

Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

Berry E-News ~ August 6, 2021



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"To Do" List

Strawberries

- Regrowth of matted row berries looks very good – one of the up-sides to all the rain.
- 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.

- Check for nymphs of potato leafhopper if you see damage (it's definitely out there!) and spray again to control in new plantings. Leafhopper can cause significant stunting which might delay bud set in the crowns.

Elderberries

- SWD loves elderberries. A number of the products labelled for other berries are also labelled for elderberries. The crop this summer looks good so protection and monitoring is really important. Check the Small Fruit Guidelines – there is an entire elderberry section!

Raspberry/Blackberry

- Scout for canes infested by raspberry cane borer. These will have wilting tips and two dark rings of punctures on the canes where eggs have been laid. Cut off and destroy the wilted tips below the rings as soon as this damage is noticed.
- Fall raspberry harvest will soon be underway and these berries are the most vulnerable to SWD so keep to the spray schedule of 5-7 days.
- Despite the fact that much of eastern NY is quite wet I'm still seeing lots of spider mite damage. 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.

Blueberries

- Fruit anthracnose is showing up in many plantings – a few places it's quite serious. Make a note to get them sprayed next spring. This problem can build up over time.
- Blueberry stem galls seem to be an increasing problem. See the article in this newsletter if you are seeing them in your planting.
- Pick Your Own crowds are thin this year – at least in some locations. Hopefully if weather improves that will change – customers are missing out on amazing fruit!
- Weed growth is pretty impressive. Mowing will help eliminate seed drop and improve your chances of controlling SWD.

Managing Blueberry Stem Gall Wasp

By Rufus Isaacs and Steve Van Timmeren, Michigan State University

As levels of blueberry stem gall wasp infestation have increased in recent years, growers should know how to best control it. The blueberry stem gall is caused by a small chalcid wasp, *Hemadas nubilipennis* and is native to eastern North America. It can be found in lowbush and highbush blueberries, and in managed and unmanaged locations. Levels of infestation of blueberry stem gall wasp have increased in recent years, and we are learning more about how best to control it.

The adult wasps emerge from the galls during bloom, and continues through bloom. Wasps lay eggs under the surface of the stems, and in susceptible varieties the developing larvae cause the shoots to swell after bloom, causing a gall. These are green and hard, kidney-shaped swellings that turn brown in the fall. Jersey and Liberty varieties are the most susceptible, Bluecrop is highly resistant. Some other common varieties may show low levels of infestation, but these are much lower than the susceptible ones. Galls can be up to 2 inches in diameter, and they contain many developing larvae that feed and grow during the summer, overwinter as larvae, pupate in the gall in spring then emerge during bloom. Checking galls for emergence holes can show when emergence starts, though some of the emerging insects might be natural enemy insects. We are learning more about those, and have found three species that come out of these galls. Their role in regulating gall wasp populations is still under investigation.



Removing galls should be the foundation of your management program. If infestation is developing in your fields, pruning can be coupled with chemical control that is focused immediately post-bloom. Using effective insecticides at this timing kills wasps that are still actively flying, plus it penetrates the stems of the bush and prevents recently-initiated galls from growing any further. This timing is also best for avoiding honey bee kills – talk to your beekeeper about removing their colonies right after bloom of your Liberty and Jersey fields to give you the option of using insecticides that cannot be used during bloom.

Reducing the number of galls through pruning and keeping the galls small through effective sprays results in a direct reduction in the number of wasps emerging the next year. Managing blueberry stem gall wasp in susceptible varieties is a multi-year commitment. The best results are expected in fields that receive a combination of pruning in the dormant months and protection of young shoots in the immediate post-bloom timing.

Our recent research has shown minimal benefits of pre-bloom sprays against blueberry stem gall wasp. This timing is challenging to manage around beekeeper activities, it can pose a significant risk to honey bees, plus sprays at this timing have usually worn off before the wasp activity is very high. We have also not identified any insecticide that is effective against blueberry stem gall wasp but also safe to bees, so applications during bloom against this pest are not recommended. Instead, we have found better control with a focus on post-bloom applications of highly active insecticides.

Gall wasp spray program

- Make sure honey bees are removed from fields. Growers needing to treat fields for blueberry stem gall wasp should talk with their beekeeper and neighbors to plan for quick removal of honey bees that will allow immediate post-bloom application once those honey bees have been removed.
- Apply effective insecticide post-bloom. In 2015, the greatest reduction of gall numbers and size was seen in fields treated with an effective insecticide applied at high volume with a penetrant:
 - Water volume at 60-90 gallons of water per acre.
 - Using an effective insecticide. We found that Lannate was highly effective and so were the pyrethroids including Mustang Max, Brigade, Asana, Danitol, etc. One grower tested Exirel at 13.5 ounces per acre and saw good control of blueberry stem gall wasp too.
 - Penetrating adjuvants can help the insecticide move into the stem tissue to reach the eggs and larvae. This can be a low (0.5 percent by volume) rate of a refined

horticultural oil such as JMS Stylet Oil or a specific penetrating adjuvant such as Wetcit, Exit or Dyne-Amic.

- Reapplication. In highly infested fields, reapplication after seven days is recommended to help ensure the full period of activity is covered. Product selection can be from the list above, keeping in mind the label restrictions and seasonal limits. Also consider what sprays will be needed for [spotted wing Drosophila](#) control later in the season.

Guidelines for Berry Crops Soil and Plant Tissue Sampling

This information is from the DairyOne, but is consistent for whatever lab you use. I really prefer Dairy One (also called Agro One) because they provide explanation and guidance based on Cornell recommendations. This pairs well with the soil test information that most growers have when they initially plant berries. If you are growing day neutral strawberries as an annual crop, pre-plant soil testing is the only nutrient test you will need, but with perennial crops tissue testing is very helpful.

Soil samples should be gathered at least a year prior to planting. Soil maps will help differentiate changes in soil type – make sure to sample different soil types separately – don't mix them.

Make sure to follow the directions closely – always get the appropriate number of sub-samples. The results are only as good as the sample.

For more information about soil sampling, visit <https://dairyone.com/services/agronomy-services/soil-analysis/taking-a-sample/>.

Timing for plant tissue sampling

Strawberries: Sample the first fully expanded leaves after renovation or within the first 6 weeks after harvest.

Raspberries: Sample healthy leaves on non-fruiting canes between August 1st and 20th.

Blueberries: Sample healthy leaves between July 1st and August 30th.

Technique for sampling

Sample healthy leaves that are well exposed to light. These should represent the average condition of the planting and should not be damaged by: disease; insects; weather or mechanical injury. Avoid mixing leaves from different cultivars or from plants of different ages. A minimum of 50 grams (~ 2 oz) fresh weight from a minimum of 30 leaves are needed per sample. If possible, each leaf should be taken from a different plant within the sampled area.

Since an accurate recommendation is dependent upon a pH reading, we strongly suggest that you test the pH at this time and record it on the appropriate line of the information sheet. Plants sampled should represent the average condition within the planting unless samples are being taken to determine cause(s) of a distinct problem or condition.

Soil conditions, past fertilizer practices and spray program should be uniform (similar) over the entire sample area. If any of these conditions differ in different parts of the planting, it will be necessary to sample these areas separately. Detach leaves and remove the petioles. Place leaves in a dry paper bag or perforated plastic bag and immediately label the bag so that you will know the area this sample represents.

Washing Leaf Samples

Wash the leaves before they wilt to remove spray residues and dirt. Gently rub the leaves together in a mild detergent solution (dish washing detergent in tap water). Shake to remove excess water and immediately rinse the sample in clean distilled water. Change the distilled water if it becomes dirty or after every 10 samples, whichever comes first. A sample is defined as 30 leaves. Shake again to remove excess water. If a large number of samples need to be prepared, the leaves may be stored overnight in a refrigerator or ice chest to prevent them from drying out. Spread out sample on clean paper towels until leaf surfaces are dry. Transfer sample to paper bag, with top open and dry at room

temperature until the leaves are brittle. Boron free stamped paper bags are available upon request.

NOTE: DO NOT let leaves to stand in water – complete the washing and rinsing process in one minute or less.

NY HERO Act Airborne Infectious Disease Prevention Plans are Due August 5th

Elizabeth Higgins, CCE ENYCHP

The New York legislature passed, and the governor signed, the New York HERO Act on May 5, 2021. This legislation requires ALL employers to adopt an airborne infections disease safety plan and requires employers with 10 or more employees to “permit employees to establish and administer a joint labor-management workplace safety committee.” All types of private employers are included in the new requirements and “farmworkers” are specifically identified as included employees in the legal text. The HERO Act defines the worksite as “any physical space, including a vehicle, that has been designated as the location where work is performed.” It goes on to include in the worksite definition “employer-provided housing and employer-provided transportation at, to or from the work site...”

The NY State Department of Labor (NYSDOL), in consultation with NYS Department of Health, is responsible for implementing the new law. They created model safety plans with ready-to-use templates for many industries including agriculture. Employers have the option of simply adopting NYSDOL’s model standard or developing a plan of their own that meets or exceeds all of the law’s requirements. The law requires the plans to specifically address the following items: employee health screenings, face coverings, personal protective equipment (PPE), workplace hand hygiene, cleaning and disinfecting of share equipment, social distancing, compliance with quarantine or isolation orders, engineering controls such as ventilation, designation of supervisors to enforce the plan, compliance with regulations, and the verbal review with employees of all related employer policies.

To get into compliance with the plan, farm employers can download the agriculture template developed by NYS DOL and NYS DOH and add information specific for your farm. The link to the template is provided below. There are 9 places in the template where you can add farm-specific information. Note that this template is in “fillable PDF” so you should be able to type right in the specially provided boxes and lines on the form.

The text of the HERO act says employers must provide their plans to employees, in writing, in English and in their native language. Further, it says the plan must be posted prominently in the workplace, included in the employee handbook if the employer has one, and made available upon request to contractors, employees, and government representatives. The HERO Act website states that “Employers are required to provide a copy of the adopted airborne infectious disease exposure prevention plan and post the same in a visible and prominent location within each worksite.” Translations of the template are not available on the website at the time of this writing but the website does indicate that DOL does intend to provide a Spanish translation.

It’s important to note that, while private employers are required to have a plan for their business by August 5, 2021, the plans are not currently required to be in effect. The plans will only be activated “when an airborne infectious disease is designated by the New York State Commissioner of Health as a highly contagious communicable disease that presents a serious risk of harm to the public health.”

Resources

Agriculture Model Safety Plan Template NY Hero Act, [Model Airborne Infectious Disease Exposure Prevention Plan](#)

NYS HERO Act Website [NY HERO Act | Department of Labor](#).

For Your Information

Lanternfly Update from Dan Gilrein, CCE Suffolk county

Spotted lanternfly is now reported from all 5 NYC boroughs. There are populations in Orange and Rockland Counties; a small population in Ithaca will hopefully be eradicated. Adults are now active and most easily detected; these very large planthoppers (around 1") have distinctive coloring. Later this fall adults tend to congregate and feed on favorite hosts like tree-of-heaven, red and silver maples, walnut, and grapes. Heavy infestations on grape have led to death of vines over winter. Sightings can also be reported at <https://tinyurl.com/NYSIPM-SLF>. The website includes a map with the current distribution and more information on management options.

Chlorpyrifos Products Can No Longer Be Applied in NY

We are looking into disposal options for growers with remaining material, stay tuned.

Upcoming Events

Berry office hours - Every Thursday afternoon from 12:30pm - 1:30pm

Anya Osatuke and Laura McDermott will hold offer a 15-minute update and then answer questions from growers. All berry growers are welcome to join us. Use this Zoom link and/or phone number to join: <https://cornell.zoom.us/j/98032160743?pwd=SOJDVONIMmRhbVpidXhONVFra056UT09>

Meeting ID: 980 3216 0743

Passcode: 353671

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Respirator Fit Test - August 11, 2021

CCE Warren County, 377 Schroon River Rd, Warrensburg, NY 12885

The New York Center for Agricultural Medicine and Health (NYCAMH) and HealthWorks is pleased to provide respirator fit testing clinics in your region in 2021.

During the clinics NYCAMH will provide medical evaluations; respirator fit tests; and WPS compliant trainings on how to properly inspect, put on, take off, fit, seal check, use, clean, maintain, and store respirators.

Clinic appointments are one hour long, and groups of 4 workers can be seen at a time. Medical evaluations, fit tests, and trainings are available in both English and Spanish.

If you are unable to attend the clinic in your area you may schedule an appointment at another clinic location. To schedule an appointment, please call the NYCAMH office between July 19 and August 10 and ask to speak with farm respirator clinic scheduler.

We can be reached at 607-547-7014 #7 or Email: fittest@bassett.org, Monday-Friday, 8:00 AM-4:30 PM

*All attendees must wear a mask or face-covering.

When calling to schedule an appointment please have the following information available:

- Total number of people attending from your farm
- Name of each person being scheduled
- Language spoken by each attendee
- Make and model of each respirator to be tested

A respirator fit test ensures that a particular make, model, and size of respirator fits the wearer's face and will meet the wearer's needs. A fit test is specific to the make, model, and size of respirator.

If a worker wears more than one style of respirator, including filtering facepieces, they must be fit tested for each one. Please keep in mind while determining who will come to the clinic that a clean-shaven face is a necessity for masks to be effective and for fit testing to be possible.

It is important to us that your workers be protected from any respiratory hazards. It is important to us that you be protected from potential OSHA or DEC fines. If you have any questions, please call us.

Cornell 2021 Hemp Field Day - August 12, 2021. It will be offered in-person in Geneva, at the Agri-Tech Station and virtually. Keep an eye on this Site for more information and registration: <https://hemp.cals.cornell.edu/2021/05/26/upcoming-event-2021-cornell-hemp-field-day/>

Berry Production Workshop: Using Insect Exclusion Netting to Manage SWD

Wednesday, September 15 from 4-6 pm

The Berry Patch

15589 State Route 22

Stephentown, NY 12168

2021 season review of SWD management techniques

Join University of Vermont ag engineer Chris Callahan, Dale Ila Riggs owner of The Berry Patch and Laura McDermott of CCE ENYCHP for a two hour review of Spotted Wing Drosophila (SWD) management techniques. We'll cover the basics of SWD monitoring of adult and larvae populations and also discuss implementing a pesticide program.

The program will focus on what has been learned about designing an exclusion netting support system that provides long term control of SWD and maximum utility for berry farmers. Exclusion netting is being used on field blueberries where it controls SWD while also excluding birds and moderating impacts of hail and heavy rain. Raspberries and strawberries also benefit from exclusion netting on the sides of high tunnels.

1.5 DEC credits available in categories 1A, 10, and 22

Register Here: <https://enych.cce.cornell.edu/event.php?id=1567>

Online Blueberry Physiology, Production Systems & Management

September 24 - November 5, 2021

Learn the fundamentals of blueberry plant physiology and growth, species and types grown and cultivar adaptation, planting establishment, production systems, and important pests to develop successful new plantings or improve the yield and production efficiency of existing planting in this online, instructor-led certificate program offered by Professional and Continuing Education at Oregon State University.

Within a collaborative, research- and experience-based curriculum and interaction with the instructor and peers through a discussion board, you will finish the course with a comprehensive knowledge of growing thriving bushes.

Register Here: <https://workspace.oregonstate.edu/course/online-blueberry-physiology-production-systems-management>

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