Tree Fruit and Berry Program Work Team

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During 2012, the Tree Fruit and Berry PWT sponsored an in-depth fruit school on fire blight and apple scab (March 14-15 in Geneva), an in-service tour of orchards and small fruit plantings in the Southern Tier (June 28), and three business meetings in Geneva (15 March, 18 May, and 30 October). The three business meetings included participants who connected to the meeting via Polycom from Ithaca, the Hudson Valley Lab, and/or other locations around the state. The In-Depth fruit school is described at the end of this report and was partially funded via PWT special funds.

The in-service field tour organized by Molly Shaw provided participants with the opportunity to see small direct-market farm operations in the Southern Tier (Ithaca, Trumansburg, Watkins Glenn). The farms we visited were representative of the small, diversified fruit farms common to the Southern Tier and other parts of the state where you-pick and direct market fruit farms are tucked into favorable niches. The tour started with a visit to Black Diamond Orchard, which is operated by Ian and Jackie Merwin who sell high quality tree fruit, including many heirloom cultivars, at the Ithaca Farmers market. The second stop was Glenhaven Farm and Winery operated by John Tamburello who has 11 acres of blueberries on well-drained gravel soils. He markets his fruit via you-pick and through the Ithaca farmers market. John also makes and sells berry wines, and the PWT group toured his winery and rustic tasting room. The third stop was Silverqueen Farm operated by Gordy and Liz Gallop where the group toured very diversified plantings of tree fruit, small fruit and vegetable crops before enjoying a lunch in their new sales barn. The next stops was Reisinger's Apple Country Farm near Watkins Glenn where the group admired well-managed orchards and viewed a sprayer technology demo provided by Rick Reisinger and Andrew Landers. The final stop on the tour was Kestrel Perch, a CSA operated by Katie Creeger at Ecovillage in Ithaca. The in-service summer tour was valuable not only because it provided participants with insights into specific needs of agriculture in one geographic area of New York State, but also because it provided participants with opportunities for informal interactions with fruit growers and with PWT members from other regions within the state.

In addition to the formalized PWT group functions, PWT extension educators organized numerous winter fruit schools, summer tours, webinars, and field meetings where Cornell faculty presented the latest information on IPM practices and crop production strategies to stakeholder audiences. These fruit grower meetings frequently attracted participants from other states and Canadian provinces because of the high quality of the programs. PWT members are also actively involved in regional professional meetings such as the Great Lakes Fruit Workers Conference that was held in Niagara Falls, Ontario, on 4-7 November; the New England, New York, and Canadian Fruit Workers Conference held in Burlington, VT on 23-24 October, and the Cumberland-Shenandoah Fruit Workers Conference held in Winchester, VA on 29-30 November. These professional meetings allow PWT participants to access the latest information generated by colleagues in other states while also show-casing our in-house expertise and research programs. More importantly, like the in-service summer tour, the informal networking that occurs at these professional meetings helps to build cooperative regional ventures among scientists and educators and helps to eliminate wasteful duplication of efforts.

Our PWT business meetings generally followed a similar format, with approximately half of the meeting time dedicated to informal sharing of observations/problems noted or anticipated in tree fruit and berry crops during the current season. The other half of each meeting was used for updates on meeting plans, conferences that might be of interest to the group, collaborative projects, and policy issues that might affect either PWT members or the clients that they serve in the tree fruit and berry industries.

The 18 May meeting was called specifically to discuss impacts of the severe freeze injury that affected most of the state during the last week of April and to determine if there were actions that we as a PWT should consider to address unique industry needs and stresses that the frost events precipitated. Several extension articles were...
published to provided guidance on managing fruit crops where the crop was reduced or totally lost, and numerous newsletters kept growers informed of how to enter crop insurance claims.

At the meeting held on 30 October, the membership elected Dr. Art Agnello as the new chair for our PWT and Jim Eve was elected co-chair with the understanding that these new leaders would assume responsibility for the PWT in January of 2013. Rosenberger and DeMarree had served as co-chairs from fall of 2007 through 2012, and both had requested that new leadership be elected to begin the 2013 season.

Participation of private crop consultants at PWT meetings (2 to 3 consultants at each meeting) allowed the group to benefit from a broader range of observations than would have been feasible otherwise because consultants regularly interact with numerous growers and, taken together, have scouting programs that cover more than 70% of the total tree fruit and berry acreage in the state. At the same time, the consultants benefitted by having first-hand access to the latest information and developments discussed at PWT meetings.

**Report on Fruit PWT Special Needs Funding – FY 2012**

The PWT special funds allocated to the Tree Fruit and Berry PWT in 2012 were used to defray costs associated with conducting the Cornell In-Depth School titled “Managing Fire Blight and Apple Scab under Difficult Conditions — Pathogen Resistance and Conducive Weather.” This meeting was held at the Geneva Agricultural Experiment Station 14-15 March 2012 and attracted 69 participants from throughout New York State as well as several from Massachusetts, New Jersey, Pennsylvania, and Ontario. Among the participants were 12 crop consultants and 11 Cornell specialists or extension educators. Both the consultants and the Cornell extension group provide pest management advice to fruit growers throughout New York and New England, so the impact of this meeting extended far beyond the list of participants and arguably benefitted virtually of the apple producers in regions served by these groups.

The meeting was organized specifically to address two "crisis" issues within the New York apple industry. During fall of 2011, streptomycin-resistant strains of *Erwinia amylovora*, the bacterium that causes fire blight, were detected for the first time in samples from several orchards in central and western New York. Since the 1950’s, streptomycin has been used to protect apple and pear trees from the devastating tree losses that can occur if fire blight is not controlled. Over the past three decades, changes in rootstocks, cultivars, and growing systems have allowed New York apple growers to more than double production per acre while at the same time introducing apple cultivars that are highly esteemed by consumers. Unfortunately, these newer rootstocks and cultivars are, for the most part, highly susceptible to fire blight, and the production systems that push trees into early production also bring increased risks for fire blight in young orchards. Thus, the industry risks catastrophic losses if fire blight is not controlled with antibiotics when trees are in bloom.

The full-day program on fire blight included 11 presentations by leading scientists along with time for questions and audience interaction with the speakers. Invited speakers included Dr. Jay Norelli from USDA-ARS in Kearneysville, West Virginia, Dr. George Sundin from Michigan State University, and Dr. Tim Smith from Washington State University. Sundin and Smith have provided leadership in managing fire blight in their respective states where streptomycin resistant fire blight has been present for many years. The strategies outlined during the meeting provided participants the information needed to continue monitoring for strep-resistance and to modify fire blight management strategies where strep-resistance is already established so as to minimize the risk of losses.

The second day of the In-Depth Fruit School focused on controlling apple scab, a challenge that has re-emerged after nearly 40 years of conventional control with fungicides because many orchards now contain fungicide-resistant populations of the scab-causing fungal pathogen. In the half-day program on apple scab, five speakers addressed strategies and changes that should be implemented where scab control has been slipping due to fungicide resistance. Emphases in the presentations included using sanitation measures to reduce scab inoculum, approaches for monitoring resistance and managing fungicides to slow selection pressure for resistance, managing nitrogen applications to benefit scab control, and new technologies for getting better spray deposition.

Information from In-Depth School was summarized in printed materials collated into three ring binders, and conclusions from the meeting were further disseminated via regional newsletter articles written by faculty and extension educators.