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Berry News

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Berry "To Do" List:

All crops

- Adult SWD have been found in traps throughout the entire Eastern Region of NYS. Larvae have been found in ripening fruit using the salt extraction method in locations where adults are reported. **SWD control should continue as long as you have ripening fruit.** Clean pick as much as possible and don't leave fruit on the ground as this will only add to your problem. Make sure that harvested fruit is refrigerated immediately and keep it refrigerated while on display.
- Information from foliar samples should be trickling in now. See the article in this issue that will help you determine how your crops are faring.

Blueberries

- Blueberry harvest is at the very tail end for all locations. By and large it was a bit lackluster – but the plants are in good shape overall and there were no major disease or insect issues. Good weed control and commitment to pruning if it hasn't been done in recent years will help insure that 2016 is a great year
- If your soil pH is bumping up, plan to add 200#/acre of elemental sulfur to help push pH down. This can be done at any point this fall.

Bramble Crops

- Fall raspberries are the most vulnerable to SWD, so protect them now.
- Hot dry weather is perfect for mites. Keep checking the underside of leaves and use a hand lens. Acramite, Zeal, Brigade are some of the options for control and Organic JMS stylet oil is labelled for NY.

Strawberries

- June bearing strawberry regrowth looks pretty good, but growers need to make sure plants are getting watered periodically. Some locations were extremely dry before this weeks' rain – regrowth and overwintering depends adequate water throughout the fall.
- Make sure to check day neutral berries for mites. The hot, dry weather promotes mite populations.
- Day neutral production has been lackluster in recent weeks. This is due in large part to the very hot weather at the end of July. When we have temps in the 90's that will suppress bud development in the crown. These plants are not daylight sensitive but they do react negatively to very hot weather.
- Annual Chandler fields should be planted by Labor Day. The later you wait, the less established they will be and the poorer they will winter and perform next spring.



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 canberries 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.

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

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



Bird Management Workshop

On August 19, 2015, growers came together in the Capital Region to learn about limiting bird damage in commercial fruit crops. In the morning, researchers from Cornell, Michigan State, and USDA presented on current research in mitigating bird damage. Presentations also included common species of birds known to cause damage, and also regulations and permitting relating to bird management. The afternoon session consisted of a field event where those in attendance were able to see

live demonstrations of bird deterrence. One common method, as seen in the picture above, is the use of inflatable "air dancers," whose flailing movements scare birds away from the crop. Another method, pictured above, is to employ a falconer, who will come to the fruit farm and fly the falcon. Falcons are predators of many of the bird species that damage fruit crops and as a result, scare away these birds. -JMO



Ragweed Allergies

Written by Michael Kerr | Published on May 4, 2012
 Medically Reviewed by George Krucik, MD
 Source: <http://www.healthline.com/health/allergies/ragweed#2>

Editors Note: this looks to be one of the worst ragweed years ever. I cannot remember seeing such a robust crop of this weed in farm fields. This weed is a major pest in most mixed vegetable and berry fields but it's also a real problem for your customers so do your best to at least eliminate it from areas where they will see it!



Ragweed pollen is one of the leading causes of hay fever in the United States, affecting nearly one in five Americans and a whopping 85 percent of the country's 70 million allergy sufferers. The 41 species of annual ragweed (Ambrosia asteraceae) have adapted to live in climates ranging from

the humid Northeast to the arid Southwest and everywhere in between. Ragweed plants are most often found in rural areas and other open spaces that get plenty of sunlight. A single plant is capable of producing up to a billion grains of pollen each season.

To make matters worse, ragweed is also one of the most tenacious allergens—its wind-driven pollen can travel hundreds of miles and survive through a mild winter. That means nearly year-round symptoms for many unlucky folks.

Symptoms

Ragweed allergies share symptoms with other hay fever allergens and may include:

- itchy, watery eyes
- scratchy throat
- runny nose or congestion
- sinus pressure (may cause facial pain)
- coughing or wheezing
- swollen, bluish-colored skin beneath the eyes

- decreased sense of smell or taste

Some sensitive people may develop contact dermatitis when exposed to ragweed as well. The painful, itchy rash, comprised of small bumps and blisters usually appears within 48 hours of exposure. It will usually resolve on its own within two or three weeks, provided there is no more contact with the plant.

Foods to Avoid

Some foods and herbs contain proteins similar to those in ragweed pollen and may trigger symptoms in those with a ragweed allergy, according to Leonard Bielory, M.D., director of the Asthma and Allergy Research Center at the New Jersey Medical School in Newark. Symptoms related to food allergies will typically be worse during ragweed season. You should contact an allergist if you notice your mouth tingling or itching after consuming any of the following:

- bananas
- chamomile
- cantaloupes
- cucumbers
- Echinacea
- honeydew melons
- watermelon
- zucchini

Treatment

Because ragweed pollen is so pervasive, avoidance—which is usually the first line of defense against most allergies—is nearly impossible. Ragweed allergy sufferers tend to rely on medications more than those with other types of allergies. Drugs that can provide much-needed relief include:

- antihistamines such as Claritin or Benadryl (for those with more serious allergies, begin taking two weeks before the beginning of ragweed season and every day until the first frost)
- decongestants such as Sudafed and Afrin
- combination medications which include an antihistamine and decongestant, such as Actifed and Claritin-D
- if over-the-counter medications prove ineffective, contact your doctor about prescription drugs or allergy shots
- over-the-counter hydrocortisone creams will usually relieve symptoms of contact dermatitis

Other steps allergy sufferers can take in the war against ragweed include:

- running the air conditioner longer than usual (well into fall)
- avoiding going outside in the morning when

Ragweed Allergies, continued from previous page

- pollen counts are at their highest
- purchasing a portable high-efficiency particulate air (HEPA) filter or dehumidifier
 - vacuuming weekly with a cleaner that has a HEPA filter (allergy sufferers should delegate this task)

Ragweed allergies and colds often share symptoms, so it's possible that a person may begin taking Echinacea in hopes of relieving the latter condition and end up making allergy symptoms much worse. According to a 2010 study published in *The Annals of Internal Medicine*, Echinacea shows little to no benefit even for colds and, because it may interact with certain medications, it should be avoided.

Ragweed Allergy Season

Depending on the location, ragweed may begin spreading its pollen as early as the last week of July and continue into

the middle of October. In most places, it begins in mid-August. Many people with ragweed allergies have reported a flare-up in symptoms in the springtime as well. Sure enough, ragweed pollen has been found to be capable of surviving through the winter—only to be picked up by spring winds and carried into the noses of already-beleaguered allergy sufferers.

Ragweed Allergy Map

Ragweed can be found in all 50 states as well as in many places in Canada and temperate regions of South America. Daily ragweed forecasts for many places in the United States can be found at weather.com, pollen.com or in local television, radio, or newspaper reports.

Tile Drainage Field Day ***Tile Plow & Backhoe installed***

Tuesday, September 1st @ 1-4pm
Field of Aaron Gabriel, 119 Waite Rd., Easton, Wash Co.
*Follow signs at dirt lane under power lines:
1.4 mi from State Rte 40 & ~0.5 mi from Co. Rte 113*

- *See a tile plow in action (run by Allenwaite Farm) & learn the nuts & bolts of installation*
- *Backhoe demonstration of tile installation*
- *Learn the technical aspects of laying out drainage, system sizing, outlet installation, installing pipe, backfilling, etc.*

Certified Crop Advisor Credits requested

Please RSVP to Tove Ford, 518-765-3518, tff24@cornell.edu or Aaron Gabriel, 518-380-1496,

For Your Interest:

How Driscoll's is Hacking the Strawberry of the Future: This is a VERY interesting article in Bloomberg News about the biggest name in berries, Driscoll's and how they are shaping the berry business of the future through their breeding program. <http://www.bloomberg.com/news/features/2015-07-29/how-driscoll-s-is-hacking-the-strawberry-of-the-future>

Hate removing plastic mulch? Check out this video on Crop Care's website. I know several growers that have purchased these and LOVE them. [CropCare Plastic Mulch Lifter Wrapper \(plastic retriever\) video](#).

Excellent article in *The Packer* about transition time for moving conventional land into organic production. This is a true challenge for perennial crops. <http://www.thepacker.com/marketing-profiles/organic-produce/transition-time-hinders-growers>

Berry Growers and Industry Friends...Plan to attend!

What: Spotted Wing Drosophila (SWD) Management Open House

When: Wednesday, September 2nd, 2015 from 3:00-5:00 PM

Where: The Berry Patch of Stonewall Hill Farm, 15589 NY Route 22, Stephentown NY 12168 (Rensselaer County)

Why: At this Farm/Field Meeting you will learn and see...

- How to do a simple salt floatation test for early detection of SWD larvae
- Real time research results comparing commercial lures for early detection of SWD adults
- Tour inside of Exclusion Netting trial (2nd year of results); modifications to netting attachment system in 2015
- High tunnel raspberry planting with 3 years of data on a Fixed Spray System trial
- What clean picking, sanitation, and immediate refrigeration accomplished despite infestation



Spotted Wing Drosophila research continues in an ongoing effort to better understand and control this new pest. Farm owner Dale Ila Riggs and the NYS Berry Growers Association have helped to secure research funding for SWD. The Berry Patch at Stonewall Hill Farm produces all kinds of berries and vegetables for local retail markets.

Open House coordinated by: Cornell University Cooperative Extension, Eastern NY Commercial Horticulture Program



To Register: call Marcie at 518-272-4210. There is no fee, but a headcount is needed to make handouts.

If you get a machine, please leave your name, phone, and number attending the SWD Open House at The Berry Patch.

This event will happen rain or shine. Questions? Contact Laura McDermott: 518-791-5038

Research Supported by funding from:

Northeast Sustainable Agriculture Research and Education (SARE)

New York Farm Viability Institute (NYFVI)

New York State Legislature

Calendar of Events

Wednesday, September 2nd – Exclusion Netting Workshop, 3-5 pm, The Berry Patch, 15589 NY Route 22, Stephentown, NY 12168. Registration is free, but we do recommend you register. Call Marcie at 518-272-4210 or email at mmp74@cornell.edu.

Thursday, September 3rd – Soil Health Field Day, 10:00 am - 3:00 pm (registration begins at 9:30 am) at Fox Creek Park, Route 30, Schoharie (use 495 N Main St for GPS). \$15 per person ~ includes lunch. Hosted by: The Carrot Barn. Featuring: Ray Archuleta, NRCS National Soil Health Expert.

Wednesday, September 16th—Strawberry Low Tunnels, 3-5pm at Stanton's Feura Farm, 210 Onesquethaw Creek Road, Feura Bush, NY 12067. Take a look at a low tunnel in a day-neutral strawberry production system. This workshop is free, rain or shine. Call Marcie at 518-272-2410 to register.

2015 Weather Table—The weather information contained in this chart is compiled using the data collected by Network for Environment and Weather Applications (NEWA) weather stations and is available for free for all to use. 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.

2015 Weekly and Seasonal Weather Information						
	Growing Degree Information Base 50° F			Rainfall Accumulations		
Site	2015 Weekly Total 8/17- 8/24	2015 Season Total 3/1 - 8/24	2014 Season Total 3/1 - 8/24	2015 Weekly Rainfall (inches) 8/17 - 8/24	2015 Total Rainfall (inches) 3/1 - 8/24	2014 Total Rainfall (inches) 3/1-8/24
Albany	183.1	2358.3	2112.0	0.86	17.06	19.53
Castleton	173.7	2862.9	1994.0	0.79	18.24	19.59
Clifton Park	179.2	2264.4	1911.8	0.81	15.23	20.56
Fishkill	169.0	2247.0	Na¹	0.81	6.08	Na¹
Glens Falls	167.0	2030.1	1889.0	0.34	14.87	23.47
Griffiss	147.5	1890.7	1777.0	0.98	22.12	26.61
Guilderland	80.0²	2036.5²	1930.0	0.05	15.58	Na²
Highland	171.3	2364.5	2121.5	1.07	17.13	22.43
Hudson	176.3	2355.2	2126.7	1.01	16.05	25.61
Marlboro	168.0	2273.8	2040.0	1.11	14.76	21.44
Montgomery	166.6	2317.4	2078.0	1.06	17.2	18.66
Monticello	135.9	1817.5	1630.5	0.86	13.91	8.45
Peru	166.1	1922.4	1805.5	0.4	17.28	20.74
Red Hook	172.2	2247.4	2076.4	1.15	17.55	11.82³
Wilsboro	164.8	1877.9	1742.0	0.24	21.3	11.06
South Hero, VT	176.7	2007.5	1887.6	0.55	19.9	21.5
N. Adams, MA	150.2	1838.3	1686.5	0.59	18.12	20.31
Danbury, CT	170.5	2157.6	1926.0	0.24	18.0	21.23

Na¹: The Fishkill site is new for 2015 so there is no historical data to report.

Na²: Growing degree days for Guilderland only go to 8/20 this week. The Guilderland weather station was not properly reporting precipitation data in 2014 so no data will be shown for this site.

Na³: Precipitation data for this site did not start until May of 2014.

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. This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension.

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