

Long Island Spotted Wing Drosophila Update
Northeast Spotted wing Drosophila Working Committee Meeting
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A total of 20 monitoring traps were placed in raspberries, blackberries, peaches, apples, blueberries, grapes, and adjacent forests. First sustainable SWD capture on long Island occurred between 12 – 19 June in raspberries (approx. 650 DD@50 base from Jan 1, day length 15:07). Numbers increased as the season progresses. Monitoring will be continued in a smaller scale through winter.

Raspberries and blackberries were heavily damaged by SWD in 2013. An intensive fruit damage assessments were done by weekly fruit inspection and laboratory rearing from 3 commercial farms. During mid-July to the end of July about 10.0%, in August 69.5%, and in September 99.3% raspberries were found to be infested by SWD. Blackberries were heavily infested from the beginning of the season starting at 45.4% in July, 77.3% by mid-August, and 100% from mid-August to onward. Blueberries were not affected much by spotted wing drosophila until late August. Less than 0.5% blueberries were found infested by July 17. From July 18 – 24 less than 2.0%, and from July 31 – August 7 (harvest ends) about 48.0% blueberries were infested. This is important to note that blueberry cultivation is small and mostly U-Pick type on L.I. and 90% berry harvest ends by late July. Late harvested berries appeared to be in significant economic risk from spotted wing drosophila damage.

Peach and apple damage by spotted wing drosophila was not noticed in Long Island orchards. In a laboratory rearing, 24 peaches and 24 apples directly picked from trees apparently had some soft spot on fruits produced no spotted wing drosophila. No oviposition mark or breathing tubes was observed when fruits were checked prior to set in rearing cages.

Grape damage was assessed intensively for the entire season. No spotted wing drosophila oviposition was observed until mid-September. However, from mid-September SWD damage has been found in some red cultivars (Pinot Noir, Merlot, and Cabernet Franc.) Some Merlot samples have shown unusually high numbers of SWD oviposition particularly vines near the forest border. Since early-October increased numbers of oviposition (as high as 50%) was observed in both **healthy** “merlot” and “cabernet” grapes. Similar to last year, we did not find any oviposition in Chardonnay grapes. Fruit color, ripeness, skin toughness, sugar content, and acidic condition might have effect on fly preference. Lack of other preferred host in late season might put late cultivars in higher risk from oviposition. Further research is necessary to assess the overall damage by SWD in grapes.

Beside crop hosts we also checked wild berries grown adjacent to fruit orchards. Wild black cherry, *Prunus serotina*, is another spotted wing drosophila's (SWD) wild host found widely

grown in forest and landscape on Long Island. This cherry plant is native to eastern North America. This is appeared to be the earliest preferred wild host (90% oviposition) of spotted wing drosophila followed by pokeweed berries (mid-season host), autumn olive (late-season host, invasive sp.) and bittersweet nightshade (late-season host). Depending on the time of collection and site we found 40 – 90% pokeweed berries, <15% bittersweet nightshade, and 10 - 80% autumn olives with eggs laid inside.

We have the year round field monitoring and adult emergence data for crops and wild hosts reared in laboratory and we will report the results later in the NY Expo meeting in Syracuse, and AgForum meeting on Long Island, NY in January, 2014.

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