

**Final Report
Virginia Wine Board
October 12, 2015**

Title: Enology Extension Specialist

Principal Investigator:

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Type of Project: Extension

Amount funded: \$46,433

1. Objectives For 2014

1. Support the growth and development of Virginia's wine industry through the expansion of educational extension programs and applied enological research.

- Provided additional workshops across VA including wine filtration workshop, wine faults detection and home winemaking workshops.
- Collaborated with Greg Peck and Amanda Stewart to offer Cider Production workshop.

2. Provide written and oral educational resources to existing and potential wine industry practitioners

- Continued work with CMS Ensemble to get new enology/fermentation website live in 2014.
- Worked with Amanda Stewart, Ken Hurley and Ann Sandbrook on new enology question/answer option for website.

3. Provide an educational bridge between vineyard practices and the wine production practices that directly impact wine quality.

- Worked with local extension offices to provide educational resources to growers and winemakers in collaboration with Tony Wolf and Tremain Hatch.
- Assisted students of Tony Wolf/Amanda Stewart with applied research projects involving winemaking/cidermaking.

2. Achievements

- Presented VT Wine School July 21-25, 2014. Workshops included presentations on harvest preparation, faults detection and juice analysis.
- Received grant funding from VA Wine Board for studying enhanced grape dehydration techniques.
- Travelled to Eastern shore to visit wineries and distribute workshop information.
- Collaborated with Tremain Hatch at IPM vineyard meetings (March 10, 2015/bunch rots and impact on winemaking) and VT Wine School to introduce impact of vineyard practices on wine quality issues.
- Presented Basic Wine Analysis at VVA meeting. February 2015
- Presented Yeast Assimilable Nitrogen impact on winemaking, Nitrogen workshop, June 8,2015
- Presented Foliar Nitrogen and Sulfur effects on Wine Aroma and Flavor, ASEV Nitrogen Symposium, June 16,2015

3. Other

- The technical growth and development of Virginia's wine industry was enhanced through the expansion of educational extension programs.
 - Multistate Extension Collaborators:
Denise Gardner, Penn State University
Michael Leonardelli, University of Missouri
 - Multistate Extension Involvement:

Presentation at Penn State Wine Conference (Bottling Line Sanitation) and PA Enology and Viticulture research conference (Aromatic Profiling of Petit Manseng 4/2015). Allowed winemakers in the north east to be exposed to optimum bottling line sanitation issues and current research in vineyard nitrogen applications and its impact on volatiles.

Collaborated with Univ. of MO presenting MO Wine School and VT Wine School. Winemakers in MO and VA benefited from regional expertise of extension specialists working with unique grape varieties that may show promise for their region. These programs addressed the needs of winemakers that would otherwise not have the opportunity to attend.

4. Submitted and funded

Kelly M., B. Zoecklein. July 2014 - June 2015. Creating Amarone-Style Wines using an Enhanced Dehydration Technique. Virginia Wine Board. Total Amount: \$28,231. 80% Participation.

- Oversee and assist with vineyard chemical applications, harvest, processing, winemaking
- Perform GCMS for volatiles, electronic nose measurements on all juice/wine samples
- Perform statistical analysis of data
- Organize and perform sensory analysis on finished wines

5. Course and Curriculum Development

- Food Science and Technology: Fermentation Option. Instructional Development Type: Curriculum. Served on committee to develop Fermentation option for FST.

6. Meetings Led/Organized

- June 2014. Wine Filtration Workshops. Mt. Jackson and Meadows of Dan. Organized and presented. Arranged for presentation by industry filtration representative. Scope: In-state. Attendees: 38.
- July 2014. VT Wine School. Blacksburg. Organized and presented. Arranged for invited speakers from Scott Labs, Missouri Extension, VT Food Science and VT viticulture extension. Scope: Regional. Attendees: 30.
- July 2014. Basic Juice Analysis Workshop. Blacksburg. Organized and presented. Arranged for Missouri extension specialist as guest speaker. Scope: Regional. Attendees: 26.
- July 2015. Wine Analysis Workshop, Blacksburg. Two sessions offered. Attendees 35.

7. Boards, Commissions, and Advisory Committees

Loudon Co. Viticulture and Enology Center Working Group. My Role: Serve as a member of the working group to provide input to research group examining feasibility of a viticulture and enology program in Loudon County.

8. Additional

Molly Kelly conducted the following activities over the period of the grant as part of her 100% time commitment to enology extension activities:

- Conducted 56 on-site-winery visits for introduction, tour facility, advise clients on variety selection, evaluate processing difficulties and technical assistance concerning wine quality, etc.
- Approximately 89 telephone conversations/emails with winemakers concerning winemaking questions/issues, establishing new wineries.
- Consults with Enology Services Lab: 35

9. Expenditures

Expense	Allocation	% of category spent as of 6/2015
Employee wages/fringe	29,433	100.00
Contractual services	4,000	27.61
Travel	10,000	68.67
Supplies and materials	3,000	253.80
TOTAL	46,433	99.67

10. Plans

Advanced Laboratory Analysis, Advanced Faults detection.

Winery wastewater treatment extension bulletin.

Winery visit, especially to those dealing with sanitation issues impacting wine quality.

11. Summary: Objectives listed above were achieved as proposed. The Virginia Wine Board has enabled Virginia Tech to provide greater educational resources and support to Virginia wineries by hiring an Enology Extension specialist and funding travel and material costs. The enhanced technical support of wine producers funded by this grant will assist Virginia winemakers in making the most appropriate winery decisions affecting wine production and wine quality.