

2010 Massachusetts IPM Report



UMass Extension

Dan Cooley, Arthur Tuttle, and Jon Clements

Department of Plant, Soil, & Insect Sciences, University of Massachusetts

This material was presented at the 72nd Annual Meeting of the New England - New York - Canadian Fruit Pest Management Workshop (Northeast Tree-fruit IPM Working Group), October 19-20, 2010, Burlington, VT. Most observations were made at the UMass Cold Spring Orchard Research & Education Center in Belchertown, MA.

Winter was generally mild, low temperature of -3 degrees F. recorded on January 30.

Spring was early — peaches started bloom on April 7, sweet cherries on April 12, and McIntosh full bloom on April 26 (10-14 days ahead of average); scattered/isolated frost damage to mostly apples on 10,11-May with below-freezing temperatures (apples well past bloom but still susceptible to frost/freeze).

Summer was hot and dry (at end, depending on location) — high temperature 97.1 on July 6; sunburn was common but did not seem to manifest itself (badly) through harvest.

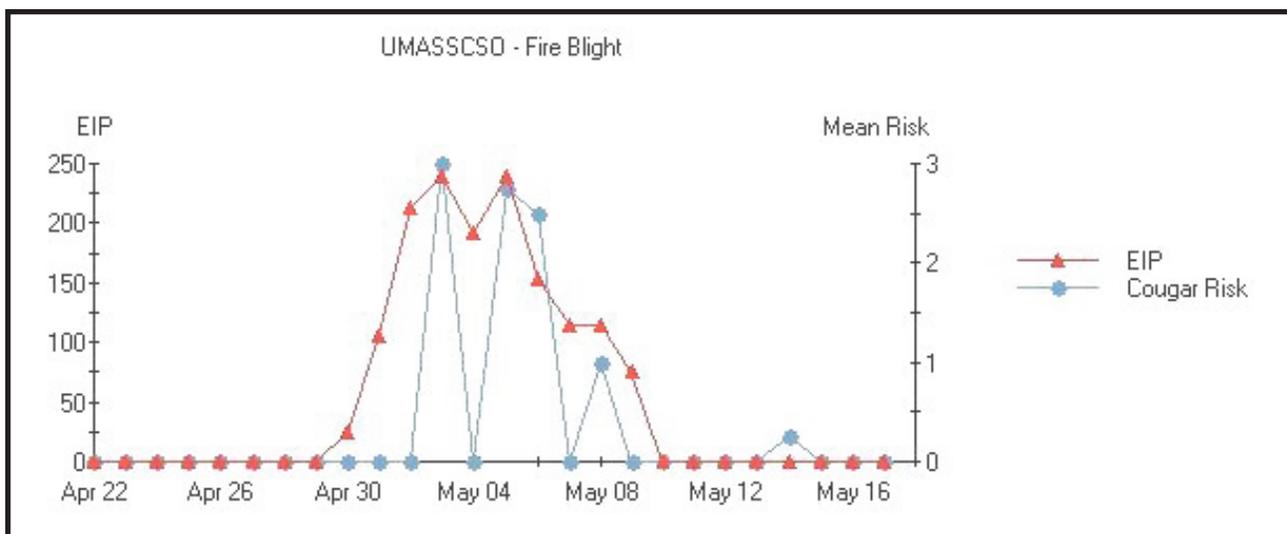
The **stone fruit** (cherry and peach) crop was generally exceptional, high sugars in peaches on account of all the sun and heat.

The **apple** harvest started up to two weeks early, McIntosh harvest averaged one week early, late apples

were still early but not so much; pre-harvest drop of McIntosh was worse than in recent memory, particularly on stressed trees, however, ReTain worked very well on all but the most stressed trees. Overall a good, moderate apple crop with generally high quality, and great fall weather (little rain). Still a somewhat trying year on account of the weather (early bloom, frost, heat, lack of rain in some locations).

Five primary **apple scab** infection periods were recorded. Scab was generally very manageable this year.

A major, high risk period during late bloom (beginning approximately May 1, lasting for almost a week) for **fireblight** infection occurred; many growers applied streptomycin; those that did not experienced some fireblight strikes throughout the growing season, while some did not; overall, fireblight seemed to take



a break after a few years of relatively high infection rate(s) in some orchards.

Five on-site weather stations and 23 airport locations were added to Cornell's **NEWA** (Network for Environment and Weather Applications) in Massachusetts, providing fruit and vegetable growers with daily developmental models (including forecasts) to aid in decision-making for management of various insect and disease pests; in addition extension IPM funding will allow us to expand this network in 2011 and 2012 while providing a more team-based approach to IPM recommendations on diversified fruit & vegetable farms.

Insects were generally unremarkable and easily controlled; notable exceptions included a pretty good influx of plum curculio during late May when fruits were relatively large — unprotected fruit had considerable PC damage near borders; and, several reports of more San Jose scale damage than seen in a while, including sprayed orchards (although one that had not been oiled for several years) — could mild(er) winters and softer pesticide application programs result in more SJS problems in the future?

We completed the 1st year of a Northeast IPM regional study, "**Development of Advanced Integrated Pest Management for Northeastern Apples**" with 6 commercial orchards in New England and 5 in NY. Collaborating scientists are Art Agnello, Harvey Reissig, and Kerik Cox from Cornell/Geneva; Peter Jentsch from Cornell/Hudson Valley; and Tracy Leskey and Starker Wright from USDA/Kearneysville. Advanced IPM strategies for scab, plum curculio, summer diseases, leafrollers, internal lepidoptera, and apple maggot were tested successfully against conventional meth-

ods.

We participated in the 1st year of a PMAP study, "**National Effort to Implement Sustainable Management of Sooty Blotch and Flyspeck on Apples**" with two commercial orchards in MA and the UMass Cold Spring Orchard. This project is developing regional SBFS warning systems based on weather data collected at orchard sites and data collected remotely. Mark Gleason, Iowa State University, is the project director.

We participated in the 1st year of an SCRI (Specialty Crops Research Initiative) study, "**Manipulating Host- and Mate-finding Behavior of Plum Curculio: Development of a Multi-Life Stage Management Strategy for a Key Fruit Pest.**" We performed "trap-tree" experiments for PC management at 5 orchards in New England. Tracy Leskey, USDA-ARS Kearneysville is the project director.



There were **32 research/data-collection/demonstration trials/plots** conducted at the UMass Cold Spring Orchard in 2010, including: using NAA with ReTain to improve drop control; NE-1020 Multi-state Evaluation of Winegrape Cultivars and Clones; NC-140 rootstock planting with Honeycrisp; assessing Alion/Rely (Bayer) herbicide performance; and fungicide efficacy including Luna (Bayer) and Inspire (Syngenta). Leads include Autio, Greene,

Cooley, Clements, Schloemann.

A **Lipco over-the-row curtain/recycling (tunnel) sprayer** was purchased with Massachusetts state specialty crop block grant funding for use at the UMass Cold Spring Orchard to research its viability and potential to reduce pesticide-application rates.



RIGHT...FROM THE START

Start your orchard RIGHT with Willow Drive Nursery's Proven Performers™. Call for a complete and updated inventory.

Calling us today can help you tomorrow!



APPLES

Braeburn

Mariiri Red™ (Eve®)
Kumeu Crimson®

Fuji

Aztec Fuji® (DT 2 Variety)
Rising Sun®
Morning Mist™
Early Fuji

Gala

Brookfield® Gala
Buckeye® Gala
Ultima Gala®

Other

Cameo® brand
Granny Smith
Honeycrisp™

It® Red Delicious
Morren's® Jonagored
Supra™
Ruby Jon®
RubyMac®
Smoothee® Golden
Spartan



CHERRIES

Attika®

Benton™

Bing

BlackGold™

BurgundyPearl™

Chelan™

Early Robin®

EbonyPearl™

Lapins

Montmorency

Rainier

Regina

Rynbrandt

Schmidt

Selah™

Skeena™

Sweetheart™

Tieton™

Ulster

WhiteGold™



PEARS

Bartlett

Columbia Red Anjou™

Concorde™

Comice

D'Anjou

Forelle

Golden Russet Bosc®

Red Clapp's Favorite



PEACHES

Stellar Series

Allstar®

Autumnstar®

Brightstar™

Coralstar®

Earlstar™

Flamin' Fury

PF 8 Ball

PF Lucky 13

PF 19-007

PF 25

PF 35-007



WILLOW DRIVE NURSERY, INC.

1-888-54-TREES

Ephrata, Washington · 1-888-548-7337 · Web Site: www.willowdrive.com