



Vol. 2, Issue 13
September 11, 2014

Berry News

ENYCH Program Educators:

Fruit

Laura McDermott

Cell: 518-791-5038

Email: lgm4@cornell.edu

Berries

James O'Connell

Phone: 845-691-7117

Email: jmo98@cornell.edu

Berries & Grapes

Dan Donahue

Phone: 845-691-7117

Email: djd13@cornell.edu

Tree Fruit

Anna Wallis

Phone: 443-421-7970

Email: awew232@cornell.edu

Grapes & Tree Fruit

Vegetables

Chuck Bornt

Cell: 518-859-6213

Email: cdb13@cornell.edu

Amy Ivy

Phone: 518-561-7450

Email: adi2@cornell.edu

Teresa Rusinek

Phone: 845-340-3990 x315

Email: tr28@cornell.edu

Crystal Stewart

Cell: 518-775-0018

Email: cls263@cornell.edu

Maire Ullrich

Phone: 845-344-1234

Email: mru2@cornell.edu

Business and Marketing

Bob Weybright

Phone: 845-797-8878

Email: rw74@cornell.edu

Layout:

Carrie Anne Doyle

Content Editor:

Laura McDermott

Regional Update

The weather in all areas of eastern NY remains very conducive to excellent berry production. Warm days, cool nights and relatively low humidity has been the mainstay of the season. Most berry growers' trickle irrigate, so that takes the pressure off rainfall, which just lately has been lacking. Disease and insect pressure is mostly low, but Spotted Wing Drosophila (SWD) has finally hit its' stride.



Raspberries/Blackberries: Several fall raspberry growers have already closed their fields due to heavy infestation that they were unable to control despite a weekly spray program. Happily, many other farms are still picking great fruit with very low infestation levels. These farms combined an aggressive spray program with excellent crop management in terms of thinning the planting, weed control and aggressive crop harvests. For additional information about pruning fall bearing raspberries, see the article in this newsletter.

If you decide to close the patch due to SWD, I would not recommend topping the canes to remove potential fruit for SWD. In 2012, when the infestation was so heavy and much earlier than this year, we were recommending that growers remove potential egg laying sites – but research does not support the theory that perhaps it would diminish the future year population of the insect. There are enough wild hosts etc. that the extra labor is simply not warranted.

Blueberries: Amazingly, several farms are still harvesting Elliot and Aurora a week after Labor Day! Those late berries that have not been adequately sprayed for harvest did NOT last as long – and growers should be aware that the soft fruit at the end of the season is not due to warm weather. An excellent way to determine infestation is to gently squeeze a blueberry and see if pin-prick bubbles of juice appear through the oviposition sites.

Hopefully most growers conducted tissue tests this season and are now adding nutrients as necessary. A common nutrient that is deficient in our entire region is Boron. This is almost universally needed annually – a problem that will not be identified until plants start showing symptoms or foliar testing indicates a problem.

Strawberries: Not much different from last newsletter. Still very little pest problems with day neutral varieties. Regrowth from renovation looks excellent. Some leaf spot here and there, but not terrible. Slug control should be done now – organic Sluggo or iron phosphide materials like Deadline Bullets are both very effective. All strawberries should get another shot of N now, 30#/A of actual N. If the tissue analysis suggests that more N is needed you can deliver another dose later in the fall. All other nutrients that are recommended by tissue analysis can be applied now as well.

U.S. Blueberry Farming Practices Need to Evolve', says Giant Berry Farms

With U.S. and Canadian annual blueberry production likely to surpass one billion pounds in the next few years, one of the countries' biggest marketers has said the sector 'needs to evolve', addressing such issues as labor shortages, new export markets, and a recent trend of 'disastrously low' summer prices.

A representative of California Giant Berry Farms said North America's planted acreage had grown by an average of 20% every year since 2008.

"That's massive incremental growth," said the company's director of operations for the North American blueberry division Evan Pence, speaking at the recent International Blueberry Seminar, held near the Chilean capital Santiago

"It's happening fast, and as an industry we're trying to be nimble, we're trying to adjust to it, adapt to it, and open new export markets."

U.S. and Canadian acreage has increased from 71,000 in 2005 to 125,000 acres today, and Pence said it was reasonable to assume highbush production would jump up

from the current 680 million pounds to one billion 'within the next five to 10 years'.

Pence went on to say although U.S. blueberry consumption was 'magnificent', retailers had to do more to promote the product during important times of the year.



Editors' Note: This short piece just outlines the larger industry that local berry growers need to be aware of.

For the complete article, please visit

<http://www.freshfruitportal.com/2014/09/01/>

The speech that is summarized in the article was given at a meeting in Argentina – another indication at how global this business is. The NYS Producers EXPO in Syracuse this coming January will be focusing on how NYS growers can become more nimble and evolve within our market.

Pruning Raspberries and Blackberries

By Dr. Marvin Pritts, Cornell University, published in New York Berry News, Volume 8 (4), 2009

Editors' Note: This article will be presented in parts in this and the next two Berry Updates. If you would like the entire article, please visit <http://www.fruit.cornell.edu/berry/production/pdfs/rasppruning.pdf>. Please note the comment re: cane density below. This article was written before SWD became a problem.

Plant growth can be manipulated by growers to achieve long-term increases in production of quality fruit. Pruning and trellising affect plant growth rate, fruit quantity and size, soluble solids (sugars), disease susceptibility, ease of harvest, and spraying efficiency. Brambles respond significantly to pruning and trellising, but these practices are usually the most expensive and time-consuming part of an operation. Growers must use care when choosing pruning and trellising strategies.



Pruned primocane berries emerging in spring with cover crop on both sides of row. Credits: V. Grubinger, U.VT

Primocane-Fruiting (fall-bearing) Raspberries

Primocane-fruiting raspberries produce fruit at the top of first-year canes in late summer. If allowed to overwinter, these same canes will produce fruit again in early summer of the second year. However, the quality of this early summer fruit is inferior to both the late summer primocane crop and summer crops of floricanes-fruiting types. Also, harvesting the early summer second-year crop is difficult because of interference from new primocanes. Likewise,

harvesting the late summer primocane crop is difficult because the primocanes are thinner and taller when the second-year canes are allowed to grow, too. Most growers sacrifice the early summer second-year crop in favor of a smaller, but higher quality late summer primocane crop.

Pruning

The smaller yield of a single late summer primocane crop is offset by the ease of management. To prune primocane-fruiting raspberries for a single late season crop, the canes need only be cut to the ground in early spring. New canes will grow each year and fruit in late summer, the canes will be cut early the following spring, and the cycle continues.

continued on next page

Pruning Raspberries and Blackberries, continued from previous page

It is important to cut old canes as close to the ground as possible so that buds will break from below the soil surface. If canes are not cut low enough, fruiting laterals may form on any remaining cane portion. These fruiting laterals are not healthy; they are entry sites for insects and disease pathogens. Also, any fruits that form will most likely rot, attracting pathogens and creating a source of inoculum (disease-conducting material) for the late summer crop. All canes that are cut from the planting should be removed from the area and destroyed. In warm climates, the primocane crop can be delayed by mowing the young primocanes a second time when they are approximately 1 foot tall. Pinching the primocanes (removing the growing tip) in July to stimulate growth of laterals will also delay fruiting. This is sometimes done to delay harvest until after the intense heat of July.

The timing of cane cutting is also important. Carbohydrates move from plant leaves into the crown in autumn, and from the crown to the buds in early spring. If canes are cut before all the carbohydrates reach the crown in autumn, the new canes may not be as vigorous the following year. Canes can also be cut too late, after carbohydrates have moved into the buds. From December through February, most carbohydrates are in the crown, so this is the ideal time to cut canes. The advantages of a single cropping system are that (1) cane thinning and detailed pruning and tying are eliminated, (2) cold injury of buds is eliminated, (3) winter damage from rabbits or voles is eliminated, (4) spur blight, anthracnose, cane

blight, and several other diseases are reduced, (5) sap beetle problems are reduced and other insect problems are eliminated, and (6) applications of fertilizers and pesticides are made easier.

Yield of primocane-fruiting types is influenced mainly by (1) the number of canes per unit area and (2) the number of berries per lateral. Growers can influence the number of canes produced by plants. Since large numbers of canes do not seem to decrease fruit size in the fall crop of primocane-fruiting raspberries, growers should try to produce as many canes per area as possible*. This can be done by planting narrow rows and more rows per acre. Row widths of 12-18 inches are considered ideal for harvesting. The distance between rows should be wide enough to allow available equipment to pass. The other factor influencing yield, the number of berries per lateral, generally depends on the particular cultivar being grown. The grower has little control except to choose productive cultivars.

**This article was written before the advent of Spotted Wing Drosophila. This view of cane density is no longer viable if growers want to control SWD adequately. Growers are encouraged to thin canes 1-2 times in the beginning of the season, usually when emerging primocanes are 8-12" tall. Cane density of 5-6 canes per square foot should aid in SWD control while still allowing good production, although there is little research yet to confirm this protocol.*

Erik Schellenberg to Facilitate GAPs Programming in Eastern New York Region

Erik Schellenberg is a New York native, who recently returned after completing graduate school in Canada for natural resource management. His background in environmental impact assessment, ecological agriculture, and vegetable farming provide him with the knowledge and experience necessary to work with and relate to farmers. Erik is filling a grant funded position aimed at facilitating the GAPs certification process for vegetable farmers in the ENY Team area with special focus, reflecting the interest of the funder, in the Albany-south area, plus Sullivan, Rockland and Westchester. To that end, he will be leading educational sessions to help producers better understand and work through GAPs certification and will also be available for farm visits to help producers work through their customized GAPs plans and address any issues before the plans are audited by the state.



Need GAPs Help?

If you want help with writing your GAPs plan or need to get ready for your first inspection, contact Erik Schellenberg (jk2642@cornell.edu). He is prepared to help you take the next steps needed to get that inspection and to be GAPs certified.

This fall, we plan on having more 2-day classes, across the region for those who have yet to get started with their plans or investigating "what it takes".

Please call 845-344-1234, and ask for Erik, if you have questions or want to book an appointment with him.

The Role of Boron in Berry Nutrition

Boron deficiency is a very common micro-nutrient problem in berry plants in most places in the world. This is largely due to the fact that Boron is water soluble and thus leaches easily. Boron deficiency causes crop losses in terms of overall yield and crop quality. Boron affects vegetative and reproductive growth of plants as it is responsible for cell expansion, root growth, fruit quality, pollen production as well as many metabolic processes.

Boron deficiency in blueberry generally develops in young leaves, which appear darker green and deformed with limited leaf expansion, twisted leaf margins, and deep dimples forming on young leaves. When deficiency is severe, the growing points stop growing, resulting in loss of apical dominance. Causes of boron deficiency include high soil pH (above 6.8) or the use of a fertilizer that lacks Boron. Lowering soil pH to 5.0-to-4.5 is recommended for improving the availability of Boron.



Deeper and abnormally-shaped young leaves and halted growing points are visual indications of boron deficiency.

Photo courtesy of D. Pitchay, Tennessee State Univ.



Boron toxicity symptoms resemble deficiency cues, especially in Brambles.

In strawberries, Boron deficiency manifests itself in the leaves and fruit. Leaves do not properly expand – in severe situations can appear very cupped and distorted. Fruit will also look distorted – almost as though it has severe tarnished plant bug or frost injury.

Cane berries show boron deficiency in much the same way – leaf cupping and problems with apical dominance. Tissue testing is still very important because Boron toxicity symptoms are very similar to deficiency cues – so annual testing is suggested.

Sources of Boron: Boric acid (16.5%boron), borax (11.3% boron) or SoluBor (20.5% boron) can be applied to soils to correct boron deficiency. Typical applications of actual boron are about 1.0 lb/acre but optimum levels of boron vary with plant type and situation – hence the need for tissue analysis. Borax, Boric Acid or Solubor can be dissolved in water and sprayed or applied directly to soil in the granular form. Excess boron is toxic to plants so growers should be sure that the application is carefully calibrated and applied evenly. -LGM

Showcase your Farm Product

Taste NY has been provided a pavilion for NYS farms to showcase products at the Grand Tasting of the 2014 New York City Wine and Food Festival (more info. at <http://www.nycwff.org/>). The 3-day event will begin on October 17th and end on October 19th. All interested parties need to apply by September 15th.

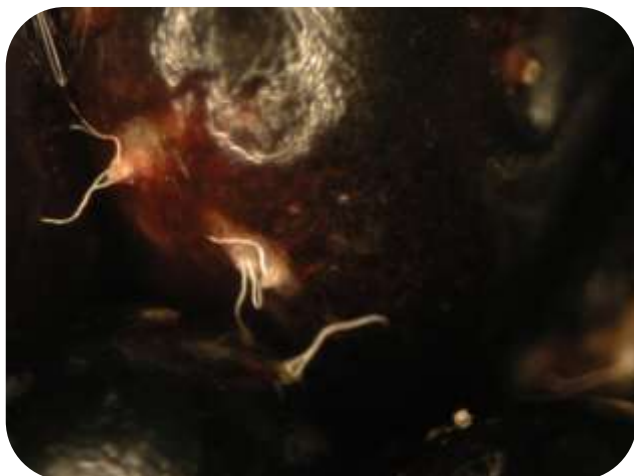
Request an application or direct questions or concerns to Joseph Ganley at Joseph.Ganley@agriculture.ny.gov or Jeffrey Lothian at jeffrey.lothian@agriculture.ny.gov.

Spotted Wing Drosophila Update

By Peter Jentsch, Cornell University Dept. of Entomology, posted to online blog August 29, 2014
<http://blogs.cornell.edu/jentsch/>

As we have seen over the past 3 years, this period of warm weather during the month of August gives rise to multiple overlapping generations of the adult Spotted Wing Drosophila (SWD). The increase in numbers has now been accompanied by significant raspberry, blackberry and blueberry injury. Fruit injury over the past week has ranged from 2% to 100% damaged fruit beginning with egg laying across much of the Hudson Valley. Until recently, due to a significant delay in SWD appearance into the region, berry patches have been lightly managed to this point. However, larva are beginning to cause significant injury to fruit as extensive fruit feeding is coupled with very high egg laying and soaring adult populations.

As raspberry and blackberry are the favored host of the SWD, relative to blueberry and strawberry, these commodities will require intensive management strategies over the next few weeks through frost.



Blackberry with very high levels of SWD egg injury.



SWD oviposition in immature blackberry

More information on conventional and organic management options for NYS grown small fruit can be found here: <http://www.fruit.cornell.edu/spottedwing/pdfs/swd-insecticides-berries-ny.pdf>.

In raspberry or blackberry patches where SWD have been captured and or fruit injury has been observed, management should begin at the first available application window to reduce adult populations and egg laying. In these cultivars a tight management schedule of 3-4 days may be needed if populations continue to increase (very likely). Blueberry have been successfully managed with a 7-day program.

If periods of rainfall begin, insecticide residue will quickly be removed and re-application should be made at the first available spray window.

2013 Lessons:

A Hudson Valley fruit grower was able to retain a clean crop (0% fruit injury) using a 3-4d program on raspberry. After 5 days of intermittent rainfall, an assessment of the crop on day 6 of raspberry showed 40% injury to the crop. With an aggressive response, this grower was able to reduce the damage down to 14% by week two through re-establishment of his management program and clean picking the crop weekly.

However, this level of damage to the crop remained until the end of the season even with a very tight program.

I'm singing (spraying) in the Rain... One option you might consider during periods of back to back rain events would be to use the entomophagous fungal pathogen, *Beauveria bassiana*, in the spore based formulation product Botanigard (conventional) or Mycotrol-O (organic). Spores of this natural insecticide have a greater germination rate in cool wet environments over time. I would suggest using 1-2 pounds of sugar per 100 gal of water to increase feeding of the spores by the adult to increase efficacy.

To date, SWD have been captured in all Hudson Valley counties where monitoring has been taking place, including Westchester, Dutchess and Ulster in raspberry, blueberry and blackberry plantings.

Given the increasing number of SWD finds we are seeing in the northeast, it would be wise to begin trapping efforts in brambles and blueberry fields as flies increase from localized to regional populations.

Larva in MY fruit? Another option to determine SWD presence would be the use of a rapid determination of the

Continued on next page

Spotted Wing Drosophila Update, continued from previous page

presence of larvae in fresh blackberries or raspberries. Creating a salt solution made by dissolving 1 to 2 Tsp. of salt in 1 cup of water. Collect a representative sample of fruit and begin by lightly crushing the berries and submerging them in the salt solution for about 10 to 15 minutes. If larvae are present in the fruit, they will crawl from the berry through the oviposition site and be visible emerging from the berries without the help of hand lenses.

Although very little damage has occurred in Hudson Valley fruit, It is likely that SWD damage to small fruit will begin over the upcoming week as adults establish and build in populations in berry patches.

Introduction: Spotted Wing Drosophila, *Drosophila suzukii* (SWD) is a vinegar fly native to East Asia. Established in the Eastern US since 2012, it has become an invasive insect pest of small fruit and to a lesser degree, cherry and grape. Information on insect biology can be found at <http://www.fruit.cornell.edu/spottedwing/bio.html>.

Monitoring: Traps we are presently using are made of red plastic 16 oz. solo cups and lids with a black band of electrical tape. Traps are baited with apple cider vinegar (ACV), as the attractant killing solution. Approximately 30, 1/8" holes, are drilled around the top 3/4 of the cup, leaving a 3' gap to pour out the ACV solution in a strip of 2" x 2" netting to access the number of captured flies. A yeast, flour & sugar bait mixed with water is added to a 5 oz. fixed position cup along the top edge.

Cornell's SWD web site hosts a map of the counties in which SWD is being trapped; updates on presence based on trap findings can be found here: http://nysipm.cornell.edu/invasives_exotics/swd/swd.asp.



SWD red solo cup trap.

Image: UNH Cooperative Extension



BotaniGard ES (*Beauveria bassiana* spore formulation).

Mycotrol-O (*Beauveria bassiana* spore formulation).

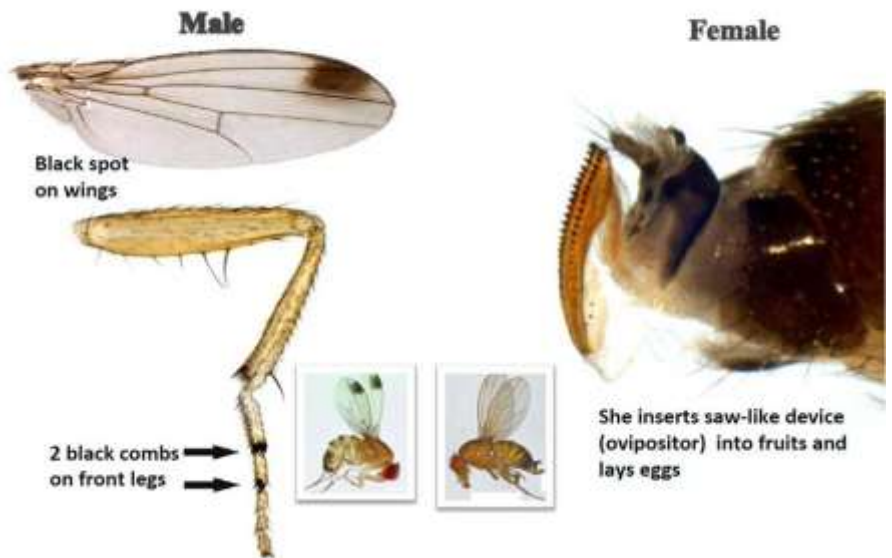


SWD egg and respiratory horn on raspberry.



SWD egg on raspberry.

SWD Identification – key characters



SWD identification using key characteristics.

Rural Entrepreneurship Challenge

The American Farm Bureau Federation together with Georgetown University's McDonough School of Business Global Social Enterprise Initiative and the Georgetown Entrepreneurship Initiative's StartupHoyas recently announced updated eligibility guidelines for the Rural Entrepreneurship Challenge.

The first-of-its-kind challenge provides an opportunity for individuals to showcase ideas and business innovations being cultivated in rural regions of the United States. The Farm Bureau Rural Entrepreneurship Challenge is a key component of the Rural Entrepreneurship Initiative, a joint effort between AFBF and Georgetown.

The inaugural challenge is accepting applications through Sept. 15. Semi-finalists will be announced at the National Summit on Rural Entrepreneurship at Georgetown University's McDonough School of

Business on Tuesday, Oct. 14. The summit is sponsored jointly by AFBF, GSEI and the White House Rural Council.

Challenge finalists will pitch their business ideas to a team of judges at the AFBF 96th Annual Convention, slated for Jan. 9-14 in San Diego, California. Participants will compete for the Rural Entrepreneur of the Year Award and prize money of up to \$30,000 to implement their ideas.

Through the challenge, rural entrepreneurs with innovative ideas will be identified and provided with assistance to help them remove any barriers standing between them and a viable, emerging business. To learn more about the challenge and submit an online application, visit <http://www.strongruralamerica.com/challenge>.

From Recipe to Market: A Seminar for Future Food Entrepreneurs

Saturday, October 18

Madison Barracks
85 Worth Road, Sackets Harbor, NY
Jefferson County
8:00am to 4:00pm

To register for this location contact Steve Ledoux at 315-788-8450 or email swl73@cornell.edu.

Sunday, October 19

Whallonsburgh Grange,
1610 State Route 22, Whallonsburgh, NY
Essex County
8:30am to 4:30pm

To register for this location contact Laurie Davis at 518-962-4810 x404 or email lsd22@cornell.edu.

Is your recipe ready to go to market? If your goal is to launch a specialty food business, then this program is for you. Bob Weybright, an Extension Agricultural Development Specialist with the Eastern New York Commercial Horticulture program, will present this one-day seminar providing future food entrepreneurs with instruction in food business basics and knowledge of the critical issues to consider before starting a food processing business.

Topics include:

- Food Business Basics
- Marketing: Developing a Strategy, Objectives, Research, and Communication Plan
- The NYS Food Venture Center
- Market Trends and Product Development
- Regulatory Agencies and Requirements
- Food Safety, Processing, Packaging and Labeling



Bob Weybright has a strong agricultural economic development and marketing background. After receiving his undergraduate degree from Michigan State University and his graduate degree from California State University in New Business / Small Business Management, Bob has been actively involved in a number of development projects. He has experience in all phases of agriculture, including production, processing, marketing and sales. He is engaging in methods that help producers develop innovative new products and increase their marketing opportunities, especially in the local foods area.

Cost is **\$75** and includes lunch and all educational materials. Deadline for registration is October 15.

Presented in collaboration with Cornell Cooperative Extension Associations of Jefferson and Essex Counties, The Eastern New York Commercial Horticulture Program, the New York State Food Venture Center, and the Whallonsburgh Grange.

Cornell Small Fruit Open House, Ithaca, NY

Friday, October 3rd from 1 pm – 4:30 pm

Part one of the program will be held at Cornell Orchard and Part Two at the East Ithaca Farm with a refreshment break will be provided between program sessions. This event is free and open to the public but pre-registration is required to ensure adequate transportation, handouts, and refreshments. Please RSVP by 9/26/14 by contacting Cathy Heidenreich, mcm4@cornell.edu, 315-787-2367.

For full details see <http://blogs.cornell.edu/fruit/2014/08/21/cornell-small-fruit-open-house/>. Topics:

- Low Tunnel Day Neutral Strawberries: Production, Plastic Types and Exclusion Netting - *Dr. Marvin Pritts and Cathy Heidenreich*
- Cranberry Production - *Dr. Justine Vanden Heuvel*
- Bird Management - *Heidi Heinrichs and Dr. Paul Curtis*
- Spotted wing Drosophila - *Dr. Juliet Carroll*
- Strawberry Soil Health: The Effect of Soil Amendments - *Maria Gannett*
- Trellising Systems for High Tunnel Blackberries - *Marvin Pritts*
- Disease concerns - *Dr. Kerik Cox*
- Small Fruit Variety information - *Dr. Courtney Weber*
- Updates on Eastern NY Applied research - *Laura McDermott*

Calendar of Events

October 3, 2014. *Cornell Small Fruit Open House, Ithaca, NY.* See above for details.

October 18-19, 2014 – *From Recipe to Market: A Seminar for Future Food Entrepreneurs*, Sackets Harbor, NY on Oct. 18 and Whallonsburgh, NY Oct. 19. See page 7 for details.

November 17-19, 2014 – *Southeast Strawberry EXPO*, Pinehurst, North Carolina. **For more information:** www.ncstrawberry.com.

December 9-11, 2014. *Great Lakes Fruit, Vegetable, and Farm Market EXPO and Michigan Greenhouse Growers Expo.* More information: <http://www.glexpo.com/>.

January 9-14, 2014 – *Rural Entrepreneurship Challenge*, San Diego, CA. See page 7 for details.

January 20-22, 2015. *Empire State Producers EXPO.* **More information:** <http://nysvga.org/expo/information/>.

January 27-29, 2015. *Mid-Atlantic Fruit and Vegetable Convention*, Hershey, PA. More information: <http://www.mafvc.org/>.

February 3-6, 2015. *NASGA Conference and Symposium*, Ventura, CA. **More info:** www.nasga.org.

February 12, 2015. *Hudson Valley Fruit School – Berry and Grape session.* Information to follow.

February 24-27, 2015. *North American Raspberry and Blackberry Conference*, Fayetteville, AK. **More information:** www.raspberrylackberry.com/.

June 18-25, 2015 – *11th International Rubus & Ribes Symposium* in Asheville, NC, June 21-24, with preconference tour to farms and research sites June 18-21. More information: <http://www.newbeginningsmanagement.com/ishs/>

2014 Weather Table—This chart is compiled using the data collected by Northeast Weather Association (NEWA) weather stations. For more information about NEWA and a list of sites, please visit <http://newa.cornell.edu/>. This site has information not only on weather, but insect and disease forecasting tools that are free to use.

2014 Weekly and Seasonal Weather Information						
	Growing Degree Information Base 50 ^o F			Rainfall Accumulations		
Site	2014 Weekly Total 9/1 - 9/7	2014 Season Total 3/1 - 9/7	2013 Season Total 3/1 - 9/7	2014 Weekly Rainfall 9/1 - 9/7 (inches)	2014 Season Rainfall 3/1 - 9/7 (inches)	2013 Total Rainfall 3/1 - 9/7 (inches)
Albany	172.2	2428.0	2406.0	0.17	20.56	27.24
Castleton	161.1	2293.8	2383.7	1.24	22.44	25.45
Clifton Park	156.1	2201.6	2265.2	0.31	22.54	28.62
Clintondale	174.6	2456.3	2560.6	0.43	23.90	29.49
Glens Falls	149.7	2168.7	2084.5	0.56	22.12	23.69
Guilderland	158.0	2218.5	2289.0	N/A	N/A	N/A
Highland	170.1	2441.3	2531.0	0.57	23.96	28.57
Hudson	173.3	2448.7	2513.0	0.51	24.06	21.57
Marlboro	163.5	2346.7	2451.5	0.20	25.03	28.91
Montgomery	164.8	2382.3	2423.0	0.01	19.80	28.37
Monticello	135.0	1871.4	1938.5	N/A	N/A	N/A
Peru	145.9	2076.9	2129.2	0.30	18.92	21.54
Shoreham, VT	154.5	2182.4	2261.8	1.10	19.55	25.83
Wilsboro	133.5	2002.0	2079.2	N/A	N/A	N/A

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.