

Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

Berry E-News ~ June 30, 2021



Ripe strawberries at Pleasant Valley Farm, Argyle, NY.

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"To Do" List

All Berries

Protect berries from SWD

SWD found at most all monitoring sites in the region this week, and in some instances numbers in

traps jumped. The traps are **not** more attractive to adult SWD than are ripening berries, so if you want to prolong the initiation of sprays, pick the first ripening fruit completely and then spray. Salt flotation tests can help growers monitor infestation levels as the season progresses. It's important to stay **IN FRONT** of this pest, so if fruit is coloring, and SWD have been found in the region, sprays should begin. [See on our website for a list of labelled materials.](#)

Continue to irrigate during this windy, hot weather. Plants lose a LOT of water through evapotranspiration (ET), and hot temps and wind will increase that rate of water loss by another 25%. For example, if the potential peak ET rate averages 0.22 inch per day, you will need about 5,970 gallons (27,154 gallons per acre-inch x 0.22 acre-inch) to irrigate 1 acre to a depth of 0.22 inch during a twenty-four-hour period. This will require an irrigation system that can supply about 4 gallons per minute (gpm) to each acre irrigated (5,970 gallons ÷ 1,440 minutes per day).

If these values are increased 25% to account for higher ET then the use rate becomes 0.28 inch per day with a requirement of 5.3 gallons per minute per day per acre [(27,154 gallons per acre-inch x 0.28 acre-inch) ÷ 1,440 minutes per day]. Thus, a spring, stream, well, or municipal water source would have to supply 4 to 5 gallons per minute continuously for each acre irrigated to meet the peak demand in this hot, windy weather.* Don't wait until the plant wilts. Overhead irrigation can cool fruit, but it often will cause sunburn. If you are cooling berries with irrigation do it in the early morning or later in the afternoon.

**This example of ET and water needs comes from the Northeast Strawberry Production Guide, Chapter 6 – Water Management.*

Strawberries

- The hot weather condensed picking for the juneberry crop. From all accounts most people only expect another week of picking except for possibly Malwina.
- Reports of **SWD** found in later varieties make it imperative to check those strawberries for SWD and cool them as soon as they are harvested. Information on how to manage strawberry fields that you've finished picking to help reduce SWD for other berry crops on your farm is in this E-News – just keep scrolling!

Blueberries



Cranberry fruitworm damage. Photo: D. Roos, NC State

- Duke blueberries are being picked at farms across the region – we are 7-10 days ahead of the average harvest date. The fruit looks (and tastes) great – berry size looks excellent, but SWD is here and berries should be protected.
- **Cranberry fruitworm** found in a few locations. Look for slight webbing in the fruit cluster and a little bit of frass. This insect, along with the cherry fruitworm have been quite damaging to some farms over the past few years. Well timed sprays after bloom are integral to control.

Raspberries/Blackberries

- Crop is ripening and harvest has begun in many areas. The summer crop is also about 7 days earlier than average, or even what accumulated Growing Degree Days (GDD) would have us expect.
- Spider mites were found in high tunnel raspberries this week. Routine scouting is needed to

stay ahead of these pests as they will inevitably be a problem in high tunnels. Spikes in heat make them a field issue as well. Predators really help, so release them throughout the season for sustainable control.

Elderberries

- Some problems with elderberry fruit set noted this week, see photo. Elderberries are believed to be primarily wind pollinated and are thought to be partially self-fruitful; however, research suggests that cross-pollination improves fruit set significantly. Plant more than one cultivar to improve pollination in commercial plantings. Elderberries also are not drought tolerant - they require no less than 1" of water a week, and prefer 2" or more especially during fruit set and swell.



Juneberries (Amelanchier)

- Fruit ripening – crop looks exceptional this year!
- SWD love this fruit – make sure you monitor this crop as well as the usual strawberries and raspberries.
- We'll be talking about this crop on July 8th in Peru – see Calendar of Events for the registration link.

Calendar of Events

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

Anya Osatuke and Laura McDermott will hold office hours for 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=SOJDV0NIMmRhbVpidXhONVFra056UT09>

Meeting ID: 980 3216 0743

Passcode: 353671

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July 8, 2021 – Berry Production Twilight Meeting

Rulf's Orchard, 531 Bear Swamp Road, Peru, NY

Many berry topics will be discussed including growing Juneberries (Amelanchier, not strawberries), using entomopathogenic nematodes to control strawberry root pests, low tunnel production in June

bearing strawberries, SWD monitoring and management. 2.5 DEC pesticide recertification credits available in categories 1A, 10, 22, and 23.

Registration now at https://enych.cce.cornell.edu/event_preregistration_new.php?id=1549.

Contact Elisabeth Hodgdon (eh528@cornell.edu or 518-650-5323) with questions.

July 13 and July 14 - Palmer Amaranth & Other Weeds to Watch

Dr. Lynn Sosnoskie, assistant professor of Weed Ecology and Management for Specialty Crops at Cornell University, will be holding two field meetings in Eastern New York on Palmer Amaranth management in July. More information and registration details are available here:

<https://files.ctctusercontent.com/50bc2eb5701/95a6adb3-c71f-4bac-8223-43f4c893d55b.pdf?rdr=true>

Renovate or Remove Strawberry Plantings Promptly Following Harvest

By Laura McDermott, CCE ENYCHP and Juliet Carroll, Cornell University

Strawberry renovation is a critical, but often overlooked part of growing June bearing strawberries. This year, with SWD numbers climbing, it's even more important to remove fruit leftover in the field as quickly as possible. Otherwise, this fruit can serve as a food and reproductive resource for SWD population growth.

The task that creates a lag in the renovation process is the 2,4-D application. Most growers want to apply this herbicide all at once, so early berries are forced to wait weeks for the late varieties to finish – and in the case of 'Malwina', growers could delay renovation for more than a month. This tactic leaves a continuous supply of unharvested, cull fruit that SWD can develop in. A further delay is due to 2,4-D needing to be taken up by the leaves — mowing is delayed for 5 days to allow the weeds to absorb the herbicide. Given this added delay from choosing 2,4-D, growers need to make sure the weed species in their field are vulnerable to 2,4-D. If not, don't delay renovation to use an ineffective herbicide, choose an alternate herbicide, and mow the planting as soon as picking is finished.

Whenever possible, mow the variety as soon as harvest is done. Be aware that mowing a water- or heat-stressed field can result in poor re-growth. Therefore, make sure the plants are well watered prior to mowing. If temperatures are above 90 degrees and you cannot irrigate, mowing should be delayed. If irrigation is not possible, consider skipping the mowing – but still renovate by narrowing the rows and throwing some soil up over existing crowns.

When strawberry fields go out of the rotation, remove them from production as soon as possible by tilling and then seeding a cover crop or a late season vegetable. If you cannot till the field, then mow it close to the crown or cultivate aggressively to help crush and dry down the remaining berries. This will help destroy this resource and limit SWD population growth in the remnant fruit.

Renovation Process – Immediately after Harvest is Finished

1. Ensure the field has adequate soil moisture.
2. Apply 2,4-D if needed.
3. Wait 5 days after 2,4-D is applied to mow. If 2,4-D is not used, mow immediately after picking.
4. Fertilize.
5. Narrow the rows, cultivate middles of wide rows. Throw ½" of soil over remaining crowns.
6. Apply pre-emergent herbicide (ie Sinbar – make sure to read labels as some varieties are sensitive).
7. Irrigate.

For more in-depth information re: strawberry renovation, visit

<http://www.hort.cornell.edu/fruit/nybn/newslettpdfs/2014/nybn1306.pdf>.

Heat Related Illness - Know How to Recognize Symptoms

Source: Dr. Elizabeth Lamb, NYS IPM

Preventing Heat Stress:

- **Proper Hydration:** Drink plenty of water throughout the day. Drink at least 5 - 7 ounces of water or a "sports" drink every 15 minutes when sweating heavily. It is best to alternate drinks of water with the sports drink to replace lost electrolytes.
- **Sweating:** Our bodies cool through the natural process of sweating, causing water loss that we must replace throughout the day. Adults should drink at least a half – gallon of water each day. If you are working outside during hot weather, you may easily need to double that amount. Remember to drink often while sweating.
- **Exercise:** Physical fitness and health are important personal factors affecting stress. It is important to condition yourself so that you can improve your circulatory system, your lungs and keep your skin in a healthy state.
- **Work Pace:** When planning your work consider that you must acclimate to heat; gradually gaining increased tolerance to higher temperatures.
 - Ideally, you should acclimate your body to the heat a couple of days before coming back to work from any extended time from work.
 - After returning to work, remember to pace yourself for the first few days.

Know the signs of Heat-Related Illness:

- Individuals should learn the early signs of heat stress and take appropriate action. Supervisors should also be alert to the signs of heat stress affecting employees and take action before a problem develops.

Signs Of HEAT CRAMPS:

- Usually cramps will be in the arms and legs
- Excessive body fluid loss through sweating

Signs Of HEAT EXHAUSTION:

- Heavy Sweating
- Weakness
- Fast Pulse
- Normal Body Temperature
- Headache and Dizziness
- Nausea and Vomiting

Signs of HEAT STROKE:

- Confusion
- Slurred Speech
- High Body Temperature/Hot Skin
- Rapid Pulse and Breathing
- Weakness
- Dizziness/Headache
- Seizures
- Unconsciousness

HEAT STROKE IS A MEDICAL EMERGENCY! CALL 911 IMMEDIATELY UPON SIGNS OF HEAT STROKE!

Keep the person cool: Move the person out of the heat and direct sunlight and into air conditioning, if possible. Spray the person with cool water, or apply cold wet cloths or ice packs to the armpits, neck, and groin. Fan air across the person to increase cooling. These methods help cool the person more quickly.

Resources:

- OSHA Heat Stress App for Mobile Devices
- Training Resources located: <https://www.osha.gov/SLTC/heatstress/index.html>

Onboarding Seasonal Workers - Using Google Classroom as a Resource for Onboarding and Training New Farm Employees

By Elizabeth Higgins, CCE ENYCHP

Does your farm use training videos for onboarding or trainings such as sexual harassment prevention and safety? Do you have good records documenting attendance at trainings? A problem many farmers face is keeping all their hiring paperwork, training materials and videos and training documentation organized so they are easily accessed when needed. Google Classroom is a possible solution. Some farms are using Google Classroom to post links to all of the training resources that they use to onboard new employees. This may include video links, standard operating procedures, maps, and other documents that are important for employees to view.

Google Classroom is a free learning tool available to anyone. All you need is a Google account. <https://www.google.com/>. Google Classroom is one of the apps available within Google. Within Google Classroom you can post links to videos, pictures, standard operating procedures, and any other important materials, which allows you to keep all of your critical materials only a click away. It organizes materials including documents, PowerPoints, videos, and allows the student to take quizzes and ask questions, among other features.

If you are looking for a jumpstart on creating your own Google Classroom, email Elizabeth Higgins (emh56@cornell.edu), to request a copy of a pre-filled, bilingual classroom that is organized with key resources and links for onboarding farm employees. It is packed with links to required new employee paperwork, safety training videos, sexual harassment prevention training resources including recommended training videos, and quizzes, as well as prompts for where to include information specific to your farm.

There is a video on using Google Classroom from a webinar given last February. You can find it here <https://bit.ly/3AedLBk>, and we are developing a guidebook for using it that will be available in early July.

This material is based on work supported by USDA/NIFA under award 2018-70027-28588.

On-Demand Courses of Interest to Berry Growers

Summer time might not be the best time for you to take an on-line course – am I right? But these on-demand courses offer the flexibility to log in whenever your schedule allows. Here are a few that might be of interest after the crop is harvested.

- **Pruning and Training Berries, Kiwifruit and Grapes** – Join Bernadine Strik, professor of horticulture at Oregon State University for this multicourse, on-demand series. Designed to provide all the information you need to prune and train specific crops. Register for just one module or get a discount on the series at <https://workspace.oregonstate.edu/course/pruning-series>
 - **Getting Tough on Pests and Going Soft on Pollinators** – Is it possible to do what the title suggests? This course provides pesticide applicators with an easy-to-apply set of rules to select and apply pesticides with minimal impact to pollinators. <https://workspace.oregonstate.edu/course/getting-tough-with-pests-and-going-soft-on-pollinators>.
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