Viticulture and Enology Program Work Team

FY 2012 PROGRAM WORK TEAM ANNUAL REPORT

1. Full name of your Program Work Team (PWT):

Viticulture and Enology

2. Please list names, affiliations and e-mail addresses of the PWT Co-Chairs: (With an asterisk [*], please indicate the co-chair responsible for finalizing this report.)

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3. Please identify your PWT’s activities, accomplishments, and, most importantly, outcomes and impacts over the past year.

The Viticulture and Enology (VIEN) Program Work Team exists to support profitable production of grapes, wine and grape products in New York State, including:

- Profitable and sustainable production of grapes, wine and juice products
- Relevant input by industry into overall direction of extension programs and activities
- Research efforts that are connected with finding solutions to issues identified by industry
- Visibility and demonstrated impact to decision-makers and funding agencies
- Connection of extension staff with campus-based faculty and extension programs

The group is diverse, and encompasses 20 Cornell faculty research and extension programs, 4 associated USDA-ARS research scientists, and 10 Extension Educators representing four regional grape programs, along with the Northeast New York Fruit Program. Industry input is channeled through program advisory committees for the respective extension programs.

Three PWT Activities. As a group, the VIEN PWT participates in three coordinated activities:

- Spring/early summer PWT meeting. (June 7, 2012). This is the meeting where we discuss upcoming field research and extension activities and the funding situation. Notable this year:
  - Two major multistate SCRI grants – VitisGen (B. Reisch) and Northern Grapes Project (T. Martinson, A.K. Mansfield, M. Gomez, K. Iungerman, C. Gerling) started their first year.
  - Teaching vineyard established with Finger Lakes Community College and Anthony Road Vineyards. (Finger Lakes Grape Program, H. Walter-Peterson)
NYS CAP invasive pest monitoring: Insect traps for several invasive pests funded by Ag & Markets (Led by T. Weigle, participation of FL, HV, LI, LE extension programs)
Lake Erie Regional Program - July 25th: LERGP Summer Field Day at North East Laboratory
July 25 and 26 Northeast Vineyard Equipment Field demo at Anthony Road vineyards (A. Landers)
Viticulture 2013 – Program planning for joint winter conference, Feb 6-8.

- **CRAVE conference (Cornell Recent Advances in Viticulture and Enology).** This is the annual forum for graduate students, faculty, and staff to present to the group brief presentations on projects that are in progress. November 12, as part of the Ag Production In Service. Highlights:
  - New simple low-tech method for measuring SO2 in small wineries (G. Sacks)
  - Chemistry of tannin extraction into wine (L. Springer)
  - Zagat survey to determine whether restaurants cater to ‘Locapours (J. Perla, B. Rickard)
  - Under vine cover crops to reduce vigor (L. Jordan and J. Vanden Heuvel)
  - Removing sensory descriptors from ‘tasting sheets’ improves sales. (L. Thomas and M. Gomez)
  - Spotted Wing Drosophila update (J. Carroll)
  - 3 presentations on Vitis Gen project (L. Cadle-Davidson, B. Reisch, E. Takacs)
  - Year 1 of Northern Grapes Project (T. Martinson, C. Particka)
  - YAN measurements in NY vineyards (M. Nisbet, A. K. Mansfield, T. Martinson)

- **Appellation Cornell.** Appellation Cornell is our quarterly on-line newsletter jointly produced by many PWT members. It goes out to 2300 subscribers in and out of New York and features articles on research, extension, and teaching programs at Cornell.
  - Internet metrics (Constant Contact, Inc.) indicate about a 42% ‘Open’ rate for e-mails, and 50% of those who open the e-mails click on at least one link.
  - 40 articles published.
  - Funded this year through the NYSAES director’s fund (Kaplan Foundation) and teaching funds provided through D. Viands. In 2013 we have requested special project funding for this.

**Outcomes and Impacts.** Collectively, five regional grape extension programs [Lake Erie, Finger Lakes, Long Island, Hudson Valley, and Northeast New York Fruit program (cold-hardy grapes)] and the statewide viticulture and enology extension programs provide continuing and comprehensive programming to well over 1000 New York growers and winemakers, supported by active faculty programs in Ithaca and Geneva. Programming, in most cases, is directly driven by industry interest, and mediated by advisory committees. Much of the impact is not measured formally, and is the result of consistent, multiyear efforts, supported by ongoing research projects.

- **Winter conferences reach >1000 growers and winemakers across NY:** PWT members planned and executed several winter conferences, including the Finger Lakes Grape Growers Convention and Wine Industry Workshop, held jointly for the first time this year (H. Walter-Peterson, C. Gerling, A.K. Mansfield, G. Sacks), Lake Erie Grape Growers convention (J. Creasap Gee, T. Weigle, K. Martin), Hudson Valley Fruit Program (S. McKay and S. Hoying) and the Long Island Hort Forum (A. Wise).

- **eXtension Grape COP** – Jodi Creasap Gee, Tim Weigle, Hans Walter-Peterson, and Tim Martinson have been contributing to the E-eXtension Grape Community of Practice, a national effort involving around 40 extension viticulturists from throughout the nation.
• Newsletters:
  
  ▪ **Electronic crop updates**: Lake Erie, Finger Lakes, and Long Island grape programs provide weekly updates during growing season, and three to five more extensive newsletters.
  
  ▪ **Veraison to Harvest**: Statewide fruit ripening newsletter jointly produced by Statewide Viticulture and Enology Programs, Lake Erie, Finger Lakes, Hudson Valley, and Long Island grape extension programs. **Eight weekly issues** published in 2012. Impacts: A readership survey was completed in October 2011 (N=100), and showed that 80% read all nine issues, 84% reported a moderate to high degree of change in awareness of harvest and fruit ripening issues; 72% rated the value of fruit chemistry sample information has high, and 60% of readers rated the overall value of Veraison to Harvest in the highest category. Complete survey results are posted at: [http://blogs.cce.cornell.edu/grapes/files/2012/01/Veraison-to-Harvest-Survey-Results-2011.pdf](http://blogs.cce.cornell.edu/grapes/files/2012/01/Veraison-to-Harvest-Survey-Results-2011.pdf)
  
  ▪ **Cellar Dweller.** A periodic newsletter produced by the Enology Extension program, published two issues in 2012 focusing on a variety of winemaking topics.
  
• IMPACT: Research Focus feature articles in *Appellation Cornell* have been widely cited in trade journals. *Sulfur Dioxide Content of Wines: The Role of Winemaking and Carbonyl Compounds* (R. Mira de Orduna) will appear in Practical Winery and Vineyard Management, with wide distribution and a national audience.

• **Cornell Fruit Resources.** Led by Juliet Carroll and Craig Cramer (Horticulture) the Cornell Fruit Grape Pages were updated. It is a great aggregator of information and links from Cornell programs, organized by commodity (grapes, tree fruits, berries) and topic area (production, IPM, labor/business management, enology and value added).

• **Two SCRi Projects in Grapes Completed their first year in 2012:** Bruce Reisch is leading VitisGen, a $2M project to advance the use of genetic markers for marker-assisted breeding of grape vines, with 25 collaborating scientists from 10 universities. Tim Martinson is leading a $2.5M project, entitled the **Northern Grapes Project** to focus on viticulture, enology, and marketing of new cold-hardy grape varieties through the upper Midwest and New England.

• **Eastern Multistate SCRi project started in 2011.** **Improving Grape Production in a Challenging Eastern Environment**, an SCRi project directed by Tony Wolf at Virginia Tech, includes involvement by several programs (J. Vanden Heuvel, A. Lakso, B. Rickard, A. K. Mansfield, H. Walter-Peterson, J. Creasap Gee, I. Merwin) at Cornell.

**Impacts:**

• **20 years of Variety Trials on Long Island** by A. Wise at the Long Island Horticultural Reseach and Extension Center have directly influenced what Chardonnay clones are planted on the island, and have identified other cultivars and clones (eg. Sauvignon blanc, specific Merlot clones) that do well in the Long Island environment.

• **Annual Disease and Insect Management Articles** by pathologist Wayne Wilcox and entomologist Greg Loeb provide growers with background on pest biology and specific information on fungicides and insecticides, along with other management tools.
• **Concord Mechanization Studies** for the juice grape industry started with development of the mechanical grape harvester (now used worldwide) in the 1960s, and have continued with mechanical pruning, crop estimation, and crop thinning techniques that maximize production of ripe fruit. New initiatives include characterization of ‘green note’ flavor attributes as influenced by viticulture, and ways of predicting and moderating its influence as growers aim for higher cropping levels.

• **Expanded Workshops in Winemaking and Distillation.** Additional staff resources since 2007 (Chris Gerling and Anna Katharine Mansfield) have allowed enology Extension to train well over 500 persons annually in wine analysis and distillation techniques.

• **Expanded programming in Cold Climate Viticulture in non-traditional areas of NY.** We have expanded programs to areas of New York (notably Watertown and Champlain regions) that were previously too cold to produce grapes and wine. Research and extension through Kevin Iungerman’s grape planting and the new Northern Grapes Project is aimed at new wine cultivars that have spawned an estimated 20 wineries and substantial grape plantings in non-traditional areas of New York.

• **Clean Plants.** Virologist Marc Fuchs, in coordination with the National Clean Plant Network, is leading an effort with NY nurseries to provide testing and surveillance for improving production and distribution of virus-tested plants to enable growers to avoid transmission of graft-transmitted diseases. This long-term project should improve availability of clean planting stock to the Eastern Grape industry.

• **Yeast Assimilable Nitrogen (YAN) in NY.** Current research has verified that NY winemakers can sample well ahead of harvest for nitrogen content of the fruit they will use in winemaking, allowing early planning for nitrogen supplements added to musts during the winemaking process. Foliar N applications after veraison (start of fruit ripening) can increase YAN, but also may increase the incidence of Botrytis fruit rots. Several talks and newsletter articles have highlighted results from current (2010 and 2011) studies.

These are a few of the specific impacts that result from ongoing programs, and long-term support of Viticulture and Enology research and extension done through the VIEN program work team.