a week for me, but now with the addition of our new viticulturist he is back on full time; half for me and half for Michela Centinari.

Over the University’s Christmas break I am also preparing for presentations at the Mid-Atlantic Fruit and Vegetable Convention, as well as presentations for the upcoming regional tree fruit meetings in February and March. I hope that you will take advantage of both the meeting at Hershey and the regional meeting near you to be updated on new methodology in fruit production. Hopefully the weather for travel will be good for the next two months with manageable snowfalls and minimal icy conditions.

Pruning season will begin for us in mid to late February since we do not have as much acreage as some of you. We have already removed the peach trees that took a beating from the winter of 2013-14. As I have said before, pruning peaches in December is not the smartest idea. Last year the cold snaps in early January took their toll on the peaches and grapes at Rock Springs.

Our new Dean of the College of Agricultural Science, Dr. Richard Roush, will be attending the Mid-Atlantic Fruit and Vegetable Convention. There will be a special reception to meet with him on Tuesday, January 27th at 5:00 PM in Cocoa Suite 6. Dr. Roush has been on the go since he arrived and has traveled extensively around the state meeting with various agricultural groups and learning about PA agriculture.

Tuesday morning will also be the 9th Annual Mid-Atlantic Cider contest. Entries will be accepted between 8:00 and 10:00 AM in the morning and judging will begin at 10:30. We will announce the winner at the banquet that night. Sorry, but the potential for a hard cider contest at the Convention was nixed by the Hershey Lodge due to liability issues.
LABOR UPDATE: EXECUTIVE ACTION ON IMMIGRATION (US APPLE)
President Obama’s executive action on immigration reform was met with mixed reaction from politicians and the general public. For the apple industry and others in labor intensive agriculture, it does not change the need for legislation that provides a permanent solution and includes guestworker reforms.

That is the message that USApple and our coalition partners in the Agriculture Workforce Coalition (AWC) will bring to the new Congress. USApple continues to play a leadership role in the coalition which continues to meet and develop strategies moving forward.

The lawyers in our coalition are also analyzing the executive order and we are meeting with key administration officials to learn how the program will be implemented and the potential impact and role of employers. The coalition plans to meet with key officials at the USDA and Department of Homeland Security. (Apple Bites, US Apple Association, 12/16/14)

USAPPLE FILES COMMENTS ON FDA REVISED PRODUCE FOOD SAFETY RULE PROPOSALS
USApple has filed a comment letter with the FDA on the Agency’s proposed revisions to the Produce Food Safety Rule. In late September, the FDA issued a revised set of proposed produce food safety regulations in an attempt to address concerns over the original proposals issued in January 2013. The revised proposals deal chiefly with concerns expressed by USApple and industry allies over the rules covering use of agricultural water.

In the revised proposals, the Agency has significantly changed the original standards and testing requirements for agricultural water. The new proposal eliminates the original requirement of weekly or monthly testing of water throughout growing season and replaces it with a tiered approach based on the EPA “recreational water” standard, and includes an option to utilize microbial “die off” rates to determine the interval in days between the last use of water and commencement of harvest. The revision calls for growers to establish a “baseline” for microbial presence in agricultural water using water samples gathered over a 2 year period.

The deadline for filing comments was December 15. The FDA is under a federal district court settlement that calls for the final produce rules to be issued by October 31, 2015. Growers would have 2 years from the effective date of the final rule (or up to 4 years for the smallest operations) in which to implement the agricultural water rules. (Apple Bites, US Apple Association, 12/16/14)

Note: Comments on the FDA Revised Produce Food Safety Rule Proposals were also filed by SHAP before the deadline.

PFB TAKES EPA TO TASK OVER “WATERS OF THE U.S.” RULE
If you listen only to the rhetoric from the Environmental Protection Agency and U.S. Army Corps of Engineers, the agencies are only looking to “clarify” their jurisdiction under the Clean Water Act. But when you dig down into the hundreds of pages of rules and regulations the EPA and Army Corps have put forth in their “waters of the U.S.” rule, it becomes clear the federal agencies have only muddied the waters.

That’s why Pennsylvania Farm Bureau, in formal comments sent to the EPA on the proposed rule, are calling for the agencies to abandon their attempt to control nearly every body of water in the country – a serious overreach of their authority under the Clean Water Act. Under their proposed rule, the EPA and Army Corps would have jurisdiction over virtually every ditch or low spot that holds or channels any water, no matter how rare it would occur. That expansion could mean farmers would need a federal permit to perform normal farming practices, such as crop spraying.

“The EPA and Army Corps have attempted to put forth some 300 pages of text under this proposed rule without any genuine attempt to confer with or understand the potential concerns that farmers and businesses may have with this proposed rule,” PFB said in comments.

PFB also took the agencies to task for their unprecedented public relations campaign to build support behind their new rule.

Some of the concerns outlined by PFB with the “waters of the U.S.” rule include:

• The rule is based on two highly erroneous assumptions. The agencies are wrong in assuming the federal Clean Water Act gives them the power to regulate any land if any possible “pollutant” can reach navigable waters, no matter how distant or remote. In reality, the Clean Water Act clearly limits federal authority to “navigable” waterways and areas having a direct connection to those waterways. EPA and the Corps is also wrong in their belief that if the federal government doesn’t regulate it, no one will be able to protect water quality. The reality is that state laws, such as existing laws in Pennsylvania, give state environmental agencies extensive authority to protect water quality and they are better able to do so than...
federal agencies.

- The new rules call for, with limited exemptions, the regulation of drains, ditches and other low spots within farm fields, making discharges into those areas unlawful without a federal permit. “The tens of thousands of dollars of additional costs for federal permitting of ordinary farming activities, however, is beyond the means of most farming operations—the vast majority of which are family-owned small businesses,” PFB said in comments.

- The proposal does nothing to clarify what types of waters bodies it intends to regulate, and instead opens farmers to potential permit violations. The agencies definition of “tributaries” is written in such a way that nearly any area that carries any water after rainfall will be considered a federally regulated “water of the U.S.” The lack of clarity in the definition must force farmers to assume that any drainage ditch is considered a “tributary” and that by failing to seek a federal permit, they are subjecting themselves to fines of up to $37,500 a day. “With such stiff statutory penalties—including the loss of one’s own personal liberty—farmers deserve much better clarity than what is provided under the extremely vague provision of the proposed rule,” PFB said.

- The proposed rule is so fundamentally flawed, the EPA and Army Corps should simply withdraw the rule, rather than making changes. “The agencies’ rule would confer federal control over all but the most remote and unconnected waters—including countless features that are more like land than water. Congress did not grant the EPA or Army Corps such authority, and using the regulatory process to usurp it must end now.”

USAPPLE FILES COMMENT LETTER ON POLLINATOR HEALTH

The widely reported issue of managed bee colony “decline” often referred to as Colony Collapse Disorder (CCD) has generated significant discussion and attention by beekeepers, agricultural interests, researchers and public interest groups. In response to widespread concern over reports of declining numbers of pollinators, the Obama Administration created the Pollinator Health Task Force, composed of multiple federal agencies including the USDA and the EPA.

A 2013 report issued by the USDA and EPA states that multiple factors play a role in honey bee colony declines, including parasites and disease, genetics, poor nutrition and pesticide exposure and concludes that there is not a single factor causing CCD. However, despite the identification of multiple causes for CCD, a number of special interest groups have focused on just one of the five factors listed in the report - pesticides - and push for regulatory action, such as banning the use of neonicotinoid pesticides that is not supported by the underlying science.

In response to a request for stakeholder feedback from the Task Force, USApple submitted comments. The conclusion of USApple’s comment letter describes USApple’s position on pollinator protection:

“USApple has consistently supported a science based regulatory approach to crop protection chemical registration. Producing a crop totally dependent upon insect pollination, apple growers as a group are a major stakeholder in the work being done by the Pollinator Health Task Force and share the goal of better understanding the problem of pollinator decline as a whole.

“We strongly urge the Task Force to use a science based approach that encompasses all of the identified causes for pollinator decline and utilizes the knowledge gained to support what appears likely to be a multi-faceted solution encompassing bee nutrition, stewardship, parasite and pathogen control, habitat, and genetics in promoting a vital and healthy pollinator community.” (Apple Bites, US Apple Association, 12/16/14)

NEW PEST FOUND IN BERKS COUNTY

State agriculture officials say a new invasive species that could threaten grape, fruit and hardwood trees has been discovered in two townships in Berks County. The Spotted Lanternfly, an inch-long red and white spotted insect, is native to Asia. In Korea, where it’s become an invasive pest, it has attacked 25 plant species that also grow in Pennsylvania.

“Since this is new to the country we are taking every precaution possible,” said Agriculture Secretary George Greig. “We need to do everything we can to stop the spread of the Spotted Lanternfly.

The invasive pest often attacked grapes, apples and stone fruits. Adults cluster in groups and lay eggs on flat surfaces. To help thwart the spread of the lanternfly, PDA has quarantined the movement of any material that can spread the pest in several Berks County townships.

THOUSAND CANKERS DISEASE FOUND IN LANCASTER COUNTY

With the discovery of Thousand Cankers Disease in Lancaster County, the Pennsylvania Department of Agriculture placed a quarantine on the movement of wood and wood products. Similar quarantines are in place in Bucks, Chester, Delaware, Montgomery and Philadelphia counties. The quarantine restricts the movement of all walnut material and hardwood firewood.

“Thousand Cankers Disease poses a significant threat to our billion dollar hardwoods industry, as Pennsylvania walnut is considered the best in the world,” said Agriculture Secretary George Greig.
The disease strikes trees when Walnut Twig Beetles carry the fungus and tunnel beneath the bark of walnut trees. That causes small cankers to form, slowly starving the trees. Black walnut trees produce high-valued lumber for woodworking and furniture making.

CHEMSWEEP COMES TO 18 COUNTIES
The Pennsylvania Department of Agriculture’s CHEMSWEEP program is coming to 18 counties in 2015. The program, which is offered to different counties each year, will be available in Bucks, Crawford, Dauphin, Erie, Fayette, Greene, Huntingdon, Juniata, Lycoming, Mercer, Mifflin, Montgomery, Perry, Philadelphia, Susquehanna, Tioga, Wayne and Westmoreland counties.

“Pesticides can be a problem when they outlive their usefulness, sitting in barns and sheds and becoming hazardous to the environment and to your safety,” said Agriculture Secretary George Greig. “Thanks to CHEMSWEEP, it’s easier for our agriculture industry to safeguard our environment and properly dispose of pesticides.”

CHEMSWEEP has safely disposed of nearly 2.3 million pounds of unwanted or unusable pesticides since 1993. Licensed pesticide applicators, dealers and commercial pesticide application businesses in the designated counties can participate by completing a CHEMSWEEP registration form that will be direct mailed. The registration period ends February 28. CHEMSWEEP is funded by annual registration fees paid by pesticide manufactures and applicators.

BE A MODEL FOR THE FUTURE
Penn State Extension is looking for host sites for demonstrating best management practices and helping beginning farmers succeed. Through funding from the USDA Beginning Farmer and Rancher Project, Penn State Extension is looking to partner with four growers across Pennsylvania to establish demonstration plots to help new growers understand and implement best management practices and improve their farm success. This ‘Models for the Future’ project will provide on-farm demonstration sites illustrating best management practices (BMP) and learning centers for new farmer networks.

Are you a beginning farmer who has been farming for two to ten years and excited about implementing cutting edge production information on your farm? The ‘Models for the Future’ project is an opportunity to work with Penn State researchers and specialists to receive specialized technical recommendations for two to three crops, including tree fruit, berries, and/ or vegetables. Researchers will work with you to track quality, profits, and pest management from the practices implemented at your farm. Grant funds will defray the costs of demonstrating best management techniques, including planting stock, cover crop seed, and other supplies. The model plot at your farm will not only help your farm succeed, but provide important information to help the next generation of farmers in Pennsylvania succeed.

Are you interested in learning from your peers and researchers? Not only will ‘Models of the Future’ provide a living classroom, but also will form study circles to focus on production, marketing, and business topics. As a ‘Models for the Future’ host you will benefit from three study circles hosted at or near your farm.

Study circles employ a discussion-based format allowing you and your fellow farmers to delve into topics of your choice, learning from an invited speaker and your peers. Study circles will begin with a 30-minute presentation by the speaker, followed by a meal and two hours of discussion. During the meal you and your fellow new farmers will have time to network and develop a community to support your new farm. Grant funds will defray the costs of the speakers and meals.

Apply by December 30th to be a ‘Model of the Future.’ Contact Tianna DuPont (tdupont@psu.edu) 610.746.1970 to learn more. (Source: Penn State)

YORK COUNTY COUPLE WINS YF&R ACHIEVEMENT AWARD
Andrew and Katie Flinchbaugh have been named the recipients of the 2014 Young Farmer & Rancher Achievement Award.

The award, presented at Pennsylvania Farm Bureau’s 64th Annual Meeting, recognizes a young farmer or couple between the ages of 18 and 35, who demonstrate outstanding farming and leadership achievement. Contestants are evaluated by a panel of judges on the basis of the growth of their farm operation, their record of leadership within Farm Bureau and other organizations.

The Flinchbaughs farm in partnership with Andy’s family. The family manages a diverse farm that includes agritourism activities, grain crops, pigs and an orchard. At the same time, Katie also manages a flock of egg-laying hens and makes baked goods for the farm market the Flinchbaugh’s operate. Andy is a member of Pennsylvania Farm Bureau’s State Board of Directors while Katie serves as newsletter editor for York County Farm Bureau.

Flinchbaugh’s Orchards & Farm Market was recognized earlier this year for enrolling more than 200 acres into the state’s Farmland Preservation Program, enabling Pennsylvania to become the first state in the nation to eclipse the 500,000-acre plateau in preserved farmland. The Flinchbaughs also embrace the role of being a trusted local farmer, hosting a number of tours and events at their farm market, to help the growing communities around York County better understand agriculture.

“Farming may be one of the most challenging careers, but it is that challenge that keeps you going, because every
day there is something new. But that challenge keeps things exciting and keeps us going in agriculture,” Andy Flinchbaugh said.

**VEGETABLE AND SMALL FRUIT PRODUCTION WEBINARS RETURN**

The Winter Wednesday Lunch Series of vegetable and small fruit production webinars returns for its fourth year starting December 10, 2014, and running through March 25, 2015. Penn State and Cornell University have teamed up to present this series of webinars to keep you informed about critical production issues.

This series provides convenient access to timely updates in commercial vegetable and small fruit production for extension educators, producers, and industry representatives in Pennsylvania, New York, and surrounding states.

The sessions, available live and recorded, feature both Penn State and Cornell speakers on a range of specific topics. All webinars are held from 1-2 p.m. on Wednesday afternoons, as follows:

- **February 11, 2015.** Soil Health Through Reduced Tillage and Cover Crops. Carol MacNeil, Extension Vegetable Specialist, Cornell; and Dr. Thomas Bjorkman, Associate Professor, Cornell.
- **March 4, 2015.** Using Sanitizers in Wash Water. Dr. Luke LaBorde, Associate Professor, Penn State.
- **March 25, 2015.** Tomato Nutrition in High Tunnels. Steve Bogash, Extension Educator, Penn State; and Judson Reid, Extension Vegetable Specialist, Cornell.

The cost for the webinars are $10 per session or $35 for the entire series. All you need to participate is access to a computer with internet access (DSL or faster) and speakers or headphones. Register online or by calling 724.627.3745. (Source: Penn State)

**EBERT ELECTED PRESIDENT**

Westmoreland County dairy farmer Richard “Rick” Ebert has been elected the next president to lead Pennsylvania Farm Bureau.

Ebert served as PFB’s Vice President since December, 2004. He chaired Pennsylvania Farm Bureau’s annual policy development process, which determines the organization’s official stand on farm and rural life issues. Ebert also chaired PFB’s Dairy Committee and has voiced PFB’s request for action to help dairy farmers during testimony on numerous occasions before the Pennsylvania Milk Marketing Board and state legislative committees. Ebert received the Mid-Atlantic Master Farmer of the Year award in 2009.

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**WANTED**

800-acre commercial apple orchard in South-Central PA is looking for an experienced and highly motivated assistant farm manager. The position involves planning, organizing, and coordinating activities pertaining to the production of apples including the implementation of crop protection programs, irrigation systems, supervising and training of pruning and harvesting, and maintaining records of such activities. Proficiency in English and Spanish is expected. Please email cover letter and resume to hr@rlorchard.com.
In Memory of Thomas C. Rosazza

THOMAS C. ROSAZZA, age 80, of Avondale, PA, passed away on Saturday, December 6, 2014, at the Twin Pines Health Care Center. He was the husband of Shirley Swisher Rosazza, with whom he shared 59 years of marriage.

Born in Avondale, PA, he was the son of the late Clarence O. and Fay Sluder Rosazza. Tom was a farmer at heart, and was a retired owner/operator of the family business, Glen Willow Orchards, in Avondale, PA.

He was a member of the Avondale Presbyterian Church, where he had served on the Board of Trustees. He was also a member and past president of the West Grove-Avondale Rotary Club, was a Paul Harris Fellow, a member and past president of the Chester Delaware County Fruit Growers Association, where he organized workers at the Farm Show, a member of the Pennsylvania State Horticultural Board, where he served on the peach and nectarine research committee, and a lifetime member of the Avondale Fire Company.

Tom had served many years of the London Grove Township planning commission, and an assistant scout leader of Troop 191 in Avondale. He was an avid boater and a member of the Coast Guard Auxiliary.

In addition to his wife, he is survived by one son, Stephen R. Rosazza and his wife Brenda of Avondale, PA; one daughter, Janice F. Ramberger and her husband Chip of Avondale, PA; two brothers, Ralph O. Rosazza and Richard P. Rosazza, both of Avondale, PA; one sister, Shirley Ann Raimato of Kennett Square, PA; three grandsons, Andrew Thomas Rosazza, Ryan Joseph Ramberger and Justin Thomas Ramberger, and several nieces and nephews.

Tom’s Memorial service was held on Tuesday, December 16, 2014, at the Avondale Presbyterian Church, 420 Pennsylvania Avenue (Route 41), Avondale, PA. A visitation and luncheon was held after the service. His viewing and burial were held privately.

In lieu of flowers, a contribution in Tom’s memory may be made to the Avondale Presbyterian Church, Building Fund, P.O. Box 446, Avondale, PA 19311

Online condolences may be made by visiting www.griecocares.com

Arrangements were handled by the Kuzo & Grieco Funeral Home, Kennett Square, PA.

Identification of Pruning Branches in Tall Spindle Apple Trees for Automated Pruning

By M. Karkee, B. Adhikari, S. Amatya & Q. Ahang

Pruning is a labor intensive operation that constitutes a significant component of total apple production cost. As growers are adapting simpler, narrower, more accessible and productive (SNAP) tree architectures such as the tall spindle fruiting wall system, new opportunities have emerged to reduce pruning cost and labor through automated pruning. This work focused on identification of pruning branches on apple trees in a tall spindle architecture. A time-of-flight-of-light-based three dimensional (ToF 3D) camera was used to construct 3D skeletons of apple trees. Pruning branches were identified in the reconstructed trees using a simplified two-step pruning rule; (i) maintain specified branch spacing and (ii) maintain specified branch length. Performance of the algorithm was optimized using a training sample of 10 trees to achieve human worker’s pruning level. With a selected branch spacing (28 cm) and branch length (20 cm), the algorithm achieved 19.5% branch removal with the training dataset and 19.8% of branch removal with the validation dataset (10 trees) compared to 22% average branch removal by workers. Root Mean Square Deviation (RMSD) between human and algorithm in number of branches identified for pruning was 10% for the training dataset and 13% for the validation dataset. The algorithm and the human pruning resulted in similar average branch spacing. The algorithm maintained an average spacing of 35.7 cm for validation set whereas the average spacing for three workers was 33.7 cm. RMSD in branch spacing between the algorithm and the workers was found to be 13%. The algorithm removed 85% of long branches whereas the overlapping branch removal was only 69%. With some additional work to improve the performance in terms of overlapping branch removal, it is expected that this work will provide a good foundation for automated pruning of tall spindle apple trees in the future.

(From Computers & Electronics in Agriculture 102:127)
In this 2-year study of ‘Brown Snout’ specialty cider apple (*Malus × domestica*) grafted onto Malling 27 (M.27) and East Malling/Long Ashton 9, we compared weight of total harvested fruit, labor hours for harvest, tree and fruit damage, and fruit and juice quality characteristics for machine and hand harvest. Machine harvest was with an over-the-row small fruit harvester. There were no significant differences due to rootstock; however, there were differences between years for most measurements. Weight of harvested fruit did not differ because of harvest method; however, harvest efficiency was 68% to 72% for machine pick and 85% to 89% for machine pick + clean-up weight (fruit left on trees and fruit knocked to the ground during harvest) as compared with hand harvest. On average for the 2 years, hand harvest required 23 labor-hours per acre at a total cost of $417, while machine harvest required 5 labor-hours per acre at a cost of $93. There were no differences due to harvest method on damage to spurs (four to eight spurs damaged per tree) or limbs (0.5–0.8 limbs damaged per tree). Although there were also no differences due to harvest method on fruit bruising (100% for both harvest methods in this study), 10% of fruit were sliced and 4% of fruit were cut in half inadvertently with machine harvest, and none were sliced or cut with hand harvest. Harvest method had no effect on fruit quality characteristics, specifically, soluble solids concentration (SSC), pH, specific gravity, titratable acidity (malic acid equivalents), or percent total tannin, when fruit was pressed immediately after harvest or stored for 2, 3, or 4 weeks before pressing. Juice quality characteristics were affected by storage, and SSC increased 11% in 2011 (3 weeks storage), and 12% and 18% in 2012 (2 and 4 weeks storage, respectively). Similarly, specific gravity increased both years after storage, 1% in 2011, and 1% and 2% in 2012 (a 1% increase in juice specific gravity corresponds to a potential 1.3% increase in alcohol by volume after fermentation for cider). Both years, juice pH tended to decline when fruit was stored (0.01 pH units in 2011, 0.06–0.12 pH units in 2012). Overall, cider apple harvest with an over-the-row small fruit machine harvester used four times less labor than hand harvest, yield reached 87% that of hand harvest (when clean-up yield was included), and juice quality characteristics were not negatively affected. These results suggest that machine harvest may be suitable for cider apples if equipment is available and affordable.

(From HortTechnology 24:519)
Effects of Nitrogen Rate and Application Method on Early Production and Fruit Quality of Highbush Blueberry

By D. L. Ehret et al.

Proper nitrogen (N) fertilizer management of highbush blueberry (Vaccinium corymbosum L.) is of major importance in south-coastal British Columbia, but little information is available. A field study was conducted to examine the effects of N rate and method of application on growth, yield, and fruit quality in highbush blueberry during the first 4 yr after planting in south-coastal BC. Nitrogen was applied at 0–150% of current production guide rates either with three equal applications of broadcast granular ammonium sulphate each spring or by fertigation through the drip irrigation system with 10 equal applications of liquid ammonium sulphate injected every 2 wk from early spring to late summer each year. Yield increased with increasing N rate during the second and third years of fruit production. The yield response as well as flower number and plant size were greater with fertigation than with broadcast fertilizers. Fruit firmness also increased consistently with increased N rates, while fruit size either increased or decreased, depending on year. There were no effects of N on fruit oxygen radical absorbance capacity (ORAC), titratable acidity, or soluble solids. However, the composition of fruit anthocyanins changed, with concentrations of seven anthocyanins decreasing, and three others increasing, with N rate. In 2 of 3 yr, total anthocyanin concentration was greater in fertigated than in broadcast treatments. Soil ammonium and nitrate concentrations increased with N rate, but only soil nitrate differed between the two application methods. Soil nitrate was higher with fertigation than with granular fertilizers, particularly at the end of the season and when greater rates of N were applied. In summary, fertigation produced more shoot growth and greater yields with less N than broadcast applications of fertilizer.

(From Can. J. Plant Sci. 94:1165)
IPM Scouting and Resistance Management and Pesticide Applicator Safety
Concurrent Sessions in Spanish and English
Tuesday, February 24th, 2015, 1:00 to 4:00 pm
Adams County Agricultural and Natural Resource Center, 670 Old Harrisburg Rd., Gettysburg, PA 17325

The primary mission of the Penn State Pesticide Education Program is to provide training for applicators and users about pest management alternatives, including the safe, proper, and legal use of pesticides. Responsible decision-making protects pesticide users, the public, plants, animals, and the environment.

The Pesticide Education team is partnering with the Penn State Horticulture Team to offer this short course series for a New Generation of Horticulturists. Concurrent sessions for English and Spanish speaking orchard employees will be offered during the three-hour program and a Certificate of Participation will be awarded.

Pesticide applicators and also those who may become applicators in the future are encouraged to attend. There is no fee, but pre-registration is encouraged. For more information, please contact Montserrat Fonseca Estrada, muf29@psu.edu or 717-334-6271, ext. 315.

*3 core and 3 category credits available for pesticide applicators.

Registration Form for Pesticide Safety Short Course
Registration encouraged but if you find you are available at the last minute, please attend!

Business________________________________________________________________Number attending______

Names_______________________________________________________________________________________

Phone____________________ E-mail____________________

Please return form to:
Montserrat Fonseca Estrada, Penn State Extension in Adams County
Adams County Agricultural and Natural Resource Center
670 Old Harrisburg Rd.
Gettysburg, PA 17325

Please call 717-334-6271, ext. 315 if you prefer to register by phone.

This publication is available in alternative media on request.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to minorities, women, veterans, individuals with disabilities, and other protected groups. The Pennsylvania State University encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact Montserrat Fonseca Estrada in advance of your participation or visit.
As the Adams County Fruit Grower Association approaches its 60th year of hosting its annual Apple Blossom Festival, it is releasing a coffee-table book on the industry, titled *America’s Orchard*. The book celebrates the fruit growing families and businesses that feed and support the Commonwealth—from the first orchards to the newest field robotic technology.

*America’s Orchard* commemorates the fruit industry’s past, honors the present, and anticipates the future through photos and stories collected from growers, distributors, and educators. Vignettes and colorful images appeal to industry insiders and consumers alike. *America’s Orchard* walks readers through the entire fruit industry so at the close of the book, they will appreciate the heritage, cooperation, and innovation that contributes to local economics and food security.

**America’s Orchard** Order Form

Name: ______________________________________________________________

Address: _________________________________________________________________________

___________________________________________________________________________

Email Address: ___________________________ Phone: _______________________

Number of books I am ordering: ________ Total Enclosed: $________________

Checks made payable to: Adams County Fruit Grower Association

Mail completed order form and check to: Adams County Fruit Grower Association, 33 Musselman Ave., Biglerville, PA 17307

1 – 10 copies - $15 each

11 – 20 copies - $12.50 each

21+ copies – $10.00 each

Suggested retail price for Farm Markets - $15

To arrange picking up your book(s) at the Adams County Fruit Grower Association Office or to have them mailed, please contact Brenda Cressler at 717-677-7444, or acfga@comcast.net.
Fruit tree ecosystems represent an important land use type in Southern Europe. Nevertheless, limited information and large uncertainty currently exist about their potential role as a sink of atmospheric CO$_2$, which is measured through an index that accounts for all inputs and outputs of C, namely the net ecosystem carbon balance (NECB). In this paper, we studied the fluxes of C assimilation, the C release and the lateral C and their contribution to the NECB in an apple orchard at different time scales. Data of net ecosystem productivity (NEP) were recorded by eddy covariance and converted into ecosystem respiration and gross primary productivity (GPP). The net primary productivity (NPP) and the C partitioning among tree organs were also biometrically assessed. The study was carried out in the period 2009–2012 in a commercial apple orchard located in an intensive fruit production district of South Tyrol, Italy. We found a positive NEP from March to October and yearly NEP values of 403 g C m$^{-2}$. GPP (1346 g C m$^{-2}$ year$^{-1}$ on average) was highest between May and September, when leaves intercepted the highest amount of PPFD. Tree growth accounted for more than 90% of the total new biomass produced in the orchard, the remaining part being represented by the herbaceous vegetation covering the orchard floor. Trees allocated to fruits approximately half of the yearly NPP, while they increased only to a limited extent their standing biomass. A significant fraction of NPP was also allocated to organs (leaves, pruned woody organs, etc.) that feed the detritus cycle. The NECB was on average positive (69 g C m$^{-2}$) but showed high variation among years, and in the year when fruit yields was very high (74 t fruits/ha), the NECB was even negative. NECB was accounted to a greater extent by the yearly increase of tree woody organs and to a minor extent by the C transfer to the soil from the decomposing litter. The most relevant agronomical suggestion of this study is that tree vegetative growth resulting into either increasing standing biomass and/or increasing tree litter should not be reduced if we aim at maintaining the CO$_2$ sink capacity of the apple orchard.

(From European Journal of Agronomy 63:97)
Foliar Application of Calcium Plus Boron Reduces the Incidence of Sunburn in Golden Delicious Apple  By E. Lotze & E Hoffman

Losses of apple fruit due to sunburn damage under South African climatic conditions can reach up to 40% per annum for specific cultivars in certain years. Various approaches to reduce the incidence and severity of sunburn resulted in temporary effects but, at present, no single remedy is available to provide a significant and consistent reduction in sunburn damage on a commercial scale. ‘Golden Delicious’ apple trees that received both calcium (Ca) and boron (B) as foliar applications on a weekly basis, when applied from approx. 21 – 70 d after full bloom (DAFB), showed significantly less sunburn in two consecutive seasons ($P = 0.0500$ and $P = 0.0247$ respectively) than untreated control fruit, or treatments based on Ca alone. The minerals were applied as supplements of sugar-alcohol complexed with Ca and B, trading as Manni-Plex® Ca [10% (w/w) Ca] and Manni-Plex® B [3.3% (w/w) B], respectively. The mode of action by which the incidence of sunburn was reduced using combined sprays of Manni-Plex® Ca plus Manni-Plex® B remains to be elucidated.

(H. Hort. Sci. & Biotech. 89:607)

Honeycrisp Apple Leaf and Fruit Nutrient Concentration is Affected by Rootstock during Establishment  By G. Neilsen & C. Hampson

A trial involving 31 dwarfing and semi-dwarfing apple [Malus sylvestris (L.) Mill var. domestica (Borkh.) Mansf.] rootstocks from Russia, USA and Germany, with ‘Honeycrisp’ as the scion, was established in 2010 in Summerland, B.C., Canada, as part of a larger experiment organized by the USDA NC-140 rootstock research group. Leaf and fruit nutrient concentrations were affected by rootstock during the critical, first three years of establishment under irrigated conditions. Trees exhibited a range of vigor and initial yield. Few problems were found in achieving adequate leaf N, B and Cu regardless of rootstock, whereas leaf Zn, P, Mg and fruit Ca often did not achieve sufficiency. Rootstocks were identified with superior and inferior abilities to accumulate individual nutrients, but only B.70-6-8 (P, Mn and K) and B.7-3-150 (P, K) were superior for more than a single nutrient. The ability to accumulate a range of key plant nutrients was not well-correlated with initial tree performance, with the exception of a close association between leaf P and initial tree vigor. There also was an apparent antagonism between P and fruit Ca concentration of the first crop.

(From J. Amer. Pom. Soc. 68:178)
Ag Literacy for Growers: Communicating with Consumers and the Media

Mid-Atlantic Fruit and Vegetable Convention, Hershey Lodge and Convention Center, Hershey, PA
Monday, January 26, 2015

12:30 Registration

12:55 Welcome and Introductions............................................Emily Rice-Townsend, Rice Fruit Company

1:00 Lost in Translation? Tips to Effectively Communicate with Consumers……Lori Connelly, Executive Director, PA Ag Resource Center – Penn State University
This presentation will provide the audience with a basic understanding of ag literacy and consumer relations, as well as equip participants with indispensable tools to address questions from the public and the media. Expect a dynamic and informative lecture that will leave you invigorated and ready to answer whatever questions come before you!

2:00 Break

2:10 Singing From the Same Songbook: Training Employees to Deal with Controversial Topics in Agriculture….Richard Stup, Ph.D., Director of Business Management Services and Branch Sales Manager – AgChoice Farm Credit
Growing consumer interest in food production and agriculture technology is confronting farm and market employees with questions they are ill-equipped to answer. This presentation provides ideas for training employees to better understand your production methods and how they should respond to questions. The goal is to engage appropriately with customers on these controversial subjects in respectful and productive ways.

2:55 Fruit Industry Support from AgChoice Farm Credit………………Katie Epstein, Loan Officer – AgChoice Farm Credit

3:05 Young Grower and Industry Experts Panel.........................Julie Flinchbaugh-Keene – Flinchbaugh’s Orchard and Farm Market, Steve P. Frecon – Frecon Farms, Heather Mikulas – Penn State Extension, Jen Baugher, Adams County Nursery – Moderator
Young growers will discuss rewarding and challenging interactions with consumers, media, and industry leaders regarding controversial agricultural topics. Some topics to be addressed include: GMOs, pesticide usage, environmental stewardship, and differences between farming practices.

3:50 Program Feedback followed by Reception Hour – Opportunity to Connect with Other Growers with Similar Interests

-------------------------------------------------------------------------------------------
Ag Literacy for Growers Registration Form - Registration Deadline: January 15, 2015

Names: _________________________________________________________ Business: __________________________

Address: __________________________________________________________________________________________________

Phone: ____________________________________   Email: _________________________________________________________

Registration Fee: $50 (includes light refreshments during networking hour)

Total Enclosed: $50 x _________ = $ ___________

Please make check payable to: State Horticultural Association of Pennsylvania
Please return registration form and payment to: Maureen Irvin, Executive Secretary, State Horticultural Association of Pennsylvania, 480 Mountain Road, Orrtanna, PA  17353
We’re a Little Worried.

Every day more orders are coming in and selections for desired trees are getting reduced. So, please keep this in mind as you make your decisions. The more quickly you choose, the more likely we’ll be able to provide. With availabilities already tight for this, and next year, and even beyond...help cut down on worries. Place a call and get us to work.

Local Representative:
Gary Kauffman. Biglerville, PA (717) 677-6931
*Patent information available upon request.

Jonastar®
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Exciting new Jonagold sport. Finishes with a nice subtle stripe over a bright red background. Wonderful taste, quality and size. Usually a one pick variety.

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Colors early with full blush by mid-August. Colors and matures sooner with whiter flesh than any other red sport. Brix level allows for earliest picking opportunities.

September Wonder® Fuji
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The earliest true Fuji out on the market. Good size with reddish blush skin color. Creamy white flesh with typical Fuji flavor.

Honeycrisp™
A wonderfully balanced flavor combined with a crisp, juicy texture makes a very enjoyable eating experience. Stores very well. An excellent pollinator.

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PO Box 116 Wenatchee, WA 98807.0116 509.662.7164 FAX 509.662.4519 800.232.2636 tree@c-onursery.com www.c-onursery.com
Morning
(7:45—Registration; Moderate—Bruce Hollabaugh)

8:00 ACFGA Business and Elections
Bruce Hollabaugh, President

8:10 PDA and Apple Marketing Board Welcome
Lela Reichart, PDA Director, Bureau of Markets and Economic Development, Julie Bancroft, PAMP Executive Director

8:30 Basics of Nematode Management
Dr. Karl Peter, PSU Plant Pathologist
1 Category/Fumigation Credit

9:00 How to Manage Secondary, Non-Fruit Feeding Pests If Blocontrol Fails
Dr. David Biddinger, PSU Entomologist
1 Category Credit

9:45 Show and Tell

10:00 Getting the Upper Hand on Troublesome Weeds
Dr. Rob Crassweller, PSU Pomologist
1 Category Credit

10:30 Know Your Enemy—Tree Fruit Boring 101
Dr. Greg Krawczyk, PSU Entomologist
1 Category Credit

11:00 Does Water Quality Affect the Efficacy of NAA Stop-Drop Sprays?
Dr. Jim Schupp, PSU Pomologist and FREC Director
1 Category Credit

11:30 Group A—Lunch/Group B—Auditorium

12:15 Group B—Lunch/Group A—Auditorium

Disease Management Following a Wet Year
Dr. Karl Peter, PSU Plant Pathologist
1 Category Credit

Afternoon

1:00 The Right Nutrients for Quality Fruit
Dr. Rob Crassweller, PSU Pomologist
1 Category Credit

1:30 On the Horizon—The WPS Regulation Revision
Jim Harvey, PSU Worker Protection Standard Specialist
1 Core Credit

2:00 Show and Tell

2:15 Improving Crop Protectant Spray Coverage
PSU Pest-Ed Spray Application Team
1 Core Credit

3:00 Education Program Feedback

Concurrent Session in Spanish – School Library
Coordinated by Montseratt Fonseca Estrada, PSU Extension

12:15 Plant Propagation for Organic Vegetable Production
Tianna Dupont, PSU Extension

1:15 Money Matter$$—Practical Record-keeping for an Effective Accounting System
Miguel Antonio Saviroff, PSU Extension

2:15 Scouting for Orchard Pests to Target Spray Applications
Hector Nunez, PSU Pesticide Education Program
1 Core Credit

Please send payment, payable to ACFGA, by February 2, to: Brenda Cressler, ACFGA, 33 Musselman Avenue, Biglerville, PA 17307

e xtension.psu.edu
Winter Educational Meetings for Fruit Growers

Tuesday, Feb. 10—Central Susquehanna
Mifflinburg, PA; Contact John Esslinger, cje2@psu.edu
570-784-6660

Wednesday, Feb. 11—Southeast Region
Leesport, PA; Contact Tanner Delvalle, tcd125@psu.edu
570-622-4225; Kathy Salisbury, kvs14@psu.edu
215-345-3283

Thursday, Feb. 12—Northeast Region
Avoca, PA; Contact John Esslinger, cje2@psu.edu
570-784-6660

Monday, Feb. 16—Adams County
Biglerville, PA; Contact Tara Baugher, tab36@psu.edu
717-334-6271

Tuesday, Feb. 17—Lancaster/York Co.
Lancaster, PA; Contact Tim Elkner, tee2@psu.edu
717-394-6851

Wednesday, Feb. 18—Franklin County
Waynesboro, PA; Contact Tara Baugher, tab36@psu.edu
717-334-6271

Tuesday, Mar. 3—Appalachian Fruit Growers
Bedford, PA; Contact Tom Ford, tgf2@psu.edu
814-472-7986

Wednesday, Mar. 4— Erie County
North East, PA; Contact Andy Muza, ajm4@psu.edu
814-825-0900

Thursday, Mar. 5— Western PA
Wexford, PA; Contact Bob Pollock, rcp3@psu.edu
724-465-3880

2015 Program Highlights

- The Right Nutrients for Quality Fruit
- On the Horizon—the WPS Regulation Revision
- Disease Management Following a Wet Year
- Basics of Nematode Management
- Secondary Pests as a Result of BMSB
- Tree Fruit Borers 101
- Getting the Upper Hand on Troublesome Weeds
- Improving Crop Protectant Spray Coverage

This publication is available in alternative media on request.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to minorities, women, veterans, individuals with disabilities, and other protected groups.

extension.psu.edu
Modeling the Effect of Preharvest Weather Conditions on the Incidence of Soft Scald in Honeycrisp Apples

By M. Lachapelle et al.

‘Honeycrisp’ apples show a high susceptibility to physiological disorders such as soft scald. The objective of this study was to identify weather parameters during fruit development that influence soft scald development in ‘Honeycrisp’ apples. Soft scald susceptibility of ‘Honeycrisp’ has been linked to weather conditions during specific periods of the growing season, referenced by given phenological stages. Using weather data and fruit quality analysis data from three sites in Ontario, two sites in Quebec and one site in Nova Scotia for three seasons (2009–2011) and four additional sites in Ontario from 2002–2006, a model for soft scald incidence (SSI) was built to predict the susceptibility of ‘Honeycrisp’ apples prior to storage. This model used primarily two weather variables during three sub-periods of fruit development to accumulate a SSI index (%) during the growing season, from full bloom to harvest time. Relatively wet conditions during phenological stages from full bloom until 10 mm diameter (precipitation > 0.5 mm) and from 10 mm until 50% of final caliper (precipitation > 6.0 mm), cool conditions (temperature < 15 °C) from full bloom until 10 mm diameter, and warm conditions (temperature > 20 °C) from 50 to 80% of final size are conditions that resulted in increased soft scald susceptibility for ‘Honeycrisp’ apples. The SSI model may be used by producers to establish more appropriate marketing and storage strategies depending on levels of susceptibility to soft scald development predicted prior to storage.

(From Postharvest Bio. & Tech. 85:57)
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- No Warping.
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Best Angle Tree Stakes
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Strite’s Orchard and CSA
Harrisburg www.stritesorchard.com
This 100-year-old family farm produces fruit, vegetables, berries and ornamentals which they market through their farm market and CSA. The market also includes a bakery.

Ashcombe Farm and Greenhouses
Mechanicsburg www.ashcombe.com
This market began as a roadside vegetable stand in 1961 but has become a year-around market featuring unique gifts, designer arrangements, homegrown plants, fresh baked goods, a café, gourmet food items and a women’s boutique area.

Hollabaugh Brothers Fruit Farm and Market
Biglerville www.hollabaughbros.com
This fourth generation family business markets some of their 500 acres of fruit and vegetables at their newly constructed full-service market that features produce, gourmet food items, baked goods, gifts, local meats and local ice cream plus an educational “Bee Room”.

The Round Barn
Biglerville www.roundbarngettysburg.com
This market is operated by Knouse Fruitlands Inc., another fourth generation fruit and vegetable farm business. Besides fresh fruit and vegetables, the seasonal market offers prepared food items, baked goods, crafts, gifts and much more in a unique and historic round barn built in 1914 that also hosts private events on the second floor.

Hauser Estate Winery
Biglerville www.hauserestate.com
This recently established alternative agritourism venture produces local grapes to make wines in their underground winery production facility. On top of the production facility is a 360° glass-enclosed tasting room that overlooks miles of farmland, orchards and forests near the historic Gettysburg battlefield. A tour of the production facility will be followed by an optional wine tasting opportunity.

Cost is $60 per person and includes lunch, bus, and winery tour.

For information visit www.mafvc.org or call 717-677-4184 or 717-694-3596
Lunch and Learn for Young Specialty Crop Growers!

**Featured Speaker**

Julie Bancroft  
*Entrepreneurship and Innovation in Marketing Specialty Crops*

Young Grower Alliance Luncheon  
to be held at the  
Mid-Atlantic Fruit and Vegetable Convention  
This is a free event for Young Grower Alliance members and any young grower interested in networking with others pursuing the unique lifestyle involved in farming and horticulture.

**Tuesday, January 27, 2015**  
12:00—1:30 pm  
Hershey Lodge and Convention Center  
Hershey, PA

Please register no later than January 20, 2015 at:  
http://extension.psu.edu/plants/tree-fruit/events/lunch-and-learn-for-young-specialty-crop-growers  
Or call 717-334-6271, ext. 314

Special Thanks to  
*Helena Chemical Co.*  
for sponsoring lunch!
9th Annual Mid-Atlantic Fresh Apple Cider Contest
to be held during the Mid-Atlantic Fruit and Vegetable
Convention in Hershey, PA

Who is Eligible: Any commercial fruit or vegetable grower
whose operation is in Pennsylvania, Delaware, Maryland, New
Jersey, West Virginia, or Virginia.

What To Submit:
1. One gallon of your best cider in plain unmarked containers.
   If your container has a preprinted label it will not be placed
   in the competition.
2. Turn in the blend details on the entry form below or on a
   separate sheet with your name and mailing address. (We
   will not reveal the percentages but just want to know what
   cultivars are in the mix.) The purpose of the email is to be
   able to notify you about next year’s contest.
3. Sorry only one submission per farm. Deadline for entries
   will be Tuesday, January 27th, at 10:00 AM.

How the Cider Will Be Judged:
1. A number will be assigned to each entry, marked on the jug
   and recorded in a judging book.
2. A panel of judges will sample and evaluate the cider.
3. Ciders will then be placed on a table in the lobby of the
   Convention Center so that other people may taste them.
4. The top three rated ciders will receive certificates. In addition
   the top rated cider will be awarded one free registration to the 2016 Mid-Atlantic Fruit and Vegetable
   Convention.
5. Judging will begin Tuesday at 10:30 AM and the ciders will
   be available through Tuesday evening for sampling.
6. The winners will be announced Tuesday evening at the
   banquet.

Mid-Atlantic Cider Contest 2015 Judging Criteria

Below are the criteria that will be evaluated for each cider entry. Note that the characteristics have variable points assigned
them. Please be sure to follow the correct number of points for each characteristic. Numbers in parenthesis are the
maximum score for a particular characteristic. The higher the number, the better the characteristic.

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Mid-Atlantic Cider Contest 2015 Entry Form

Name/Farm: ________________________________
Address: __________________________________
Phone: ______________________ Email: __________________________
Mixture of Varieties: ___________________________ Entry Number: _________
2015 Mid-Atlantic Fruit & Vegetable Convention
Educational Programs

Updated as of January 5, 2014

THIS LIST ONLY CONTAINS WORKSHOPS AND FRUIT RELATED PROGRAMS. PLEASE VISIT WWW.MAFVC.ORG FOR THE MOST UP-TO-DATE AND COMPLETE LISTINGS, INCLUDING THE VEGETABLE PROGRAMS.

Please note, speakers, topics, times and rooms in this program are subject to change. Check for updates on the website at www.mafvc.org. The printed program at the Convention will take precedence over any pre-convention programs.

Monday, January 26, 2015

New Organic Vegetable Producers School
9:00 a.m. to 3:00 p.m.
Fee - $100 includes lunch, course reader and organic production guide.
This full day intensive will delve into plant propagation, insect, weed and disease management. Join us if you are a new organic vegetable producer or interested in transitioning your operation.
9:00 Introduction and Organic Standards
9:30 Tips for Transplant Propagation for New Organic Growers
10:00 Plant Disease Basics
10:30 Managing Plant Disease Hands-on Activity
12:00 Lunch
12:30 Six Steps toward Ecological Weed Management in Organic Vegetable Production
1:30 Organic Pest Management Hands-on Activity
3:00 Adjourn
Speakers - Tianna DuPont, Penn State Extension; John Good, Quiet Creek Farm, and Beth Gugino, Penn State Univ.
***Note – Soil Management is an important basis for organic management. Rather than cover it only in a cursory manner we will point you in the direction of longer courses designed to delve into the details.

Irrigation Water Toolbox Workshop
9:00 a.m. to 4:00 p.m.
Fee - $50 includes lunch
Have you tested your irrigation water chemistry? Learn how the quality of your irrigation water affects aspects of production including nutrient availability, pesticide behavior, and pathogen control. Bring your own water sample to test and develop a plan for your own water testing toolbox. Water sample collection instructions will be sent to registrants.
Presenters will include Penn State Extension commercial horticulture and water resources educators, and other academic researchers and water treatment industry representatives.
The following topics will be covered:
• Evaluating irrigation water source options.
• Water chemistry: pH, alkalinity and conductivity
• Acid adjustment calculations and injection systems
• Hands-on water testing activity; equipment calibration
• Water testing and water test report interpretation
• Fertilizer-water interactions
• Water quality effects on pesticides
• Physical and chemical water treatment methods

Basics of Good Agricultural Practices Workshop
9:00 a.m. to 5:00 p.m.
Fee $50 includes lunch – limited registration
This will be a pilot presentation of the FDA-Approved Farm Food Safety Course presented by the Produce Safety Alliance that will prepare growers to meet the food safety standards under the new Food Safety Modernization Act (FSMA).

Pennsylvania Pesticide Applicator License Basic Training
9:00 a.m. to 4:00 p.m.
Fee - $50 includes lunch and Private Applicator Packet (course and study materials)
If you intend to purchase and/or apply restricted use pesticides for the purpose of producing an agricultural commodity on land which is owned or rented by you, then you need a Pennsylvania Department of Agriculture Pesticide (PDA) License. To become a certified private applicator, testing is required. This full day Monday session will cover the basics and prepare you for the pesticide applicator’s exam (which will take place Tuesday morning from 8:30 AM – 11:30 AM).

* before a topic indicates the topic is expected to qualify for a category pesticide applicator license update credit.
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**Ag Literacy for Growers – Communicating with Consumers and the Media**

1:00 p.m. to 4:00 p.m.

Fee - $50 includes light refreshments

Do you struggle with communicating your message to consumers and media? Are you confident that your employees can handle any question from a customer? Lori Connelly (Penn State Univ.) will prepare you to smoothly deliver your company’s beliefs and easily conduct interviews before any audience. Dr. Richard Stup (AgChoice Farm Credit) returns to discuss best practices for training employees to address concerns they hear from consumers.

**Workshop Topics**
- Ag Literacy—What is it?
- Connecting with your Consumers
- Framing your Message
- Do’s and Don’ts when the Press Calls

Session incorporates interaction between participants to expand your network and opportunities to ask questions of your peers, industry experts and educators.

**USDA, AMS Grant Writing Workshop**

1:00 p.m. to 4:00 p.m.

Fee - $20

We expect USDA, Agricultural Marketing Service (AMS) will announce the availability of approximately $30 million in competitive grant funds to be awarded through the Farmers Market Promotion Program (FMPP) and the Local Food Promotion Program (LFPP). This workshop is intended as grant writing skills development in anticipation of applications for program being available late spring, 2015.

- FMPP is for projects that establish, expand, and promote direct producer-to-consumer marketing.
- LFPP enables eligible entities to plan or implement project(s) that assist in the development, improvement, and/or expansion of local and regional food business enterprise supply chain activities (activities that are not direct-to-consumer).

The goal of these program grants are to increase domestic consumption of and access to locally and regionally produced agricultural products, and to develop new market opportunities for farms serving local markets. For these projects “local/regional” is defined as a 400 mile radius. Bring your ideas for our local/regional food system, and get a start on developing a project proposal with the attributes to get funding. The final details for the expected 2015 programs are not yet published but you can check the USDA, AMS web site for the available information at [http://www.ams.usda.gov/AMSv1.0/fmpp](http://www.ams.usda.gov/AMSv1.0/fmpp)

**Tree Fruit - Nigerian Room**

9:00 Invocation
Ed Weaver, Weaver’s Orchard Inc.

9:05 President’s Address
Tim Weiser, Weiser Orchards

9:15 *The MaluSim Apple Carbohydrate Model and its Use For Improving Consistency of Chemical Thinning*
Dr. Alan Lakso, Cornell Univ. and Dr. Terence Robinson, Cornell Univ.

10:00 *Improving Branching of Apple Trees*
Win Cowgill, Rutgers Cooperative Extension

10:30 Adjourn to Keynote Session

**Keynote - Nigerian and Trinidad Rooms**

10:45 Legislative Update

11:00 Keynote Presentation: Human Capital: Now, Tomorrow and the Next Generation
Russell Redding, Delaware Valley College

11:45 Crop Insurance Changes Under the New Farm Bill
Brandon Willis, USDA-RMA

12:00 Luncheon Buffet
Great Lobby and Chocolate Lobby (cash)

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**Tuesday Afternoon, January 27, 2015**

**Tree Fruit** - Nigerian Room

1:30 **Automating Pruning—**
Pie in the Sky or Rubber meets the Road
Dr. Peter Hirst, Purdue Univ.

2:00 **Pruning by the Numbers**
Dr. Jim Schupp, Penn State Extension

2:30 **Pruning Running Late—Time to Automate**
Dr. Jayson Harper, Dr. Leland Glenna,
Dr. Anouk Patel-Campillo, Penn State Univ.

3:00 **From Loppers to Lasers—Labor-Saving**
**Engineering Advances for Grapes and Apples**
Dr. Johnny Park, Purdue Univ. and
Tony Koselka, Vision Robotics

3:45 **Computer-Assisted Pruning Demonstration**
Mid-Atlantic Growers and Speakers

4:15 **Adjourn**

4:30 **SHAP Business Meeting**
MSHS Executive Committee Meeting
Cocoa Suite 2

4:45 **NJSAS BOD Meeting**
Cocoa Suite 3

**Wednesday Morning, January 28, 2015**

**Small Fruit - Focus on Spotted Wing Drosophila** -
Crystal Room

9:00 **Spotted Wing Drosophila in the Mid Atlantic: An Update**
Dr. David Biddinger, Penn State Univ.

9:30 **Experiences With a Fixed Sprayer System in High Tunnel Raspberries**
Dale Riggs, D. Riggs Consulting

10:00 **Progress Towards Managing Spotted Wing Drosophila on Blueberries**
Cesar Rodriguez-Soana, Rutgers Coop. Extension

10:45 **Chemical and Non-Chemical Approaches to Managing Spotted Wing Drosophila in Raspberry**
Dr. Rufus Isaacs, Michigan State Univ.

11:30 **Using Spotted Wing Drosophila Exclusion Netting in Blueberries**
Dale Riggs, D. Riggs Consulting

12:00 **Luncheon Buffet**
Great Lobby and Chocolate Lobby (cash)

**Wine Grapes** – Magnolia CD

9:00 **Key Factors to Consider for Vineyard/Winery Development in the Mid-Atlantic**
Joyce Rigby, Harrisburg Area Community College and Hauser Estate Winery

9:45 **Understanding, Assessing and Managing Freeze Injury in Grapevines**
Dr. Michela Centinari, Penn State Univ.

10:15 **Finding Balance – Vine Size, Capacity, Vigor and Vine Balance**
Dr. Alan Lakso, Cornell Univ.

11:00 **Replanting: Challenges and Opportunities**
Dr. Gary Pavlis, Rutgers Univ.

11:30 **Sprayer Calibration: Protecting Your Crop and Your Bottom Line**
Dr. Kerry Richards, Penn State Univ.

12:00 **Luncheon Buffet**
Great Lobby and Chocolate Lobby (cash)

**Spanish** – Empire Room D

9:00 **Bayas y la Drosophila Ala Manchada**
(Brambles and SWD)
Kathy Demchak & Tianna Dupont, Penn State

9:30 **Manejo Postcosecha de Bayas y Fresas**
(Post-Harvest Handling of Berries)
Lee Stivers, Penn State Extension

10:00 **Mantenga la Seguridad de sus Cultivos—Use Buenas Prácticas Agrícolas y MIP**
(Keep Your Crop Safe – Use Good Agricultural Practices and IPM)
Tianna Dupont and Maria Gorgo-Gourovitch, Penn State Extension

11:30 **Poda de Huertos de Manzano de Alta Densidad: Principios y una Demonstration**
(Pruning High Density Apple Orchards: Principles and a Demonstration)
Mario Miranda Sazo, Cornell Extension

12:00 **Luncheon Buffet**
Great Lobby and Chocolate Lobby (cash)

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Tree Fruit - Nigerian Room
9:00 *How to Take Advantage of NEWA Weather and Pest Models
Dr. Julie Carroll, Cornell Univ.
9:30 Grower Usage of NEWA Systems (panel)
Dr. Rob Crassweller, Penn State Univ. (moderator),
Sam Boyer, Boyer Orchards;
Ben Lerew, Lerew Orchards;
Bruce Hollabaugh, Hollabaugh Brothers Fruit Farm
10:00 Grower Funded Research an Industry Partnership
Phil Baugher, SHAP Research Committee
10:10 The Importance of Grower Funded Research for the Prosperity of the Industry
Dr. Gary Thompson, Penn State Univ.
10:45 Grower Innovations (panel)
Bob Pollock, Penn State Extension (moderator)
Evan and Nathan Milburn, Milburn Orchards,
use of dancing air machines;
Chuck Musser
use of blue birds for insect control;
Brian Knouse, Knouse Fruitlands,
use of GPS;
Greg Heller, Heller Orchards,
using the Munkoff Pluk-O-Trak;
John Saunders, Saunders Orchards,
irrigation systems
11:30 Apple Tree Water Use in Northeastern Climates and an Online Water Balance System
Dr. Alan Lakso, Cornell Univ.,
Danilo Dragoni, Nevada Dept. of Env. Protection
and Dr. Terence Robinson, Cornell Univ.
12:00 Luncheon Buffet
Great Lobby and Chocolate Lobby (cash)

Wednesday Afternoon, January 28, 2015

Peaches - Trinidad Room
1:30 Peach Cultivars for the New Age - The Ernie Christ Lecture
Dr. Bill Shane, Michigan State Univ.
2:15 Peaches: Trends and Opportunities
Eric Gaarde, Gaarde FoodSource
2:45 Peach Rootstock Trials
Dr. Jim Schupp, Penn State Univ.
3:15 Peach and Nectarine Varieties I Love and Those I Should Never Have Planted (panel)
Jerry Frecon (moderator),
Robert Fralinger, Fralinger Farms;
Henry Chiles, Crown Orchard Co;
Gene Kingsbury, Kingsbury Orchards;
Dwight Mickey, Shatzer Orchards
4:00 Adjourn

Wine Grapes – Magnolia Room CD
1:30 Recommended and Promising Varieties for the Mid-Atlantic
Dr. Joseph Fiola, Univ. of Maryland
2:15 *Spotted Lanternfly and its Pest Potential to the Grape Industry
Dr. Mike Saunders Penn State Univ.
2:45 *Grape Disease Research Review and Update
Bryan Hed, Penn State Univ.
3:30 Wine Marketing & Promotion Strategies for the Mid-Atlantic Region
Abigail Miller, Penn State Univ.
4:30 Adjourn

Spanish – Empire Room D
1:30 Nuevas Tecnologías para Trabajar Inteligentemente y No Tan Fuerte
(New Technologies to Work Smarter Not Harder)
Mario Miranda Sazo, Cornell Extension
2:15 Uso de Presupuestos para Evaluar Empresas Agrícolas
(Using Budgets to Analyze Agricultural Enterprises)
Miguel Saviroff, Penn State Extension
3:10 **El Impacto de la Calidad del Agua en el Desempeño del Pesticida: El pequeño Factor que hace la Gran Diferencia
(The Impact of Water Quality on Pesticide Performance: The Little Factor that Makes a Big Difference)
Hector Nunez-Contreras, Penn State Extension
4:05 Evaluación (Survey)
4:15 Sesión termine (Adjourn)

Tree Fruit - Nigerian Room
1:30 *Revisiting Control Options for Internal Worms
Dr. Greg Krawczyk, Penn State Univ.
2:00 U.S. Apple Assoc & PA Apple Marketing Board Updates
Jim Bair, US Apple Association,
Julie Bancroft, PA Apple Marketing Program
2:30 Apple Flower Development - Busting the Myths
Dr. Peter Hirst, Purdue Univ.
3:00 *Wooly Apple Aphid Outbreaks in Relation to Stink Bug Management
Dr. Chris Bergh, Virginia Tech Univ.
3:45 Progress on a Low Cost Harvest Assist Device
Dr. Paul Heinemann, Penn State Univ.
4:15 Adjourn
4:30 MSHS Business Meeting – Tower 2
(all members are encouraged to attend)
4:45 NJSHS Annual Meeting – Tower 1

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Thursday Morning, January 29, 2015

Small Fruit - Cocoa 1
9:00  *What’s New in Blueberry Weed Control
      Dr. Eric Hanson, Michigan State Univ.
9:30  How We Grow and Market Strawberries and Raspberries at Strawberry Tyme Farms
      John Cooper, Strawberry Tyme Farms
10:00 Recycling Horticultural Films: Handling and Marketing
      Dr. Lois Levitan, Cornell Univ.
10:45 Low Tunnels for Strawberries: What Works and What Doesn’t
      David Pike, Farm to You Market; Eric Menard, Dubois Agrinovation and Kathleen Demchak, Penn State Univ.
11:30 Proper Postharvest Handling of Berries
      Lee Stivers, Penn State Extension
12:00 Luncheon Buffet
      Great Lobby and Chocolate Lobby (cash)

Peaches - Trinidad Room
9:00  **Protective Clothing – Dress for Success in Protecting Yourself
      Dr. Kerry Richards, Penn State Univ.
9:30  How We Put the Woot in Froot?
      Kim Gaarde, Fruit Dynamics
10:00 **Rise in Secondary Pests in Peaches
      Dean Polk, Rutgers Cooperative Extension
10:45 *Observations in the Field of Bacterial Spot on Stone Fruits
      Mark Shannon, Shannon Farm Services, Inc.
11:00 *Bringing IPM Back to Peaches in the Face of BMSB
      Dr. Ann Nielsen, Rutgers Univ.
11:30 **What the Industry Learned about Listeria Outbreak
      Dr. Steve Knabel, Penn State Univ.
12:00 Luncheon Buffet
      Great Lobby and Chocolate Lobby (cash)

Thursday Afternoon, January 29, 2015

Small Fruit - Nigerian Room
1:30  What the Winter of 2013/2014 Taught Us About Floating Row Covers
      Dr. Michael Newell, Wye Research & Education Center
2:00  *Integrated Management of Major Diseases on Brambles
      Dr. Mahfuzur Rahman, West Virginia Extension
2:45 To be Announced
3:30 Food Safety Considerations When Using Irrigation in Strawberries
      Kathleen Demchak, Penn State Univ.
4:30 Adjourn

Tree Fruit - Nigerian Room
1:30  **Sprayers 101 – Are You Hitting the Target
      Dr. Kerry Richards, Penn State Univ.
2:00  Using Social Media to Tell Your Story
      YGA Panel; Carla Snyder, Penn State Extension (moderator) Ben Kishbaugh, Big Hill Ciderworks; Ashlee Dugan, Broad Street Market; Tyler Butler, Butler Orchards
2:45 Early Results of Asian Pear Cultivar Plantings
      Dr. Rob Crassweller, Penn State Univ.
3:15 Determining Harvest Maturity of Asian Pears
      Win Cowgill, Rutgers Cooperative Extension
3:30 Adjourn

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Members and guests of the Pennsylvania Apple Marketing Program are invited to enjoy a casual evening of conversation and camaraderie with fellow apple growers and their families.

The reception is also a great time to meet and visit with US Apple staff members.

When

Wednesday, January 28, 2015
5 PM - 7 PM

Where

Mid-Atlantic Fruit & Vegetable Convention
Hershey Lodge & Convention Center
Cocoa Suites 3, 4 & 5

Light Appetizers & Open Bar

Sponsored by:
2015 MEMBERSHIP DUES ARE PAYABLE NOW!

2015 MEMBERSHIP DUES - Part I

Membership Categories:
A. Fruit Grower Membership (Owner or Operator) ........................................... $75.00
B. Commercial Membership (Business or Firm related to the Industry) ................ $75.00
C. Professional/Subscription Membership (Ext. & Assoc. Personnel, Consultants) . $40.00
D. Student Membership (High School and College Students) ............................ $20.00

*Payment for membership dues is NOT to be considered a charitable contribution.

If you wish to make a donation beyond your dues, please indicate below. Your generosity is greatly appreciated!

□ Endowment Fund

□ Association

Amount of Donation: $  

TOTAL $  

Membership Name ____________________________
Farm or Business Name ________________________________
Address ___________________________________________City/State/Zip________________________
Telephone Number _______________________________FAX Number __________________________
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2015 MID-ATLANTIC FRUIT AND VEGETABLE CONVENTION
156th Annual Meeting of the State Horticultural Association of Pennsylvania
at the Mid Atlantic Fruit and Vegetable Convention Hershey Lodge and Convention Center - Hershey, PA  •  January 27 – 29, 2015

REGISTRATION FEES – PART II

Member’s Registration:
Advanced Registration (postmarked by January 16, 2015)
First person from a farm or company ................................................................. @ $65.00 =
(Additional family members or employees) ...................................................... @ $60.00 =
Walk-In Registration at Hershey ................................................................. @ $80.00 =

Non-Member's Registration:
One Day (at door) ................................................................. @ $110.00 =
Three Day (at door) ................................................................. @ $150.00 =

Workshops (January 26, 2015):
New Organic Vegetable Producers School ......................................................... @ $100.00 =
Irrigation Water Toolbox .............................................................................. @ $50.00 =
Basics of Good Agricultural Practices ............................................................ @ $50.00 =
Pennsylvania Pesticide Applicator License Basic Training.............................. @ $50.00 =
Ag Literacy for Growers - Communicating with Consumers and the Media .......... @ $50.00 =
Farm Market Tour ........................................................................................... @ $60.00 =

FRUIT and VEGETABLE GROWERS DINNER
GROWER RECEPTION - DOOR PRIZES - AWARDS
Tuesday, January 27, 2015 - Nigerian Room .......................................................... @ $35.00 =

TOTAL $  

Names for additional tags needed

PLEASE MAKE YOUR CHECK PAYABLE TO: “STATE HORTICULTURAL ASSOCIATION OF PENNSYLVANIA” AND MAIL TO:  Maureen Irvin, Executive Secretary, State Horticultural Association of Pennsylvania
480 Mountain Road, Orrtanna, PA 17353
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