



Vol. 4, Issue 8
June 30, 2016

Berry News

Spring Berry "To Do" List

All Crops

- Bird management – put up nets in berry plantings before the berries begin to color. SWD exclusion netting can also be used to deter birds, so if you are buying new netting consider using exclusion netting for one solution to two problems.
- Weed management – should be ongoing – make note of real problem weeds.
- Deploy monitoring traps for Spotted Wing Drosophila and do occasional fruit flotation checks for larvae in ripening fruit.

Blueberries

- Blueberries starting to turn. Keep watering as fruit size really depends on water uptake.

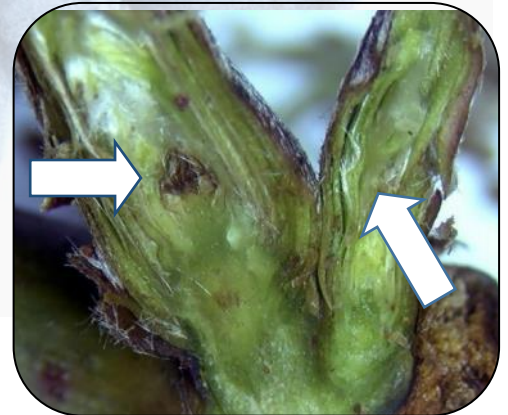
Strawberries

- Strawberry season mostly good – due to very dry weather pickers were there in droves. Still fruit size was slightly off.
- Scout for leaf diseases – photos and management tips in last Berry News.
- Scout for leaf notching or shot hole damage from strawberry root pests. And watch for weak growing areas. Call for a diagnostic visit.
- Prepare to renovate as soon as picking finishes. See this newsletter for information on renovation.

Raspberries and Blackberries

- Orange rust is sporulating. Use Nova, Pristine or Cabrio to protect uninfected plants.
- Scout for crown borers and cane borers, both of which may be causing cane collapse.
- Scout for two-spotted mites – especially if you have raspberries in tunnels, although this hot, dry weather is just what they love in all of the areas.

- Collapsing floricanes may be due to cold damage. The thin layer of cells right beneath the flower/fruit buds was probably damaged during the February or April cold snap and some of the fruiting canes may be succumbing to that damage now. Just prune them out – but while you're doing that make sure that the damage isn't due to crown or cane borer.



Cold-injured primary blackberry bud (left) and uninjured secondary bud (right). Photo credit: Fumi Takeda, USDA-ARS-AFRS

Below: Orange Rust – Early symptoms on left. Sporulation on underside of leaf on right. Photo courtesy of Ohioline, Ohio State University Extension



Pest of Juneberries

Laura McDermott, ENYCHP

Although Juneberries or Saskatoons (*Amelanchier*) are not planted widely in eastern NY, this plant has the potential to be a profitable berry crop in the northern areas of our region. Juneberries are easy to grow and have very high antioxidants and good eating quality. And apart from rust issues, it was thought that this plant had few pests.

A grower in Fort Ann, NY that has some young Juneberries called saying that many of the ripening fruit seemed to be hollowed out and were withering before they could ripen. With help from Duke Elsner at Michigan State University, we are quite sure that Saskatoon Sawfly

(*Hoplocampa Montanica*) laid an egg in those fruit, then the larvae hollowed out the developing fruitlet causing to the fruit to wither and drop.

According to a Manitoba fact sheet, plants should be inspected for presence of adult sawflies from flower opening to 30 per cent petal drop. Additionally, fruit clusters should be inspected just before ripening for exit holes. If the inspection during berry ripening indicates that the number of affected berries exceeds 10 per cent, control measures should be considered the following spring at 20 per cent bloom.



Entry hole of Saskatoon sawfly – the larvae hatches from egg laid by adult sawfly and then burrows around the developing fruit hollowing it out. The fruit fails to enlarge and appears as a dried out fruitlet. Photos courtesy of Duke Elsner, Michigan State



Strawberry Renovation 2016

For the most part, strawberry yield and fruit quality was good this year, although a few growers were disappointed in overall size. Some of the king blossoms were hit by frost and that together with the dry weather may have limited size.

Renovation should commence as soon as possible after harvest is finished. If temperatures are in the low 80's or below, and if we get some rain, then you should feel confident when using 2,4-D and mowing the berries. If it gets really hot again, make sure you put plenty of water to them so that they'll regenerate the leaves quickly. If the plants take too long to regrow it will weaken them signifi-

cantly and they'll have trouble making it through the winter.

Dr. Greg Loeb has been specifically monitoring strawberry fruit for SWD larvae the past two weeks but so far has not found any evidence of infestation. However, it does seem likely that SWD could start getting into plantings after commercial harvest is over especially where they are ripe and rotting fruit laying around. Before doing a "clean up" spray, growers should confirm that SWD is in the strawberries at your farm. This is a tricky proposition as larval assessments on overripe fruit yield larvae from many different species of drosophila. Waiting until there are positive SWD findings elsewhere on the farm before you do any clean-up sprays. Brigade or Danitol would be the best bet for that purpose.

Renovation tips:

- 1. Begin with weed control.** Use 2,4-D to control annual broadleaf weeds ideally right after harvest. If grasses are a problem, use Poast but don't tank mix the two herbicides. Read the label carefully as plant injury can occur with misapplication of 2,4-D.
- 2. Mow strawberries** just above the crowns 3-5 days after herbicide application. Be careful not to damage crown by mowing too low.



Pickers entering Yoleberry farm in Fort Ann, NY

3. Fertilize the planting. The main goal is to deliver nitrogen to help re-grow the canopy. Nitrogen should be applied at 25-60 lbs/acre, depending on vigor and basic soil fertility. Split applications (one now and the rest in 4-6 weeks) are better than a single fertilizer application. This gives plants more time to take up the nutrients in the fertilizer. A leaf tissue analysis (recommended once the canopy has regrown – see article this issue) is the best way to fine-tune your fertilizer program. This will tell you what the plants are actually able to take out of the soil and what nutrients are in sufficient supply or not.

4. Subsoil! This will be very important this year as constant saturated soil has become compacted where tractor and picker traffic has been heavy. Subsoiling between rows will help break up compacted layers and provide better water movement. Subsoiling may be done later in the sequence if necessary.

5. Narrow rows and cultivate between rows. Reduce the width of rows to 12-18 inches at the base. More berries are produced along row edges than in row middles. Wider rows lead to lower fruit production (yield and quality) and increased disease pressure. Narrow rows also give better sunlight penetration, air circulation, spray coverage, and over-all fruit quality. Use a rototiller, multivator, or cultivator to achieve the row narrowing. Work in the straw between the rows and try to throw 1-inch of soil on top of the rows at this time to stimulate new root formation on established crowns and new runners.

7. Post-renovation weed control. Pre-emergence weed control should begin immediately after the plants are mowed and the soil is tilled to narrow the crop row. Apply half the annual rate of terbacil (Sinbar at 4 oz/acre). You

must mow strawberry plants first to prevent plant injury. If strawberry regrowth has started, you could really damage plants if you apply Sinbar. Sinbar should not be used on soils with less than 0.5% organic matter or on reportedly sensitive varieties such as Guardian, Darrow, Tribute, Tristar, and possibly Honeoye. Devrinol at 4 lb/acre or Dacthal at 8- 12 lb/acre can be applied at this time instead of Sinbar. Dacthal is preferred over Devrinol if the planting is weak. If Sinbar is used, apply Devrinol at 4 lb/acre 4 to 6 weeks later to control winter annuals. Be sure to water in the Devrinol.

During the summer, Poast can be used to control emerged grasses. Shallow cultivation is also common during the summer months. If you have a bad thistle problem you can use Stinger in September to help clean that up if renovation doesn't do the trick.

8. Irrigate to activate herbicides and for plant growth. The planting should receive 1 to 1-1/2 inches of water per week from either rain or irrigation.

9. Cultivate to sweep runners into the row until plant stand is sufficient. Runners not rooted by September will not bear fruit and should be considered weeds. Coulter wheels and/or cultivators will help remove these excess plants in the aisles.

10. Adequate moisture and fertility during August and September will increase fruit bud formation and improve fruit yield for the coming year. Continue irrigation through this period and fertilize if necessary. An additional 20- 30 pounds of N per acre is suggested, depending on the vigor.

Spotted Wing Drosophila Update

Laura McDermott and Jim O'Connell, ENYCHP

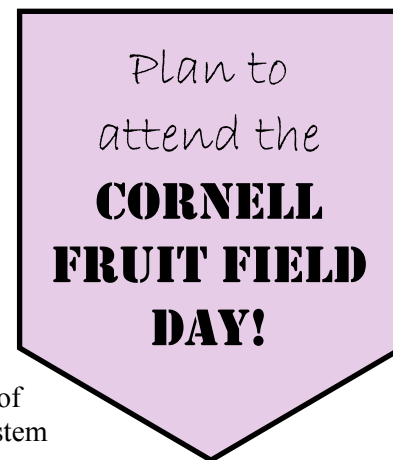
SWD continues to be found across the region and state, but despite the early catches the onset of the insect has been relatively slow. Sustained adult catches in traps at the same location hasn't happened in many places, but Jim O'Connell found eggs and larvae in ripening fruit in Ulster County last week. As raspberry and then blueberry fruit ripen, please know that if SWD has been found anywhere in your county it is advised to spray a cover spray. SWD populations increase rapidly, especially with high humidity and temperature that is warm but not excessively so. As fruit ripens, SWD adults will be pulled out of the hedgerow and into the field.

As June bearing strawberries are left after picking ends, there is an opportunity for SWD to lay eggs in the overripe fruit and kickstart the population growth. Growers wonder if it would be wise to spray the field with an insecti-

cide, but unless you are sure that there is a developing population in that fruit there is no good reason to pursue that strategy. It would be much wiser to focus on getting a cover spray on the ripening raspberries and blueberries.



Mark your calendars for the **Cornell Fruit Field Day**, to be held in **Geneva, NY on Wednesday, July 20**. The 2016 version of this triennial event will feature ongoing research in berries, hops, grapes, and tree fruit, and is being organized by Cornell University, the NYS Agricultural Experiment Station (NYSAES), the College of Agriculture and Life Sciences Fruit Program Work Team, and Cornell Cooperative Extension.



Berries

Spotted wing drosophila (SWD) research update | Hummingbird use | SWD monitoring network | Exclusion netting against SWD in fall raspberries | Monitoring and SWD management decisions in summer raspberry & blueberry | Behavioral control of SWD with repellents and attract & kill stations | Effect of habitat diversity on ecosystem services for strawberries | High tunnel production of black and red raspberries | Day-neutral strawberries and low tunnel production

Tree Fruits

Apple breeding & genetic studies | Research updates on fire blight, apple scab, powdery mildew | Bitter pit in Honeycrisp | 3D camera canopy imaging | Ambrosia beetle management trials | *Malus* selections for cider production | Precision spraying in orchards | Role of insects in spreading fire blight in apples | Bacterial canker of sweet cherry | Rootstocks & training systems for sweet cherry | NC-140 rootstock trials on Honeycrisp & SnapDragon | Pear rootstocks & training systems

Grapes & Hops

Sour rot of grapes | VitisGen grape breeding project | Precision spraying in grapes | Managing the spread of leafroll virus in *Vinifera* grape using insecticides & vine removal | Early leaf removal on Riesling | Overview of NYSAES hops planting | Powdery & downy mildew management in hops | Hops weed management & mite biocontrol | Update on malting barley research

also

FSMA (Food Safety Modernization Act) Produce Safety Rule

Where: NYSAES Fruit and Vegetable Research Farm South, 1097 County Road No. 4, 1 mile west of Pre-emption Rd. in Geneva, NY.

When: Wednesday, July 20th, 8:00 AM. Tours begin promptly at 8:30 AM and are scheduled in the morning from 8:30 to 11:30 and in the afternoon from 1:30 to 5:00. Lunch will be served at the exhibit tent area between 11:30-12:30.

Register now!

Admission fee is \$50/person (\$40 for additional attendees from the same farm or business), which covers tours, lunch and educational materials. **Pre-registration is required.** Walk-in registration may be available for a \$10 surcharge on the day of the event. Register on the [Cornell Fruit Field Day Event registration](http://events.cals.cornell.edu/ffd2016) page, <http://events.cals.cornell.edu/ffd2016>

PESTICIDE UPDATES

EPA announced an exemption from the requirement of a tolerance for residues of the *Bacillus amyloliquefaciens* strain PTA-4838 on all food commodities when applied or used as a fungicide, nematocide, or plant growth regulator. LidoChem, Inc. submitted a petition to EPA under the Federal Food, Drug, and Cosmetic Act (FFDCA), requesting an exemption from the requirement of a tolerance. This regulation eliminates the need to establish a maximum permissible level for residues of *Bacillus amyloliquefaciens* strain PTA-4838.

Current Average Farmers Market Prices



Product (NC = nonconventional)	Unit	Mid-Hudson	Capital Region	Saratoga - Lake George
Blueberries	Pint	\$4.00		
Blueberries NC	Pint			
Raspberries	Pint		\$6.50	
Raspberries NC	Pint	\$4.00	\$3.50	
Strawberries	Pint	\$4.25	\$4.20	\$4.50
Strawberries NC	Pint		\$4.25	\$4.00

Blueberries are

Consumers know some of the benefits blueberries provide, but they're less aware of the advantages of reverting aging, improving vision and memory, a new University of Florida study shows.

Researchers wanted to determine how much consumers know about blueberry health benefits and see if there's a knowledge gap with blueberry health benefits among demographic groups. Using their findings, they will identify promotional opportunities for Florida blueberries.

More than 2,000 people in 31 states were surveyed -- mostly on the East Coast and in the Midwest -- to see what they know about the health benefits of blueberries. Most were aware of the benefits of blueberries in warding off cancer and lowering the risk of heart disease. The UF/IFAS study also found that low-income populations tend to know less about blueberry health benefits.

"People being more familiar with blueberries as deterrents for cancer and heart disease may be related to the high general awareness of these two diseases. The fact that cancer

and heart diseases are the leading causes of death in America may have led to more personal research related to preventing the diseases, leading to the respondents being exposed to these findings more than other benefits."

To help promote blueberries' health benefits, UF researchers suggest holding events during blueberry season, such as tastings or u-picks to draw consumers to the crop while providing a vehicle for information about blueberry health benefits.

*Written by
Brad Buck
from information provided by
University of
Florida Institute of
Food and
Agricultural
Sciences*



Attention Growers! We are in search of Purple Raspberries to photograph. If you have any, please contact Jim O'Connell. Thanks for your help!

Jim O'Connell
845-691-7117 (Lab), 845-943-9814 (Cell)
Jmo98@cornell.edu

2016 Weekly and Seasonal Weather Information						
	Growing Degree Information Base 50^o F			Rainfall Accumulations		
Site	2016 Weekly Total 6/21-6/28	2016 Season Total 3/1-6/28	2015 Season Total 3/1-6/28	2016 Weekly Rainfall (inches) 6/1-6/28	2016 Total Rainfall (inches) 3/1-6/28	2015 Total Rainfall (inches) 3/1-6/28
Albany	147.1	927.9	1033.5	0.21	7.02	11.28
Castleton	141.6	890.9	976.0	0.39	10.43	11.47
Glens Falls	128.5	806.9	853.0	0.78	9.19	12.81
Griffiss	124.0	720.3	810.5	0.56	13.39	18.97
Guilderland	120.0	821.5	919.5	0.64	12.56	16.77
Highland	153.1	1007.2	1049.3	NA	11.6	17.1
Hudson	153.1	978.7	1043.3	0.96	12.43	16.06
Marlboro	143.3	939.4	990.6	2.17	10.25	12.63
Montgomery	141.7	925.9	1031.0	1.81	9.09	14.11
Peru	127.1	731.5	781.7	0.54	7.1	14.13
Red Hook	148.5	933.8	984.0	0.81	8.01	12.39
Willsboro	126.4	723.4	754.2	0.35	7.79	16.57
N. Adams, MA	115.0	704.8	770.5	0.93	11.61	12.59

ENYCH Program Educators:

Fruit

Dan Donahue
Phone: 845-691-7117
Email: djd13@cornell.edu
Tree Fruit

Anna Wallis
Phone: 443-421-7970
Email: aew232@cornell.edu
Tree Fruit & Grapes

Laura McDermott
Cell: 518-791-5038
Email: lmg4@cornell.edu
Berries

James O'Connell
Phone: 845-691-7117
Email: jmo98@cornell.edu
Berries & Grapes

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

Erik Schellenberg
Phone: 845-344-1234
Email: jk2642@cornell.edu

Crystal Stewart
Cell: 518-775-0018
Email: cls263@cornell.edu

Maire Ullrich
Phone: 845-344-1234
Email: mru2@cornell.edu

Business and Economics

Jesse Strzok
Phone: 518-429-1464
Email: js3234@cornell.edu

Upcoming Events

July 20 – Cornell Fruit Field Day, see details in this newsletter.

August 13-17 – International Strawberry Symposium
Quebec, Canada.

<http://www.iss2016-quebec.org/> This meeting is research oriented, but it might be a once in a lifetime kind of event. Follow it up with a much more farmer appropriate educational event below.

August 17-18 – North American Strawberry Growers Summer Tour
Quebec, Canada.

Several years ago Laura attended this event in the greater Montreal area. It was a FANTASTIC opportunity and growers are encouraged join and make time to attend. Bring a spouse or partner and have some fun! <http://www.nasga.org/>



Find us on
Facebook