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Eastern NY Commercial Horticulture Program

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Berry News

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Spotted Wing Drosophila (SWD) populations are on the rise in the Lower Hudson Valley and throughout Eastern NY

Numbers adult of adult spotted wing Drosophila trap captures remained low until late July in the Lower Hudson Valley. Since then trap captures of adult flies have continued to increase. Fruit injury by SWD has also increased. Percent infested fruit has jumped from 5% or less in late June and early July to 15% in late July and 50% in early August. At some farms this week we are seeing 100% infestation in fields that have been on a 10 day spray schedule. Last year, as the season progressed, adult populations continued to rise and injury to fruit was severe. Current SWD populations, in the Lower Hudson Valley, are at similar levels to those found last year. At this point in the season, growers should be implementing a regular spray program with a spray interval of 5 days to protect their berry crops (Blackberry, raspberry, day neutral strawberry, and late maturing blueberry).

In the Capital District, there seems to be a dividing line near Albany. South of the city trap catches spiked this week and infested fruit could be found even in regularly sprayed fruit. Fruit infestation remains low however, still less than 20%. North of Albany, trap catches remain relatively low – mostly below 15 individuals even in hedgerow traps. However, there is little precedence for these populations to remain low and little information to suggest that these low trap catches mean that fruit is clean. Berry growers should understand that unless the berries are protected, infestation is imminent.

Northern NY growers are seeing sustained, low level catches in traps, but no fruit infestation at this point. Again, a 5-7 day spray schedule is necessary to avoid major infestation.

If periodic rains become part of the weather cycle, it is imperative to get insecticide on the plants as soon as the rain passes. Additionally, there is some discussion that Assail may have some larvicidal characteristics, so incorporating it, along with a feeding stimulant, may provide some protection especially if fruit is already infested.

More information about spotted wing Drosophila can be found at:

<http://www.fruit.cornell.edu/spottedwing/index.html>

A table with available insecticides for the management of SWD can be found at:

<http://www.fruit.cornell.edu/spottedwing/pdfs/UpdatedLabeled%20InsecticidesNY-SWD-final.pdf>

-JMO and LGM

Spotted Wing Drosophila Day Neutral Strawberry Project: Data Collection Underway in the Hudson Valley

There has been much discussion and work done trying to understand SWD biology, the crops which this pest affects, and the appropriate and effective control measure. Currently the most effective – although not 100% effective – is an intensive spray program.



Researchers and educators at Cornell and throughout the country are searching for more economical and environmentally feasible management options. Laura McDermott and I are conducting preliminary research on the use of reflective silver mulch in day neutral strawberries as a deterrent to SWD. Research by Cornell found that silver reflective mulch in onions reduced thrips populations by disrupting their visual cues. Other research indicates that *Drosophila* species also use visual cues to identify their hosts. Because day neutral strawberries mature at a time when SWD populations are high, they are susceptible to infestation by SWD. We will be collecting preliminary data from two farms, an organic and a conventional farm, for 3 weeks in hopes that the information will help us secure funding for more detailed experiments on day neutral strawberries and SWD. -JMO



Spotted Wing Drosophila in Processing Fruit

By Dr. Hannah Burrack, NCSU

Editors Note: Although eastern NY growers do not send much if any soft fruit to processing, the post-harvest handling information should be of interest to all. Short story – put fruit in the cooler immediately, and advice customers to do the same.

Rainfall makes SWD management more challenging, as growers have discovered in the last two months. As we move into the end of blueberry harvest, fruit being picked for processing is at higher risk for spotted wing drosophila (SWD) infestation for several reasons: It is often softer than fruit picked for the fresh market, and SWD prefer soft fruit; Processing fruit may be harvested less frequently than fresh market fruit, increasing the time ripe berries are exposed to SWD; Finally, because processing fruit is often machine harvested, all the fruit in the field (good and bad) may be picked.

There are some strategies that growers can employ post harvest to decrease the likelihood that SWD infested fruit will be sent off for processing:

1. Hold fruit at cool temperatures. Work in our lab suggests that SWD eggs and larvae cease development at temperatures less than 41F. They will not necessarily die at cool temperatures, but they likely will not cause further

damage to the fruit. The longer fruit are held and the cooler the temperature they are held at, the more likely that small SWD larvae will die. Holding fruit at cooler temperatures also give growers the added benefit of determining how significant any infestation is, as large larvae will exit fruit as it cools.

2. Sort out soft fruit. Soft fruit are the most likely to be infested with SWD for two reasons--egg laying SWD are more attracted to soft fruit, and because blueberries become softer as SWD feed. If growers can remove soft fruit before sending fruit off for processing, this will further decrease risk of infestation being present. I suspect our aggressive soft sorting standards for fresh market blueberries are one of the reasons that SWD has been a less significant issue in this crop than some other hosts.

3. Sample collection timing. When receiving fruit, processors can either collect samples before or after fruit are sorted/de-stemmed. Samples collected before fruit has been soft sorted are not necessarily representative of the status of the fruit that will be processed. Samples of fruit after chilling and sorting, prior to processing/freezing are likely more representative.

Source: <http://ncsmallfruitsipm.blogspot.com/2013/07/end-of-harvest-concerns-in-blueberries.html>

Cornell Fruit Field Day at NYSAES in Geneva a Success

On August 1st, nearly 500 growers and fruit industry reps were present at the NYSAES in Geneva and there was an excellent showing from eastern NY. The two tracks consisted of Tree Fruit and Berries, Grapes and Hops.

In addition to unveiling two brand new apple varieties, SnapDragon and RubyFrost, research plots were examined including the one pictured above which was part of a NE SARE supported project dealing with berry nutrition. Dr. Marvin Pritts has been leading the 2 year project which is being finalized this fall. We have a number of growers in this region that are participating and soon all growers will be able to use a handbook to better help them understand and manage the nutritional needs of berries.

For more information about foliar leaf analysis – which should be done SOON!!! – please visit the Agro-One website at: <http://www.dairyone.com/AgroOne/default.htm> or call Laura or Jim. -LGM



Don't Miss Your Chance to Meet with FDA About the New Food Safety Law

August 20 9:30 am - 12:30 pm Alumni Hall Auditorium, Hopkins Center, Dartmouth College

At this session farmers can ask questions of FDA officials about the draft rules for implementing the Food Safety Modernization Act (FSMA).

Two rules that will directly affect farmers are the Produce Safety rule and the Preventive Control rule. Although the law and the rules are complicated, a lot of work has been done to help interpret them and identify areas of concern. I strongly urge you to:

- 1) take an hour or two to get up to speed on the issues,
- 2) show up to this session on Aug 20, and
- 3) submit comments to FDA by the Nov. 15 deadline.

FSMA is too important to leave up to 'someone else' to deal with; speak now before the rules are finalized.

Here are some resources to help you learn about FSMA and its potential impacts:

- National Sustainable Agriculture Coalition (extensive background and talking points): <http://sustainableagriculture.net/fsma/overview-and-background/>
- New England Farmers Union: <http://www.newenglandfarmersunion.org/food-safety-modernization-act/>
- The NHVBGA website for growers to discuss FSMA: <http://www.farmtalkfsma.org/>
- The FDA website on FSMA: <http://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm>

Source: Dr. Vern Grubinger, UVM, VT Veg and Berry News, <http://www.uvm.edu/vtvegandberry/>



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Visit On-Farm Research Trials to Learn Innovative Management Techniques for Spotted Wing Drosophila

Tuesday, September 10th, 2013



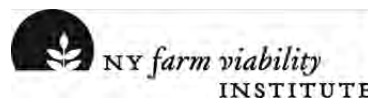
Spotted Wing Drosophila management has been a major statewide research and extension focus during 2013, with 2 of the projects located in the Capital District region in eastern NY. Through efforts by local berry growers, including members of the NYS Berry Growers Association, and supported by NY state and federal funding, these projects are advancing our understanding of this invasive pest. Plan to join growers, extension educators, Cornell University research faculty, industry and government representatives for updates on innovative management techniques for SWD.

Locations	Times
<p>Fixed Sprayer System in a High Tunnel Raspberry Planting <i>The Berry Patch of Stonewall Hill Farm, 15370 NY Route 22, Stephentown, NY 12168</i></p> <p>This NYFVI funded project examines the effectiveness and labor saving attributes of this mode of pest control when faced with a challenging pest like SWD. Owner Dale Ila Riggs has been a leader in the campaign to secure research funding for SWD. The farm also grows blueberries with bird netting and day neutral strawberries in a high tunnel – all for local markets.</p>	2:00 pm-3:30 pm
<p>Travel to 2nd site</p>	3:30 pm-4:00 pm
<p>Exclusion Netting and Mass Trapping to Control SWD in Organic Blueberries <i>Hay Berry Farm, 1276 Babcock Lake Road, Hoosick Falls, NY 12090</i></p> <p>Lawrie Nickerson was awarded a NE SARE Farmer Grant to evaluate netting as a management tool for SWD. She also looked at weed mat and berry quality in the study. The farm features a SMART NET bird net, deer fencing and a portable hand-washing station to meet U-Pick customer needs.</p>	4:00 pm-5:30 pm

Please register by calling Marcie at 518-272-4210 – there is no fee, but it will help us provide the appropriate number of handouts etc. If you get a machine, leave the number attending, your name and a phone number. **This event will happen rain or shine.**

If you have questions, please contact Laura McDermott: 518-791-5038.

Research Supported by funding from Northeast Sustainable Agriculture Research and Education, and New York Farm Viability Institute.



Potato Leafhoppers in High Tunnel Raspberries

Potato leafhoppers, *Empoasca fabae*, have been found to be a real problem on some varieties of raspberries, particularly in high tunnels. These insects moved into the tunnel after the first outside mowing around the outside of the tunnels and specifically target the varieties ‘Polana’, ‘Polka’ and ‘Jaclyn’. Significant damage was seen including stunted canes, twisted leaves and yellowing of the leaves making it easy to confuse with nutrient deficiency or a virus. The leafhoppers can also significantly damage the developing fruit. Leafhopper damage persists throughout the season even after the insects were gone. This results in a great deal of yield loss. Tunnels may exacerbate the damage as the foliage in the tunnel is more succulent than leaves on plants outside of the tunnel. We see similar damage occasionally with high tunnel tomato crops and in potato fields. Proximity to hay fields is a good indicator as to how severe this problem could be.

Labeled products include Assail, Sevin, Danitol also Provado and Admire which are systemic. Organic products include Mycotrol O and Pyganic. -LGM



Potato leafhopper damage on Polana. Photo courtesy of C. Heidenreich.

Weekly and Seasonal Weather Information

Site	Growing Degree Information Base 50 ^o F			Rainfall Accumulations		
	2013 Weekly Total 8/07—8/12	2013 Season Total 3/1 - 8/12	2012 Total 3/1—8/12	2013 Weekly Rainfall 8/07—8/12 (inches)	2013 Season Rainfall 3/1—8/12 (inches)	2012 Total Rainfall 3/1—8/12 (inches)
Albany	124.2	1767.3	2181.3	0.77	22.54	17.39
Castleton	119.9	1863.5	2263.9	0.49	20.73	17.15
Chazy	110.8	1633.2	2230.6	0.64	19.72	14.20
Clifton Park	114.3	1785.8	2045.8	0.67	21.10	20.59
Clintondale	109.2	2019.3	1695.0	NA	NA	NA
Glens Falls	115.1	1673.9	1830.0	0.25	17.77	14.33
Granville	112.0	NA	1940.5	0.01	NA	18.76
Guilderland	122.0	1684.3	1887.5	0.59	6.24	6.16
Highland	127.6	2028.6	2221.0	3.60	19.81	21.61
Lake Placid	77.5	1114.9	NA	1.32	21.32	NA
Montgomery	127.0	1928.2	1963.5	5.53	20.79	NA
Monticello	101.7	1414.0	1930.5	0.08	0.27	1.45
Redhook	127.1	1923.8	2075.0	1.51	16.07	17.36

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. CCE provides equal program and employment opportunities.