The 76th Annual NE, NY, and Canadian Fruit Pest Management Workshop

# An Overview of the Long Island Tree Fruit IPM – 2014 Report

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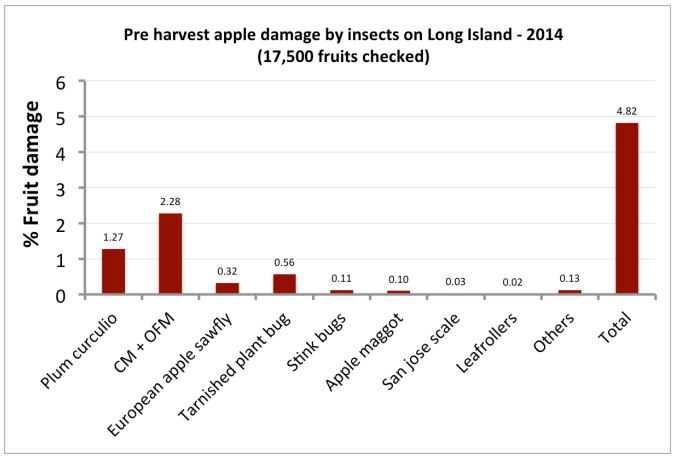
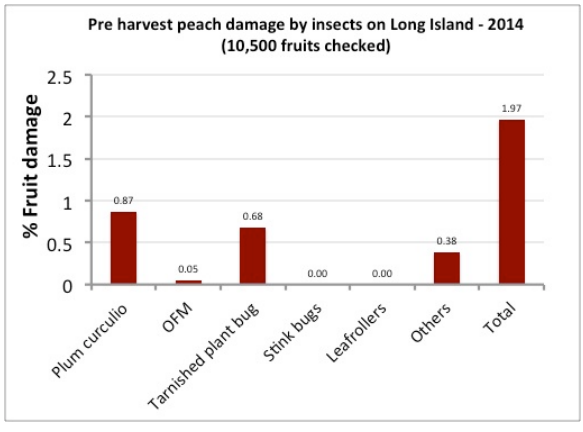
Long Island has approximately 324 acres of tree fruits orchard owned by 14 growers. Tree fruits are important crops of Long Island agriculture. Knowing the pest status is key for a successful pest management operation in any agriculture production. Production of good quality fruits and economic sustainability of orchards largely depend on timely control of the pests. In 2014, twelve apple and five peach orchards were selected under a tree fruit integrated pest management project run by the Entomology and Agriculture Stewardship Program of Cornell Cooperative Extension, Suffolk County. Growers were provided season-long weekly pest monitoring and pest management recommendations through with staff from CCE-Suffolk County, NYSAES at Geneva, and Cornell University's Hudson Valley Lab. In 2014, a total of 17,500 apples and 10,500 peaches were inspected for insect related fruit damage throughout the growing season (500 fruits/sample checked from 10 interior and 10 border trees). Codling moth, plum curculio, tarnished plant bug, European apple sawfly, oriental fruit moth, and stink bug were the most significant insect pests in pome and stone fruits on Long Island. These insects were responsible for about 4.82% apple and 1.97% peach damage.




In 2014, codling moth was the most damaging pest on Long Island apples has caused 2.28% fruit damage. However as high as 15% codling moth damage was found in one orchard. Overall plum curculio infestation was 1.5% in 2014, much lower then 2013 (3.86%), 2012 (2.89%) and 2011 (>15%). Long Island fruit growers made significant progress in plum curculio control primarily by early detection services provided by Cornell cooperative extension staff and timely use of effective insecticides Avaunt and Assail. Our relatively small orchard size surrounded by long forest borders and multiple cultivars within block present challenges for PC control on L.I. farms. Similar to 2013, tarnished plant bug damage (TPB) was low in apples (0.56%) and peaches (0.68%) in 2014 down from 1.28% and 2.04% for apples and peaches, respectively, in 2012. Timely weed management was recommended for reducing TPB damage in fruits. No insecticide application was needed. European apple sawfly was not a noticeable problem in 2011 (only 0.11% damage), but in 2012 some orchards had up to 2% damage (average 0.32%). In 2014, about 0.32% fruit damage was found in apples, down from 0.41% in 2013. Stink bug damage was very low, less than 0.15% apples and 0.10% peaches were found showing some kind of injury (including brown marmorated stink bug, green stink bug, and brown stink bug). Most damage was in



exterior rows near forest borders. Similar levels of damage were observed in 2012 and 2013. Damage was not attributed to any particular stink bug species. Despite severe cold weather in the past winter, we have seen an increased brown marmorated stink bug (*Halyomorpha halys*) population in traps as well as reports from local homeowners. This shows the insect is now well established and overwintering in eastern Long Island and we suspect it responsible for some of the stink bug damage seen in tree fruits. Three BMSB and four green stink bug (*Chinavia halaris*) adults were found in apples during the fruit scouting period. Oriental fruit moth (OFM) damage was low, just 0.21% in apples and 0.15% in peaches.

In 2014, many growers (67% tree fruit acreage) on Long Island used pheromone mating disruption techniques for controlling OFM, CM and peach tree borers in tree fruits. In early spring CCE-SC had organized a workshop on insect mating disruption presented by fruit entomologist from Cornell University-NYSAES at Geneva and CCE-Suffolk. Since 2013, there has been an upswing of OFM and CM damage in the region. Although codling moth has not recently been a threat for pome fruit on L.I., there was noticeable damage (<5%) in two locations during late summer and early fall in 2013 and damage have increased in these locations in 2014 (up to 15%). Growers are encouraged to use mating disruption techniques for controlling lepidoptera pests in tree fruit. Cost sharing benefit from CCE-SC for mating disruption material purchase (40%) was provided in 2014 and will be available for 2015 season. Although not seen in a high numbers but fruit growers are advised to be watchful for some emerging pests in the coming years. We have seen few incidences of dogwood borer, pear psylla, apple midge, and ambrosia beetle damage in some orchards.

Overall, insect damage in tree fruits was less than 4% in Long Island orchards. Slightly higher damage was observed in rows near the forest borders. In the past two years, fruit damage from insect infestation was significantly reduced largely because of frequent pest monitoring and timely management. CCE-SC, CU and NYSAES Entomologists and Agricultural Stewardship members will continue working with the Long Island tree fruit growers. For more information on tree fruit pest management please contact Long Island Horticulture Research and Extension Center at 3059 Sound Avenue, Riverhead, NY 11901 or call at 631-727-3595.

2014 PWT meeting and fruit tour at Long Island

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