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THE PRODUCE PAGES

Serving the fruit and
vegetable growers of
Eastern New York

Feature Story

Onboarding Your Seasonal Workers

Elizabeth Higgins, CCE ENYCHP

We are getting near that time of year when you will be hiring and training your seasonal workforce. The Eastern NY Commercial Horticulture Team (ENYCH) and the Lake Ontario Fruit Team (LOFT) have been collaborating with the Cornell Ag Workforce Development Program to develop resources for you to streamline the process and paperwork of hiring new employees. This winter we reorganized many of those resources into a [website](#) to make them more accessible.

One of the key resources is an [onboarding plan template](#). The plan indicates what needs to happen, who will do it, and when it should happen. Farms that have developed organized systems for new hire paperwork, and that have developed effective systems for training and assessing new staff are more likely to have

employees that are productive at work more quickly, with fewer accidents and errors while working. Farms that hire lots of seasonal employees or farms that, because of the nature of the work, have a lot of employee turnover will find that the upfront investment in developing better onboarding systems will pay dividends quickly. There is a 4-week schedule in Excel that you can use to plan your month, and an Action Plan to help you identify a few key areas to focus on at first if you are overwhelmed. We also have included a template [NYS Employee Manual](#).

Cornell Cooperative Extension
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The *Produce Pages* is a monthly publication of the Eastern New York Commercial Horticulture Program. For more information about the program, please visit our website at <http://enych.cce.cornell.edu/>.

Serving the Educational and Research Needs of the Commercial Small Fruit, Vegetable and Tree Fruit Industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Putnam, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties.

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The website pulls together links to many of the resources that you will need for hiring and training a new employee. You will find a [checklist and links to key paperwork](#), [housing resources](#), [training resources and videos](#), and links to [NYS and US DOL regulations](#).

We hope that this website makes it easier to pull together the resources that you will need this season. Send welcome suggestions for additions or improvements to Liz Higgins at emh56@cornell.edu.

Weed Management Tips in Preparation of 2022 Herbicide Shortages

By Lynn M. Sosnoskie, Cornell University and Thierry E. Besançon, Rutgers University

This article originally appeared in the Feb 1st Rutgers Cooperative Extension Plant & Pest Advisory. The link to the original can be found here: <https://plant-pest-advisory.rutgers.edu/tips-in-preparation-of-herbicide-shortages-in-2022/>

Many growers in the US have been focused on predicted herbicide shortages in the upcoming field season. While the primary concerns have surrounded glyphosate and glufosinate, there is increasing apprehension that active ingredients of importance to vegetable growers may also be affected. Although the supply change is dynamic, chemical stocks may become, and remain, tight at the local or regional level as growers try to fill gaps in their toolboxes. Heading into the new year, consider the following for the 2022 season.

- ✓ Successful weed identification, regular scouting, and detailed field records are crucial for optimizing weed control success. The first step in developing a novel herbicide program is knowing what species are present and determining which combination of products will be the most effective (and affordable) at suppressing them. Not all active ingredients are equally useful against all species and careful consideration needs to be paid to each chemical's spectrum of control.
- ✓ Familiarize yourself with chemical substitutes before applying them over many acres. Some switches may be intuitive (e.g. using Poast (sethoxydim) or Assure II (quizalofop) in place of clethodim where allowed) while others may be more complicated (e.g. using a tank-mixture in place of a single product). In addition to knowing a novel product's target species, become acquainted with a new herbicide's labeled rate structure and spray volume, use patterns (e.g. application timing), environmental limitations (e.g. temperature restrictions), adjuvant requirements, and potential interactions with tank-mix partners. Not all chemicals are compatible with each other, and antagonism can reduce weed control efficacy while enhancing crop injury concerns. Contact your Extension Specialists if you have any doubt regarding physical compatibility and efficacy of herbicide mixtures. Herbicide damage may be observed across seasons so pay attention to rotation restrictions. Some active ingredients may already be part of registered pre-mixes in certain crops (i.e. bentazon, which is the active ingredient in Basagran, is also part of Varisto).
- ✓ Soil-applied, preemergence herbicides can be useful tools for suppressing weeds that emerge with the crop; these plants are the most injurious as early season competitors are very likely to reduce yields. Like postemergence products, soil-applied herbicides must be carefully selected to balance crop safety with weed control needs. Pay attention to rate requirements according to soil type, as this can influence both efficacy and injury. Pre-emergence herbicides need to be moved into the soil solution (either physically or via rainfall or irrigation) where they are taken up by emerging weed seedlings; delays in incorporation can reduce overall performance if some weeds continue to germinate and emerge under low soil moisture conditions. Delays in herbicide activation may facilitate the degradation of some products susceptible to breakdown in sunlight (i.e. photolysis). When possible, use overlapping residual products to suppress weed emergence throughout the season. Some active ingredients (e.g. oxyfluorfen (Goaltender)) may have both preemergence and postemergence activity.
- ✓ Timing matters. Postemergence weed control should be undertaken when weeds are small and succulent. Herbicide labels will have specific recommendations regarding the optimal size for treatment. Because many foliar-applied herbicides can also damage crops, always follow label guidance to reduce risk of injury. For instance, in 2021 New York research trials, applications of postemergence herbicides made before the first trifoliate leaf stage in snap beans resulted in up to 20% yield loss because of crop stunting.
- ✓ Optimize herbicide application rate for postemergence (i.e. foliar) applications. Target using the lowest effective herbicide rate to stretch your herbicide supply. For example, instead of using 32 or 44 oz/acre of a Roundup brand product, consider using the standard rate on the label such as 22 oz/acre for Roundup PowerMax. Again, timing of application with regards to weed size will be critical to optimize your herbicide supply. The smaller the weeds, the less herbicide you will have to apply to control it! Therefore, frequent scouting as highlighted in point one will be very important to optimize your herbicide application and stretch your herbicide supply.
- ✓ Don't skimp on adjuvants. If herbicides are going to be in short supply, then there may be fewer shots to control weeds. If there are fewer shots available, make every shot count as much as possible. Follow label recommendations regarding the inclusion of water conditioners, surfactants, etc..., to maximize product efficacy. Refer to point number two about potential compatibility concerns when tank-mix partners are involved.
- ✓ Consider non-chemical weed control strategies when and where appropriate. This includes hand weeding, cultivation, altering

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planting dates to avoid particularly troublesome species, and using stale seedbed practices. Like herbicides, physical and cultural practices are not always effective against all species. While cultivation can control many weed seedlings, particularly at the white-thread stage, soil disturbance is less effective against well-developed plants. In the case of some perennials (for example, field bindweed or Canada thistle), cultivation events can break up and disperse root fragments within and across fields, facilitating dispersal. Ultimately, plan for hand-weeding escapes

prior to the weeds setting seed as this will help reducing the weed seedbank for future growing seasons.

2022 could be a difficult year if many crop production and protection chemicals are limited. Herbicide shortages could impact weed control success in the coming growing season...and beyond. Weeds that are not controlled in 2022 will set seed that will cause problems in the future. Planning now can help with weed management in both the short and long term.

Early Season Tree Fruit Pest Control for 2022

Dave Schmitt, Rutgers Cooperative Extension

This article first appeared at <https://plant-pest-advisory.rutgers.edu/early-season-tree-fruit-pest-control-in-2018-2-2-2-2/>

Dormant Oil Sprays: The first pest control applications in tree fruit usually consist of oil and copper sprays. These are long standing standard recommendations that are not without special considerations. Oil is generally recommended at rates of 2%, or 2 gals. per 100 gallons of water for dormant applications. Traditionally this has translated to 4 gallons of oil per acre for stone fruit based on a dilute volume of 200 gallons per acre: the amount generally considered to cover a mature peach tree to the point of drip. For pome fruit the recommendation has been 6 gallons of oil per acre based on a dilute volume of 300 gallons per acre: the amount generally considered to cover a mature semi dwarf apple to the point of drip. The use limitations and application rates vary by product and growth stage so be sure to read and adhere to the product label.

Oil acts by suffocating overwintering scale insects and mite eggs as they begin to respire in the spring. Coverage has always been challenging and is increasingly so in recent years as weather extremes have increasingly been the norm. Mite eggs and overwintering scale can be found on any part of the surface area of the canopy, and can multiply rapidly during the growing season. Since a single female [san jose scale](#) can produce up to 400 crawlers per generation it's important to try to get as close to 100% coverage of the scaffold and trunk surface area as possible. It's worth mentioning that opening up canopies with [proper pruning](#) can go a long way toward accomplishing that goal. The key takeaway is that since fruit tree architecture includes many cracks and crevices as well limbs and twigs that exponentially increase surface area, coverage to the point of drip is the most important consideration regardless of the products applied.

Dormant oil can be safely applied up to the [pink stages](#) of peach, apple and pear. Delayed dormant applications applied for mite suppression should provide good control of scale and suppress early season aphids. Multiple applications are often recommended in apple and may be beneficial where both scale and mites are a concern in peaches. Since conditions are seldom optimal for good coverage in the spring, multiple applications also help to get closer to the goal of 100% coverage. Where multiple applications are made the rate is generally dropped the closer an application is made to

bloom. A application in apples for example might consist of a 2% application up to ½" green, and a 1% application up to tight cluster. An application of 0.5% at pink is an option that may provide additional insurance. Growers that have been having difficulty controlling scab may consider control programs that shift to materials like captan in pre-bloom or bloom sprays. This type of program would not be compatible with split oil applications since captan applied within 10-14 days of an oil application can injure fruit trees. Refer to the product label for crop specific safety precautions. In the event that oil is in short supply or not readily available, mite suppression might be achieved by making a single application of a reduced rate of oil in combination with Apollo, Onager, or Savey.

One sees many recommendations for mixing materials efficacious for scale such as insect growth regulators (Centaur; Esteem) with delayed dormant oil applications. The general consensus from data review seems to be that the addition of scale insecticides to oil do not significantly improve control over oil applied alone, however some of the newer products are compatible with oil and have efficacy on their own when applied at the delayed dormant stage of growth. Recent tests performed by Dr. Neilsen's lab indicate that both Sivanto Prime and Centaur when applied alone in the pre-bloom period are comparable to dormant oil for scale control. Esteem has good efficacy for scale when applied up to to 1/2" green. Esteem, Closer, Sivanto Prime, and a new product: Versys, applied either alone or with oil at 1/4" to 1/2" green all have good to excellent ratings for rosy apple aphids. See the Cornell Tree Fruit Guidelines for more information.

On pears dormant petroleum oil applications are a standard practice for early season pear psylla control. Unlike applications made for scale control and mite suppression, oil acts less as an insecticide and more as a method of exclusion since pear psylla adults tend not to lay eggs on oily surfaces. Therefore, oil needs to be applied as early as weather and soil conditions permit. Usually the first applications are made in southern counties from mid to late March when oviposition begins.

These applications are useful throughout early bud stages and are generally long lasting; about 2 -3 weeks. In the dormant or delayed dormant stages apply a 2 % solution of oil (2 gals/100 or 6 gals/

acre), or two applications of 1% through the green bud stage (when buds are swollen and green tissue is present). At this stage a pyrethroid is generally also recommended to knock down adult populations. Adjust rates downward for later stages: 1% (1 gal/100) from swollen bud through green bud, or 2 applications of 0.5% (0.5 gals/100) from green bud through white bud (flower parts are visible). During the delayed dormant stages, the addition of an insect growth regulator such as Centaur or Esteem may improve control. Sivanto Prime combined with oil in the delayed dormant timing is an also an option. Surround, a clay product, may also be applied with oil at a rate of 25-50#/ acre in the delayed dormant stages. Surround applications without oil can be applied through bloom to disrupt the entire oviposition period and has shown to provide good control of the first generation nymphs. Surround alone is also useful in the delayed dormant period when temperatures are too cold to safely apply dormant oil.

Dormant season copper Sprays: Coppers are early season fungicides recommended for early season scab control and fire blight suppression in apples and pears. Coppers, Ziram, and Bravo (Chlorothalonil) are also used for [peach leaf curl control](#), and should be applied before or at bud swell. Many different copper formulations are available and it's often difficult to decide which one is best, and is also labeled for the crop and season of application. See the following detailed discussion's at [Michigan State](#), and [Penn State](#) about the different forms of copper and their use for disease control.

Care must be taken when applying copper to prevent unintended consequences. Copper phytotoxicity takes the form of leaf damage on stone fruit and leaf and fruit injury on pome fruit. We recommend season-long copper applications at very low rates in peach for

bacterial spot suppression. But significant phytotoxicity can occur from tank mixes, especially when applied after a long period of overcast weather, and/or the [spray water ph is less than 6](#). It's recommended to have some ph strips and buffer on hand to test the finished spray mixture and adjust the ph to lessen acidity if necessary. On apples and pears, coppers should not be applied much past green tip unless fruit finish is not a concern. Copper ions present after half inch green can cause russet, especially on sensitive varieties. The risk of fruit injury is increased in years with little rainfall between bud break and pink, because more copper will be present when the fruit is fully exposed.

Dormant season urea sprays: One final early spring chore is to get a jump on apple scab in orchards that have high inoculum from the previous season. Here [orchard sanitation](#) using urea and/or by shredding leaves is of benefit. Last season's leaves carry the overwintering inoculum of the fungus. Urea works in two ways to reduce this season's inoculum: it helps organisms in the ground cover decompose the leaves quickly; it also suppresses the development of spores so that they are not released. Chopping the leaf litter with a flail mower will accomplish the same end, and if combined with a fall or early spring urea application will greatly reduce overwintering inoculum. This is useful for getting the upper hand on primary scab control and for resistance management.

Urea is applied at rate of 40# per acre in 100 gallons of water per acre. This can be applied with an airblast sprayer with the nozzles directed at the ground cover. It is best done after leaf drop in fall but can still be applied in the spring before bud break or as late as green tip. Applications made after bud break should be done with a boom sprayer since urea drifting onto green tissue may make it more susceptible to phytotoxicity from copper or oil sprays.

Using Sous-Vide Machines for Hot Water Seed Treatment

Elisabeth Hodgdon, CCE ENYCHP

Hot water seed treatment is a task that often falls on the list of "should do's" in the winter and early spring, but sometimes falls by the wayside. Treating seeds in a hot water bath can help prevent serious bacterial, fungal, and viral diseases by killing pathogens harbored within the seed. The practice is recommended for both seed collected on the farm and purchased from commercial sources. However, it's sometimes difficult to know which seeds to invest in treating, and whether it's worth the time or cost. In the past, hot water seed treatment at home meant investing in rather costly laboratory hot water baths or taking a chance on less reliable stovetop methods. With the popularity and availability of "sous vide" machines, hot water seed treatment is easier, and more predictable than ever.

What is a sous vide machine?

Sous vide, pronounced "soo veed," means "under vacuum" in French. Sous vide machines are cylindrical kitchen gadgets that circulate and heat water to create a hot water bath (Fig. 1). The device can be clipped to the side of a large saucepan or other

container that holds water. Because the device circulates the water as it heats, the water bath retains a very consistent temperature. The typical use of a sous vide machine is for cooking meat or vegetables. The food is sealed in a plastic bag, placed in the water, and cooked to desired temperature without burning. After the food has been steamed and cooked within the bag, it can be taken out of the plastic and seared in a pan or in the oven to finish before eating.



Fig. 1. Sous vide machine heating water for spinach seeds enclosed in a cheesecloth bag.

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What makes the sous vide machine great for cooking also makes it ideal for treating seeds. Water baths with steady temperatures help ensure the seeds are treated at the precise temperature to kill pathogens without harming the seed embryo.

There are various types of sous vide machines. Some are more sophisticated and costly than others (~\$200 each), and are controlled via a phone app. Other simpler models, many less than \$100, are programmable by controls on the device itself and are easy to use.

Which seeds should you treat?

Hot water treatment has varying degrees of efficacy depending on the size and structure of the seed and the characteristics of the pathogen. Tomato, pepper, *Brassica*, and spinach seeds are a few crops that are recommended for treating in our region. Some important and common diseases are successfully killed by hot water treatment in these species. For example, heat treating tomato seeds can prevent serious bacterial infections (such as bacterial spot, speck, and canker) that are difficult to manage once established on the farm. For a list of crops, pathogens, and seed treatment protocols, see Cornell's Dr. Meg McGrath's useful reference table online, listed below. Before treating any seeds, be sure to check with the seed supplier to make sure that the seed hasn't already been treated. Double heat-treating seeds can reduce germination. Also be aware that old seeds and coated seeds should not be treated. Hot water can harm older seeds and reduce germination, and seed treatments can be washed off in a water bath.

How do you use the sous vide machine to treat the seeds?

Many excellent sources are available with detailed procedures on how to use hot water treatments for seeds (see references below). Instead of using two hot water baths, you will need two sous vide machines. One will be for pre-warming the seed (usually to around 100 degrees F) to reduce shock to the embryo from the hot water

bath using the second sous vide. Because sous vide machines circulate water on their own, there is no need to stir the water manually, as you would need to do if using a stovetop burner and saucepan. Be aware that sometimes the water circulation can cause mesh seed bags and string to get sucked into the circulator. You can prevent this by securing the bag to the pot or container in some fashion. Although plastic vacuum bags are used when cooking food with the sous vide machine, it's recommended to adhere with typical seed treatment protocols and use mesh bags (Fig. 1). Hot water treatment procedures were developed based on porous bags, and the efficacy of seed treatments in plastic bags is not known.

Allow the device a few minutes to bring the water up to temperature before starting treatment. Check the temperature of the water using a handheld thermometer to be sure the device is functioning correctly. Once both baths are at the desired temperature, you are ready to go.

Hot water seed treatment can seem like a burdensome task during the busy pre-season, but it's well worth the time to prevent serious disease problems in the future.

References and suggested viewing

Details on hot water seed treatment protocols, including table with procedures for crops and pathogens: <https://www.vegetables.cornell.edu/pest-management/disease-factsheets/managing-pathogens-inside-seed-with-hot-water/>

Managing pathogens inside seed with hot water, by Meg McGrath, Andy Wyenandt, and Kris Holmstrom. <https://www.vegetables.cornell.edu/pest-management/disease-factsheets/managing-pathogens-inside-seed-with-hot-water/>

How-to video:

<https://www.youtube.com/watch?v=tLalwbUigsk&feature=youtu.be>

Testing the Feasibility of Using Red Sticky Card Traps to Monitor Spotted-Wing *Drosophila*

Juliet Carroll, Laura McDermott, Janet van Zoeren, and Anya Osatuke, NYS IPM Program, Eastern NY Commercial Horticulture Program, Lake Ontario Fruit Program, and Harvest NY Cornell Cooperative Extension

Spotted-wing drosophila (SWD, *Drosophila suzukii*) continues to drive berry and cherry growers' spray schedules. Monitoring helps to determine when populations begin to build up, and therefore can help save growers spray applications in a late infestation year. This year we successfully tested red sticky card traps, baited with SWD lures, to detect first arrival of SWD in berry plantings and cherry orchards. The baited, red sticky traps provided good results for the SWD monitoring network. We found that the red sticky traps have potential for use by growers and consultants to monitor SWD pressure in at-risk fruit plantings. Grant funding was obtained, PI Laura McDermott, ENYCHP, to further test the red sticky traps and to educate growers and consultants on their use.

SWD monitoring recap:

The 2021 statewide monitoring effort included 126 trap locations monitored by 16 Cornell extension scientists in 23 counties. During the season, first trap catch across the SWD monitoring network occurred over a 14-week-long period, from May 11 (Niagara County) to August 17 (Steuben County). The occurrence of first catch over several weeks is typical for SWD occurrence in New York State. However, most trapping sites were not catching SWD during the late May and early to mid-June period, and only one reached sustained catch in early June. Normally, by mid-June, most traps will have caught SWD.

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Scentry jar traps with lure have been used in the SWD monitoring network since 2016. Lured jar traps from which SWD are filtered, sorted from related species, then identified with magnification are currently the best at attracting the first insects, but growers cannot implement this level of monitoring and the statewide trap network isn't robust enough to deliver farm-specific information. Using an easier monitoring method, if it works as well as the jar traps, will help growers monitor SWD on their own farms. Growers in New Jersey and Ontario, Canada have successfully used red sticky card traps with lures to monitor SWD on their farms.

Sticky card trap results:

Cornell extension scientists in the SWD monitoring network conducted a preliminary test in 2021 of the use of red sticky card traps. A total of 20 locations where both the Scentry-lure-baited jar traps and the Trécé-lure-baited red sticky card traps were being used yielded data to compare the first trap catch date for the jar traps and the red sticky card traps. First catch on the red sticky cards was obtained earlier at 40% of the trap locations (8 out of 20), later at 45% of the locations (9 out of 20) and was same as the date obtained in the jar traps at 15% of the locations (3 out of 20) (Figure 1). These results suggest that the red sticky cards will work comparably to the jar traps and that using sticky traps won't lead to trap catch results being obtained too late, which would place crops at possible risk of infestation from populations of SWD that have gone undetected.

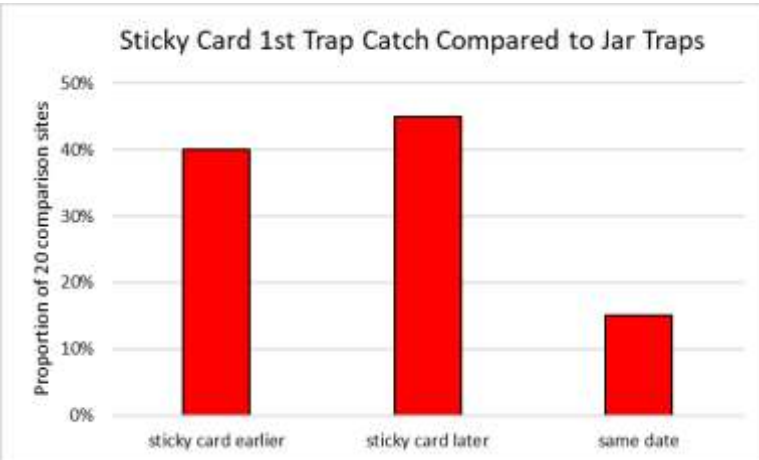


Figure 1. Comparison of first SWD catch in Trécé-lure-baited red sticky card traps versus Scentry-lure-baited jar traps.

Setting up sticky cards:

The red sticky cards are relatively easy to use, though the sticky coating on the traps can pose a challenge for the user. Wearing nitrile, latex, or plastic disposable gloves to protect hands from the sticky goo on the trap is essential. Tying back long hair can be helpful. An SWD lure is positioned above the red sticky card, which is hung from a branch, trellis wire or wooden stake, preferably 1.5 m (5 ft.) off the ground, and within the fruit zone in a shaded area (Figure 2). In berries, this will depend on how the plants are trained and traps may need to be placed lower. Traps must be secured tightly to the trellis wire, branch, or wooden stake to minimize sliding or

blowing around with the wind or the airblast sprayer. Canes or branches should be tied up or removed so the sticky traps are easily seen and won't contact any foliage or berries. Mark the location of the trap with flagging tape. Label the trap with a code number for your records. Record the date the trap and lure were set out in the field and the trap GPS coordinates, if needed.

Reading the sticky cards:

It is easy to identify the male flies, because they have the distinctive spots on their wings (Figure 3). To service the trap and identify the male SWD, again, it is best to wear gloves and tie back long hair to protect yourself from the sticky goo. Each week, remove the trap and check for stuck male SWD



Figure 2. The steps for hanging the lure and red sticky cards in blueberry, top row. Traps hanging in blueberry and cherry, bottom row. It is easier to remove and replace the trap when it is on its own set of wire hangers, separate from the lure.

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(Figure 4, next page). Alternatively, the sticky card trap can be wrapped in plastic wrap and then taken out of the field to scan and enumerate SWD flies indoors. Examine both sides of the sticky trap with a hand lens, magnifying glass or OptiVisor DA 7 (2.7x magnification) or DA 10 (3.5x) (Figure 5) Enumerate the male SWD caught (Figure 6) on both sides of the sticky card and record the total number per red sticky card trap. Discard the examined trap and install a new one. It is very important to change the trap weekly when you check for SWD. This will make it much easier to identify insects. Change the lure every 4 weeks and make note of the date the lure was changed.

Future plans:

Suggestions and questions from the 2021 extension collaborators to improve the utility of the red sticky card traps included:

- The cards should have a grid on them to make scanning the sticky card easier.
- Because they are relatively large, perhaps only one side could be sticky or the entire edge could be left free of the sticky goo to make handling the traps easier.
- Cages around the traps might be needed to protect non-target, small animals from being caught inadvertently and to prevent the crop plants from tangling in the trap.
- Would yellow sticky cards be easier to read, and would they capture SWD flies with the same efficiency?

We have obtained grant funding to further test the red sticky card traps and educate growers and consultants on their use. This two-year project is getting started in spring 2022. It will entail grower and consultant demonstrations, extension materials, and education efforts on the use of red sticky cards baited with SWD lures, to monitor for SWD in berry plantings and cherry orchards. This project will also provide the opportunity to further test these traps.



Figure 5 (left). D. Breth, Lake Ontario Fruit Team, retired, examining fruit using an OptiVisor. A hand lens is shown hanging from a lanyard around her neck. Figure 6 (right). Male SWD circled in yellow that are stuck on the Trece-lure-baited red sticky cards.

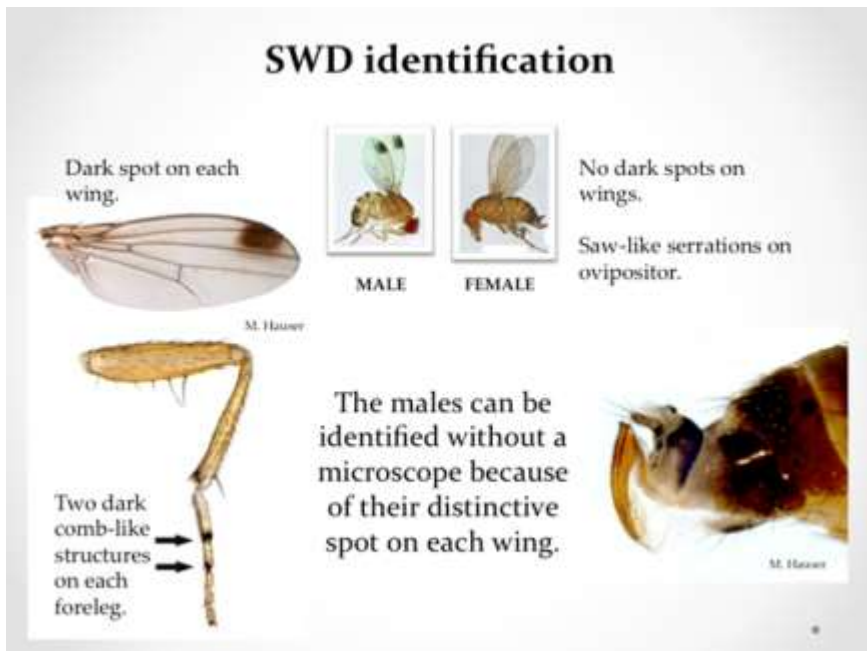


Figure 3. Identification guide to the distinctive characteristics of the male and female SWD flies.

For more information consult:

Cornell Fruit Resources, Spotted Wing Drosophila, <https://fruit.cornell.edu/spottedwing/>

Spotted Wing Drosophila blog, <https://blogs.cornell.edu/swd1/>

Spotted Wing Drosophila Management, <https://fruit.cornell.edu/spottedwing/management/>

Spotted Wing Drosophila Monitoring, <https://fruit.cornell.edu/spottedwing/monitoring/>

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Figure 4. The steps for servicing the red sticky card traps in the field. It is easier to discard the sticky trap if it is wrapped in paper before crumpling it up and placing it in a trash bag.

NYS Tax Filing and Withholding Requirements for New Employers

Elizabeth Higgins, CCE ENYCHP

Hiring an employee can be a big step for a farm business. In addition to the challenges of managing a new employee, there are lots of laws and regulations to comply with. This article covers your main requirements for reporting new employees to the state, withholding tax, unemployment, and wage reporting.

Your first step is to get an [EIN \(Employer Identification Number\) from the IRS](#). This is necessary for both federal and state registration for employee tax purposes. Once you get your EIN you will register with NYS as an employer. This is done by applying online through New York Business Express ([see Employer Registration for Unemployment Insurance, Withholding, and Wage Reporting for Business Employer \(NYS 100\)](#)), or calling the Department of Labor at 1 888 899-8810 or (518) 457-4179.

Once You Hire an Employee

You must report to the NYS Tax Department certain identifying information about newly hired or rehired employees working in the state **within 20 calendar days of the hiring date**. A newly hired or rehired employee means an employee:

- previously not employed by the employer, or
- previously employed by the employer but separated from such prior employment for 60 or more consecutive days.

The hiring date is the first day compensated services are performed by an employee. This is the first day any services are performed for which the employee will be paid wages or other compensation. New York State employers may report new hire information electronically through the department's new hire Web site (www.nynewhire.com/#/login). Please be aware that effective

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January 1, 2022, employers were required to report individuals under an independent contractor arrangement with contract(s) more than \$2,500. For more information about New Hire reporting requirements, please visit <https://www.tax.ny.gov/bus/wt/newhire.htm>.

Federal Withholding Requirements

For Federal taxes employers generally must withhold federal income tax from employees' wages. To figure out how much tax to withhold, use the employee's Form W-4, the appropriate method and the appropriate withholding table described in Publication 15-T, Federal Income Tax Withholding Methods.

An employer generally must also withhold part of social security and Medicare taxes from employees' wages and the employer additionally pays a matching amount. To figure out how much tax to withhold, use the employee's Form W-4 and the methods described in [Publication 15, Employer's Tax Guide](#) and [Publication 15-A, Employer's Supplemental Tax Guide](#).

You must deposit your withholdings. The requirements for depositing, as explained in [Publication 15](#), vary based on your business and the amount you withhold.

Federal Unemployment (FUTA) Tax is reported and paid separately from Federal Income tax, and social security and Medicare taxes. You pay FUTA tax only from your own funds. Employees do not pay this tax or have it withheld from their pay. Agricultural employers are liable for any calendar year in which they (1) pay cash remuneration of \$20,000 or more in any calendar quarter of that year or the preceding year to persons in agricultural labor; or (2) employ 10 or more persons in agricultural labor on at least one day in each of 20 different weeks during that year or the preceding calendar year. Refer to Publication 15, Employer's Tax Guide and Publication 15-A, Employer's Supplemental Tax Guide for more information on FUTA tax.

NYS Withholding Requirements

Agricultural employers are subject to NYS unemployment for most employees. Generally, if your business has a gross payroll of \$300 or more in a calendar quarter, your business is subject to the New York State Unemployment Insurance Law and must register with DOL. The NYS Tax Department is required to collect wage reporting information based on definitions used by NYS DOL in administering

the unemployment insurance program. Every employer who is liable under the provisions of the New York State Unemployment Insurance Law is required to file a quarterly wage report with the department on [Form NYS-45, Quarterly Combined Withholding, Wage Reporting, and Unemployment Insurance Return](#), and if needed, Form NYS-45-ATT, Quarterly Combined Withholding, Wage Reporting, and Unemployment Insurance Return – Attachment. Forms NYS-45 and NYS-45-ATT may be filed online using the Tax Department's Web File system (at www.tax.ny.gov) or on paper.

You are also likely to be obligated to provide workers compensation insurance and disability insurance to your employees as well as withholding for paid family leave. You can get information on current rates for workers' compensation and disability insurance by visiting the State Insurance Fund Web site (www.nysif.com), or by calling the State Insurance Fund at 1 888 875-5790. Most private employers with one or more employees are required to obtain Paid Family Leave insurance. Contact your broker or insurer for information about available policies as well as options for paying your premium (e.g., whether it can be paid semi-annually, annually, or annually on a retrospective basis). This insurance is generally added as a rider on an existing disability insurance policy; it does not replace it. For a list of insurers offering Paid Family Leave policies, visit the [PFL section of the Department of Financial Services website](#).

For More Help

New York State Department of Labor Web site: www.labor.ny.gov. Telephone assistance is available Monday through Friday by calling 1-888-899-8810 or (518) 485-8589.

New York State Tax Department Web site: www.tax.ny.gov. Telephone assistance is available Monday through Friday by calling (518) 485-6654

For information relating to New York State unemployment insurance, income tax withholding (including New York City and/or Yonkers, if applicable), and wage reporting, see [Publication NYS-50, Employer's Guide to Unemployment Insurance, Wage Reporting, and Withholding Tax](#).

For federal wage reporting and withholding information, see [IRS Publication 15, \(Circular E\), Employer's Tax Guide](#), which explains employer filing responsibilities and the withholding and payment of federal income and employment taxes.

Dear Cucurbit Grower,

We are conducting a survey to learn about your experiences using row covers and your willingness to adopt a new row cover approach known as mesotunnels. Our study is evaluating the use of mesotunnels in the eastern half of the US for control of the full range of pests and diseases on organic production of cucurbit crops.

Your participation in this survey is voluntary. You may not have used mesotunnels or row cover systems in your production, that is perfectly fine and we still value your opinions. Your responses are valuable to us and will contribute to improving row cover innovations.

To participate the survey, please use this link: <https://go.iastate.edu/EHWJCH>

The responses you provide will be kept completely confidential, and results will be reported in a summary form only. Please answer the questions by clicking on a response option or entering text in the box. You will have an opportunity to add comments at the end of the survey.

Dr. Sarah Pethybridge, Associate Professor of Plant Pathology, Cornell University, sjp277@cornell.edu, 315-787-2417

Thank you in advance for your time and attention!

Online Worker Protection Standard (WPS) Train the Trainer Course Approved

Teresa Rusinek, CCE ENYCHP

The WPS is an Environmental Protection Agency (EPA) regulation intended to protect agricultural workers and pesticide handlers from risk of exposure. If you are an agricultural employer or manager, you must know your responsibilities under the WPS and provide WPS training and protections to employees. Employees include:

- pesticide handlers - those who mix, load or apply pesticides;
- agricultural workers - those performing tasks related to growing and harvesting plants;
- other persons involved in pesticide applications.

The WPS states that “**Agricultural workers and pesticide handlers must receive training before they begin work and every 12 months.**” If EPA registered products are applied on your farm, including those used in the production of organic agricultural plants, the WPS probably applies to you. Check the pesticide product label in the DIRECTIONS FOR USE section. If you see a box

labeled **AGRICULTURAL USE REQUIREMENTS**, the WPS applies where that pesticide product is used in agriculture, whether conventional or organic.

The EPA has approved a web-based course that you can take to qualify yourself to perform annual WPS training for your agricultural workers and pesticide handlers. It is self-paced with 12 modules, quizzes and a final exam. The course costs \$35.00, and requires 2-3 hours to complete. This web-based course and other training materials are available in Spanish. To find these training materials go to the Pesticide Educational Resources Collaborative website: <http://pesticideresources.org/wps/ttt/index.html>

[Materials for Training WPS Trainers: www.pesticideresources.org](http://www.pesticideresources.org)

If you hold a current DEC pesticide applicator license you already qualify to perform WPS training and do not need to take a train the trainer course.

NEW Video Resource: Smart Equipment Investments on Four Farms

Elisabeth Hodgdon, CCE ENYCHP

Investments in cost-effective automation can pay off quickly in a world of increasing labor shortages, unpredictable weather events, and other challenges faced by vegetable farms in the Northeast. In this video series, four vegetable growers discuss smart equipment investments and process improvements that have improved efficiency and safety on their farms. This series originally aired at the New England Vegetable & Fruit Conference in December.



[Propagation Greenhouse Efficiencies at Juniper Hill Farm](#)

Adam Hainer, Wadhams, NY

In this video, Adam presents his process for seeding vegetable trays from start to finish. He demonstrates his tray filler, 3D-printed custom-made dibbling tool, automatic seeder, and tag printer in action and discusses how these tools have reduced greenhouse labor needs. <https://youtu.be/W2mZ3ih02tI>



[Seeding and Weeding: Tools and Systems We Use at Atlas Farm](#)

Gideon Porth, South Deerfield, MA

Over the years, Atlas Farm has honed their greenhouse seeding techniques to include an automatic tray filler, vacuum seeder, and home-made vermiculite seed topping conveyer. Another tool they have invested in is the K.U.L.T Kress Argus hoe, a two-person field cultivator that can improve speed and precision of weeding for many different vegetable crops. Gideon discusses some of these tools and describes how they have improved efficiency at Atlas Farm. <https://youtu.be/HmVDQJv9IW0>



[Saving Labor Harvesting Carrots with the Univerco Mini Veg](#)

Tyler Dennis, Kingston, NY

In this video, Tyler demonstrates his Mini Veg carrot harvester, which has proved to be an excellent investment on the farm, saving many hours in the fall harvesting root crops. <https://youtu.be/bDUvDFzcVkc>



[Using the Skid-Steer for Multiple Jobs at Edgewater Farm](#)

Pooh Sprague, Plainfield, NH

The skid-steer and its attachments are valuable pieces of equipment used all year round at Edgewater Farm. Ease of moving pallets of filled trays and pots during greenhouse season, bins of produce at harvest, and transporting rebar for trellising in the field are just a few of the tasks made easier with the skid-steer and forks. In addition to the forks, the farm crew uses the brush cutter, harley rake, and bucket attachments to clear brush and maintain farm roads around the property, among other uses. <https://youtu.be/HOeDhdR1KP4>

Upcoming Events & Important Information

ENYCHP Apple Pruning Workshops—One Date Remaining!

March 11, 200 1:30pm—3:00pm

Bowman Orchards—147 Sugar Hill Rd, Rexford, NY

Cornell Cooperative Extension ENYCHP tree fruit specialists are pleased to offer three in-person pruning workshops at our region's orchards in March. Dr. Terence Robinson will be joining us to demonstrate how to prune young and mature tall spindle trees, and will walk us through his precision pruning protocol to reduce crop load early in biennial bearing varieties like 'Honeycrisp' and 'Fuji'. Registration not required; contact Mike Basedow with questions: mrb254@cornell.edu

Pesticide Applicator Certification Exam Prep Course

March 15, 2022 9am—12pm

Are you planning to become a certified pesticide applicator in 2022? Join ENYCHP specialists for an in-depth review of topics covered on the NYS DEC pesticide applicator certification exam. This two-day virtual course includes explanations of key concepts on the core exam, test-taking tips for the core and category exam, practice questions, and Q&A with instructors. Course materials, including program recordings, practice exams, and DEC materials will be posted on the ENYCHP Teachable site. This training is geared toward certification in categories 1A (agricultural plant), 21 (field and forage), 22 (fruit), and 23 (vegetable).

For questions, requests for accommodations, and/or financial assistance in purchasing manuals, please contact Ethan Grundberg (eg572@cornell.edu or 617-455-1893).

To register: <https://cce-enychp.teachable.com/p/pesticide-certification-exam-prep-course>

What's New in Crop Load Management?

March 18, 2022 1:30pm—4:45pm

We will review the key crop load management models available on the new NEWA 3.0 platform, and will share some research findings demonstrating the practical usage of these models in commercial field trials. We will also discuss the future of apple thinning with computer-aided technologies. The meeting will end with discussions of metamitron and Accede, a new thinning material from Valent that is the first commercially available PGR thinner for peaches.

Register: [https://cornell.zoom.us/meeting/register/tjYuc-6hqzspGtdsp3VFnf7sQKDG01wGQg5S](https://cornell.zoom.us/j/91234567890)

Fusarium Management in Garlic: Field and Storage Considerations

March 22, 2022 3pm—5:00pm

This workshop will share research results from two fusarium management studies: one focused on field management of fusarium in garlic and the other focused on post-harvest handling's affects. Speakers are Chris Callahan, Agriculture Engineer at the University of Vermont, and Crystal Stewart Courtens, ENYCHP. This workshop is funded through the generous support of Northeast SARE.

To register: https://enych.cce.cornell.edu/event_preregistration_new.php?id=1640

Virtual Good Agricultural Practices (GAPs) Grower Training

March 23, 2022 9am—4:15pm

Good Agricultural Practices (GAPs) is a voluntary food safety audit program requiring minimum standards for production, handling, packing, and storing of fresh fruits and vegetables. Many wholesale buyers, including grocery stores, schools, and other institutions, require GAPs certification from farms in order to purchase their produce. Farms considering expanding their wholesale markets should attend this training.

To register: <https://cvp.cce.cornell.edu/event.php?id=1618>

For more information contact Robert Hadad rg26@cornell.edu 595-739-4065

Rodent & Wildlife Management on the Farm

March 23, 2022 1pm—3:15pm

Dr. Paul Curtis, Cornell University, Natural Resources & Environment – Learn the behavior and control of deer, groundhogs, raccoons, turkey, geese, and crows. He will cover problems in the field, in crop storages, and around barns and facilities.

Dr. Matt Frye, NYS IPM Specialist - Learn the behavior of different rodent species; how to inspect and evaluate a rodent problem; types of traps and how to use them; short & long-term reductions strategies. *There is more to reducing rodents than a piece of cheese and a snap-trap!*

Two pesticide applicator credits are available in categories 1A, 1B, 21, 22, 23, 25, and 31.

Register here: https://caahp.cceext.net/civicrm/event/info?reset=1&id=156&fbclid=IwAR3FdK0ax-g3y_2CM_rZ3GWcBlrOSHAIWVE8tOTDXYFzjIB-ktIT60L-Er0



Cornell Cooperative Extension
Eastern NY Commercial Horticulture Program

The Label is the Law. Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any product is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

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