#### **VOLUME 5, ISSUE 4**

PAGE

**Cornell University Cooperative Extension** 

# Eastern NY Commercial Horticulture Program

#### Vol. 5, Issue 4 May 24, 2017

# **Berry News**

# **Spring Berry "To Do" List**

# **Blueberries:**

- Blueberry bloom looks very strong in most places.
- Set looks good in early varieties in all locations.
- Fungicide applications at bloom will help prevent fruit molds.
- Plan to monitor for cranberry and cherry fruitworm – see article in this newsletter.

## **Strawberries:**

- At least 2 well timed fungicide sprays to protect against Botrytis makes a huge difference to berry quality. For organic growers there is some evidence that Regalia can help control Botrytis and Fruit Anthracnose – but mostly in grapes or in combination with conventional materials. Still it's something.
- Small populations of strawberry bud weevil were seen last week. These insects girdles strawberry flower bud. If you see 1-2 clipped buds in a two foot section of row you should take action. Look along field edges first. Perimeter sprays may be effective. Insecticide options for clipper include Lorsban, Brigade, Sevin and PyGanic.
- Scout for the tarnished plant bug nymphs, shake 30 flower clusters (six clusters in five different locations) over a plate. If four or more of the clusters out of the 30 sampled have any nymphs, control measures should be taken. Insecticide options include Assail, Brigade, Danitol, and PyGanic.
- Weak or stunted plants may indicate root problems. Now is a good time to evaluate for root weevils and red stele disease. To diagnose red stele, pull up a few plants that look weak and scrape the roots of these plants to see if the center is reddish orange in color. Red stele is caused by a soil pathogen that infects roots when soils are wet with temperatures around 50°F and the symptoms are



Strawberry clipper damage Photo courtesy of OMAFRA, Canada

most evident in the spring. Ridomil Gold®, Alliette® or Phostrol® are fungicides that can be applied in the late fall or early spring for control of red stele. In newly planted beds, RootShield® may be applied as a pre-plant root dip to help prevent infections.

Root weevil larvae can be found at root zone now - you can start to look for leaf notching as well. Both of these root problems can be evaluated with diagnostics which are free of charge if you live in the 17 county Eastern NY region. Just call Laura McDermott at 518-791-5038.

### **Brambles**:

Floricane brambles are flowering with some bud set in the south. Primocanes are pushing nicely throughout the region

## **Ribes:**

Currants and gooseberries have set strigs throughout all parts of the region except the most northerly locations.

Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in BERRY NEWS Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Putnam, Rensselaer,

### Cranberry Fruitworm and Cherry Fruitworm R. Issacs & J.Wise, Michigan State University

Michigan State Univ. Fruit Crop Advisory, <u>Fruitworm</u> <u>Control in Blueberries</u> (R. Isaacs, J. Wise) 5/17/16 emerge at approximately 230 GDD Base 50°F from March 1. Cranberry Fruitworm emerges later, around 350 GDD

ID/Life Cycle: Both Cranberry Fruitworm (Acrobasis vaccinii) and Cherry Fruitworm (Grapholita packardi) are native to North America. as are the blueberries they infest. The adult forms of these fruitworms are small brownish-gray or grayishblack moths. Eggs are laid near the calyx of green fruit and are pale creamy color. Larvae found within blueberry fruit in June are small and pale yellowish or pinkish in color. CFW larvae have dark brown heads.



Base 50°F. Emergence can be confirmed by using pheromone traps that capture male moths of each species during their first flight. Noting the start of sustained trap captures can be used as the biofix for the developmental model.

The important stage to forecast for either species is egglaying which, for CBFW, occurs during the period of 85-400 GDD Base 50°F after the onset of sustained adult activity or flight (biofix). **Therefore CBFW egg laying is generally predicted** 

Fruitworms overwinter as larvae in the duff around bushes or field edges and pupate in the spring, emerging as adult moths after the start of bloom and usually before early fruit set. Cherry Fruitworm (CFW) emerges earlier than Cranberry Fruitworm (CBFW). Once mated, moths move into blueberry plantings when fruit is small and green to lay eggs directly on the fruit. Larvae then tunnel into the fruit and begin feeding. Infested fruit turn prematurely blue making them easy to identify when scouting. Larvae will consume from 3-6 berries, filling them with brown frass, and web together fruit with silk. The frass from CFW remains inside the fruit whereas that from CBFW is pushed out and visible. Upon reaching maturity, larvae leave the berries and move to over-wintering sites. There is one generation per year.

**Damage**: Larvae feed on ripening fruit. Feeding reduces the crop and spoils marketability of the berries.

#### **Management**

Monitoring: Pheromone traps can be used to monitor male populations of these pests and helps to identify the initial flight into a blueberry planting. Lures are available for both species. Traps should be placed during bloom with a minimum 50' buffer between them. Monitor trap catches twice weekly and remove moths caught each time you check in order to identify when sustained captures occur. Secondary scouting can be done for egg laying by inspecting the calyx end of green fruit with a hand lens. Scout the periphery of the planting especially near woods and hedgerows. Finally, scout for infested fruit by looking for prematurely pigmented berries.

**Developmental Model**: Fruitworm development is closely related to weather conditions for both species and can be predicted with reasonable accuracy using Degree Day accumulations. Cherry Fruitworm is thought to to take place during the period of 435-750 GDD Base 50°F. Modeling for CFW egg-laying is not currently available but is likely somewhat earlier than CBFW.

#### **Control strategies** Cultural/Biological

• Eliminate weeds and trash around plants to minimize protective overwintering habitat for larvae.

- Clean cultivate between rows to disrupt pupation sites and reduce the population of this pest.
- Hand pick and destroy infested fruit in small plantings.
- Preserve natural enemies whenever possible by selecting spray materials that are less toxic to beneficials.

#### Chemical:

• Apply recommended insecticides beginning 85 - 100 GDD base 50°F after sustained trap catches (biofix), which usually coincide with berry-touch or when degree day models reach the action threshold.

• If action threshold is reached while some bushes are still in bloom, use materials that are listed as relatively safe for pollinators/parasitoids in chart below that are listed as relatively safe for pollinators/parasitoids.

- Avoid use of insecticides with seasonal use restrictions that may be needed for Spotted Wing Drosophila (SWD) control later in the season.
- Rotate insecticides from different IRAC groups to reduce the chance of resistance development in the pest.
- Use pesticides that are less toxic to predators (e.g., insect growth regulators or B.t. products) to promote populations of natural enemies.

#### **VOLUME 5, ISSUE 4**

Trade Names***	Chemical Class	Life-stage activity	Optima Spray Timing	Pollinator/Parasitoid Toxicity Rating
Imidan	Organophosphate	Eggs, larvae, adults	100% Petal fall	Highly toxic
*Lannate/ Sevin	Carbamate	Eggs, larvae, adults	100% Petal fall	Highly toxic
Asana/ Danitol/ Mustang Max/ Hero/ Bifenture	Pyrethroid	Eggs, larvae, adults	100% Petal fall	Highly toxic
Exirel/Altacor	Diamide	Larvae	100% Petal fall	Relatively safe
Assail	Neonicotinoid	Eggs, larvae	100% Petal fall	Moderate toxicity
Entrust/ Delegate	Spinosyn	Eggs, larvae	Early fruit set over eggs	Moderate toxicity
⊗Dipel	B.t.	Larvae	Early fruit set over eggs	Relatively safe
Intrepid/ Confirm	Growth Regulator	Larvae	Early fruit set over eggs	Relatively safe
⊗Grandevo/ ⊗Venerate	Biologicals	Larvae	Early fruit set over eggs	Relatively safe
Rimon	Growth Regulator	Eggs, larvae	Early fruit set under eggs	Relatively safe
Esteem	Growth Regulator	Eggs, larvae	Early fruit set under eggs	Relatively safe
Assail	Neonicotinoid	Eggs, larvae	100% Petal fall	Moderate toxicity
Entrust/ Delegate	Spinosyn	Eggs, larvae	Early fruit set over eggs	Moderate toxicity
⊗Dipel	B.t.	Larvae	Early fruit set over eggs	Relatively safe
Intrepid/ Confirm	Growth Regulator	Larvae	Early fruit set over eggs	Relatively safe
⊗Grandevo/ ⊗Venerate	Biologicals	Larvae	Early fruit set over eggs	Relatively safe
Rimon	Growth Regulator	Eggs, larvae	Early fruit set under eggs	Relatively safe
Esteem	Growth Regulator	Eggs, larvae	Early fruit set under eggs	Relatively safe

Table 1. Details of insecticide options and timing for fruitworm control in blueberry as of 2016.

\*= Restricted Use Material 🛇 = OMRI approved for Organic Production

#### **Summary Management Table:**

Conventional (PHI)	Organic OMRI listed (PHI)	Cultural Practices
*Asana XL (14) Avaunt (7) *Brigade WSB (1) Confirm 2F (14) Esteem 35WP (7) Imidan 70W (3) *Lannate 90 (3) Molt-X (0) Pyrenone .5EC (0) Sevin XLR (7)	<ul> <li>Agree WG (0)</li> <li>Aza-Direct (0)</li> <li>Biobit 1.6 FC (0)</li> <li>Deliver (0)</li> <li>Dipel DF (0)</li> <li>Javelin WG (0)</li> <li>Molt -X (0)</li> <li>Pyganic (0)</li> <li>Venerate XC (0)</li> </ul>	<ul> <li>Eliminate weeds and trash around plants to cut down on overwintering protection for larvae.</li> <li>Clean cultivate between rows to disrupt pupation sites and reduce the population of this pest.</li> <li>Hand pick and destroy infested fruit in small plantings.</li> <li>Preserve natural enemies whenever possible by select- ing spray materials that are less toxic to beneficials.</li> </ul>

\*= Restricted Use Material 🛇 = OMRI approved for Organic Production

See the <u>2017 Cornell Pest Management Guidelines for Berry Crops</u> for application rates and additional information. Some of the materials listed in this table may not be approved for use in NYS. Check the <u>NYS DEC portal</u> for specific information. **BERRY NEWS** 

# H-2A Struggles to Keep up with Grower Demand

Gary Pullano, Fruit Growers News

According to the U.S. Department of Labor (DOL), the number of H-2A workers jumped from 77,246 to 165,741 between 2011 and 2016. Since 2001, there's been a 106 percent increase in H-2A certifications. According to statistics from the Office of Foreign labor Certification within the US Dept of Labor, berry workers nationwide make up 9% of the H2A labor. New York State is 8th in the nation for hiring H2A laborers.

The H-2A program is for seasonal agricultural workers, generally for a period of 10 months or less, to provide farms with short-term agricultural labor when the number of

Top 10 states using H-2A labor in 2016 (% of total certified FY 2016)					
Florida	22,828	13.8%			
North Carolina	19,786	11.9%			
Georgia	17,392	10.5%			
Washington	13,686	8.3%			
California	11,106	6.7%			
Louisiana	8,301	5.0%			
Kentucky	6,779	4.1%			
New York	5,522	3.3%			
Arizona	5,391	3.3%			
South Carolina	3,896	2.4%			

Percentages indicate portion of U.S. certified H-2A workforce. Source: Office of Foreign Labor Certification, U.S. Department of Labor

available domestic workers is insufficient.

Growers should keep a lookout for changes regarding the H-2A and H-2B visa programs for foreign workers. Labor relating to production and other work within a greenhouse falls under the H-2A program, whereas labor relating to the installation of plants and landscape work falls under the H-2B program for non -agricultural jobs.

The most important distinction between the two programs is the cap placed on the number of visas issued under the H-2B program, limited to 66,000 a year. The H-2A visa program does not have a yearly cap. Three government agencies are involved in the H-2A visa program. The process starts with DOL, then goes to the U.S. Department of Homeland Security and the U.S. Department of State. Precise timelines for application deadlines and other steps throughout the process are specified in OFLC's regulations, available at www.doleta.gov.

#### **Additional resources**

#### Department of Labor - https://

<u>www.foreignlaborcert.doleta.gov/</u> Employers must first apply for labor certification through DOL. The Office of Foreign Labor Certification page on the DOL website provides filing tips, answers to frequently asked questions and application time frames for foreign labor programs.

Department of Homeland Security - <u>https://</u> <u>www.uscis.gov/</u> Once an employer receives application approval, they must file a petition with U.S. Citizenship and Immigration Services for a visa. On the "Working in the US" page on the USCIS website, employers can find information on qualifications for the H-2A and H-2B programs and on how to petition on behalf of a worker.

Department of State - <u>https://travel.state.gov/</u> It is the foreign worker's responsibility to apply for a visa through a U.S. embassy or consulate, but it is important for employers to be aware of the process. Under the "Employment" tab, the department's website outlines the application process, fees and required documentation.

Source: Fruit Growers News, April 28, 2017. For complete article, which includes information on certified labor contractors, please visit: <u>http://</u> <u>fruitgrowersnews.com/article/h-2a-struggles-keepgrower-demand/</u>

# For Your Information

⇒ Seasonal High Tunnel Initiative - NRCS New York is part of an ongoing program to assist participants with extending their plant productivity and health through the implementation of seasonal high tunnels. A seasonal high tunnel is a polyethylene-covered structure at least six feet high which modifies the climate to create more favorable growing conditions for vegetable and other specialty crops grown in the natural soil beneath it.

For more information visit: <u>https://www.nrcs.usda.gov/</u> <u>wps/portal/nrcs/detail/ny/programs/financial/eqip/?</u> <u>cid=nrcs144p2\_027074</u>

- ⇒ Seal the Seasons, a frozen produce business, is looking to work with caneberry growers in GA, NC, NJ, NY and New England. We work with growers to freeze their crop and sell in grocery under the Seal the Seasons brand. We purchase wholesale quantities from our partner growers. We look for grade A and grade B product for freezing. We are not interested in juice grade. If you are interested in working with Seal the Seasons, please reach out to Patrick Mateer at patrick@sealtheseasons.com. Learn more about the company at www.sealtheseasons.com
- ⇒ An orchard in Crown Point, NY is selling their Haygrove Super Solo high tunnel, 25'x220'. Contact Will Gunnison at 518-572-4642 (mobile) for more information.

#### ⇒ More tick information sources:

<u>https://ahdc.vet.cornell.edu/news/lyme.cfm - (</u>Link to new lyme test for ticks available to home owners from Cornell diagnostic lab)

<u>https://nysipm.cornell.edu/whats-bugging-you/ticks -</u> IPM website – you can find great links to different fact sheets right off this website, with photos.

<u>https://itunes.apple.com/us/app/tickclick/id983240198?mt=8 -</u> Link to a tick click ID app developed by Suffolk CCE with funding from IPM.

#### Agricultural Energy Audits Available to New York Farms through NYSERDA

#### New York farms can cut energy use and energy costs with the Agriculture Energy Audit Program

Last spring, NYSERDA launched the <u>Agriculture Energy Audit Program</u>. The Program offers farms and onfarm producers <u>no-cost energy audits</u>. No up-front costs are required form the farmer as NYSERDA pays the consultant directly. Three levels of audits are offered. The level II audit adheres to ANSI/ASABE S612 standards and can be submitted with EQIP applications or to other third parties for funding consideration.

The next EQIP deadline is June 16, 2017. Farmers are encouraged to sign up for the audit immediately and begin the application process with their local NRCS office. Level II audits are required for EQIP applications. The audit does not have to be completed by June's deadline but farmers must be enrolled in the AEAP program to qualify.

Audits are available on a first-come, first-served basis. The program runs through the end of the 2017 or until funds are expended. For general information or to request flyers for your office call 800-732-1399 or email <a href="mailto:aeep@nyserda.ny.gov">aeep@nyserda.ny.gov</a>. To discuss the program further or contact the Program Manager, Lisa Coven, at extension 839 or <a href="mailto:lisac@ensave.com">lisac@ensave.com</a>.

Applications available at <u>https://nyserda.seamlessdocs.com/f/AgAudit</u>

# **Rapid Harvest Schedules and Fruit Remoal as Non-Chemical Approaches for Managing Spotted wing Drosophila**

H. Leach, Moses, J; Hanson, E.; Fanning, P.; Isaccs, R.

on April 29, 2017

Spotted Wing Drosophila has caused significant economic losses to small fruit and berry growers throughout the USA and Europe since its invasion. This pest can lay many eggs over its lifetime within ripening and ripe berries, causing yield loss and the risk of fruit contamination.

Zero tolerance for this pest has led to increased use of broad-spectrum insecticides to control it, which are costly and pose many other sustainability and pest management concerns. There is an urgent need to evaluate management strategies that can decrease reliance on chemical controls and mitigate economic losses. Over two growing seasons, we compared harvest schedules for their effect on infestation by D. suzukii, revealing that fruit harvested every 1 or 2 days had significantly fewer D. suzukii larvae than a 3day harvest schedule. Furthermore, we found that yield per unit effort was highest on a 2-day schedule. Sanitation of the crop is another important component of a successful 99% of D. suzukii larvae. integrated pest management program, and we found that bagging infested waste berries killed 99% of larvae after

Source: Published online in the Journal of Pest Science 32 h, with higher fruit temperatures in clear bags than white or black bags. In combination, these methods can reduce the effects of this invasive pest on raspberry production. This study will provide guidance to growers on culturally based IPM tactics to decrease reliance on chemical management.

#### **Key Message**

• New management techniques for Drosophila suzukii are needed to decrease reliance on insecticidal control.

• Reducing the harvest interval of raspberries to 1–2 days decreases the prevalence of D. suzukii larvae.

• Harvesting every 2 days had higher marketable yield than plots harvested every day.

• Bagging infested berries in clear plastic for 32 h kills

June 15, 2017 - UMass Extension Fruit Program Berry Twilight Meeting, 5:00-&:30, Nourse Farms, 41 River Rd., Whately MA. Strawberry & Raspberry Variety Showcase, Blackberry Swing Arm Trellis Demo, High Tunnel Berry Production Update, Spotted Wing Drosophila Management Research and Management Update. 1 Pesticide Credit requested. Cost \$20 payable at the meeting. Light fare and refreshments included. Pre-registration is encouraged by emailing umassfruit@umass.edu in order to provide enough seating and food. For more info go to http://ag.umass.edu/fruit/upcoming-events.

#### Ag Business Tuesdays this Summer – free farm business technical assistance.

The Cornell Cooperative Extension Eastern NY Commercial Hort Team, in collaboration with CCE County offices, is offering free farm business technical assistance appointments this summer on Tuesdays at various locations in our service region.

Topics for consultations can include: labor regulations and management, risk management (insurance and best practices), land use regulations and zoning, other food-regulations (labels, processing), personal finance and farm transition planning, tax and other grant and incentive programs, bookkeeping and recordkeeping, pricing products and market channel assessment, contract terms and negotiation, and loan programs and financing decisions. At your appointment we can either help to answer your questions or help direct you to the right resources.

#### Planned locations for May, June, and July 2017

May 30 CCE Schoharie County, Cobleskill NY June 20 CCE Orange County, Middletown NY June 27 CCE Essex County, Westport NY July 11 CCE Clinton County, Plattsburg NY July 25 CCE Warren County, Warrensburg NY

Appointments are in 1.5-hour increments starting at 9:00 am. In some cases, early morning or early evening appointments may be available. Pre-registration in advance is required - we cannot accommodate walk-ins. If you can't physically come to the office, we can also schedule an appointment by phone or a video conference. To register go to: http://bit.ly/2oyaGpM or call (518) 949-3722 and leave your name, preferred date and preferred time and the best way to reach you. Liz will also be doing farm visits in the counties on the following Wednesday. If you would like a farm visit, contact her directly at emh56@cornell.edu.