Cornell University
Cooperative Extension

Eastern NY Commercial Horticulture Program

Vol. 2, Issue 11
August 14, 2014

Berry News

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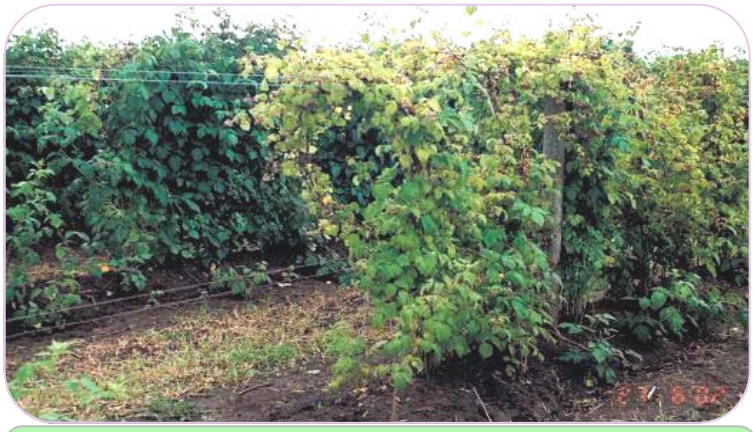
Regional Update

The last two weeks have brought numerous heavy rains accompanied by high winds and hail. This has caused damage locally, but berry crops have made it through relatively unscathed.

Brambles: Another example of why patience is a virtue in farming. This spring the brambles came out of the winter looking sooooo bad….and now they look great! Summer raspberries are finished and the season was quite strong. Blackberries that have fruit set look quite good – with larger than average fruit. Those growers that are managing fall raspberry plantings are looking at excellent fruit set so SWD control will be important. We have found small numbers of adult flies in traps in fall raspberry blocks – despite the fact that there are only a few ripening fruit at the bottom of the canopy. This means that the entire block should be protected with insecticide every 5-7 days. Please be aware that bees are foraging and time your sprays for when the pollinators are not in the crop. Take a peak at the photos above – if your plants look like the ones on the right – get out there and take a foliar sample! Your brambles will do a lot better if you feed them.



Photos above show a nitrogen sufficient raspberry leaf and plant on the left and a nitrogen deficient leaf and plant on the right. *Source: Oregon State Nutrient Management Guide, EM 8903-E. http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/20427/em8903-e.pdf.*

Blueberries: The blueberry harvest is about two thirds done with a strong crop still on later varieties. SWD has not been an issue so far, and the crop looks very good – a few growers remarking that numbers of pickers are down but sales at the stand are strong. Winter injured plants that caused concern a month ago seem to be bouncing back. New cane growth from the crown, and more leaf growth on younger wood has made me much more optimistic about the chances for these plants to get through the winter. **No fertility whatsoever is needed for blueberries at this time of year!** These plants need to harden off so that they will be fully dormant going into December. Ideally pruning should wait until late winter, but at the very least should not be started until after Thanksgiving, and that only if the weather has been conducive to dormancy.

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Regional Update, continued from previous page

Strawberries: Anthracnose is appearing throughout the region on day neutrals. Anthracnose is caused by a strain of Colletotrichum which can be moved by rain, but also by workers or on equipment, therefore affected fields should be worked in last. Strobilurin fungicides (Abound, Cabrio, Pristine) currently are the most effective option for anthracnose. They can only be applied twice consecutively before rotating with a different class of fungicide, preferably Switch as Captan, Captevate, and Thiram are better used as protectant fungicides for early in the season. Other than that and a few problems with plant collapse in wet areas and tarnished plant bug, this crop looks very good.

Strawberry anthracnose caused by Colletotrichum spp. *Courtesy of apsnet.org, by J. Pawlak*

Our current cool-ish weather pattern with abundant rain has promoted excellent regrowth in renovated June berries. Hopefully most growers have been able to gather foliar samples for leaf analysis. There is still time through this week, but as it means gathering the very first fully expanded leaves after renovation the window of opportunity is closing quickly. See article later in this issue for optimum readings from the returned analysis.

Late Summer Weed Control Options for Berries

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 many 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% a.i./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. *-LGM*

What Your Foliar Analysis is Telling You

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 can be applied at any time. Please call Jim or Laura if you have any questions.

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

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

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

2012 Census of Agriculture Released

Source: U.S. Dept. of Agriculture, http://www.agcensus.usda.gov/About_the_Census/

The Census of Agriculture is the leading source of facts and figures about American agriculture. Conducted every five years, the Census provides a detailed picture of U.S. farms and ranches and the people who operate them. It is the only source of uniform, comprehensive agricultural data for every state and county in the United States. Participation by every farmer and rancher, regardless of the size or type of operation, is vitally important. By responding to the Census, producers are helping themselves, their communities and all of U.S. agriculture.

The 2012 Census of Agriculture collected information concerning all areas of farming and ranching operations, including production expenses, market value of products, and operator characteristics. This information is used by everyone who provides services to farmers and rural communities - including federal, state and local governments, agribusinesses, and many others. Census data is used to make decisions about many things that directly impact farmers, including:

- Community planning
- Store/company locations
- Availability of operational loans and other funding
- Location and staffing of service centers
- Farm programs and policies

For 2012 Census of Agriculture results, go to http://www.agcensus.usda.gov/Publications/2012/

Management Tips for Spotted Wing Drosophila on a Small Scale

By Mark Bolda, University of California Cooperative Extension

I've been getting a number of calls lately concerning spotted wing drosophila in caneberries and strawberries, especially from growers on the smaller scale – in most cases organic operations.

Let's do a brief review what the best way to manage this will be:

One should take a two pronged approach. First the use of Entrust (spinosad) as a spray is recommended, while at the same time, to the extent possible, one should be removing the cull fruit (rots and over-ripes) from the field and burying them or throwing them away. For strawberry growers running the tractor over the culls in the furrow can be useful - not so much because it crushes the larvae, but because the flattened fruit dries out quickly and loses its property as a suitable food source. The spray is reducing the number of adults, while at the same time all routes of maturation are no longer available to the fly. Harvested fruit is removed and sold, and cull fruit is removed or destroyed, so there is no way for the larvae to complete their life cycle and turn into more flies.

That said, two years of research tells us to recognize that removal of cull fruit alone will not be enough to bring the population down to acceptable levels. There will always be the one fruit that is missed but yet contains the propagation potential in it to re-infest your field. That is why the best route for you is to spray along with practicing good sanitation.

Final word would be to take note of what is around your field. Are there any patches of uncontrolled spotted wing drosophila next door or wild blackberries? Both of these areas are serving as hosts and it will benefit you to get some control there also.

There is a pesticide mentioned in this article for control of spotted wing drosophila on the small scale. As always, before using such a pesticide, refer to the product label for directions on use.

Source: UCANR Strawberries and Caneberries Blog

Here are some photos from this week's **Open House for Spotted Wing Drosophila Netting Exclusion and Fixed Spray System Farm Trials**, held August 13 at The Berry Patch of Stonewall Hill Farm, Stephentown, NY.

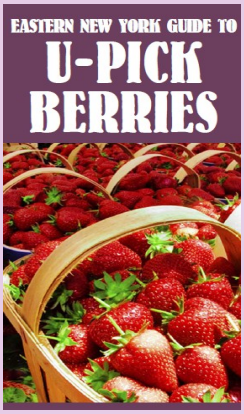
This meeting focused on a SARE Farmer grant funded project looking at different grades of exclusion netting and its efficacy on eliminating SWD from blueberries, and also looked at a high tunnel raspberry planting that has a NYFVI funded grant project examining the efficacy and labor saving attributes of a fixed spray system in the tunnel.

Please contact Laura at 518-791-5038 or email lgm4@cornell.edu if you would like more information.

The Eastern NY Guide to U-Pick Berries is out!

Hard copies of this bulletin were sent to all CCE and Tourism offices of counties in the region. Maire Ullrich, who headed up the effort, is also trying to get them placed at Thruway and Northway stops.

We also have them available for download at http://counties.cce.cornell.edu/orange/U-PIck_Berries_14.pdf. If you missed this opportunity this year, please look for it – or give Maire or me a call and we can make a note of your interest. *-LGM*



Eastern NY Educator Wins National Extension Award

Crystal Stewart, CCE Regional Agriculture Specialist with the Eastern NY Commercial Horticulture Program, was awarded an Achievement Award at the Annual Meeting of the National Association of County Agricultural Agents (NACAA) held in Mobile, Alabama on July 22nd, 2014.

The Achievement Award is presented to those agricultural agents that have been working in their field for less than 10 years but in that short time have made significant contributions to their profession.

Crystal was supported in her nomination by the Garlic Seed Foundation for her work on behalf of garlic growers in this state and nationwide. She played a key role in the recent work on garlic bloat nematode and has initiated additional garlic research studying weed control, post-harvest handling and plant fertility. Crystal is including the results of this work into a new garlic chapter that will be incorporated in the 2015 Cornell Guidelines for Vegetable Crops.

Crystal was also supported by the Cornell Small Farms Program, specifically for her efforts on the Beginning Farmer Online Course leadership team. She has been instrumental in leading that effort and has taught and/or assisted on 4 different courses. Crystal continues to be the point person for beginning farmers in the eastern region.

Crystal has not confined her extension program delivery to just technology driven methods. One of her finest achievements lies in the success she has had with the Amish and Mennonite communities in the Mohawk Valley. These growers have come to rely on Crystal's expertise and energy as they improve their skills producing high value crops.

Crystal was recognized by co-workers and farmers alike as having 'the rare combination of content knowledge, teaching skills, passion, wit, and humility' that make her such a valuable resource to Eastern NY farmers. Please congratulate Crystal when you see her!

Cornell Berry Open House

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

Cornell's East Ithaca Farm on Maple Avenue Orchards and High Tunnels, Ithaca, NY

Topics include:

- 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*

Contact: Cathy Heidenreich at 315-787-2367 or email mcm4@cornell.edu.

For online class registrations, announcements, older issues of the newsletters and more, please visit the Eastern NY Commercial Horticulture Team's website at http://enych.cce.cornell.edu/.

We hope you bookmark it on your computer and begin using it as your 'go to' website for production and marketing information. Email or call any of the educators with questions or comments on the website – we want to make it work for YOU!

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** 7/28– 8/10	**2014 Season Total** 3/1 - 8/10	**2013 Season Total** 3/1 - 8/10	**2014 Weekly Rainfall** 7/28– 8/10 (inches)	**2014 Season Rainfall** 3/1 - 8/10 (inches)	**2013 Total Rainfall** 3/1 - 8/10 (inches)
Albany	**145.8**	**1865.8**	**1869.0**	**0.61**	**7.39**	**24.95**
Castleton	**136.3**	**1760.0**	**1874.9**	**0.79**	**8.61**	**23.00**
Clifton Park	**138.2**	**1696.0**	**1768.5**	**0.38**	**9.26**	**25.35**
Glens Falls	**131.0**	**1673.3**	**1622.5**	**0.24**	**10.94**	**20.60**
Guilderland	**147.0**	**1710.0**	**1777.5**	**N/A**	**N/A**	**5.54**
Highland	**143.8**	**1847.9**	**1993.2**	**0.19**	**11.61**	**23.04**
Hudson	**143.2**	**1883.6**	**1960.7**	**0.70**	**9.83**	**20.17**
Marlboro	**140.3**	**1798.9**	**1925.2**	**0.21**	**12.78**	**26.58**
Montgomery	**143.3**	**1830.8**	**1888.5**	**0.07**	**14.46**	**25.20**
Monticello	**116.1**	**1446.6**	**1514.0**	**N/A**	**N/A**	**N/A**
Peru	**135.7**	**1594.7**	**1637.3**	**0.28**	**10.13**	**18.55**
Shoreham, VT	**138.0**	**1671.5**	**1746.2**	**0.63**	**9.22**	**19.69**
Wilsboro	**127.6**	**1533.1**	**1611.0**	**N/A**	**N/A**	**21.45**