

Empire State Fruit and Vegetable Expo - 2012
Syracuse, NY

Title of session: Facing new threats in NY fruit and vegetable: brown marmorated stink bug & spotted wing drosophila

Speaker: Dr. Greg Loeb, Department of Entomology, Cornell University

Title of talk: The spotted wing drosophila in small fruit and grape

Summary: The invasive species spotted wing drosophila (SWD) *Drosophila suzukii* has exploded onto the scene in essentially all states in the Northeast Region in the 2011 growing season, causing significant injury to fruit crops in several areas. SWD first appeared in California in 2008 and has been rapidly expanding its distribution ever since. Unlike many other fruit flies, SWD has the capacity to lay eggs into intact and marketable fruit. Berries, particularly raspberries and blueberries, are especially vulnerable. In addition, SWD has been reported from many other crops and wild plants. In regions where SWD has been present for a little longer, in order to keep fruit clean and marketable, growers have resorted to treating raspberry plantings twice per week with insecticides. This level of emphasis on chemical management will hasten the development of resistance in SWD to insecticides, will have negative impacts on beneficial insects and the environment, and will increase the risk of worker and consumer exposure to insecticides.

In this presentation I will provide an update on the status of SWD in NY and surrounding areas. This will include an overview of its basic biology and ecology, identification, type of damage, crops at risk, seasonal phenology, how to monitor, current management options and directions of ongoing and future research. Below are some of the key features of this pest that I will highlight.

1. Like other fruit flies, SWD have a high reproductive capacity and short generation time.
2. Female SWD have a robust ovipositor (egg laying structure); lay eggs in ripe, marketable fruit.
3. SWD populations tend to build late in the season (mid to late August)
4. Soft-skinned fruit such as raspberries, blackberries, blueberries and cherries particularly vulnerable to SWD. Also fall harvest of day-neutral strawberries.
5. Fruit contaminated with larvae a major concern with SWD.
6. Wild hosts may represent important source of SWD infestations.
7. SWD adults susceptible to several classes of insecticides, although only Delegate*, Entrust* (organic) and Pyganic (organic) legal in NY (*2ee exemption).
8. Recommend monitoring for adult SWD in or near susceptible crops.
9. Frequent insecticide applications may be necessary for clean fruit (once or more per week).
10. Research is being initiated to better understand phenology of SWD and associated risk factors and develop improved monitoring and management options.