



Berry News

Spring Berry "To Do" List

☐ All crops

- Manage voles by removing habitat (weeds!) and using traps or baits in feeding stations.
- Weed management – blueberry and brambles weed control discussed in last edition, strawberry weed control in this newsletter.
- Fertilizer program – see Cornell Guidelines or last edition of this newsletter.
- Enroll in [NYS IPM Spotted Wing Drosophila blog](#).

☐ Blueberries

- Bring in bees around 10% bloom (see last newsletter for more info on bees).
- **Plan for bloom applications to prevent fruit molds.** Botrytis blossom and twig blight can be controlled at pink. Many of the same fungicides labelled for mummyberry will control botrytis. Anthracnose fruit rot is best controlled by a fungicide application right at bloom.
- **Treat for Mummyberry as needed. High risk is NOW** Abound, Captevate, Switch – many other fungicides labelled. A second application will be needed and if bloom is delayed perhaps a third. Rotate chemistries when repeating applications. Control is improved greatly simply by disturbing the soil under the bushes just prior to bud break. This disturbs the fungal fruiting body and prevents spore dispersal.
- Take a few moments to look for winter moth larvae in blueberry buds. The photo above shows how small they are. Thankfully winter moth hasn't been seen in New York, but southern New England is getting hammered this year.
- Scout for scale insects.
- Scout for weevil leaf notching. We have found black



Winter moth caterpillar in blueberry bud. For more information about winter moth including control measures visit: <http://www.dem.ri.gov/programs/bnatres/forest/pdf/wmothctrl.pdf> (Photo courtesy H. Faubert, URI)

vine weevil in blueberry fields in eastern NY. They were stymied before they became a big problem, but they are there.

☐ Raspberries

- Scout for two-spotted mites.
- Scout for Yellow Rust and assess treatment options.
- Scout for spider mites and treat as needed.

☐ Strawberries

- As plants start to grow, watch for weak growing areas and check plants for weevil larvae, root rot and/or cold damage.
- Begin fungicide application starting at 10% bloom to prevent fruit mold.
- Scout for root weevils as they'll be in the upper soil levels now.

☐ Ribes

- Currants at bud swell in the Hudson Valley
- Scout for currant aphid which is most common on red and white currant and sometimes on gooseberry. The leaves get very distorted and the aphids produce a lot of honeydew. Spray when you see them – there are no thresholds.
- While scouting keep an eye out for currant stem girdler. These sawfly insects emerge in late April and lay eggs in young shoots which cause the shoots to die. You will need to prune off the affected shoot to prevent the eggs from hatching and increasing population.



Robust and healthy blueberry buds at Stanton's Farm in Albany county. Blueberry bud damage seems to be less than we had originally thought although some varieties will have significantly reduced yield due to April 5th freeze event. *Photo courtesy of A. Mills, Cornell*

Cold Spell Slows Haskap Growth

Jim O'Connell, ENYCHP

Warm temperatures at the end of March caused a surge in growth in many berry crops, including Haskaps. Plantings across the Hudson Valley all responded similarly, pushing new succulent growth, as well as initiating flowers.

Leading into the first days of April, the warm temperatures continued as did plant growth. By the first full week in April, though, temperatures dropped to between 30°F and 40°F for the high, and to between 5°F and 30°F for the low.

Many of the open flowers were killed by the low temperatures and succulent green tissue was injured. The damage ranged from marginal leaf burn to complete leaf mortality. Fortunately, the plants did rebound. Flower buds that were not open during the cold event have since bloomed and set fruit. Secondary shoot growth has replaced the damaged or dead leaves.



Image shows new secondary growth emerging after leaves and flowers died back (Photo courtesy J. O'Connell)

Consumer Interest in Blueberry Varieties

Edited by Laura McDermott, ENYCHP

Edited by Laura McDermott; full article 'Breeding for The Ideal Fresh Blueberry', written by: Jessica L. Gilbert, James W. Olmstead can be found at <http://www.growingproduce.com/fruits/berries/breeding-the-ideal-fresh-blueberry/1/>

The following article is a summary of "take-aways" about what blueberry customers are looking for in a fresh blueberry. The full article was written to report results from a consumer study that will help influence blueberry breeders, but there is plenty of information that a farmer can use as well. Consumer satisfaction and their interest in improved flavor, mouth feel and health are all huge factors that overall consumption.



Multiple attributes influence a consumer purchase decision (think color, size, and perceived flavor) but the consumer might not necessarily be rational or consciously aware of the reasoning for this decision.

Historically, many traits have been selected for blueberry breeding programs with growers in mind, rather than consumers. This has led to a focus on traits such as yield, disease resistance, and climatic adaptation, as the grower is the "customer" for new blueberry varieties. To avoid this, the consumer was presented with sets of

three to four individual descriptive phrases or elements at a time, assaying the impact of a total of 36 specific blueberry sensory and psychological traits. In this manner, the researchers were able to identify the individual traits that most impacted the likelihood of fruit purchases.

The most important blueberry trait from the perspective of consumers was, not surprisingly, taste. A sweet and intense blueberry flavor resulted in the most positive purchase interest. Of those surveyed, 61% were most interested in the aspects of blueberry flavor.

More surprisingly was that the second largest segment of respondents (39%) was most influenced by the perceived health benefits commonly associated with blueberry fruit consumption.

On the negative side, the five quality traits that were most detrimental to purchase weren't from poor taste, but firmness and texture categories such as seediness or mealiness. Negative comments on texture included "mealy, pasty, and dry," "lots of seeds, a bit of grit," "tough chewy skin," "mushy, melts in your mouth," and "meaty, not juicy."

This study suggests breeders and growers should devote resources toward selecting for improved blueberry flavor, and marketing strategies to sell blueberry cultivars of superior flavor may be appropriate to meet consumer desires.

If you would like a very complete list of blueberry varieties and they're horticultural traits (although admittedly eating characteristics are NOT always in the cultivar description), please contact Laura or Jim.

Weed Management in Strawberries

Andy Senesac, CCE

This is the time of year to be cleaning up weeds that have overwintered and applying pre-emergent herbicides to control annual grasses and broadleaf weeds.

Spring germinating broadleaf weeds and grasses are a major challenge to strawberry production. The choice of residual pre-emergence herbicides that can be applied at this time of year is very limited. Napropamide (Devrinol) can be applied to established and newly transplanted berries. A new formulation, Devrinol DF-XT, is now registered even for Long Island. Devrinol needs either irrigation or rainfall after application to activate it and move it into the zone where the weed seeds are beginning to germinate.

Devrinol can be applied until bloom begins. Pendimethalin

(Prowl H2O) can also be applied banded to row middles at this time of year to both established and new plantings. Pre-emergence control of annual grasses and some key annual broadleaf weeds can be expected. In general, Devrinol and Prowl control a similar spectrum of weeds.

Post-emergence control of established grass weeds can be achieved with either sethoxydim (Poast) or clethodim (Select). Both are systemic and grasses are fairly slow to show symptoms, but the active ingredient actually enters the grasses quickly and stops new growth within hours. A repeat application may be needed for perennial grasses or new flushes of grass weeds.

Source: LI Fruit & Vegetable Update April 16, 2015

Botrytis
on infected fruit

Spray Guidelines to Manage Fungicide Resistance

Dr. Cassandra Swett, Grape and Small Fruit Pathologist, University of Maryland

Here's a strawberry spray guide that manages fungicide resistance, when your main objective is gray mold (Botrytis) protection:

Pre-bloom (crown rot protection):

- Spray: Every 7-10 days
- Rotating: Captan 50 WG or 80 WDG (group M)
- With: Rovral 50 WG (Group 2) --this compound can only be applied once, and only pre-bloom

Early Bloom (10%) to fruit set:

- Spray: Every 7-10 days
- Rotating: Elevate 50 WDG (group 17), CaptEstate (group M + 17), Switch 62.5 WG (group 9 + 12), Fontelis* (group 7), Scala (group 12) and Pristine WG (group 7 + 11)
- With: Captan or Thiram Granuflo+ (both group M)
- An example: Captan+Fontelis*, then Switch, then Captan, then Pristine, then Thiram+, then Elevate, then Captan

After fruit set:

- Spray: Every 7-10 days
- Rotating: Captan and Thiram+ (both group M)
- With: CaptEstate (group M + 17), Elevate (group 17), or Fontelis* (group 7) -each applied only once during this interval.

Rates: For every compound, there is a range in the rate you can apply. For fungicides at risk of resistance (Switch, Pristine, Rovral, Scala), the lower rate is always recommended. For fungicides that are not at a high chance of resistance (Elevate, Fontelis*, Captan, Thiram+), the amount you apply should be adjusted, in part, based on how high disease pressure is. If it rained at least once since your last spray, and temperatures are between 65 and 75°F, you will want to use the higher concentration. If, in contrast, it's been cooler than 65, warmer than 75 and / or dry, use the lower rate.



Botrytis cinerea, the causal agent of gray mold on strawberry, on infected fruit. Note dusty covering of gray spores on infected fruit. Courtesy of APS image database

Timing: The same goes for how often you spray. We get a lot of rain this time of year, and every time it rains the fungus has a chance to infect plants. So long as it's raining about every week, plan to spray every 7-10 days.

Tips:

- Control is improved when you rotate between Fontelis* and Switch and when you tank mix Fontelis with Captan.
- One of the compounds in Pristine is the same FRAC group as Fontelis*, so don't use these sequentially.
- Switch and Pristine are both highly effective, but are at high risk of resistance if they are used too often. Because of this, it is recommended that they are only used ONCE each year.

Spray Guidelines, continued from previous page

What about non-synthetic chemicals?

There is some interest in using non-synthetic chemicals for fruit rot control, as a rotation with synthetic chemicals, especially in post bloom control, and for organic management. One such compound is Regalia, a plant extract labeled for use on gray mold and anthracnose fruit rot in strawberry. Trials are lacking for strawberries, but in grape Regalia can be as effective as Pristine against *Colletotrichum*, and is moderately effective against *Botrytis*. In trials in California, disease control with Regalia is best

when rotated with conventional compounds. We will be doing work on strawberry starting this year to evaluate Regalia and other bio-pesticides / biologicals, so we should have more information on this in future years.

***Fontelis is not labelled in NYS.**

+Thiram Granuflo is labelled but is NOT listed in the 2016 Cornell Pest Management Guidelines for Berry Crops.

Source: Penn State Extension, Small Fruit Blog <http://extension.psu.edu/plants/tree-fruit/news/2015/time-for-strawberry-fruit-rot-protection>.

FOR YOUR INFORMATION

⇒ **New! Organic Processed Blackberry Cost Study from Oregon State University**
<http://oregonstate.edu/dept/NWREC/programs/berry-crops>

⇒ **Scientific study review reveals health promoting potential of red raspberries**

LYNDEN, WA, Feb. 10, 2016 - Components in red raspberries may have anti-inflammatory, anti-oxidative and metabolic stabilizing activity, according to a comprehensive review of the available scientific literature published in the January issue of *Advances in Nutrition*. These properties shed light on the potential role of red raspberries in helping to reduce the risk of metabolically-based chronic diseases, including cardiovascular disease, diabetes mellitus, obesity, and Alzheimer's disease: all of which share critical metabolic, oxidative, inflammatory links.

Red raspberries contribute a number of valuable essential nutrients, including providing an excellent source of vitamin C and nine grams of fiber per cup. They are also among the few plant foods that provide a source of ellagitannins and anthocyanins in the same package. The evidence is suggesting that the action of these nutrients and phytochemicals in the body hold the key to red raspberry's health promoting properties.

"Turns out what is good for the heart, is also good for the brain. That is what is particularly interesting about the research on red raspberries - their potential to help reduce factors contributing to metabolic syndrome which has implications for diabetes development and overall cardiovascular and brain health," says Britt M. Burton-Freeman, PhD, MS of the Center for Nutrition Research, Institute for Food Safety and Health, Illinois Institute of Technology, and lead author of the paper.



⇒ **Laser tech keeps birds out of fields:**

Laura's note: *this seems very intriguing, but according to all the bird experts I talked to none of them thought this would give berry growers that much relief. Lasers apparently work best on flocking birds and they are effective in preventing them from roosting at night, but that might not be enough to keep them out of your fields in the daytime.*

⇒ **Farmstand Finder App**

Hello Local Farms! Farmstand Finder is an app for all mobile devices that enables users to upload and find local fresh foods from YOUR farmstands. Download Farmstand Finder for Android and iPhone to instantly upload a farm stand from your device. Alternatively, you can enter your farm stand's full information in the form [here](#) and it will be added to the database of farm stands within 1 week. We need your help - upload your farm today!



FYI, continued from previous page

⇒ **NYS DEC will host a webinar “New York Deer Management Update” the evenings of May 10th & 12th.**

Both nights will have the same content. Any member of the public can participate on either night by connecting online from the comfort of their own home or by joining DEC staff at locations throughout the state.

The webinar is designed to inform New York deer hunters and the general public about current issues in deer management and to set the stage for updating DEC’s [Management Plan for White-tailed Deer in New York State](#). DEC will provide an overview of the state’s deer management program, outline progress on current deer program activities including a brief explanation of DEC’s recent decision to encourage hunters to voluntarily pass up young bucks, and discuss current management priorities including urban-suburban deer over abundance, reducing deer impacts on forests, and other issues.

The presentation will be simulcast online and to a number of meeting venues where participants will have opportunity to meet their regional DEC deer biologist. After the presentation, DEC staff will be available online and in-person to answer questions and discuss public concerns about deer management.

For instructions about how to connect online, for the list of locations where the meetings will be hosted by DEC staff, and for updates on this process, see [2016 Public Meetings on Deer Management](#).

⇒ **USDA Launches First-Ever Local Foods Survey** - The U.S. Department of Agriculture (USDA) recently announced the 2015 Local Food Marketing Practices Survey as part of its continued support of local and regional food systems. USDA’s National Agricultural Statistics Service (NASS) is conducting this first-time survey to produce official benchmark data on the local food sector in the United States. The Local Food Marketing Practices Survey will ask producers for information on their production and local marketing of foods during the 2015 calendar year. Information includes the value of food sales by marketing channel (i.e. farmers markets, community supported agriculture (CSA) arrangements, restaurants, roadside stands, food hubs, and more), value of crop and livestock sales, marketing practices, expenses, Federal farm program participation, and more. Producers who receive the 2015 Local Food Marketing Practices Survey from NASS are strongly encouraged to respond. Farmers and ranchers can fill out the survey online via a secure website, www.agcounts.usda.gov, or return their form by mail. For more information about the 2015 Local Food Marketing Practices Survey, visit www.agcensus.usda.gov

Farm Credit has cited 100 agriculture professionals as tops in the nation for their ‘Fresh Perspective’
and we are proud to say that eastern NY is home to 4 of the 6 NY honorees!

Congratulations to all of the folks on the list and especially to the New York farmers among them including:



Levi Cahan, Whitehall, NY
Christine Fesko, Skaneateles, NY
Jim Hyland, New Paltz, NY
Dale Ila Riggs, Stephentown, NY
Nancy Robbins, Sackets Harbor, NY
Jessica Ziehm, Buskirk, NY

For more information on this program and the honorees, please visit:
www.farmcredit100.com/fresh-perspectives/honorees

ENYCHP Canada Bus Tour

Date: June 28th, 2016

Departure: 6:00am from Albany, NY



*Pick-up stops will be planned for Saratoga, Glens Falls & Plattsburgh as needed

Return: 9:00-9:30pm Arrive in back in Albany, NY

Cost: \$75 (includes bus fare, Lunch and a light Dinner)

Stops: Sherrington, St. Clotilde & Napierville, Quebec

* All those attending must have a valid passport or enhanced drivers license
Please Contact Amy Ivy, with any questions: 518-561-7450, adi2@cornell.edu

Registration and Payment due by Monday, May 23rd

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2016 Weekly and Seasonal Weather Information

Site	Growing Degree Information Base 50° F			Rainfall Accumulations		
	2016 Weekly Total 4/18-5/3	2016 Season Total 4/18-5/3	2015 Season Total 4/18-5/3	2016 Weekly Rainfall (inches) 4/18-5/3	2016 Total Rainfall (inches) 4/18-5/3	2015 Total Rainfall (inches) 3/1-5/3
Albany	39.5	105.4	93.5	1.05	3.51	3.55
Castleton	44.0	94.7	97.7	1.15	4.41	3.13
Glens Falls	25.4	60.0	43.0	1.08	3.74	2.49
Griffiss	140.1	175.8	35.0	1.52	6.87	2.74
Guilderland	36.5	86.0	77.5	1.01	8.12	3.4
Highland	61.6	158.0	125.1	2.84	6.32	6.6
Hudson	44.5	120.9	105.7	2.64	6.12	4.81
Marlboro	55.2	134.6	105.9	1.92	4.26	4.85
Montgomery	60.4	132.4	115.5	1.98	4.45	5.2
Peru	14.4	33.1	55.2	1.22	4.16	2.62
Red Hook	45.8	115.2	96.2	1.39	3.31	3.91
Willsboro	12.4	31.6	43.4	1.41	3.76	2.24
N. Adams, MA	22.7	63.3	23.5	0.89	5.24	2.95

Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide. .