Berry “To Do” List

All Crops

Spotted Lanternfly found in Albany County. This find, which was just one individual, coincides with a similar find of one individual in Yates County, NY. This insect will likely NOT stay within its quarantined area in PA unless citizens learn to recognize and report hitchhiking insects to the NYS Dept of Ag and Markets as soon as possible. For more information see the fact sheet in this newsletter. To contact NYSDAM re: an insect sighting email them at spottedlanternfly@dec.ny.gov.

High levels of SWD infestation are being found in bramble fruits, elderberries and day neutral strawberries that have NOT been sprayed. Please see the article on salt flotation in this newsletter for more information about the wisdom of monitoring for SWD infestation in fall berry crops. Click here for more information on doing your own salt flotation test.

Strawberries

- June bearing strawberries that are at least one year old will benefit from fertilizer now. Using results from tissue testing is the best way to gauge fertility needs, but if you haven’t done that a rule of thumb is that matted row systems could use 30# of actual N per acre. Calcium nitrate is a great choice for this time of year. That would mean that you should apply 200 # of Calcium nitrate to a planted acre.

- Control next season’s slugs now – apply bait in September.

- Keep an eye on leaf spot. High rainfall and high temps really cause the causal agents of leaf spot diseases to get a foothold. A lot of research has implicated heavy leaf spot as the cause of poor spring re-growth.

continued on next page
Late summer and fall are perfect times to work on tough-to-control perennial weeds such as Virginia creeper vine, bindweed, green-brier, Canada thistle, goldenrod, and poison ivy. These perennials are among the most difficult weeds to eradicate, especially because of their ability to generate new shoots from their root systems. Successful management strategies will mostly rely on herbicide that can move from the leaf to the below-ground plant parts. Timely initial application and consistency at controlling any regrowth with follow-up spot treatments are crucial for long-term control of these weeds.

Glyphosate (Roundup or other generic products) is the only postemergence herbicide labeled on blueberry that can provide good control of perennial weeds. Late summer and fall are good times for applying glyphosate as plant sap movement is mostly directed toward the roots where nutrients will be stored in anticipation of next season. Therefore, large volume of glyphosate can easily be translocated from the leaves to the roots, improving the efficiency of the herbicide at killing below-ground storage organs. It is VERY IMPORTANT for glyphosate to be applied when weed leaves are still green before fall colors appear. Use extreme care not to contact crop green tissues (stems and leaves) with glyphosate. Glyphosate absorbed by crop green leaves and bark moves within the plant and can severely damage or kill above-ground and below-ground parts of annual crop and perennial trees.

Weeds such as bindweed, Virginia creeper, and...
greenbrier may need to be pulled out of the trees so they can be treated safely. This may seem too slow to be practical, but consider what these weeds cost in lost income. For example, blueberry bushes covered by Virginia creeper vine may yield just 20% of their potential. This easily equates to a $5 to $10 loss per bush. The loss is incurred each year and increases as the vines spread to neighboring bushes. Investing 15 minutes to carefully pull vines out of that bush and safely treat them on the ground is money well spent.

Glyphosate should be applied through low pressure spot treatment to limit drift movements. Glyphosate absorption will be improved if ammonium sulfate (17 lbs / 100 gal water) is added to your spray mixture. For effective control, at least 50% of the foliage should be wet with glyphosate applied as a 2% solution (see your product’s label for rate necessary to reach this concentration). Consider also “cut stump” applications for Virginia creeper or poison ivy that have large diameter stems. Apply a 2% glyphosate solution to the cambium (inner bark area) IMMEDIATELY after cutting the stem. Don’t let time for cutting to dry as this would prevent glyphosate absorption and translocation to below-ground plant parts. Always apply glyphosate on weeds that are actively growing and not under drought stress. Always refer to the commercial product label for rates and additional information.

Field bindweed (upper left), goldenrod (lower left) and green-brier (right) are some tough weed species of NJ blueberry and will warrant extra time for achieving successful control.

Use Salt Flotation to Check for SWD
Dr. Juliet Carroll, NYS IPM

Source: Spotted Wing Drosophila blog, September 11, 2018

Effective use of salt flotation will help you determine if your fruit are infested with SWD and if your spray program is working. It also will give you a perspective on what your customers may find when they take the fruit home to eat fresh or to make pies, jellies, jams and preserves.

I learned that variations on the salt flotation method helped a couple NY blueberry growers decide when to close this season. After a bad 2017 SWD season, when many NY blueberry growers suffered significant crop loss and shut down early, it was time to take action to monitor their fruit. Here are their methods.

Grower 1: We analyze a batch of berries picked off bushes and a batch gathered that have fallen to the ground. Blueberries are collected randomly across our 5-acre patch. We test batches of 20-30 berries from these two sources separately and then compare.

Mix a solution of one gallon of... continued on next page
Tips to Control Rodents in Drip-Irrigated Strawberries

Danilu Ramirez, Growing Produce

Pests like pocket gophers, moles, squirrels, and voles, when not properly managed, eat the plants and fruit, causing crop damage and yield loss. In addition to damaging the crop, some rodents attack drip tape. It’s expensive and time-consuming to replace, giving growers who employ a drip irrigation strategy even more incentive to ward off rodents.

With a proactive approach and a few key strategies, strawberry growers can ensure rodents don’t wreak havoc on their crop and drip irrigation system.

Rodents are a major concern for all strawberry growers, including those with drip irrigation systems.

Source: Growing Produce, August 3, 2017

continued on next page
The good news is, it doesn’t take highly innovative practices or a cutting-edge approach to control rodents in strawberry fields. In fact, most growers can be successful with heightened awareness and by implementing a few best practices. While strawberry growers do have the added consideration of food safety regulations to account for, there are still several steps they can take to control rodents, and prevent costly damages and yield loss.

Because there isn’t one, “magic” solution for controlling rodents, strawberry growers can build a good, integrated defense with these 10 tips.

**Early Identification**

The first line of defense in the war on rodents begins in the early stages of the growing season.

1. Prior to planting, growers often fumigate fields to prevent disease. This practice can also help eliminate moles that feed on earthworms in the soil. Because of food safety regulations that go hand-in-hand with strawberry production, all growers need to check with their local agricultural commissioner for registered fumigants that are approved to use.

2. Voles are drawn to areas around a strawberry field, too – particularly, overgrown fields and ditches, so it’s advised to eliminate excess weeds, ground cover, and growth.

3. Organic fields tend to have more rodent activity, as soils have not been conventionally fumigated and fields are often surrounded by high vegetation areas. Rodents tend to damage drip tape as they search for water sources. If this happens, consider replacing 5-millimeter tape with a stronger tape that has a thickness of 12 millimeters or more.

**Control While You Grow**

The bulk of rodent management activities take place throughout the growing season, on an ongoing basis.

4. Be on the lookout for mounds, particularly, fan-shaped, and mole hills, as they’re the first sign a pocket gopher or mole has made its home.

5. Upon identifying mounds and hills, set traps on both tunnel entrances.

6. Growers can also destroy mole hills by stomping them, but should take note if they’re rebuilt within a couple days. If so, the moles are active and more attention should be paid to the area.

7. Squirrels tend to be a bigger problem in the summer, when their spring food supplies are starting to run out. Because they tend to stay near perimeter fences, it’s recommended to run PVC pipe along a fence, and put bait inside the pipe.

**Timing and Timelines**

Paying attention to seasonal factors and keeping track of efforts are the final keys to a quality rodent management plan.

8. To best monitor and address issues now and in the future, keep detailed records of where and when damage occurs.

9. It’s also advisable to track the number of pests destroyed in given time periods, as the spikes will help to show when more attention is required.

10. In warm areas where growers farm winter-planted berries, the spring and summer seasons are both crucial times to take action and closely track efforts. Growers who plan in the summer, are proactive early in the fall season, and remain vigilant all the way through to the end of harvest, will attain the best results.

**Not Good Luck, Good Planning**

One final piece of advice isn’t necessarily part of an ongoing program but is highly recommended — don’t be afraid to ask for help. Seek out the advice of fellow strawberry growers who operate drip systems, as well as rodent management experts and local Extension agents.

With proper planning and ongoing best management practices, rodent threats can be minimized in strawberry fields with drip irrigation systems, allowing growers to enjoy the benefits of reduced water use and greater yields, leading to better water and resource use efficiency (WUE and RUE).

Danilu Ramirez, CCA, PCA, is a Water Quality Consultant for RDO Water, based in Santa Maria, CA. She consults berry growers on everything from water efficiency and regulatory compliance to disease prevention and pest management.
SPOTTED LANTERNFLY

Lycorma delicatula

What is the spotted lanternfly?

The spotted lanternfly (SLF) is an invasive pest from Asia that primarily feeds on tree of heaven (Ailanthus altissima) but can also feed on a wide variety of plants such as grapevine, hops, maple, walnut, fruit trees and others. This insect could impact New York’s forests as well as the agricultural and tourism industries.

Identification

Nymphs are black with white spots and turn red before transitioning into adults. They can be seen as early as April. Adults begin to appear in July and are approximately 1 inch long and ½ inch wide at rest, with eye-catching wings. Their forewings are grayish with black spots. The lower portions of their hindwings are red with black spots, and the upper portions are dark with a white stripe. In the fall, adults lay 1-inch-long egg masses on nearly anything from tree trunks and rocks to vehicles and firewood. They are smooth and brownish-gray with a shiny, waxy coating when first laid.

Where are they located?

SLF were first discovered in Pennsylvania in 2014 and have since been found in New Jersey, Delaware and Virginia. As of spring 2018, New York has no infestations, though it’s possible they are present in low numbers and have not been detected yet. Given the proximity of the Pennsylvania infestation, it is expected to be found in New York eventually.

What is the risk to NYS?

SLF pose a significant threat to New York’s agricultural and forest health. Adults and nymphs use their sucking mouthparts to feed on the sap of more than 70 plant species. Feeding by sometimes-thousands of SLF stresses plants, making them vulnerable to disease and attacks from other insects. SLF also excrete large amounts of sticky “honeydew,” which attracts sooty molds that interfere with plant photosynthesis, negatively affecting the growth and fruit yield of plants. New York’s annual yield of apples and grapes, with a combined value of $358.4 million, could be impacted if SLF enters New York. The full extent of economic damage this insect could cause is unknown at this time.

Although native insects also secrete honeydew, the size of SLF and the large populations that congregate in an area result in large accumulations of it. The sticky mess and the swarms of insects it attracts can significantly hinder outdoor activities. In Pennsylvania, where SLF populations are the densest, people can’t be outside without getting honeydew on their hair, clothes, and other belongings.
How do they spread to new areas?
While SLF can jump and fly short distances, they spread primarily through human activity. They often hitch rides to new areas when they lay their eggs on vehicles, firewood, outdoor furniture, stone, etc. and are inadvertently transported long distances.

What are the signs of an infestation?
- Sap oozing or weeping from tiny open wounds on tree trunks, which appears wet and may give off fermented odors.
- One-inch-long egg masses that are brownish-gray, waxy and mud-like when new. Old egg masses are brown and scaly.
- Massive honeydew build-up under plants, sometimes with black sooty mold.

What is being done?
DEC is working with the NYS Department of Agriculture and Markets and the US Department of Agriculture to address SLF. Since it is less expensive and easier to deal with a pest before it becomes widespread, the goal is to find SLF early or prevent it from entering NY altogether.

A plan has been developed that describes how the agencies will prevent and detect SLF in New York. Extensive trapping surveys will be conducted in high-risk areas throughout the state as well as inspections of nursery stock, stone shipments, commercial transports, etc. from Pennsylvania. DEC and partner organizations encourage everyone to be on the lookout for this pest.

What can I do?
- Learn how to identify SLF.
- Inspect outdoor items such as firewood, vehicles, and furniture for egg masses.
- If you visit states with SLF, be sure to check all equipment and gear before leaving. Scrape off any egg masses. Visit www.agriculture.pa.gov for more information on SLF in PA.

If you believe you have found SLF in New York…
- Take pictures of the insect, egg masses and/or infestation signs as described above (include something for scale such as a coin or ruler).
- Note the location (address, intersecting roads, landmarks or GPS coordinates).
- Email the information to DEC (see below).
- Report the infestation to iMapInvasives at www.NYiMapInvasives.org.

CONTACT INFORMATION
Bureau of Invasive Species and Ecosystem Health
Division of Lands and Forests
New York State Department of Environmental Conservation
625 Broadway, Albany NY 12233
spottedlanternfly@dec.ny.gov
www.dec.ny.gov
Updated May 1, 2018
Cornell’s berry breeding program is releasing two new varieties, which will be available for planting in spring 2019: a strawberry, Dickens, and a raspberry, Crimson Treasure. Both varieties produce large fruits with vibrant colors that maintain peak flavor for longer than most heritage varieties.

The new berries are the handiwork of berry breeder Courtney Weber, associate professor in the College of Agriculture and Life Sciences based at Cornell AgriTech in Geneva, New York.

Dickens is a traditional, June-bearing strawberry with high yields and bright red fruit that continues bearing late into the season. The berries are firm, so they hold well on the plant and in the container, Weber said, but not so firm that they have no flavor. Strawberries are the third-leading fruit crop in New York state, but most strawberries sold in supermarkets are from California.

“With New York-grown berries, because we don’t have to ship so far, we can handle a softer fruit. And people notice the softer, sweeter, juicier fruit,” Weber said. “Customers can get supermarket strawberries any day of the week; the reason people make the effort to come to the farm stand or farmers market and buy the local product is because it tastes so much better. Maintaining that flavor is paramount to what we do in our breeding program.”

The Dickens strawberry was first discovered in Weber’s breeding fields in 2002 and was originally noticed for the plant’s hardiness in surviving cold winters, making it especially suitable for New York and other cold-winter climates. Production trials throughout the region have shown Dickens to be an adaptable and consistent producer of high-quality fruit. Dickens has been tested in annual and perennial production systems, without soil fumigation, and found to be tolerant to root rot and other common diseases.

Weber has named his raspberry varieties after his favorite authors, including L’Amour, Clancy, Herriot, Walker and, most recently, Archer. Because this newest berry “yields like the dickens,” Weber decided to name it after prolific English author Charles Dickens.

The new raspberry, Crimson Treasure, is also very high-yielding, with larger fruit than traditional varieties grown in the region. The well-known Heritage raspberry produces fruit of approximately 2.5 grams, while Crimson Treasure produces berries twice as large – averaging between 4 to 6 grams. That’s typical of what you see with supermarket raspberries, Weber said.

Crimson Treasure is a fall-bearing raspberry with bright-red fruit that holds its color and texture well in storage.

“Color is a big deal. You need fruit that does not darken after you pick them,” Weber said. “A lot of older varieties, after you pick them and put them in the cooler, they darken and then look overripe. This one doesn’t; it holds its color and eating quality well.”

Crimson Treasure was originally discovered in 2012. Weber has worked to speed the process of developing new raspberry varieties because the program has so many international collaborators interested in raspberries. These collaborators plant trial raspberries and collect data, giving Weber more information on disease resistance and other traits that can inform his breeding trials.

The name continues another Weber tradition. This is the third raspberry in the “Crimson” series. Two previously released raspberries were named Crimson Giant and Crimson Night.

The Dickens strawberry will be available from Nourse Farms, a licensee in Whately, Massachusetts. More information can be found on their website https://www.noursefarms.com/ or by calling (413) 665-2658.

Crimson Treasure raspberry will be available from North American Plants, a licensee in McMinnville, Oregon. More information can be found on their website http://www.naplants.com/ or by calling (877) NAP/INFO (627-4636)

continued on next page
Cornell’s berry breeding program is the oldest in the country and is the only one in the Northeastern U.S. The university’s berries are grown all over the world: Crimson Treasure has been planted in trials in New York, California, Mexico and the European Union. The berry program works with commercial partners across North America, in Morocco, Spain and Portugal. Heritage, the most commonly grown raspberry variety in Chile, was developed at Cornell, and two Cornell raspberry varieties, Crimson Night and Double Gold, are under license in Japan.

---For Your Information---

- **NY Berry Grower Survey**: Cornell Cooperative Extension and the New York Berry Growers’ Association have partnered on a survey to better understand the current status and future growth potential of New York’s berry industry, and identify the best approaches to support and develop resources to help berry growers. Please respond to this brief survey to provide critical information about what you need and would utilize to grow your business. Feedback from all berry growers, regardless of berry type or size of plantings is needed. The survey takes just a few minutes: [https://www.surveymonkey.com/r/YP22Y6K](https://www.surveymonkey.com/r/YP22Y6K)

- **Have your crops been hurt by drought this year?** Essex and Clinton counties on the northern edge of the ENYCH region have been experiencing drought throughout the summer. The Farm Service Agency has requested that those farmers in Essex or Clinton counties that have experienced at least 30% loss in any one crop, or had wells dry up, or other farm – drought related problems please contact them. The FSA can apply for drought relief funding if there is a need. Contact Jennifer Tierney Bosley, [jennifer.bosley@ny.usda.gov](mailto:jennifer.bosley@ny.usda.gov)

- **Farm and Food Funding Accelerator Program**

  For local food entrepreneurs on the verge of scaling their businesses, one impediment to growth can be the access to capital. The Hudson Valley AgriBusiness Development Corporation’s ([HVADC](https://www.hvadc.org)) [Farm and Food Funding Accelerator Program](https://www.hvadc.org/farm-food-funding-accelerator) (FFFA) is an opportunity for farm and food enterprise owners to develop the necessary skills and materials to build their businesses and approach financial sources. Don’t miss this exciting opportunity! **For all details go to [www.hvadc.org/farm-food-funding-accelerator](https://www.hvadc.org/farm-food-funding-accelerator).**

  Applications for the intensive training program are being accepted until September 15 at [www.hvadc.org/fffa-application](https://www.hvadc.org/fffa-application). There is an application fee of $15 - the fee will be waived for Veterans. Accepted participants will be notified in October. There is no additional cost to participate in the program.

  Through a customized program, FFFA participants will engage in expert instruction, one-on-one counseling and technical assistance, group interaction and industry networking events to learn how to build their sales in anticipation of speaking with investors, discover new market opportunities, and pitch to potential funders.

  FFFA applicants must be a farm, food, fiber or agriculture-dependent business having their home office, farm or production facility in the Hudson Valley, and sourcing the majority of their product ingredients from the region, as well as the majority of their labor force. They must be able to make a commitment to the time and resources required of the training program and be able to commit the same to future FFFA participants as a peer or mentor.

  Additional details about the FFFA may be found at [www.hvadc.org/farm-food-funding-accelerator](https://www.hvadc.org/farm-food-funding-accelerator) or by calling 518-432-5360

*Funding for the Food and Farming Funding Accelerator Program was made possible by the US Department of Commerce Economic Development Agency*
**Calendar of Events**

**November 6-9 - NASGA European Tour** Amsterdam, Netherlands [www.nasga.org](http://www.nasga.org)

**November 7 - Northeast Greenhouse Conference and Expo - Basic Production Skills Session**; Boxboro Regency Hotel, 242 Adams Pl., Boxborough, MA 01719 - The Basic Production Skills session at the NEGC will feature four presentations on the fundamentals of greenhouse production. These presentations are appropriate for new growers or experienced growers interested in learning training topics. Registration: [https://www.negreenhouse.org/registration.html](https://www.negreenhouse.org/registration.html)

**November 7 –8 - Growing Innovations Conference**. Las Vegas, NV - A two-day conference and exposition showcasing innovative solutions spanning all specialty crops, from pre-production through post-harvest. [https://www.growinginnovations.com/](https://www.growinginnovations.com/)

**December 4-6 - Great Lakes Expo**. Grand Rapids, MI [https://glexpoc.com/](https://glexpoc.com/)


**January 15-17, 2019 – Empire State Producers EXPO** - SRC Arena in Syracuse, NY. Three full days of workshops for specialty crops growers. The full berry day will be on Thursday, January 17th. Registration and information: [http://nysvga.org/expo/information/](http://nysvga.org/expo/information/).


**February 19-21, 2019 – 2019 Eastern NY Fruit and Vegetable Conference** – Three days of workshops and sessions for small fruit, tree fruit, vegetable and grape growers. A full trade show. Berry workshop will be Tuesday, February 19th. Registration information will be posted soon on ENYCHP website: [https://enych.cce.cornell.edu/](https://enych.cce.cornell.edu/)

**February 19-21, 2019 – Berry Health Benefits Symposium** – Portland, Oregon. The symposium features cutting edge findings in many areas including breast and colon cancer, leukemia, diabetes, gut health, metabolism, brain aging, heart health and more. Put on under the auspices of the National Berry Crops Initiative, the Berry Health Benefit Symposium offers 1 1/2 days of research presentations and a special 1/2 day event “The Berry Sessions” for non-scientists, and will include a tour of a nearby berry farm.

**May 7th-9th, 2019 – Berry Health Benefits Symposium** – Portland, Oregon. The symposium features cutting edge findings in many areas including breast and colon cancer, leukemia, diabetes, gut health, metabolism, brain aging, heart health and more. Put on under the auspices of the National Berry Crops Initiative, the Berry Health Benefit Symposium offers 1 1/2 days of research presentations and a special 1/2 day event “The Berry Sessions” for non-scientists, and will include a tour of a nearby berry farm.