



New York Berry News

Volume 11, Number 9

October 4 2012

Events Calendar

October 11, 2012. *Chautauqua CCE Small Fruit Tour*, Kennedy, NY. For more information see news brief that follows.

October 26, 2012. *Elderberry Winemaking Workshop*, Columbia, MO. Five hour workshop designed for those interested in learning how to make elderberry wine hosted by the University of Missouri. For more information, <http://www.brownpapertickets.com/event/276034>.

November 7-10, 2012. *Southeast Strawberry Expo*, Hilton Charlotte University Place, Charlotte, NC. Farm tour, workshops, educational sessions, and trade show. For more information, contact the NC Strawberry Association, info@ncstrawberry.com, 919-542-4037, or visit www.ncstrawberry.com. Exhibitor inquiries welcome.

December 4-6, 2012. *Great Lakes Fruit, Vegetable and Farm Market EXPO*, DeVos Place Convention Center, Grand Rapids, MI. For more information: www.glexpo.com.

January 22-24, 2013. *Empire State Producers EXPO*, OnCenter, Syracuse NY. More information: <http://nysvga.org/expo/info>.

January 27-30, 2013. *North American Strawberry Growers Associations*, Portland OR. More information: Kevin Schooley, 613-258-4587, info@nasga.org or www.nasga.org.

January 28-30, 2013. *North American Raspberry and Blackberry/Strawberry Growers Association*, Portland OR. More information: 919-542-4037, info@raspberrylblackberry.com.

January 29-31, 2013. *Mid-Atlantic Fruit and Vegetable Convention*, Hershey, PA. More information: William Troxell, 717-694-3596, pvgga@pvgga.org or www.mafvc.com.

February 27 – March 1, 2013 – *US Highbush Blueberry Council Spring Meeting*, in Savannah, GA. More information: 916-983-0111 or www.blueberry.org.

March 13, 2013 – *Cape Cod Cranberry Growers' Association Winter Meeting*, in Hyannis, MA. More information: 508-866-7878, info@cranberries.org, or www.cranberries.org.

June 17-19, 2013 – *Berry Health Benefits Symposium*, in Concord, NC. Join leading researchers and industry leaders to learn about the newest research in this field. Held biennially; this fourth Symposium will be the first time the event has been held on the East Coast. For more information, contact catmc@peak.org. Info about the 2011 Symposium may be found at www.berryhealth.org.

December 4-7, 2013 – *Joint North Carolina Strawberry Growers Association and North American Strawberry Growers Association Conference*, Sheraton Imperial Hotel, Durham, North Carolina. More information: info@ncstrawberry.com or www.ncstrawberry.com.

Chautauqua Cornell Cooperative Extension Offers Program for Small Fruit Growers October 11, 2012

Kennedy, NY- Cornell Cooperative Extension of Chautauqua County will offer a small fruit workshop and farm tour on Thursday, October 11th, for growers of blueberries, blackberries, raspberries, and other small fruits. The workshop will begin at 2:00 pm and will conclude at 5:00 pm at Abers Acres located at 884 Route 394 in Kennedy, NY.

Topics to be discussed include: organic production and pest and disease control of fruit crops; a new invasive insect confirmed in New York State, the Spotted Wing Drosophila; and the use of high tunnels in fruit crops. All current or prospective small fruit growers in Western New York are welcome to attend.

Abers Acres, owned by John, Susan, and Adam Abers, grows certified organic fruits and vegetables on over 100 acres in Kennedy. The Abers are currently growing and marketing their strawberries, red and black raspberries, blueberries, currants, elderberries, and gooseberries through a home farm stand, a stand in Warren, PA, and farmers markets. Their Pick-Your-Own crops have grown over the years to include most of these fruit crops as well as peas, beans, and cut flowers. They utilize high tunnels with their red raspberry crops with great success.

Cathy Heidenreich, Berry Extension Support Specialist, focusing on small fruit production, small fruit pest management, and applied berry crop research, will facilitate discussion about production-related questions during the tour.

Small fruit growers are encouraged to call Ginny Carlberg by October 5th at 664-9502 x. 202 to register. This tour is free for all CCE-enrolled farms, \$10 per farm for all non-enrolled.



Spotted Wing Drosophila – Your Input Requested

Dear Berry Growers:

Please take five minutes to help us fight the spotted wing drosophila (SWD), a new insect pest that threatens berry crops in the Northeast.

Unlike most fruit fly species that only attack overripe and rotten fruit, SWDs can lay eggs in ripening soft-skinned fruit such as raspberries, blueberries and strawberries, infesting them before harvest.

An Asian native, SWDs were first detected in North America in California in 2008, and made their way to New York late in the 2011 growing season. In 2012, they were back earlier in the season and appear to have caused widespread damage, especially in late-season blueberry varieties, fall raspberries and day-neutral strawberries. Extension educators and researchers received questions and reports of SWD damage daily.

So that we can better understand the scope and economic impact of this new pest to berry growers in the Northeast, we request that you complete a brief online survey. This information will be invaluable in defining the problem and informing policymakers and funders of the best way to support research and extension efforts to battle SWD.

The survey is anonymous and information about specific farms will not be released to the public. (The only identification information we ask is the county and state where you observed damage.)

So that we can share the results of our survey at an upcoming strategy meeting, please complete the survey by October 19, 2012.

Questions? Cathy Heidenreich, 315-787-2367 or mcm4@cornell.edu.

Thank you for sharing your information and helping us fight this new threat to the Northeast berry industry.

Northeast IPM Spotted Wing Drosophila Working Group

Take the SWD survey now:

<https://www.surveymonkey.com/s/3FH6X3Q>

More about SWD:

http://www.fruit.cornell.edu/berry/pestaalerts/droso_philapestaalert.html

Get Started with Berry Production! Online Course Starts in November

Whether you're brand new to farming or an experienced farmer considering adding berries to your enterprise mix, this 5-week online course will help you get started with the big three berries--strawberries, blueberries, and brambles--as well as some lesser-known berry crops like currants and gooseberries. Sign up to learn about:

- Primary considerations when choosing a site for successful berry farming
- Basic cultural demands of the 3 major berry crops (strawberry, blueberry and brambles)
- Cultural requirements of an array of lesser known berry crops
- Pest complexes of the major berry crops
- Post-harvest requirements of berries
- Considerations for successful marketing of berry crops

The information in this course is designed with Northeast growers in mind, though producers from other regions may register too. It is led by Laura McDermott, a berry specialist with Cornell Cooperative Extension. You'll also hear from farmers and other Ag specialists in live weekly webinars, which will complement reading materials, discussion forums, and resource links in the course's virtual classroom.

This 5-week course costs \$200. Registration closes when the course fills up, or by Nov. 12, whichever happens sooner. So don't delay, visit <http://nebeginningfarmers.org/online-courses/all-courses/bf-122-berry-production/> to learn more and to register.

This online course is only one of many offered this Fall, Winter, and Spring by the Cornell Small Farms Program and Cornell Cooperative Extension, on topics ranging from financial recordkeeping to raising poultry. Visit <http://nebeginningfarmers.org/online-courses> to learn more!

Berry Open House Features New Options for Growers - Craig Cramer, Cornell Department of Horticulture

As you probably know, it's been a tough year for many of New York's berry growers. But that didn't stop more than 80 from attending the Small Fruit Open House at Cornell Orchards August 31. There, they saw how the latest research can help extend the harvest season, manage nutrients, and try new crops.

"Berry growers got hit with a triple-whammy this season," says Cathy Heidenreich, Extension berry specialist in the Department of Horticulture, Cornell University.

Following mild winter weather and an unprecedented early-season heat wave, many growers woke up to flower-killing frosts in spring. Then drought in many locations further reduced harvest potential. And finally, the Spotted Wing Drosophila (*Drosophila suzukii*, or SWD for short) – a tiny exotic fruit fly pest – spread to many parts of the state, ruining fruit in mid- to late summer.

"There's not much we can do about the frost, but we're encouraging growers to consider installing drip irrigation as a cost-effective way to deal with drought," says Heidenreich. "It's the fruit fly that really has everyone worried."

An Asian native, the SWD first appeared in the U.S. in California in 2008. It then spread to the Southeast and finally showed up in the Hudson Valley late last season.

SWDs resemble the fruit flies that often buzz around overripe fruit on the kitchen counter. The big difference is that they can pierce unripe fruit and lay eggs inside, where larvae can develop unnoticed. "Many berry growers are closing early this season, leaving their fall crops unharvested rather than risk a bad experience for their customers," says Heidenreich.

Coping with SWDs will be challenging, she adds, in part because New York berry growers are a different breed. According to a 2007 Cornell University study, 73 percent grow on 6 acres or less, so their operations are relatively small. 79 percent sell at least some of their harvest through farm stands, farmers markets or U-pick operations, so they know their customers personally. And more than 90 percent are low- or no-spray. (17.5 percent grow organically.)

There aren't many pesticide options for berry growers to combat SWDs, Heidenreich points out. And many are reluctant to adopt intensive spray programs that require investments in sprayers and protective equipment and time spent monitoring pest populations.

"That's not why most of them started growing berries," says Heidenreich. "This pest could be a life-changing experience for them."

Cornell entomologists are seeking funding to find ways of managing this new pest. Despite the lack of funding, they and others are working together to monitor SWDs as they move across the state. By mid-September, they detected SWDs in 30 counties from Long Island to western New York. (For pest alerts and SWD distribution map, visit: www.fruit.cornell.edu/berry/pestaalerts)

At the field day, growers toured high tunnels that extend the harvest and improve the quality of bramble crops, as well as make it possible to grow crops that don't normally overwinter in New York, such as figs and blackberries. High tunnels can also protect crops from late

freezes such as the one that occurred last spring. Growers also viewed a low-tunnel production system that similarly protects crops from frost and allows earlier harvest of everbearing strawberries in spring while extending the season well into fall. Growers were also introduced to new berry crop possibilities, including juneberries, currants, gooseberries, and elderberries.



Above: High tunnels extend the season and improve the quality of raspberry crops, and make it possible to grow crops such as figs and blackberries that don't normally overwinter in New York.

"Berry growers are hard-working and creative," says Marvin Pritts, berry crop specialist and chair of the Department of Horticulture. "Their ideas and perseverance – coupled with ideas generated and tested at Cornell – will allow berries to continue to be an important and vibrant component agriculture in the Northeast for years to come."

Below: Growers view low-tunnel everbearing strawberry production system that extends the harvest season and protects against frost.



2012 CENSUS OF AGRICULTURE

YOUR VOICE. YOUR FUTURE. YOUR RESPONSIBILITY.

USDA News

Farmers Use the Census of Agriculture to Improve Local Communities, Farm Future

When a Pennsylvania dairy farmer heard that his local county officials were considering a significant reduction in rural snowplow services in his community, he became concerned. While the cuts were caused by local government budget constraints, this dairy farmer knew he had to do something – he turned to the Census of Agriculture administered by the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS).

Using Census data he was able to illustrate the need for rural snowplow service to, "show our county officials the value of all the milk produced" in the community and the need for truck access to dairy farms during inclement weather. The farmer said the officials, "had no idea of the size of the dairy industry in our county and reconsidered their plan for the snow removal budget with dairy farmers in mind." Because of his efforts and utilizing data from the Census of Agriculture, one farmer had the opportunity to make a significant impact and benefit his community.

While stories such as the Pennsylvania farmer's make it evident that the census protects U.S. agriculture now, it may also be surprising to know it also protects the future of agriculture in America. Data gathered from the 2007 Census of Agriculture showed the average farmer is approaching 60 years of age and the number of farmers under the age of 25 decreased by almost 30 percent since 2002. Findings such as these have helped the USDA see the need to create beginning farmer programs to protect the future of agriculture.

Officials from NASS say stories like the one from the dairy farmer in Pennsylvania should be more common – and they encourage more farmers and ranchers to take advantage of the data and the benefits it provides. The first step is to complete the Census of Agriculture to ensure an accurate and complete count and to help grow your future, boost rural services and shape farm programs.

Soon farmers will have the opportunity to complete the 2012 Census of Agriculture. NASS will mail Census form at the end of December, and responses are due by February 4th, 2013. By responding, farmers and ranchers can have a voice in shaping their future. After all, the Census is your voice, your future and your responsibility. For more information about the Census, visit www.agcensus.usda.gov or call 1-800-4AG-STAT (1-888-424-7828).

USDA Seeks Applications for Grants to Help Agricultural Producers Bring Increased Value to Their Products

WASHINGTON, August 16, 2012 – Agriculture Secretary Tom Vilsack today invited agricultural producers to apply for grants to increase the value of their products.

"Producers can greatly enhance the bottom line of their businesses and improve their economic prospects when they improve the value of their products, thus expanding their markets and customer base," Vilsack said. "The Value Added Producer Grant program (VAPG) has a proven track record of doing just that and I am pleased to announce that we are inviting producers to apply for these grants by the deadline. The funds in this program enable America's farmers, ranchers and rural business owners to find ways to expand their product offerings, revenue streams and create more economic opportunity by bringing additional value to what they already produce."

Applicants have until October 15, 2012 to apply. Vilsack emphasized that far too many producers are missing out on significant economic opportunities when their products are enhanced further away from the farm. "When our producers keep their value-added activities closer to the farm, it not only improves their bottom line; it strengthens our rural economy and strengthens our rural communities."

USDA Rural Development is making up to \$14 million in grants available for projects that help farmers and ranchers produce bio-based products from agricultural commodities. The grants, which are competitively awarded, are available for planning activities or for working capital expenses, but not for both. The maximum grant amount is \$100,000 for planning grants and \$300,000 for working capital grants. Generating new products, creating and expanding marketing opportunities and increasing producer income are the goals of the VAPG program.

For example, Unruh Greenhouse LLC in West Union, Iowa received a VAPG working capital grant to process and package local produce for nearby grocery stores, universities and hospitals. Schmidt Farms Inc. in Rawlins County, Kansas received a working capital grant to expand the market for their product lines which includes beef, chicken, and eggs. The company is a family farm that has been in the meat business for the last 25 years. They have been marketing their home grown beef directly to customers. Schmidt Farms is building and expanding the market not only for their beef, but also for their chickens and eggs. The product lines will be marketed as being produced locally and produced farm fresh. Beef produced is promoted as being all natural and chickens as being free range and antibiotic free.

Businesses of all sizes are encouraged to apply, but priority will be given to operators of small and medium-sized farms or ranches that are structured as family farms, beginning farmers or ranchers, or those owned by socially-disadvantaged farmers or ranchers. Grants are available for projects up to 36 months in duration.

For information on how to apply, see page 48951 of the August 15, 2012 Federal Register, <http://www.gpo.gov/fdsys/pkg/FR-2012-08-15/pdf/2012-20082.pdf>.

President Obama's plan for rural America has brought about historic investment and resulted in stronger rural communities. Under the President's leadership, these investments in housing, community facilities, businesses and infrastructure have empowered rural America to continue leading the way – strengthening America's economy and strengthening small towns and rural communities. USDA's investments in rural communities support the rural way of life that stands as the backbone of our American values. President Obama and Agriculture Secretary Tom Vilsack are committed to a smarter use of Federal resources to foster sustainable economic prosperity and ensure the government is a strong partner for businesses, entrepreneurs and working families in rural communities.

USDA, through its Rural Development mission area, has an active portfolio of more than \$170 billion in loans and loan guarantees. These programs are designed to improve the economic stability of rural communities, businesses, residents, farmers and ranchers and improve the quality of life in rural America.

FOCUS ON FOOD SAFETY

Produce Safety Alliance September Update - *Gretchen Wall, Produce Safety Alliance Program Coordinator,*
glw53@cornell.edu

With fall farmers' markets in full swing, there certainly has not been a lack of colorful displays packed full of fresh fruits and vegetables. We hope this autumn will allow you and your family to enjoy an abundance of safe, wholesome produce in whatever region you live. We've included a few resources at the end of the newsletter to help you brush up on your food safety skills before heading out to the market.

A Lesson Learned: PSA Curriculum Learning Objective Development

One of the most important questions we ask ourselves constantly is "What do we want our audience to be able to do by the completion of the curriculum?" From the very beginning, the PSA has been focused on developing content that will be concise and useful in reducing the risks associated with fresh produce. Our process is highlighted in the diagram to the right (see PDF). The first step, identifying GAPS challenges, was accomplished by facilitating 10 national working committees, hosting an educational material conference, and conducting farmer focus groups to collect information. We have been very fortunate to have so many individuals with broad expertise participate in this process and willingly provide recommendations.

Identifying challenges and understanding grower expectations allowed us to set curriculum goals. Our focus is on building a one day workshop with seven hours of dedicated instruction time that includes six modules: Worker Health, Hygiene, and Training; Water; Soil Amendments; Wildlife and Domestic Animals; Equipment, Facilities, and Sanitation; and Developing a Farm Food Safety Plan.

To meet our goals, our next step is to create specific learning objectives that describe what the learner will know or be able to do as a result of the attending a PSA training. There are four main benefits to using learning objectives in curriculum development; 1) provide consistency in the design of instruction, 2) guide the selection of course content, 3) provide a basis for evaluating what participants have learned, and 4) help students organize their own learning. We will continue to share our progress with you and look forward to collaboration to foster effective educational programs in your state by using techniques grounded in science and educational design.

For those of you that made it this far through the newsletter, congratulations! As much as we food safety nerds love to talk about educational design, we promise there are some exciting things coming in the next few months with the creation of content. To avoid reinventing the wheel, we hope you will be willing to share your tools and resources with us or let us know if you see an innovative food safety program.

Spotlight Series: Produce Handler Input Opportunity!

As a national alliance, we strive to supply both learners and researchers with the most comprehensive database of educational materials and resources to keep fresh fruits and vegetables safe. Much of the information we have collected via the working committee process, farmer focus groups, and through the educational materials conference have helped us shape an effective training program for farmers, packers, regulatory personnel, and others interested in the safety of fresh produce. However, without access to credible, science-based information, we would not be nearly as far as we are in understanding produce safety as we are today.

This month we are highlighting researchers from the University of Rhode Island and Cornell University who are looking for produce handlers to participate in an on-line survey to share their awareness of non-thermal food processing technologies. The survey does not ask for any proprietary information, is completely anonymous, and the researchers promise the survey will take only 15 minutes.

You may contact the researchers directly if you have any comments or questions:

Lori Pivarnik, pivarnik@uri.edu or Randy W. Worobo, rww8@cornell.edu

Please note that the researchers are also surveying shellfish handlers, in case some of the questions sound nautical.

Please take 15 minutes to access and complete the survey here: <http://www.zoomerang.com/Survey/WEB22FBY9ESZCD>.

The survey will be open until the end of September. Thank you for helping the researchers collect data for their project to continually add to the greater body of knowledge to reduce food safety risks in fresh produce.

Food Safety at the Market!

Farmers' markets are a great way to stock up on locally grown fresh fruits and vegetables. Both producers and consumers need to be aware of potential food safety risks that exist, not only in the grocery store but at the market too! Below are just a few resources that can help farmer's market managers, vendors, and consumers keep fresh produce safe.

Colorado State University:

[Colorado Farm-to-Table Food Safety](http://farmtotable.colostate.edu/index.php)

Colorado State University's new Farm-to-Table Food Safety website was developed to enhance the accessibility of food safety resources and information to help Coloradans lower the risk of foodborne illnesses all along the food chain--from the producer to the consumer. The Extension website features information targeted to those who Grow, Prepare, or Eat food. On the Grow page, find resources for farmers' market vendors and managers; learn how to create a farm food safety plan; or view recorded GAPs/GHPs training webinars. Find all this and more at <http://farmtotable.colostate.edu/index.php>.

The Ohio State University Extension Fact Sheet:

[Produce Safety at the Farm Market: A Guide for Farmers and Sellers](#)

Farmers' Market Federation of New York:

[Food Safety Recommendations for Farmers' Markets](#)

Join Us!

Our listserv is always expanding and we hope you'll join us! To sign up, please visit our website at

<http://producesafetyalliance.cornell.edu/psa.html>. As always, please do not hesitate to contact myself or Betsy Bihn (eab38@cornell.edu) if you have any questions.

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ON THE ORGANIC SIDE...

New "Organic Storage Guide" Serves New York's Growing Organic Produce Sector - Mary Woodsen, NYS IPM program

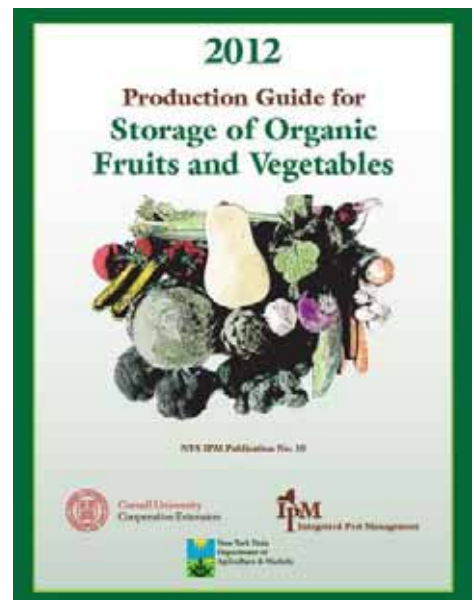
The peaches at the farm stand, the pears in the supermarket: they're still alive—still kicking, as it were. Yet because many organic fruit and vegetable farmers sell their produce shortly after harvest, best practices for long-term storage haven't been a looming concern.

Now, with organic produce reaping a growing marketplace share, farmers who can keep their crops fresh longer will benefit from more marketing options. But it takes knowing how—which is where the 2012 Production Guide for Storage of Organic Fruits and Vegetables, comes into play. It is free and newly posted online by the New York State Integrated Pest Management Program (NYS IPM).

Go to: http://www.nysipm.cornell.edu/organic_guide/default.asp to download.

Authors Christopher Watkins and Jacqueline Nock's clear, exhaustive (but not exhausting) manual provides the information and advice farmers need to store their crops with the same care they put into growing them.

Growers will learn, for example, that some fruits or vegetables change sugars into starches as they age. Others do the reverse. Some emit ethylene, a natural gas essential for ripening. Others don't. Among those that don't, some might start decaying, yellowing, or sprouting at the merest whiff of ethylene from a nearby dis-play—yet others pay it no heed.



Of course, some crops naturally lose freshness far more quickly than others. Yet even among these, how they are cared for after harvest (and even as they grow) has a huge effect on how well they hold up in the storage bin or on the grocer's shelf.

Watkins, a Cornell horticulture professor specializing in postharvest science, and Nock, a horticulture research specialist at Cornell, have written this free guide to complement NYS IPM's updated 2012 organic grower guides. NYS IPM promotes least-toxic solutions to pest problems.

Learn more at www.nysipm.cornell.edu. The guide was funded in part by a New York Specialty Crop grant via the New York State Department of Agriculture and Markets.

Organic Management of Spotted Wing *Drosophila* - Emily Cook, Organic Fruit and Vegetable Extension Educator, Ulster County, Hudson Valley Lab, Highland, NY, 854-943-9810, ekc68@cornell.edu

Berries sampled on organically managed raspberry plantings in Ulster County continued to show spotted wing drosophila (SWD) infestation this past month. Two products are approved for use in organic production to control SWD: Entrust and PyGanic. Entrust has been found to be the most effective, but it must be rotated with PyGanic to avoid resistance build-up in the insect. Entrust is limited to 2 consecutive applications, and a total of 9 oz. per crop, per season. If 3 applications are made within one 30 day period, Entrust should not be used for the following 30 days. Entrust will have residual activity for 5-7 days. Entrust has a 1 day-to-harvest interval for bush and caneberries and a 4 hour re-entry interval.

PyGanic 5.0 should be applied at a rate of 16-32 oz. per 100 gallons of water in tractor operated sprayers or ¼- ½ oz. per gallon for backpack sprayers. PyGanic is not limited in number of applications, and has a zero day to harvest interval. It has a re-entry interval of 12 hours. PyGanic degrades quickly in sunlight so has very low residual on crops. Repeat applications need to be made every 1-2 days. Spraying in the evening will prolong its activity. **PyGanic may also be sprayed on harvested fruit in baskets** to prevent infestation. Post-harvest spray rate is 5 ml in 10 pints water.

For control of SWD that will best prevent resistance build-up, spray bi-weekly with Entrust and use PyGanic every two days in alternate weeks. Coverage is important for both materials, so it is recommended to add a spreader/sticker, such as M-PEDE or NuFilm P to the tank.

MIXING RATES for backpack sprayers	Per Gallon water	Per 3 gallons water	Per 5 gallons water
2 oz./acre Entrust	0.015 oz	0.046	0.075 oz
PyGanic 5.0	0.5 oz	1.5 oz	2.5 oz

FOCUS ON PEST MANAGEMENT

Recommendation for Fall Raspberries Infested with SWD- Laura McDermott, Capital District Vegetable and Small Fruit Program.

As quickly as SWD populations rose during the last few weeks, they seem to be dropping possibly due to the cool fall weather. Regular spraying (3-7 day spray schedule) has reduced infestation to bearable levels. There is a lot to learn about this insect and I feel that there will be information forthcoming this winter to help growers develop a better strategy for 2013.

If you decided to forgo spraying for SWD and are considering mowing primocane raspberries early, **STOP!!!** There is no evidence that mowing canes early will actually have any impact at all on 2013 population or pressure from Spotted Winged Drosophila. What we DO know is that mowing those canes now, before they can adequately move carbohydrates to the crown of the plant, will have a serious negative impact on the ability of the raspberry plant to successfully winter in our climate.

Carbohydrates move from the leaves into the crown during the fall and then back up from the crown into the buds in the spring. Removing canes early essentially removes the stored food available to the canes and can result in winter injury or weak canes the next year. Conversely if you wait until the spring – say March – and it turns warm quickly (like this past spring) the carbohydrates will move into the buds and then you remove those canes with the stored food leaving the new canes with no reserve.



The best time to remove canes on fall bearing raspberries is from December to February when most of the carbohydrates are in the crown of the plant. Prune the old canes as close to the ground as possible so that the buds for new canes will break below the soil surface. If you don't do this, the fruiting laterals may form on the remaining cane and could be very low, unproductive and at risk of insect and disease.

If you are trying to reduce the population of SWD, you can top the canes, removing the fruiting bracts to discourage berries that would harbor SWD. This can be done anytime. Our recent frosty weather may have taken care of it for growers in some areas.

As for spraying the topped canes, there is no information to indicate that this is a good strategy and may likely be a waste of money and time. This also applies for spraying fruiting plants in hedgerows. Both of these strategies are considered illegal pesticide applications and should not be done.

New Blueberry Disease Factsheets – Craig Cramer, Cornell Department of Horticulture

The New York State IPM Program has released two new blueberry disease factsheets:

- [Blueberry Shock Disease](#) – This virus has recently emerged in New York, having been confirmed in 2011. Because it is transmitted by pollen and readily dispersed by bees and other pollinators, it is difficult to control.
- [Blueberry Scorch Disease](#) – This viral disease is a considerable threat to New York blueberry production. It is spread through clonal propagation of infected plant material and by aphids.

Disease Snapshot: Strawberry Red Stele Root Rot - Zachary Frederick, Graduate Student and R. Kerik D. Cox, Assistant Professor Plant-Pathology & Plant-Microbe Biology, Cornell University

Causes: *Phytophthora fragariae*

When to watch for it: All season

First line of defense: Use disease free planting stock and clean tools and equipment to prevent the spread of soil inoculum.

Summary: Red stele root rot is a particularly severe problem in production areas where strawberries are cultured as a perennial crop in cool, wet conditions. The severity of the above ground symptoms usually depends on the degree of root rot, which implies that minor infections have few or no aboveground symptoms. Severe infections will appear as wilts in wet depressions of a field during hot weather, and may produce little or no fruit and runners. Older leaves of severely infected plants will become tinged red, orange, or yellow. Lateral roots are the first to rot away after infection, and are followed by main roots which rot from tip to crown. The stele turns red once it is infected, and the crown will follow as infection progresses. As the infections age, the stele of the root and the inner tissues of the crown will turn brown and aboveground portions of the plant will wilt.



Above: A. Strawberry roots showing characteristic reddening of the stele when cut open (at arrow). Note the blackening of root tips below the sites that were cut, and the overall lack of lateral roots one would observe on a healthy plant. This gives the infected plants a “rattail” like appearance. B. As infections progress, the crown of the plant will also discolor and rot away.

Preventing the introduction of *P. fragariae* into the planting site by planting certified stock and not selecting a site that will not receive runoff from infested sites is essential to preventing disease. Once established, resting oospores and persist in soils. This limits management options to improving site drainage, selection of resistant cultivars, and the use of phosphorous acid, fosetyl-AL, and mefenoxam products to reduce the incidence of red stele. Soil fumigants have not been shown to completely eradicate *P. fragariae* from infested soils.

“Pack ‘N Cool” Provides Farmers with Mobile Refrigeration Solution

N.C. State University’s Plants for Human Health Institute (PHHI) has developed a new mobile cooling unit for farmers. The five-by-eight-foot refrigerated trailer – called the “Pack ‘N Cool” – is designed to keep fruits and vegetables at ideal temperatures during transport to and from farmers markets or as they’re harvested in farm fields. The Pack ‘N Cool is the program’s latest postharvest quality and food safety project geared toward helping farmers.

[Dr. Penelope Perkins-Veazie](#), professor and postharvest physiologist with PHHI, coordinated the effort to develop a mobile refrigeration unit that agricultural producers can use as a model for building their own versions. The Pack ‘N Cool unit combines the mobility of a cargo trailer with the refrigeration capabilities of a commercial cooler.



With construction spearheaded by Louis Wojciechowski, a lab technician with Perkins-Veazie’s research team, the model unit cost around \$3,400 to construct, including a new cargo trailer priced at \$1,500 (a pre-owned trailer can reduce costs). Construction guidelines, step-by-step photos and a sample budget are available on the Plants for Human Health Institute website:

<http://plantsforhumanhealth.ncsu.edu/2012/08/20/pack-n-cool/>.



As a scientist that studies fresh produce after it’s harvested, Perkins-Veazie recommends that many fruits and vegetables be stored at 32 to 41 degrees Fahrenheit. This includes most fruits (apple, blackberry, strawberry), leafy greens (cabbage, lettuce) and immature vegetables (broccoli, cucumber, green beans), which decay in heat.

The Pack ‘N Cool keeps perishable produce, like watermelons, at a cool temperature to preserve quality. (Pictured L-R: Louis Wojciechowski and Dr. Penelope Perkins-Veazie)

“Based on my experience, farmers know that it’s important to keep certain fruits and vegetables at cool temperatures to remove field heat and hold fresh-grown quality, but it’s often challenging to purchase or

maintain the equipment needed to ensure those ideal temps,” said Perkins-Veazie. “The Pack ‘N Cool model provides farmers with a mobile, cost-efficient alternative to commercial cooling units.”

She adds that keeping fresh-picked fruits and vegetables cooler for longer preserves quality and extends the shelf life of the produce, a benefit for farmers hauling food to and from multiple markets each week.

“Highly perishable fruits like blackberries that sit at 80 degrees at market will last only a day compared to a week if kept at 40 degrees,” said Perkins-Veazie. “That makes a big difference to farmers.”

A CoolBot adapter maximizes the cooling output of the AC unit to allow for trailer temps in the 30s.

The Pack ‘N Cool utilizes [CoolBot](#) temperature technology to maximize the output of a basic window air conditioner unit. The CoolBot adapter interfaces with the AC unit, which typically bottoms out at 60 F, to generate temperatures as low as the 30s in the trailer.

Wojciechowski added, “If the AC ever fails, a new unit can be bought at a home improvement store for \$300 and hooked up the same day without



the need for a refrigeration service call. It's simple and energy-efficient." An electrical extension cord (110V) or a generator powers the unit.

The Pack 'N Cool will also be used as a training tool for N.C. State faculty and N.C. Cooperative Extension agents. The unit will be demonstrated at agricultural field days and events across the state.

Pink Lemonade, Razz, and More! Wonderful Blueberries from ARS to You - [Marcia Wood](#), *Agricultural Research Service Information Staff*.



Pink Lemonade blueberries have a sweet, mild, flowery flavor and a pretty pink color. (D2598-1)

Anyone who grows backyard blueberries knows that some of the berries may turn pink before they finally ripen to a familiar dusty blue.

When a Pink Lemonade blueberry is ripe and ready to eat, however, it is, in fact, pink.

Though not a first, this intriguing coloration is "still somewhat unusual" for a ripe, harvest-ready blueberry, according to Agricultural Research Service plant geneticist Mark K. Ehlenfeldt.

Ehlenfeldt has his laboratory, greenhouse, and test plots at the Philip E. Marucci Center for Blueberry and Cranberry Research and Extension in Chatsworth, New Jersey, about 60 miles south of Newark in the state's pine barrens.

Here's more about Pink Lemonade and a glimpse of several other interesting blueberries developed through the Chatsworth research.

Pink Lemonade: Pretty and Tasty

Pink Lemonade "may be the prettiest blueberry around," says Ehlenfeldt. This plant bears moderate yields of firm, glossy, medium-sized berries, with a mild flavor that Ehlenfeldt describes as "sweet and flowery." It ripens from mid-late to late season. In New Jersey, that's usually mid to late July.

"Pink Lemonade is also a nice plant for landscaping," Ehlenfeldt says. "It has shiny green leaves in spring and summer and dusky, reddish-brown twigs in winter."

Ehlenfeldt says Pink Lemonade is suited for U.S. Department of Agriculture Plant Hardiness Zone 6—where the weather, on average, never gets colder than 0°F—and for milder regions.

Pink Lemonade resulted from the crossing of two parent plants—an experimental blueberry developed by Nicholi Vorsa, a Rutgers University scientist stationed at the Chatsworth center, and a commercial blueberry, Delite, which was developed by USDA and the University of Georgia. Ehlenfeldt crossed these two plants in 1991 and, in 1996, chose one of the offspring—designated as "Selection Number ARS 96-138"—for further testing.

While Ehlenfeldt was scrutinizing the plant's performance in New Jersey test plots, colleague Chad E. Finn, a plant geneticist in the ARS Horticultural Crops Research Unit in Corvallis, Oregon, was evaluating it on the West Coast, in response to interest by the plant nursery industry in that region.

Based on that interest and the good scores that ARS 96-138 achieved in these evaluations, the scientists formally released the variety in 2005, assigning the selection number as its identifier. In 2007, to help build market identity for the plant, the researchers named it "Pink Lemonade." In that same year, the novel blueberry garnered a "best new shrub" honor at the prestigious Far West Horticultural Show. You can find "Pink Lemonade" for sale in garden catalogs and on the web.



Razz blueberries offer a taste of raspberry. (D2599-1)



The superior flavor of Sweetheart blueberries isn't lost during storage. (D2600-1)

Razz: Its Flavor Will Surprise—and Please

Razz is a blueberry with a taste that's rather surprising. Its name is a hint: Razz tastes quite a bit like a raspberry.

"The remarkable raspberry overtones make Razz unlike any other commercial blueberry that we know of," says Ehlenfeldt.

Razz is a "rediscovered" blueberry. It was bred in 1934 by USDA's first blueberry breeder, Frederick V. Coville. It was selected for further study by USDA scientist George M. Darrow and Rutgers plant breeder J.H. Clarke in 1941.

After that, it "just hung around for a long time," says Ehlenfeldt. "It was considered unsuitable for large-scale commercial production because it was too soft for shipping or storing. And, although people appreciated its flavor, the berry was simply too different for the times.

"Eventually, several nurseries expressed an interest in growing and marketing it to backyard gardeners. We decided to test it here in New Jersey and released it in 2011."

Razz produces good yields of medium to large berries that ripen in midseason. "In New Jersey, that is the end of June through the first week or two of July," Ehlenfeldt says.

"Razz should do well in most places where northern highbush blueberries can be grown. Growers, pick-your-own farms, and backyard gardeners might want to give this specialty berry a try."

Sweetheart: A Berry To Begin—and End—the Growing Season

Sweetheart may be the perfect plant for those who just can't wait for the first blueberries of the growing season—and, of course, hate to see the season end.

That's because Sweetheart meets both needs. It produces firm, delectable, medium to medium-large berries early in the season, about mid-June through the end of the month. Then, if the autumn is mild, Sweetheart may reflower and refruit, Ehlenfeldt says. "The autumn yield is not really large enough to be called a 'second crop,'" he explains, "but it's a nice treat at a time when most blueberry plants have long since stopped fruiting." Late-season refruiting is "a somewhat unusual trait," he notes.

Sweetheart berries have "a superior flavor that lasts, even in storage," he says. That's unlike some blueberries, which "begin to lose some flavor soon after they've been picked."

Well suited for commercial growers, Sweetheart is "great for home gardens, too," says Ehlenfeldt who, in 1996, made the cross that resulted in today's Sweetheart plants. In 1999, he chose it—from among other candidate seedlings—for further study, continued testing it at Chatsworth through 2009, then formally released it as a named variety in 2010.

Sweetheart can be grown in USDA Plant Hardiness Zone 5—where temperatures usually won't get colder than -10°F, on average—and in milder zones. What's more, some preliminary studies "suggest that Sweetheart may also be hardy in regions colder than Zone 5," says Ehlenfeldt.

Cara's Choice: Outstanding Flavor

Cara's Choice is "regarded by some blueberry aficionados as having the best flavor of any blueberry," says Ehlenfeldt. "This is a very sweet, medium-sized blueberry, with a pleasant aroma."

Even though its yields are only moderate—about 35 percent less than industry standards such as Bluecrop, for example—this berry nonetheless offers growers the significant advantage of keeping its quality while still on the bush. "That's a plus," notes Ehlenfeldt, "because it allows growers to distribute their harvests over a longer period of time." Meanwhile, the berries' sweetness tends to increase.

"The berries can stay on the plant for several weeks after ripening, without losing flavor or firmness," he reports.



Some blueberry fans say Cara's Choice is the best they have ever tasted. (D2601-1)

Best for Zone 6 and milder zones, this berry is ready for harvest in midseason.

Blueberry researcher Arlen D. Draper, formerly with USDA in Beltsville, Maryland, and now retired, made the cross that yielded today's Cara's Choice in the late 1970s and, in 1981, singled it out for further study. Since then, evaluations at the Atlantic Blueberry Company and at Variety Farms—both in Hammonton, New Jersey—by Draper; Ehlenfeldt; now-retired ARS scientists Gene J. Galletta and Allan W. Stretch; and Rutgers's Vorsa led to the plant's release in 2000.

Ehlenfeldt expects to have yet another superb blueberry ready to introduce in the near future.

This research is part of Plant Genetic Resources, Genomics, and Genetic Improvement (#301) and Plant Diseases (#303), two ARS national programs described at www.nps.ars.usda.gov. "Pink Lemonade, Razz, and More! Wonderful Blueberries From ARS to You" was published in the [September 2012](#) issue of Agricultural Research magazine.

Weather Reports

NEW YORK CROP WEATHER SERVICE NOTES

Week ending August 26th

Weather: It was another mainly dry week across New York State with almost the entire state not even getting close to reaching weekly precipitation normals. The only rainfall came from isolated to scattered showers and thunderstorms which generally fell across the eastern half of the state early in the week. Temperatures started below normal through the first half of the week especially with overnight low temperatures due to lower humidity levels. However, temperatures then warmed to above normal for the last half of the week as high pressure moved to New England and a warmer flow regime set up.

Week ending September 2nd

Weather: Precipitation for the week was highly variable with the bulk of the precipitation occurring Monday into Tuesday with showers and thunderstorms while much of the rest of the week was dry. The week started out dry with high pressure across the state on Sunday. The showers and thunderstorms on Monday and Tuesday occurred along with a wave of low pressure. High pressure then built across the state on Wednesday and remained in place through Thursday before sliding southeast on Friday. A cold front then dropped southeast from southern Canada Friday morning and through the state by Saturday morning bringing cooler conditions and very little rainfall except for some light showers across far northern New York. Temperatures started the week warm with readings mainly in the 80's Sunday through Tuesday, cooler conditions occurred on Wednesday with highs mainly in the 70's. On Thursday highs were mainly from the mid 70's to mid 80's with highs on Friday and Saturday mainly in the 80's with a few locations topping 90 on Friday.

Week ending September 9th

Weather: Precipitation for the week was highly variable with the bulk of the precipitation occurring late Monday into Tuesday and again on Saturday with showers and thunderstorms while much of the rest of the week was dry. The week started out dry with high pressure across the state on Sunday. A trough of low pressure dropping south from the eastern Great lakes on Monday and a low pressure system moving northeast from the Ohio Valley through the state on Tuesday brought showers and thunderstorms to the state. High pressure built across the state on Wednesday bringing dry weather with some showers and thunderstorms across the southern tier on Thursday as a cold front moved into the eastern Great Lakes. Friday was mainly dry except for some showers and thunderstorms across far western New York as a powerful cold front started to move towards the state. On Saturday, the cold front swept across the state producing hail, wind damage and even a couple of tornadoes in the New York City area. Temperatures across the state were well above normal for the week with highs mainly in the 70's and 80's. Nighttime lows were also very mild, generally in the 50's and 60's.

Week ending September 16th

Weather: The week started out with a cold front exiting New England Sunday with a strong high pressure system over the lower great lakes behind it. A weak boundary provided the focus for lake-effect showers across western portions of the state on Monday while the rest of the state remained dry as high pressure built in. This high pressure system continued to dominate the weather pattern over the state for much of the work week, bringing dry weather and seasonable conditions Tuesday through Thursday. Patchy frost developed across northern parts of the state throughout the week. A cold front moved across the state Friday and Saturday producing scattered to widespread showers. Precipitation for the week was mainly limited to the passage of a cold front Friday and Saturday across the state and lake-effect showers across western portions of the state Monday. Temperatures across the state were average to slightly below average for the early part of the week with highs generally in the upper 50s to lower 60s in northern portions of the state to upper 60s and lower 70s in southern portions of the state. A slight warm up began on Wednesday with highs generally in the 70s and lower 80s across the state. Temperatures returned to averages on Saturday. Nighttime lows were chilly throughout the early part of the week generally in the 30s and 40s and warmed into the 40s and 50s by the end of the week. Some frost was observed in portions of the Adirondacks.

Week ending September 23rd

Weather: The week started out with high pressure across the region and dry weather. This area of high pressure slowly moved offshore Monday as a potent storm system approached from the Midwest. This storm system began to impact the region Tuesday and persisted through early Wednesday morning bringing widespread heavy rainfall, gusty winds and flooding along mountainous terrain. A cold front

associated with this system moved off the New England Coast during the day Wednesday enabling a large area of high pressure to build in across the state. This high pressure ushered in the first fall-like air mass of the season with below normal temperatures and dry conditions. Another frontal boundary associated with a low pressure system moved across the state late Friday through Saturday producing scattered to widespread showers. Precipitation for the week was associated with two low pressure systems that affected the state Tuesday/Wednesday and Friday/Saturday. Widespread heavy rainfall, particularly across eastern and southern portions of the state, produced localized flooding in mountainous terrain on Tuesday. Several daily rainfall records were set on Tuesday across this region as well. A weaker storm system on Friday/Saturday produced scattered to widespread showers across the state. Temperatures across the state were average to slightly below average to start the week with highs generally in the upper 60's and low to mid 70's. A brief warm up occurred midweek with high temperatures generally in the 70's across the state before a fall-like air mass dropped highs into the upper 50's and 60's by the end of the week. Nighttime lows were generally in the 40's and 50's early in the week. Lows warmed into the 50's and 60's during the midweek followed by nighttime lows dropping into the upper 30's across northern portions of the state with generally 40's and low 50's elsewhere.

Week ending September 30th

Weather: High pressure was in control to start the first week of fall with cool and dry weather. The surface high moved off the Mid-Atlantic Coast on Tuesday with temperatures moderating above normal. A slow moving frontal boundary with waves of low pressure moving along it brought some rain to the region on Wednesday. The frontal boundary dipped south of New York and New England on Thursday. A wave of low pressure moved north or northeast along the boundary on Thursday night bringing rain back into the region Friday into early Saturday. Precipitation was normal to above normal from the Mohawk Valley, Lake George Region, Capital Region, and parts of the Finger Lakes Region south and east to Long Island and New York City. Precipitation was well below normal over western and northern New York. Temperatures were near normal to slightly below normal.

Questions or comments about the New York Berry News?

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