



EDUCATION AND RESEARCH

HOW CAN EDUCATION AND RESEARCH HELP TO INCREASE THE SUSTAINABILITY OF MY WINEMAKING AND BUSINESS PRACTICES?

CHECKLIST OF QUESTIONS TO ANSWER

1.0 ENHANCING EDUCATION TO INCREASE THE SUSTAINABILITY OF WINEMAKING AND BUSINESS PRACTICES

1.1 What knowledge can I gain to improve my winemaking and business practices?

- Have you identified key areas where your knowledge may be lacking?
- Have you identified areas where your employees' knowledge may be lacking?
- Have you considered how your business can improve by providing education to cellar staff? Sales and retail staff?
- Do you and your employees have an understanding of the chemistry of winemaking?
- Do you understand the impact of winemaking practices on the environment?
- Do you and your employees have the best training in the efficient operation of equipment?
- Do you have a sound understanding of business management strategies?
- Is English or Spanish as a second language education needed?

1.2 Where and how can I educate myself?

- Do you subscribe to winemaking publications? (ie: [Wines and Vines - W&V](#)).
- Do you search out the websites of academic and industry organizations?
- Do you subscribe to technical bulletins and newsletters? ([WSU Extension newsletter](#), other academic and industry newsletters).
- Have you joined and attend wine and grape associations? (i.e. [ASEV](#), [WAWGG](#), [Unified](#))
- Do you attend other symposiums, workshops, meetings? (i.e. Academic or Industry Workshops)
- Do you utilize vendor training on product use and equipment operation?
- Do you belong to winemaker groups?
- Do you belong to any marketing and business organizations? (i.e. [WWC](#))
- Do you belong to any sustainability organizations? (i.e: [LIVE](#))

- Do you belong to any tasting groups? – form one with knowledgeable friends and co-workers
 - Do you meet one on one with other winemakers? – identify knowledgeable winemakers that you can discuss issues or problems with.
 - Do you sponsor in-house education by inviting outside speakers or teaching your employees yourself?
 - Do you encourage your employees to attend workshops to increase their knowledge?
- 1.3 What other educational opportunities exist through academic institutions, industry associations, and local government?
- Have you contacted local academic, industry, and extension groups and asked what they may offer in the way of education opportunities?
 - Do you attend industry organizational meetings where you can impact educational events?
- 1.4 Do you plan annually for further education of yourself and your employees?
- Have you developed a written annual plan for education focusing on the key areas of knowledge gaps identified above?
 - How often do you and your employees take refresher courses on practices and equipment?
 - Have you researched upcoming or annual events to attend?
 - Have you determined which employees should attend?
 - Do you meet annually with grape suppliers to discuss and improve grape quality?
 - Do you meet annually with product and equipment vendors to discuss and improve practices?
 - Have you determined which publications to subscribe to?
 - Have you scheduled meetings with other winemakers?
 - Have you budgeted for education?
- 1.5 Do you share your knowledge with others?
- Have you performed research that could be shared with others?
 - Do you volunteer to speak at meetings?
 - Do you seek opportunities to share your knowledge?
 - Do you join wine tasting groups?
 - Do you join web forums or start a web forum?
 - Do you establish in-house educational events?

2.0 ENHANCING THE QUALITY OF WINES MADE AND ULTIMATELY THE SUSTAINABILITY OF OUR WINERIES AND THE WASHINGTON WINE INDUSTRY

- 2.1 Do you regularly monitor and analyze your wines to assure wine quality parameters are met?
- Have you established a wine quality control program with standard operating procedures to monitor wine quality?
 - Are your employees fully trained in the wine quality SOP's you have established?
 - Are your wines analyzed periodically to assure adherence to quality parameters and monitored for spoilage activity? (Alcohol, pH, TA, VA, RS, SO₂, cold & heat stability, Brett, TCA)
 - Do you have the ability to perform basic wine analysis in-house to allow for more immediate action in correcting issues?

- Do you verify in-house analysis results with outside laboratories periodically?
- Do you periodically calibrate and verify the accuracy of your lab equipment and instruments?

2.2 Do your wines have defects?

- Have you educated yourself about wine defects, what are the sensory characteristics, what causes them, how to prevent them?
- Do you know your sensory threshold for the compounds involved in wine defects?
- Do you taste your wines periodically to check for sensory defects?
- Do you send your wines to an outside facility to be analyzed by a professional tasting panel?
- Do you ensure proper winery sanitation is conducted to avoid wine spoilage issues?
- Are your cellar and retail employees fully trained in identifying wine defects?
- Do your employees receive refresher training on wine defects periodically?

2.3 How do your wines compare with others?

- Have you established a protocol to periodically compare your wines to other wines?
- Do you blind taste your wines with other local, regional, and in-state wines?
- Do you blind taste your wines with out of state and internationally produced wines?
- Do you have a panel of trusted peers taste your wines and give comments?
- Do you participate in wine tasting groups?

3.0 UTILIZING RESEARCH TO INCREASE THE SUSTAINABILITY OF WINEMAKING AND BUSINESS PRACTICES

3.1 Do you seek out current research on sustainable winery and business practices?

- Do you attend annual wine and grape industry meetings to learn about current research?
- Do you subscribe and read technical publications which circulate current research findings?
- Do you seek out who is conducting research and stay abreast of their current research work?

3.2 Are you involved in setting the direction of Washington State academic research and supporting academic and other types of research through donation of time or money?

- Do you participate in local industry groups that set the direction of wine education?
- Do you attend industry meetings and contribute ideas?
- Do you volunteer time or money to sponsor and support educational events and workshops?
- Do you collaborate with individual researchers volunteering time and or resources?

3.3 Do you continually work to improve your use of sustainable practices by utilizing research?

- Do you use current research to plan and implement changes to your winery practices? ([ASEV](#), [V&WM](#))
- Do you periodically assess your practices seeking ways to improve sustainability through research of others or of your own?
- Do you utilize Washington's academic resources to help you conduct your own research? ([WSU](#), [WWCC](#), [YVCC](#))
- Do you share your own trials and research findings with others?

RESOURCES:

[\(ASEV\) American Society of Enology and Viticulture](#)
[California Sustainable Winegrowing Alliance](#)
[College, Northwest Viticulture Center](#)
[Cornell University](#)
[\(LIVE\) Low Input Viticulture & Enology](#)
[Oregon State University](#)
[Salmon Safe](#)
[South Seattle Community College Northwest Wine Academy](#)
[\(Unified\) Unified Wine & Grape Symposium](#)
[United States Environmental Protection Agency Sustainability](#)
[University of California Davis](#)
[Walla Walla Valley VINEA-The Winegrowers Sustainable Trust](#)
[\(V&WM\) Vineyard & Winery Management](#)
[Virginia Tech](#)
[\(WWCC\) Walla Walla Community College Enology and Viticulture](#)
[Washington Association of Wine Grape Growers](#)
[\(WSU\) Washington State University](#)
[WSU Extension Enology Newsletter](#)
[\(WWC\) Washington Wine Commission](#)
[Wine Business Monthly](#)
[Wine Spectator](#)
[Wine Press Northwest](#)
[\(W&V\) Wines and Vines](#)
[The Wine Institute- California](#)
[Winemakers Federation of Australia](#)
[Yakima Valley Community College Vineyard and Winery Technology](#)
[Shelton-Badgett North Carolina Center for Viticulture and Enology](#)
[University of Arkansas Enology and Viticulture](#)

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