



# New York Berry News

Volume 13 Number 7

August 21, 2014

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## Berry Bytes...

### Cornell Small Fruit Open House

Friday, October 3, 2014. Low tunnels. Cranberries. Bird and SWD management. Biopesticides. Soil health. Trellising systems. Variety Q&A. And more. [Read more in the article on page 2.](#)

### Late summer weed control

What are my options for strawberries, blueberries, brambles, my options for broad-leaf weeds, grasses, perennial weeds? [Read more in the article on page 4.](#)

### Three Juneberry questions...answered

Why two names? Why use commercial varieties vs. wild species? What are the most common pest issues in NY? [Read more in the article on page 5.](#)

### What your foliar analysis is telling you...?

How well are those soil nutrients making it into the plant? [Read more in the article on page 6.](#)

### Berries aren't a cause of food-borne illnesses, are they?!

Yes they are! When berries are picked for fresh consumption, they are either placed directly in retail containers in the field or packed in a packinghouse without washing because they are highly perishable. Thus, there is typically no "kill step" that would eliminate pathogens in fresh or frozen berries. [Read more at the University of Florida website](#) [Read more in the article on page 9.](#)

### Beat the heat...

Long days working in high temperatures can lead to dehydration and even death.

How do you protect yourself, your family, and your farm workers from the effects of summer sun? [Read more in the article on page 20.](#) [More "hot" topics on the NYCAMH website.](#)

### The pricing crystal ball...

Is profit a dirty word in the berry business, NO! What price and how should I set my price is the question asked by many in search of the mythical magic bullet that will lead to maximized profits. [Read more in the article on page 13.](#)

### Make those berries you don't have a market for count...

Farmers may be reimbursed for their labor costs in harvesting and packing produce, as well as packaging materials, when produce is donated to food banks. [Read more in the Glean NY brochure.](#)

### No kidding - free pesticide disposal!

Planning is now underway for the Fall 2014 CleanSweepNY collection that will target **Nassau and Suffolk Counties on Long Island, NY.** [Read more in the article on page 16..](#)

### 80% of deaths caused by tractor rollovers happen to experienced farmers...

Don't become one of the statistics! The ROPS (Rollover Protective Structure) Rebate Program will rebate 70% of the cost of purchasing and installing the ROPS up to \$865 maximum rebate. [Read more at the ROPS website.](#)

**New YouTube Video:**  
[Juneberries in Upstate New York](#)



# Cornell Small Fruit Open House

Friday, October 3, 2014

*Cornell Orchards, Ithaca, NY 1:00 PM to 4:30 PM*

Cornell University's School of Integrated Plant Science (SIPS) Horticulture Section is sponsoring a small fruit open house from 12:45 to 4:30 pm on Friday, October 3, 2014.

The two-part program, hosted by Dr. Marvin Pritts, professor and berry crop specialist, will include researchers, extension specialists and graduate students from SIPS Horticulture and Plant Pathology and Plant-Microbe Biology Sections, Cornell Departments of Entomology and Natural Resources, and the Cornell Cooperative Extension Eastern NY Commercial Horticulture Team.

The program will begin at 1:00 PM. Participants should meet at Cornell Orchard, 709 Dryden Road (Route 366), Ithaca, NY 14850 between 12:30 PM to 12:45 PM for parking, check-in, and announcements.

Part one of the program will be held at Cornell Orchard, located on route 366 in Ithaca across from the Vet School parking lot. Topics for part one of the 2014 open house will include a chance to examine and discuss a new strawberry low tunnel production system being introduced to the Northeast region, a look at a new cranberry demonstration planting, techniques for minimizing bird damage in berry crops, an inside look at biopesticides as a newly emerging disease management tool, and an update on applied berry research efforts in eastern New York.

Part two of the program will be held at the East Ithaca Farm located just around the corner from Cornell Orchard on Maple Ave. Topics for this portion of the program will include techniques for monitoring and managing Spotted Wing Drosophila, a new invasive fruit fly, using wild flower plantings to enhance strawberry pollination, a berry variety question and answer session with Dr. Courtney Weber, Cornell small fruits breeder, introduction of a new research project on soil amendments and their effects on strawberry soil health and finally, a discussion of trellising systems for high tunnel blackberries.

A refreshment break will be provided between program sessions. The open house will be held rain or shine; umbrellas and/or lawn chairs may be desirable.

***The open house is free and open to the public but pre-registration is required*** to ensure adequate transportation, handouts, and refreshments. Signs will be posted on the day of the event. Please register by phone or e-mail by contacting Cathy Heidenreich, [mcm4@cornell.edu](mailto:mcm4@cornell.edu), 315-787-2367, **no later than Friday, September 26, 2014.**

# Cornell Small Fruit Open House

Friday, October 3, 2014

Cornell Orchards, Ithaca, NY 1:00 PM to 4:30 PM

## Program part 1: Cornell Orchard (1:00 PM to 2:30 PM)

### Topics/Speakers

- 🍓 Low tunnel day neutral strawberries – production and plastic types – *Marvin Pritts and Cathy Heidenreich*
- 🍓 Low tunnel day neutral strawberries - SWD exclusion netting – *Marvin Pritts and Cathy Heidenreich*
- 🍓 Cranberries - *Justine Vanden Heuvel*
- 🍓 Bird damage management in fruit crops - *Heidi Henrichs and Paul Curtis*
- 🍓 Biopesticides and small fruit disease management: efficacy and production fit - *Kerik Cox*
- 🍓 Update of eastern NY berry field research – *Laura McDermott*

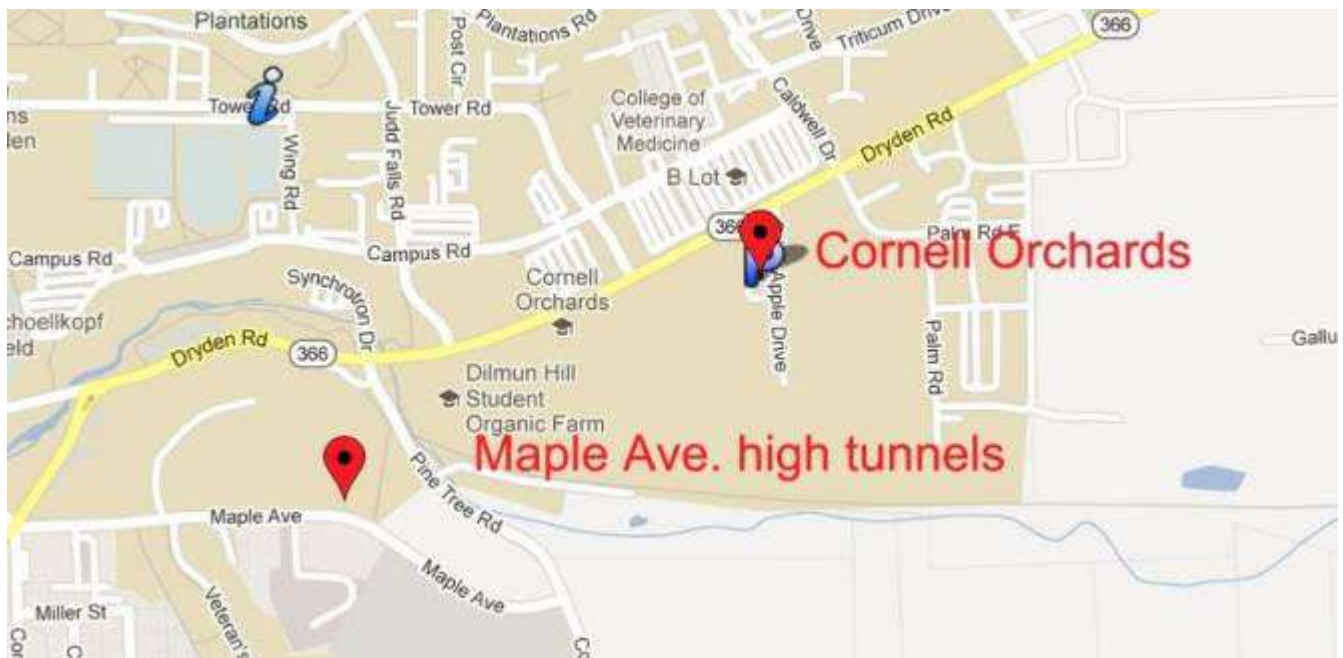
## Refreshment/restroom break and changing program locations (2:30 PM to 3:00 PM)

## Program part 2: East Ithaca farm, Maple Avenue (3:00 PM to 4:30 PM)

### Topics/Speakers

- 🍓 Spotted wing drosophila - *Juliet Carroll*
- 🍓 The role of attractive and deterrent odors in novel control methods for SWD - *Anna Wallingford*
- 🍓 Use of wildflower plantings to enhance pollination in strawberry – *Heather Connolly*
- 🍓 Berry variety question and answer - *Courtney Weber*
- 🍓 Strawberry soil health: the effect of soil amendments - *Maria Gannett*
- 🍓 Trellising systems for high tunnel blackberries - *Marvin Pritts*

### Map of program locations:



## Late Summer Weed Control Options for Berries

*Laura McDermott, Eastern NY Commercial Horticulture Team*

**Strawberry Weed Control:** Controlling fall germinating winter annuals such as chickweed and shepherds purse is critical at this time of year.

Devrinol (napropamide) is a pre-emergent herbicide that can cause problems with rooting of daughter plants so this material should be used after early forming daughter plants have rooted. Because daughter plants that form after late August don't usually contribute as much to the yield, Devrinol can be applied without much effect at that time, but BEFORE winter annuals emerge. Devrinol must be moved into the soil by cultivation or water after application. Sinbar (terbacil) is a preemergent herbicide with some postemergence activity. Usually

Sinbar is applied after renovation or after the berries have gone dormant in the fall. If leaves are present during application, immediately apply 0.5-1 inch of water to wash the chemical off the strawberry foliage. Otherwise severe injury may result. Do not use Sinbar on soils with less than 2% organic matter and do not use on Guardian, Darrow or Micmac, as these cultivars have shown extreme sensitivity while some growers report that Honeoye and less vigorous cultivars have an increase in root rot following Sinbar use. Sinbar is limited to 8 oz/A per growing season.

Poast (sethoxydim) is a postemergent, grass herbicide. This material works well applied in late summer or early fall to actively growing grasses. Don't waste your time and the product on summer annual grasses like foxtails and crabgrass that will be killed by frost. Poast can be used in the fall to suppress perennial grasses such as quackgrass; control early emerging small grains, and kill winter annual grasses such as wild oats. Poast must be applied with crop oil.

**Highbush Blueberry Weed Control:** August is the time to focus on problem weeds, especially woody perennial plants. As perennial weeds begin to move carbon stores to their roots, they will efficiently move systemic herbicide to the root zone. But, so will blueberry plants! Be very careful with your application. A shielded sprayer is a must, better yet would be a wick applicator.

A 2% Round-Up solution (41% ai/gallon) will kill most of your problem herbaceous weeds, but if you have large woody material, you might want to use a higher

solution. The Round-Up Pro label gives mixing instructions for many concentrations up to a 50% solution. The cut-stem application method is also listed for problem woody plants. Using a 50-100% solution of Round-Up, apply the material directly to the woody stem using a wick applicator immediately after cutting. Many growers use a roller/wiper application to the edges of their mulched row to keep grass from encroaching. Be sure that your mulch is nice and thick and that no blueberry roots are obvious.

For pre-emergent control of fall annuals there are several choices. Sinbar can be used after harvest in all but 1-year old plantings. Devrinol should be cultivated or watered in within 24 hours of application. Solicam is also a good choice at this time of year, IF you did not apply this material in the spring.

**Bramble Weed Control:** Late summer and fall is an excellent time to control troublesome perennial weeds like thistle, dock, smartweed, and morning glory by spot spraying with Round-Up, but take EXTREME caution to avoid getting herbicide on bramble canes.

For grass control, now is the time to apply the second Poast application. This should be done while grasses are actively growing. The further you get in August, the poorer the control.

To suppress winter annual germination, both Sinbar and Devrinol can be used. Solicam, if not applied in spring, is a good choice unless you have a new planting or light soils. Make sure that you read the label as herbicides have caveats re: soil organic matter content and rates.

**Organic Options:** If you are an organic grower or trying to reduce your herbicide usage, late summer is a good time to consider going through the berry plantings with a crew to hand weed or use a flamethrower in plantings.

Cultivation is an option for strawberries and materials like vinegar could also be very helpful for weed control. Cleaning up a patch, then applying mulch where it is appropriate will save time next season. Do not ignore late season weed control just because you don't use herbicides.



## Three Juneberry Questions...Answered

*Jim Ochterski, Cornell Cooperative Extension*

### **Q: Commercial juneberries and saskatoons are exactly the same fruit. Why two different names?**

**A:** The term “saskatoon berry” or “saskatoon” is a predominantly Canadian term for this tasty, dark berry that has spilled over to Michigan and a few other communities near the US-Canada border. Elsewhere, including North Dakota, Minnesota, and the Northeast US, we are using the term “juneberry” because of the close relationship with our native juneberry. From a marketing point of view, the name “juneberry” conjures it’s ripening season, a favorable early summer-ness, and offers an easy-to-remember / easy-to-say word. There has been some mild cultural tension with Canadian saskatoon growers, so we often use both terms now. The Saskatoon Berry Council of Canada now uses the term “juneberry” in their marketing to the US.



*Above: Juneberries approaching Harvest. Photo: Jim Ochterski.*

### **Q: Can I take juneberries from the woods in New York and plant them?**

**A:** The wild juneberry (or serviceberry or shadbush) you would find naturally around woodland edges is a species known botanically as *Amelanchier canadensis*. The species that has been domesticated for fruit production in Canada and now New York *Amelanchier alnifolia*.

For farming, *A. alnifolia* has a lot of advantages over *A. canadensis*. It was cultivated from wild plants on the Canadian prairies more than 80 years ago, and is

known widely there as the Saskatoon berry. The variety ‘Smoky’ was selected due to its exceptional flavor in the 1950s.

*Amelanchier canadensis* (wild juneberry) is native to the Eastern United States and has been cultivated primarily for ornamental and wildlife-attracting uses, but not necessarily for human food. Some individual plants may produce full-flavored berries, but currently yields are often comparatively low, and inconsistent with flavor compounds.

### **Q: Now that juneberries are being grown more commonly in New York, what are the most common problems most growers are experiencing?**

**A:** Bird damage. Cedar waxwing, American robin, and European starling are the main culprit species. Ripe juneberry plantings require full-force bird deterrence for a couple weeks: noise makers, distress calls, scary eye balloons, pop-up figures, and netting if necessary. Use the same bird deterrence as any other fruit grown in NY.

In 2014 there was partial crop loss due to cracking with extra rain in late June. As the damp 2014 summer growing season has lapsed, we are seeing notable levels of Entomosporium leaf spot (fungal).

*Below: Packed Juneberries ready for sale. Photo: Juneberry grower Sophie Sidaway, Britain.*



*More on Sophy’s efforts in commercializing Juneberry production in the UK:*

[http://www.warwickshire.ac.uk/about\\_us/latest\\_news/superfood\\_crop\\_first\\_for\\_uk.aspx](http://www.warwickshire.ac.uk/about_us/latest_news/superfood_crop_first_for_uk.aspx).

## What Your Foliar Analysis is Telling You...

Laura McDermott, Eastern NY Commercial Horticulture Program

A combination of soil testing and tissue analysis is important for understanding and managing nutrients in perennial and semi-perennial berry crops. Soil tests help growers understand the potential of the soil, and to maximize that potential prior to planting as much as possible.

Foliar analysis allows growers to see how well those nutrients are making it into the plant. Many of you should be receiving your foliar analysis reports in the next few weeks. (For those of you who have yet to send the sample – there is still time but try to gather the sample soon.) Tissue testing should be done annually.

Many growers use it to identify problems in crops; others use it as a way to monitor the progress.

Tissue testing should be done when the nutrient load has the least amount of fluctuation. This time period has been identified by research to be late July to early August. As fall progresses, nutrients in the leaves are moving towards the crown and root system. Leaves gathered in late August and September will give an artificially low reading.

When the report arrives, compare the levels of nutrients in your crops to the sufficiency levels below. This will help explain the recommendations for future nutrient applications. Some nitrogen can be applied in the fall for strawberries, but for caneberries and blueberries nitrogen should wait for spring applications.

Another common requirement is Boron. That element may be applied at any time.

**Table 1. Recommended tissue sufficiency levels for berry crops, Northeast U.S.**

Nutrient	Blueberry	Caneberry	Strawberry (JB)	Strawberry (DN)
<b>Nitrogen (%N)</b>	1.7 - 2.1	2.0 - 3.0	2.0 to 2.8	3.0-4.0
<b>Phosphorus (%P)</b>	0.1 - 0.4	0.25 - 0.40	0.25 – 0.40	0.2 – 0.4
<b>Potassium (%K)</b>	0.4 - 0.65	1.5 - 2.5	1.5 - 2.5	1.1 – 2.5
<b>Calcium (%Ca)</b>	0.3 - 0.8	0.6 - 2.0	0.7 – 1.7	0.5 – 1.5
<b>Magnesium (%Mg)</b>	0.15 - 0.3	0.6 - 0.9	0.3 - 0.5	0.25 – 0.45
<b>Sulfur (%S)</b>	0.12 - 0.2	0.4 - 0.6	0.4 – 0.6	
<b>Manganese (ppm Mn)</b>	50 - 350	50 - 200	50 – 200	30 - 100
<b>Boron (ppm B)</b>	30 - 70	30 - 70	30 – 70	25 - 50
<b>Iron (ppm Fe)</b>	60 - 200	60 - 250	60 - 250	50 - 150
<b>Zinc (ppm Zn)</b>	8 – 30	20 - 50	20 - 50	15 - 50
<b>Copper (ppm Cu)</b>	5 – 20	6 – 20	6 – 20	4 – 15

Source: PALS Production Guides for Highbush Blueberry, Brambles and Strawberry

## Kathryn Boor Joins Board of Food, Agriculture Research



**July 24, 2014.** Secretary of Agriculture Tom Vilsack [announced](#) today the appointment of Dr. Kathryn Boor, Ronald P. Lynch Dean of CALS, as an inaugural member of the board of directors of the new Foundation for Food and Agriculture Research. Dean Boor will serve as one of 15 appointed and 5 ex-officio directors of the Foundation.

Established by Congress in the 2014 Farm Bill, the Foundation will foster research, innovation and partnerships important to the nation's agricultural economy. It will aim to address problems of national and international importance in plant and animal health, production and products; food safety, nutrition and health; renewable energy, natural resources and the environment; agricultural and food security;

agriculture systems and technology; and agricultural economics and rural communities. It will also work to foster collaboration among agricultural researchers to meet unmet and emerging research needs through grants, contracts, cooperative agreements and memoranda of understanding.

The Foundation will operate as a non-profit corporation seeking and accepting private donations in order to fund research activities. Congress also provided \$200 million in research dollars to be matched by non-federal funds as the Foundation identifies and approves projects.

The board of directors will have broad responsibilities to establish policies, governance structures and set priorities for the new Foundation.

"I am thrilled that Dr. Kathryn Boor of New York was appointed to the Foundation for Food and Agriculture Research Board of Directors," said U.S. Senator Kirsten Gillibrand. "This new foundation will provide much needed resources to our nation's farmers and industry leaders in the areas of food safety, nutrition, energy, agriculture systems, technology, economics and rural communities. I supported her nomination and commend her leadership at Cornell University, providing resourceful tools, technology and information to New York farmers." [Via CALS Notes \[2014-07-24\]:](#)

## Write Your Farm Business Plan with Help this Fall

**August 18, 2014.** Trying to run a farm without a written plan is like going on a wilderness adventure without a compass: the perils are many, and the chances are that even if you manage to arrive somewhere safely, it won't be where you intended to go. And if you ever plan to borrow money for your farm, a business plan is even more essential, as you generally can't get a loan without it.

Many new farmers are intimidated by the process of writing a business plan. The online course [BF 202: Planning to Stay in Business](#) demystifies the process and provides students with feedback on their plans each week.

This course, taught by an experienced farmer and a Cornell

Cooperative Extension educator, is 6 weeks long and consists of weekly webinars followed by homework, readings, and discussions in an online setting.

**The course runs Thurs. Sept 25 - Oct 30**, with webinars Thurs. evenings from 6:30-8pm EST. The cost is \$200, but multiple people from the same farm may participate without paying extra.

See <http://nebeginningfarmers.org/online-courses/all-courses/bf-202-planning-for-sustainability/> for more on the course learning objectives, instructors, and outline.

[BF 202: Planning to Stay in Business](#) is part of the line-up of 12 online courses offered this Fall,

Winter and Spring by the Cornell Small Farms Program.

If you complete the assignments, by the end of this 6-week, fast-paced course you will have the majority of your business plan completed.

To learn more about each course, please visit <http://nebeginningfarmers.org/online-courses>. From this site you can learn more about our instructors, see answers to Frequently Asked Questions, read details for each course, and view the calendar of course offerings for 2013-2014.

*Courses often fill very quickly, so don't miss your chance to sign up today!*

## AG NEWS

### USDA Reminds Farmers of 2014 Farm Bill Conservation Compliance Changes

**July 22, 2014. WASHINGTON D.C.** — Agriculture Secretary Tom Vilsack today reminded producers that changes mandated through the 2014 Farm Bill require them to have on file a Highly Erodible Land Conservation and Wetland Conservation Certification (AD-1026). The Farm Bill relinked highly erodible land conservation and wetland conservation compliance with eligibility for premium support paid under the federal crop insurance program.

"It's important that farmers and ranchers taking the right steps to conserve valuable farm and natural resources have completed AD-1026 forms on file at their local Farm Service Agency (FSA) office," said Vilsack. "This will ensure they remain eligible for crop insurance support."

For farmers to be eligible for premium support on their federal crop insurance, a completed and signed AD-1026 form must be on file with the FSA. Since many FSA and Natural Resource Conservation (NRCS) programs have this requirement, most producers should already have an AD-1026 on file. If producers have not filed, they must do so by June 1, 2015.

When a farmer completes the AD-1026, FSA and NRCS staff will outline any additional actions that may be required for compliance with the provisions. The Risk Management Agency, through the Federal Crop Insurance Corporation (FCIC), manages the federal crop insurance program that provides the modern farm safety net for American farmers and ranchers.

Since enactment of the 1985 Farm Bill, eligibility for most commodity, disaster, and conservation programs has been linked to compliance with the highly erodible land conservation and wetland conservation provisions. The 2014 Farm Bill continues the requirement that producers adhere to conservation compliance guidelines to be eligible for most programs administered by FSA and NRCS. This includes the new price and revenue protection programs, the Conservation Reserve Program, the Livestock Disaster Assistance programs and Marketing Assistance Loans implemented by FSA. It also includes the Environmental Quality Incentives Program, the Conservation Stewardship Program, and other conservation programs.

online at: [www.fsa.usda.gov](http://www.fsa.usda.gov). USDA will publish a rule later this year that will provide details outlining the connection of conservation compliance with crop insurance premium support. Producers can also contact their local USDA Service Center for information. A listing of service center locations is available at

[www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/local/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/local/).

### Agricultural Producers in NY Still Have Time to Apply for Direct Farm Ownership Loan Program

**August 8, 2014.** The U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) today announced that farmers and ranchers still have time to apply for low interest 2014 loans available through FSA's direct farm ownership program. The deadline to submit applications is Sept. 30, 2014.

Eligible producers can borrow up to \$300,000 in direct farm ownership loans to buy or enlarge a farm, construct new farm buildings or improve structures, pay closing costs, or promote soil and water conservation and protection. The interest rate on select loans can be as low as 1.5 percent with up to 40 years to repay.

FSA encourages all interested applicants to apply for direct farm ownership loans. For more information about the program and other loans administered by FSA, visit any FSA county office or [www.fsa.usda.gov](http://www.fsa.usda.gov). For local FSA Service Center contact information, visit <http://offices.sc.egov.usda.gov/locator/app>

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— FSA recently released a revised form AD-1026, which is available at USDA Service Centers and





## Focus on Food Safety Series Part 4 – Selected Case Studies of Foodborne Illness Outbreaks in the US & Europe - Craig Kahlke & Betsy Bihn

To summarize the major produce-associated foodborne illness outbreaks that have occurred over the past 50 years is not possible within the scope of this newsletter, so only three will be highlighted here. Table 1 lists a “Top 10” US & Europe Foodborne Outbreaks Related to Produce”,<sup>1</sup> and several other resources are listed at the end of this publication to provide a more comprehensive look at foodborne illness outbreaks. In addition, a nice publication entitled “Ranking the Risks: The Top 10 Pathogen-Food Combinations with the Greatest Burden on Public Health” can be found at this link <https://folio.iupui.edu/bitstream/handle/10244/1022/72267report.pdf>.

### Three Produce-Associated Foodborne Illness Outbreaks

**2006 *E.coli* O157:H7 outbreak associated with spinach.** In September 2011, news of this outbreak hit the media like a storm as the FDA’s original recommendation was for consumers to stop eating spinach until the source of the outbreak was identified. Finally the source of the outbreak was traced to one large field in California. The outbreak investigation identified risks that included field intrusion by feral pigs, surface water contaminated by animal feces used for irrigation, and adjacent land use included cattle grazing. This outbreak resulted in at least 276 consumer illnesses and 3 deaths attributed to the tainted produce.<sup>2</sup> Thirty-one people ended up suffering hemolytic uremic syndrome, a serious condition often resulting in kidney failure, with many more suffering bloody diarrhea and dehydration. The hospitalization rate for this outbreak was over 50%, which is unusually high for *E. coli* O157:H7 infection. In response to this outbreak, some of the largest grocery chains sent a letter to the farmers’ associations, giving them 6 weeks to come up with a plan to prevent problems like the *E. coli* O157:H7 outbreak from happening again. The result was the Leafy Greens Marketing Agreement, which set strict GAPs standards for the production and postharvest handling of fresh leafy greens in CA and AZ. The West Coast spinach industry is just now recovering from the impact of this outbreak as spinach consumption trends return to pre-2006 levels. For the US, this was the “game changer” in regards to public awareness of produce associated foodborne illness outbreaks and industry awareness of the pain and suffering of those affected as well as the liability and financial losses to the produce industry as a whole.

**2008 US salmonellosis outbreak associated with peppers.** In the spring and summer of 2008, the rare Saintpaul serotype of *Salmonella enterica* caused at least 1442 cases of salmonellosis in 43 states throughout the US.<sup>3</sup> It was the largest reported salmonellosis outbreak in the United States in over 20 years, and the largest caused by produce in the last 50 years. There were at least 257 reported hospitalizations linked to the outbreak, leading to at least one death, and possibly a second with other complications. At first, the major unifying factor in the illnesses seemed to be fresh, raw tomatoes but the pathogen could not be isolated from tomatoes. This complication in identifying the origin and commodity associated with the outbreak severely impacted the tomato industry since sales and consumption dropped dramatically as the traceback investigation continued. As the investigation widened, raw jalapeno & serrano peppers, along with cilantro and bulb onions were also implicated. Finally the Saintpaul serotype of *S. enterica* was isolated from fresh raw jalapeno at a distributor on the Texas-Mexico border. The FDA later found samples of the outbreak strain of *Salmonella* in samples of serrano peppers and groundwater at a Mexican farm. There is much more to this complex story, but it highlights both the impact to public health as well as the impact to the produce industry as identifying the source of contamination is delayed. A good summary can be found in this CDC update at this link: <http://www.cdc.gov/salmonella/saintpaul-jalapeno/index.html>.

## FOCUS ON FOOD SAFETY *(continued)*

**2011 US listeriosis outbreak associated with cantaloupes.** In the summer and fall of 2011, the United States saw an outbreak of listeriosis caused by the pathogen *Listeria monocytogenes* associated with cantaloupes from Colorado. Although the outbreak began in July, illnesses were still being reported in December, due to the long incubation period of this pathogen in some individuals. When the outbreak was over, thirty people had died and 128 were sickened in 28 states, making it the second deadliest recorded U.S. outbreak since the CDC began tracking outbreaks in the 1970s.<sup>4</sup> The FDA found positive samples at a broker of the cantaloupe that linked them to one farm (Jensen Farms) in a cooperative of Eastern Colorado cantaloupe growers. Subsequently, the FDA found positive *Listeria* samples at Jensen farms packing facility, including on brushes in the washing equipment that was originally designed for potatoes. Lack of proper sanitation of this equipment, allowed the *L. monocytogenes* to become established within the equipment and subsequently contaminate cantaloupes that moved through the washer. It is not clear how *Listeria* was first introduced into the equipment, but *Listeria* was found in cull piles in nearby fields, in standing water under the packing equipment, in palletted fruit in a refrigerated cooler awaiting shipment, and in fruit in consumers' refrigerators. It is important to note that Jensen farms received a 96/100 score in an early season Primus food safety audit, so the growers likely thought their food safety program was well implemented and effective at reducing risks. In hindsight, this outbreak highlights many lessons including the importance of equipment sanitation and the risks that *Listeria monocytogenes* presents in fresh produce operations. In addition, it provides many points for discussing the value of third party audits as well as the importance of the competence and training of auditors. For more information, please see the CDC's last update at <http://www.cdc.gov/listeria/outbreaks/cantaloupes-jensen-farms/>.

We would love to have your suggestions, so please email Craig at [cjk37@cornell.edu](mailto:cjk37@cornell.edu) to suggest article topics or share your thoughts about how Cornell Cooperative Extension can help improve the implementation of produce safety practices in New York.

**Figure 1. "Top 10" US & Europe Foodborne Outbreaks Related to Produce** (In order by year, not by hospitalizations & deaths. Notes\* see below)

No.	Location	Pathogen	Produce	Year	Illnesses	Deaths	See Footnotes & References Below
1	US-CO, CA, WA, Canada	E.coli O157:H7	Apple juice (unpasteurized)	1996	>70	1	A
2	<b>US- NY-Washington County</b>	E.coli O157:H7	Drinking water	1999	>1,000	2	B
3	N. America (NE OH & SW PA)	Hepatitis A	Green Onions	2003	>339	4	C
4	N. America	E.coli O157:H7	Spinach	2006	>275	3	D
5	N America.- 43 states, plus Canada	Salmonella enterica	Jalapeno and serrano peppers	2008	>1,400	1-2	E
6	Germany & 15 other countries	E.coli O104:H4	Sprouts	2011	>3,950	53	F
7	US – 28 states	Listeria monocytogenes	Cantaloupe	2011	>145	30	G
8	US- Oregon	E.coli O157:H7	<b>Strawberry</b>	2011	>15	1	H
9	US-24 states	Salmonella spp.	Cantaloupe	2012	>260	3	I
10	US- Arizona	E.coli O157:H7	Lettuce	2013	>90	none	J

A. The company was using blemished fruit and ignored warnings from in-house safety experts. The company had *specialized in selling unpasteurized juices for their supposed health benefits*. 70 people in several U.S. states were stricken, mostly in the West, and in Canada. The outbreak took the life of one child, a 16-month-old girl from Colorado. Belluck, P. ["Accord Is Reached in Food-Poisoning Case"](#). *New York Times*. 1998 (ay 27) Accessed 5-7-14.

## FOCUS ON FOOD SAFETY *(continued)*

B. Underscores the potential contamination of drinking water, the source is likely runoff from a cattle operation, or the contamination of the well from a septic system, but neither was confirmed. NYSDOH, Health Commissioner Releases E. coli Health Report. 3-31-2000. <https://www.health.ny.gov/press/releases/2000/ecoli.htm>, accessed 5-8-14.

C. Worse Hepatitis A (HAV) outbreak in US history. From a Mexican restaurant, no employee was found to be infected. The source has likely a HAV-infected handler from elsewhere in the distribution chain, likely during harvest, process, packing, or repacking. [Hepatitis A Outbreak Associated with Green Onions at a Restaurant --- Monaca, Pennsylvania](#), 2003. CDC, accessed 5-2-14.

D. Feral pigs in the field, major fecal contamination on produce from the area clearly being used as pig habitat. [Update on Multi-State Outbreak of E. coli O157:H7 Infections From Fresh Spinach, October 6, 2006](#). CDC, accessed 4-30-14.

E. Rare strain of the bacteria, difficult detection, followed by difficult traceback – tomatoes originally implicated, not confirmed as a cause, neither is cilantro, but it was never completely confirmed or unconfirmed. Largest produce-related outbreak of Salmonella in the US on record. Behraves CB, Mody RK, Jungk J, Gaul L, Redd JT, et al. 2011. 2008 Outbreak of Salmonella Saintpaul infections associated with raw produce. N Engl J Med Mar 10;364:918-927

F. Deadliest bacterial foodborne outbreak in Europe., new strain of E.coli. Difficult traceback. Spanish cucumbers originally implicated, causing millions of dollars of loss to that industry. Sprouts exported all over Europe and even to the US, where there were some confirmed illnesses. CDC, Outbreak of Escherichia coli O104:H4 Infections Associated with Sprout Consumption — Europe and North America, May–July 2011. 12-20-13. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6250a3.htm>, accessed 5-8-14

G. Deadliest produce-implicated outbreak in the US in nearly 100 years. It's also the second deadliest bacterial foodborne outbreak in US, and second deadliest Listeria outbreak. Centers for Disease Control and Prevention, <http://www.cdc.gov/listeria/outbreaks/cantaloupes-jensen-farms/120811/index.html>, accessed 5-2-14.

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J. Two people developed hemolytic uremic syndrome (HUS), a severe complication of an E. coli O157:H7 infection that can destroy the kidneys. It was difficult to finally point to lettuce as the original source of contamination that came from patrons who ate at a Mexican restaurant in Arizona. Food Safety News, Final Report: 94 Sickened in Federico's E. Coli Outbreak, Lettuce Implicated, 11-25-13. <http://www.foodsafetynews.com/2013/11/final-report-94-sick-in-federicos-e-coli-outbreak-lettuce-implicated/#.U2ukUlf87uE>, accessed 5-6-14.

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## ON THE ORGANIC SIDE...

### Historic Farm Bill Funding Available to Organic Producers and Handlers

*Funds to assist with Organic Certification Costs*

**July 17, 2014.** WASHINGTON D.C. - The U.S. Department of Agriculture (USDA) announced today that approximately \$13 million in Farm Bill funding is now available for organic certification cost-share assistance, making certification more accessible than ever for small certified producers and handlers.

"Consumer demand for organic products is surging across the country," said Secretary Tom Vilsack. "To meet this demand, we need to make sure that small farmers who choose to grow organic products can afford to get certified. Organic food is now a multi-billion dollar industry, and helping this sector continue to grow creates jobs across the country."

The certification assistance is distributed through two programs within the Agricultural Marketing Service. Through the National Organic Certification Cost-Share Program, \$11.5 million is available to all 50 states, the District of Columbia, and five U.S. Territories. Through the Agricultural Management Assistance Organic Certification Cost-Share Program, an additional \$1.5 million is available to organic operations in Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming.

These programs provide cost-share assistance through participating states to USDA certified organic

producers and handlers for certification-related expenses they incur from October 1, 2013 through September 30, 2014.

Payments cover up to 75 percent of an individual producer's or handler's certification costs, up to a maximum of \$750 per certification. To receive cost-share assistance, organic producers and handlers should contact their state agencies.

Each state will have their own guidelines and requirements for reimbursement, and the National Organic Program (NOP) will assist states as much as possible to successfully implement the programs. State contact information can be found on the NOP Cost Share Website,

[www.ams.usda.gov/NOPCostSharing](http://www.ams.usda.gov/NOPCostSharing).

In 2012 alone, USDA issued close to 10,000 cost-share reimbursements totaling over \$6.5 million, to support the organic industry and rural America. Additional information about resources available to small and mid-sized producers, including accessing capital, risk management, locating market opportunities and land management is available on [USDA's Small and Mid-Sized Farmer Resources webpage](http://USDA's Small and Mid-Sized Farmer Resources webpage).

USDA has a number of new and expanded efforts to connect organic farmers and businesses with resources that will ensure the continued growth of the organic industry domestically and abroad. During this Administration, USDA has signed four major trade agreements on organic products, and is also helping organic stakeholders access

programs that support conservation, provide access to loans and grants, fund organic research and education, and mitigate pest emergencies. Through the NOP, USDA has helped organic farmers and businesses achieve \$35 billion annually in U.S. retail sales. The organic community includes over 25,000 organic businesses in more than 120 different countries around the world.

### NOP Instruction: Use of Brand or Company Names Containing the Word "Organic"

The National Organic Program is releasing an instruction on the use of brand or company names containing the word "organic." It clarifies the statutory and regulatory requirements regarding the use of brand or company names that contain the word "organic" or its variants on the labeling of agricultural products. The policy clarification is needed to provide fairness and equity in label use throughout the organic industry and to satisfy consumer expectations for organic products. View [NOP 4012, Use of Brand or Company Names Containing the Word "Organic"](#)





## \$ MONEY TALK \$

### The Pricing Crystal Ball.....

*Or, in search of the silver bullet that carries the magical answer*

*Bob Weybright, Eastern NY Commercial Horticulture Program*

What price and how should I set my price is a frequently asked question many in search of the mythical magic bullet that will lead to maximized profits. Truth be told, there is no such single answer. Also, if there was "THE one price" to charge the Federal Trade Commission might take an interest into what was going on. The key to determining if your prices are solid and realistic are: accurate knowledge of the world you sell in and observations of what is happening at key points in the marketing chain. This approach will help to maximize the return on investment for your crops and products. As a prelude to the following considerations around pricing please understand that these are all from the premise that **Profit is not a dirty word.**

Towards that end I would like to offer some thoughts to consider: First is what channel(s) are you are selling into. This could be a single channel or a combination of channels. Among the more common channels that most growers think of, and which might require different pricing structures, include: wholesale to retailers, wholesale to restaurant, wholesale to processors, retail farmers market, retail pick your own (PYO), or retail farm stand. My reasons for breaking sales outlets into these types of classifications is that one really should give some solid thought towards a pricing structure for each of these channels since each may require different levels of packaging, sorting, work to sell, delivery expense, or marketing activities that should be included in the cost determination when setting the price.

In addition to these inputs the setting of urban vs rural can come into play. One would expect that urban markets are able to command a higher selling price than rural. However, research by Dr. Marvin Pritts and Cathy Heidenreich of Cornell University has shown that often the opposite is true. This only serves to support the notion that a review of pricing in your selling region and outlet is a worthwhile activity to assure you are maximizing your returns.

The next sets of considerations are quite obvious; what are the financial objectives and needs of the farm. While one might think (and rightfully so) that pricing for profit margin is the most important and only consideration when setting price. However, there are in fact other situations that may override this practice. This is partially true as other needs, such as the generation of

cash flow to pay short term financial commitments, can be a driving force to set a lower price point to move product and get quick access to cash. I have also heard that some grower's strategy is to utilize a fixed price across a season. This strategy assumes to break even at the beginning and end of a growing season when harvest expenses can be higher with the desired profits being generated in peak season when harvest costs are lowest and yields are higher. What is the net of this?.....basically to be aware of what financial pressures might be floating around in the back of your mind when you set your price, or pricing strategy for the season and make conscious decisions that encompass all your needs and goals.

Other things to think about when determining a price are those which are very much out of your control. If something is out of your control then why be worried about it you might ask. Quite simply it is so you can monitor whether your prices can be tweaked up, need to shift a tad bit down, or are good and can stay right where they are. Pricing according to the time of season and therefore availability of product is something that a lot of large volume growers follow. Quite simply; when supplies are tight (beginning or end of season) prices can be higher, then dropped in peak season to encourage movement of all the available product.....A wonderful example of basic Macro Economic supply and demand theory in a market economy put into action. Now in the interest of full disclosure this may not hold true for niche or specialty berries as they are not as readily available and often considered "premium". I would venture to say that strawberries and possibly blueberries might follow this pricing trend from the larger production areas. Of course there is always the "blip" to watch for that might allow you to increase your margin if you follow what is going on in the world around you. An example would be earlier in July when there was a shortage of trucks available in south Jersey to move their berries to market. This created the potential in some of the wholesale markets to get an extra few pennies per pound for the short time the supply remained strained.

Again, awareness of the world is becoming even more important as we unfortunately have a new 600 pound gorilla in the closet to contend with, the dreaded Spotted Wing Drosophila!! As I am sure you are aware this is a menace that adds a new dimension to berry production and harvest in our world. You now have to take into consideration the cost of monitoring and spraying to keep it at bay as it is a definite factor, which can become very costly to keep under some semblance of control. This makes

## \$ MONEY TALK \$ *(continued)*

keeping tabs on the world at large even more important to see if there may be opportunity knocking. If you have paid the time, effort, and money to spray so that you have crop, and are the only supply in town then you really need to give serious consideration to which market channels can and should absorb a price increase. (Remember from paragraph one where I clarified that this premise of this article is that profit is not a dirty word).

Having read this far might raise the question about where to find this information which can be used as a tool with which one can evaluate their prices against, or do research to determine whether their prices are a reasonable expectation. This can be a daunting task as admittedly there are a number of resources which have the potential to generate reams of data that would be more than a full time job to review.

That being said I would suggest to start with the Hunts Point Market prices that are generated daily, <http://www.terminalmarkets.com/huntspoint.htm>. This is a handy and relatively easy to use starting point. Their reports are nicely broken down into separate reports for fruits, vegetables, etc. A valuable report that is included via this link is the trucking report; where monitoring this would have let any blueberry growers know that there was a short term potential "shortage" coming out of South Jersey this summer.

Next, and probably a winter project at this point in time is to look at the USDA's Agricultural Marketing Service (AMS) <http://www.ams.usda.gov/AMSv1.0/>. There is an amazing amount of information contained at this website that takes some time to sort through and determine which is relevant and useful to you and your business. Once you get an idea of what information you wish to incorporate into your decision making processes this is the link to the page where you are able to create custom reports, <http://marketnews.usda.gov/portal/fv>, that you can access as part of your regular weekly or monthly business review. While you are at that link you might want to take a scan at the various search tools on the left side of the screen that might be of interest as well

Essentially the goal of all this information is to learn what is available and can be developed into a report format that is succinct, relevant, and workable for you and your operation on a regular basis. Over kill on data can easily lead to analysis paralysis.

Now the big question of all that has been presented here: So What!!!

It is hoped that some take away thoughts include an understanding and agreement that it is worthwhile to be aware of the business environment as a whole so that you can make conscious and informed business decisions. Be aware of changes in pricing and market dynamics that have the potential to affect your sales outlets. In my opinion this can most easily (I am not saying that this is an easy process) be achieved by using the reference sources that are available. And, do not become complacent and price via benign neglect, make conscious and informed pricing decisions.

I probably should offer an apology if you have read this far and are still expecting to see magical formulas to calculate price appear. If you have stayed with me and read this far I would hope that you would agree that there are a very large number of variables go into and affect the decision to set a selling price. Most, if not all, of the variables that would show up in any standard pricing formulas are situational based on individual farm needs and objectives. When it is all said and done is a good thing as it creates possible opportunities by which you can differentiate your business from your competitors. So if you are able to create and follow a process to evaluate your production costs, farm operation, sales outlet, and business position you will be able to more confidently set prices that will work for your business over the long term.

## FOCUS ON PEST MANAGEMENT

### Weed Science Society of America Updates Popular Herbicide Handbook

**August 18, 2014.** Today the Weed Science Society of America (WSSA) announced the availability of the 10<sup>th</sup> edition of its popular *Herbicide Handbook* – a trusted resource used by educators, researchers, growers, extension agents, government officials, students and others interested in weed management.

First published more than three decades ago, the handbook offers comprehensive information on the more than 230 herbicides currently available in the U.S. It includes physical properties, mode of action, environmental fate, solubility, toxicity to humans and wildlife, binding properties and much more.

The new edition has been completely updated and reorganized in an easy-to-navigate alphabetical format. It also includes approximately 20 new herbicide compounds introduced since the last edition was published.

A handy glossary includes definitions of technical terms and acronyms, a conversion table for measurements, lists of adjuvants that improve herbicide performance, and an updated genealogy of agrichemical companies that reflects how the industry has changed through the years.

“Dozens of weed scientists volunteered their time in support of the project,” says Dale Shaner, a past president of WSSA and editor of the new edition. “They’ve helped us bring together a comprehensive body of information that should be useful to anyone who uses or studies herbicides.”

The Herbicide Handbook is available for order through the WSSA business office. Orders can be placed online at <https://psfebus.allenpress.com/wssa/Products/BookStore.aspx>.

#### About the Weed Science Society of America

The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment.

The Society promotes research, education and extension outreach activities related to weeds, provides science-based information to the public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit [www.wssa.net](http://www.wssa.net).



### CleanSweepNY - Fall 2014

*Promoting a Toxic Free Future in New York State*

Planning is now underway for the Fall 2014 CleanSweepNY collection that will target **Nassau and Suffolk Counties on Long Island, NY.**

This CleanSweepNY collection event will take place during the week of September 29, 2014 and pre-registration is required. Registration packets can be requested by telephone or e-mail at the following:

**Telephone: 877-793-3769**

**E-Mail: [info@cleansweepny.org](mailto:info@cleansweepny.org)**

#### Registration Deadlines:

**September 5, 2014** - For participants with unknown products and gas cylinders.

**September 19, 2014** - For all other participants.

CleanSweepNY results in enhanced stewardship of the environment through the improved management of unusable pesticides and other chemical wastes.

These materials can pose human health risks upon exposure and a significant hazard to the groundwater and surface water resources on Long Island.

CleanSweepNY services are provided to farmers and owners of former farms that have unwanted pesticides on their property, all categories of NYS certified pesticide applicators, cemeteries, golf courses, marinas, and other entities possessing unwanted or unusable pesticides and other waste chemicals.

CleanSweepNY collection and disposal services will also be provided to a limited number of schools with unwanted laboratory chemicals and other materials.

CleanSweepNY Services are Not Available to Homeowners.

CleanSweepNY is an Environmental Benefit Project administered by the Natural Heritage Trust (NHT) which was initially established with approximately \$2.2 million from several enforcement settlements in DEC's Pest

## FOCUS ON PEST MANAGEMENT *(continued)*

Management program.

The collections are scheduled and organized by NYSDEC with the collaboration of NYSDOT who generously provides sites for the collection of these unwanted chemical materials.

Do not contact NYSDOT for information. Call the number provided above.

CleanSweepNY is supported by Cornell Cooperative Extension, the Agricultural Container Recycling Council, Soil and Water Conservation Districts, New York Farm Bureau, and related grower associations.

[CSNY Fall 2014 Tri-Fold Brochure](#)



**Berry Diagnostic Tool**



**PIMS**  
Product, Ingredient, and  
Manufacturer System

### Equipo de protección personal Personal Protective Equipment

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<ul style="list-style-type: none"> <li>ANSI-Z41* FOOT PROTECTION Safety Toe Steel Mid Sole Anti-slip tread</li> </ul>		<ul style="list-style-type: none"> <li>ANSI-Z41* PROTECCIÓN DE LOS PIES Cubre Dedos Medida Suela de metal Marcas contra resbalas</li> </ul>
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ANSI-American National Standards Institute  
NRR-Noise Reduction Rating

\*Edidos Mínimos Recomendados  
ANSI-Instituto Nacional de Estándares Americanos  
NRR-Tasa de reducción de ruido

Pagado por el Programa de Disminución de Peligro  
del Departamento de Trabajo de Nueva York  
Funded by the New York State Department  
of Labor Hazard Abatement program

**NYCAMH**  
New York Center for Agricultural Medicine & Health  
1000 1st Ave. S.  
Watkinsville, GA 30686



## Be on the Lookout for Leaf Rust in Michigan Blueberry Fields

**Editor's note:** Leaf rust may also be an issue in NY blueberries. Given our wet rainy summer conditions, it would be a good idea to keep an eye out for this disease in your plantings. Products mentioned for leaf rust management in this article are those labeled for use in Michigan. As always, check to be sure both host (blueberry) and pest (leaf rust) appear on any NY product label before using it for management of this disease.

Annemiek Schilder, Michigan State University Extension, Department of Plant, Soil and Microbial Sciences

Humid conditions are conducive to leaf rust in blueberries. Scout fields for the tell-tale orange spore pustules on the undersides of leaves. If rust is found, apply an effective fungicide to minimize the potential for premature defoliation.

**August 19, 2014.** Due to the humid conditions during the 2014 growing season, there is an increased risk of leaf rust in blueberries. Michigan State University Extension advises growers to keep an eye out for the tell-tale orange pustules. Rainy periods in mid- to late summer as well as longer dew periods are conducive to disease development. Leaf rust is caused by the fungus *Thekopsora minima*. Small yellow spots appear on leaves between July and September and then turn brown with a darker border. On older leaves, lesions may be surrounded by red or purplish discoloration. On the lower leaf surface, yellow to orange powdery pustules are visible with the naked eye or hand lens. These contain infective spores and, when touched, the spores come off.

Leaf rust can rapidly increase towards the end of the season under warm, wet conditions. It generally has little impact on current-season yield, but may cause premature defoliation. Severe defoliation has the potential to reduce fruitfulness of new buds or winterhardiness of the canes. No studies have been done on yield loss in blueberries due to leaf rust.



Necrotic lesions (spots) of Blueberry leaf rust on upper leaf surface. Photo courtesy Annemiek Schilder.

### Biology

The rust fungus needs two plant hosts to complete the lifecycle. The alternate host of the fungus is the hemlock (*Tsuga* spp.), which explains why the rust tends to be more severe in the vicinity of hemlock trees. The hemlock plays an essential part in the lifecycle of the fungus. In spring, spores produced in overwintered blueberry leaves on the ground below blueberry bushes become airborne and infect hemlock needles. This infection may be difficult to see, but infected needles turn yellow and have cream-colored, tube-like projections hanging from them on the lower surface. Spores from these are airborne and infect blueberry leaves anytime from June to August.

Once blueberry leaves are infected, spores produced in the rust

pustules are spread by wind and re-infect blueberry leaves in the presence of water from rain, dew or overhead irrigation. There can be repeated cycles of infection as long as conditions are right for infection. In the fall, the fungus drops to the ground with the leaves and overwinters in the field until the next growing season. In regions where green leaves are present year round, such as in the southern United States or in the greenhouse, hemlock trees are not needed to complete the life cycle.

### Management

Removing all hemlock trees within 0.5 miles from a blueberry field would break the rust lifecycle, but is neither desirable nor practical. Besides, hemlocks are a beautiful part of the Michigan landscape. Raking or

## Leaf Rust *(continued)*

chopping up blueberry leaves after leaf drop in the fall can reduce inoculum carry-over.

Minimize leaf wetness by adjusting timing of overhead irrigation and apply effective fungicides in mid- to late summer.

The most effective fungicide is Pristine (pyraclostrobin + boscalid), but Indar (fenbuconazole), Orbit (propiconazole) and Quash (metconazole) are also effective, especially when applied in the early stages of the epidemic. Do keep in mind that Indar and Orbit have a 30-day pre-harvest interval (PHI) and Quash has a seven-day PHI. Bravo (chlorothalonil) has moderate activity and has a 42-day PHI. However, after harvest, all of these fungicides can be sprayed provided that the maximum number of sprays per season is not exceeded.

A tank-mix of a sterol inhibitor fungicide, such as Indar or Orbit, with a half rate of Bravo is another option for both protectant and curative activity. Serenade (*Bacillus subtilis*), an organic biofungicide with a zero-day PHI, has moderate to good activity against blueberry rust – adding a sticker-extender like Nufilm P may improve efficacy. Dormant lime sulfur applied to the leaves on the ground in the fall or spring may be helpful in reducing overwintering inoculum, but efficacy has not been confirmed.

Dr. Schilder's work is funded in part by [MSU's AgBioResearch](#). Source: [Michigan State University Extension News](#)



Orange rust pustules on lower leaf surface. Photo courtesy Annemiek Schilder.

## FARM SAFETY

**Beat the Heat!** *Anna Meyerhoff, The New York Center for Agricultural Medicine & Health (NYCAMH)*

When summer heats up and farmworkers are exposed to long days of working at high temperatures, it's very easy to become dehydrated. When our bodies lose too much water, we are no longer able to cool down by sweating, and our bodies get overheated.

Dehydrated workers can become disoriented, weak or dizzy, and may suffer a heat-related illness if they do not get help quickly.

These tips can help you beat the heat this summer!

**1. Drink lots of water.** Don't wait until you're thirsty! It is better to drink small amounts of water frequently - before, during and after work - rather than drinking

large amounts less often. Field workers need to drink plenty of water when they are working hard, more if it is hot and muggy.

**2. Wear the right clothing.** Wear light-colored, cotton clothing to help keep you cool. Avoid darker colors and heavier fabrics that absorb the sun's rays and trap heat. A wide-brimmed hat and Z87 sunglasses can also help you stay cool.

**3. Take breaks in the shade.** When it's hot out, you need to rest more often to avoid getting sick from the heat. Take short breaks in a cool, shaded area and drink some water.

**4. Work smart.** Don't overdo it during the hottest time of the day. Instead, schedule heavier tasks for early morning or late afternoon when it's cooler.

**5. Avoid alcohol, caffeine and sugary drinks.** They can dehydrate you more. Remember, taking care of yourself, getting enough sleep, staying hydrated, and eating well can keep your body in good shape and help you stay healthy and strong while working. Take care and stay safe this summer!

For more information, or to set up a free on-farm safety training session, please contact me at 800-343-7527, ext. 291 or email me at [ameyerhoff@nycamh.com](mailto:ameyerhoff@nycamh.com). NYCAMH, a program of Bassett Healthcare Network, is enhancing agricultural and rural health by preventing and treating occupational injury.

**Protect Yourself from the Sun** *Jim Carrabba, The New York Center for Agricultural Medicine & Health NYCAMH*

When we think about safety issues around an agricultural workplace some of the first things that usually come to mind are injuries that occur with tractors and machinery. While it is true that a large percentage of work-related injuries and fatalities are related to such things as machinery, large animals, falls, etc., there are other safety dangers lurking around your farm that can be just as deadly but are overlooked by many. One of these hazards that farmers and other outdoor workers tend to overlook is skin cancer. According to the Centers for Disease Control, skin cancer is now the most common form of cancer in the United States.

Exposure to the sun's rays is the major cause of skin cancer. More than a million people will be diagnosed with skin cancer this year. It is estimated that skin cancer will claim the lives of 9,800 people. There are three main types of skin cancers. The first two are basal cell and squamous cell carcinomas, which are highly curable. The most serious type of skin cancer is malignant melanoma. Melanoma is responsible for three-quarters of all deaths from skin cancer. People with light skin and light hair color are most at risk for getting skin cancer. Skin cancer does not commonly occur in dark skinned people but it is still possible for them to contract this disease.

The good news is that skin cancer can be prevented. Here are some important precautions you can take to reduce your chances of getting skin cancer:

- ✓ Whenever possible, limit your exposure to the sun between 10 am and 4 pm, when the sun's rays are the strongest. Cab tractors or tractors with sunshades can help reduce your exposure.
- ✓ Always use sunscreen. Apply a broad-spectrum sunscreen with a Sun Protection Factor (SPF) of at least 15 or higher. Reapply every 2 hours. Even waterproof sunscreen can come off when you towel off, sweat, or spend extended periods of time in the water. Don't forget to apply to your face, ears and the back of your neck.
- ✓ Wear a wide brimmed hat. It provides good sun protection to your eyes, ears, face, and the back of your neck.
- ✓ Cover up. Wearing tightly woven, loose fitting



## FARM SAFETY *(continued)*

and full-length clothing. is a good way to protect your skin from the sun's UV rays. . Wear sunglasses that block 99-100% of UV radiation. This will greatly reduce sun exposure that can lead to cataracts and other eye damage.

- ✓ Avoid sunlamps and tanning parlors. The light source from tanning beds and sunlamps damages the skin and unprotected eyes. You'll get enough exposure to the sun when you are out doing your farm work.

In addition to following these skin cancer prevention steps, you should also check your skin regularly for any abnormal changes. Skin cancer is curable if caught early. Some of the things you would look for include:

- ✓ Any change to the size, shape or color of moles. . Irregular borders on moles.
- ✓ Moles that aren't symmetrical.
- ✓ Moles that are bigger than a pencil eraser.
- ✓ Sores that bleed or don't heal, red patches or lumps.

These symptoms could appear anywhere on your body. If you notice any symptoms such as these, do not hesitate to seek medical attention. Following these precautions will significantly reduce your chances of getting skin cancer.

As a service to the farming community, NYCAMH offers on-farm safety surveys and worker safety trainings at no cost. If you want more information on these services, please contact me at 800-343-7527, ext. 239 or e-mail me at [jcarrabba@nycamh.com](mailto:jcarrabba@nycamh.com). NYCAMH, a program of Bassett Healthcare Network, is enhancing agricultural and rural health by preventing and treating occupational injury and illness.

## Heat and Sun Safety



"If I don't drink lots of water I get a bad headache and sometimes I even feel dizzy."

### Protect yourself from heat stress and skin cancer

Use sun screen, SPF 15 or higher

Wear light colored cotton Clothes

Wear a full brim hat

Drink plenty of water before, during and after work

Sit in the shade during breaks

Wear safety sunglasses marked "Z87"



Funded by the New York State  
Department of Labor Hazard  
Abatement Program



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New York Berry News (NYBN) is a monthly commercial berry production newsletter provided by Cornell berry team members. It is designed to help promote and strengthen commercial berry crop production in New York State. NYBN is available free of charge in pdf format at:

<http://www.fruit.cornell.edu/nybn/>.

Visit the NYBN web site to view back issues or to subscribe to monthly e-mail notices with table of contents and a link to the most current issue.

More on individual team members and their areas of expertise may be found at: <http://www.fruit.cornell.edu/berry/berryteam.htm>.

#### Questions or comments about the New York Berry News?

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*Editor's Note: We are happy to have you reprint from the NY Berry News. Please cite the source when reprinting. In addition, we request you send a courtesy [e-mail](#) indicating the NYBN volume, issue, and title, and reference citation for the reprint. Thank you.*

**\*Cornell University provides equal program and employment opportunity.**

## Upcoming Events

**October 3, 2014.** *Cornell Small Fruit Open House*, Ithaca, NY. More information:

**November 17-19, 2014 –** *Southeast Strawberry EXPO*, Pinehurst, North Carolina. **For more information:** [www.ncstrawberry.com](http://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 8-11, 2014.** *2015 OPGMA Congress*, Sandusky, OH. **More information:** [www.opgma.org](http://www.opgma.org).

**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.raspberryblackberry.com/>.

**February 3-6 2015.** *NASGA Conference and Symposium*, Ventura, CA. **More information:** [www.nasga.org](http://www.nasga.org).

**February 24-27, 2015.** *North American Raspberry and Blackberry Conference*, Fayetteville, NC. **More information:** [www.raspberryblackberry.com/](http://www.raspberryblackberry.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/>