

75th Annual New England, New York, Canadian

Fruit Pest Management Workshop

Burlington, VT , 22-23 October 2013

2013 IPM Report: Massachusetts, New Hampshire, Vermont, Connecticut, New York

Diseases, Insects and Mites

Glenn Morin, Robin Spitko, Rafael (Andy) Vega

New England Fruit Consultants, Montague, Massachusetts

Overall observations: Phenological development of apple in 2013 was much more “normal” with green tissues present in the third week of April, as is typically experienced.

Changes in the pest complexes for both insects (CM, OBLR, SWD) and diseases (powdery mildew) which have been increasing in recent years continue but damage was less significant in 2013 as IPM strategies were adjusted and control measures refined.

Timely emergence of plant tissues, minimal frost events, a “snow-ball” bloom and good pollination resulted in a bumper crop of generally very high quality apples. Minor freeze events resulted in some frost damage, most often in the form of frost rings, but these instances were limited at best and generally restricted to poorer apple-growing sites.

Disease observations:

Apple scab season began slowly in 2013, nearly 6 weeks later than in 2012. In many sites, the first fungicides were not applied until early bloom; first scab fungicides and streptomycin for fire blight were being applied at the same time. The extended, ill-defined wetting of May 8-12, was the first significant scab infection period of the season. At this point, the weather changed completely and we entered a month-long period of frequent and/or extended wettings, which challenged fungicide programs and renewed fears of another bad scab season. Growers responded aggressively however, relied heavily on protectant fungicides for their primary control materials, and did have periods of dry weather which allowed timely applications of preventative fungicides. Overall, scab damage in 2013 was minimal.

Powdery Mildew was a significant factor again in 2013, but damage was not as extensive as in 2012 as growers were more realistic about the need for treatment and were prepared with aggressive management programs from the beginning of the growing season. Until last year, many sites had not treated for PM since the introduction of the DMI fungicides in the late 1980's.

Fire blight pressure was moderate in 2013. Maryblyt identified two potential infection periods (EIP > 100) during the bloom period requiring 1 or 2 applications of antibiotic to effectively bracket the

periods of risk. Most growers responded appropriately. Incidence of both blossom infections and shoot-blight infections was minimal this season. Most complaints of FB strikes were attributed to old canker activity that was not adequately removed during the dormant season.

Sooty blotch and flyspeck were non-issues again this year despite adequate hours of wetting. Commercial growers are making standard practice of including Topsin or Propylate in their summer spray applications, controlling this potentially damaging pest complex with little cost and effort.

Insect and mite observations:

Tarnished plant bugs, leaf miner, and other early-season fruit and foliar pests remain minor issues.

Plum curculio remains the primary driver for most early-season insecticide programs (although OBLR control plays an increasing role in some orchards). Damage in 2013 was minimal. High temperatures during the late May and into early June (5/20 – 5/23 and 5/30 – 6/3) resulted in a concentrated flush of curculio activity which was easily bracketed with insecticide sprays. Little PC damage was noted at harvest in most commercial blocks.

Apple maggot is still our #1 late-season pest. AM pressure was lower in 2013 than in recent years. Significant wetting events in July were minimal therefore emergence was delayed in most sites. More typical rainfall returned in August although captures remained modest. Damage at harvest was low in 2013 as most growers relied on standard control options applied on 14-day intervals from first significant captures.

Lepidopteran pests continue to present challenges. Codling moth and oblique-banded leaf roller populations have become well entrenched in a significant percentage of grower's blocks. Combining the use of pheromone traps and developmental models along with visual observations allowed for timely application of control measures resulting in low levels of fruit damage at harvest.

Spotted-wing drosophila trap captures began a week earlier than last year's first captures. As in year's past, populations began to rise sharply towards the end of July or in early August. Late season blueberries and fall raspberries were affected the most. Growers that used aggressive strategies appeared to have moderate to good control. These strategies included shortening insecticide applications (5-7 days) and rotating to stronger materials during peak pressure. Overall there appeared to be significant but less overall damage compared to last year.

European red mites continue to present few challenges when treated early as populations begin to build. There are a number of effective miticides options for use in apples (9) representing several distinct chemical classes. Consistently rotating between available chemical groups will hopefully provide adequate control for the near future. Two-spotted mites required treatment in a few blocks after dry month of July.