

Eco-Friendly Viticulture & Vinification

There are many programs dedicated to sustainable farming practices in Oregon. Some required as much as two years within an apprentice program after fulfilling all requirements. These programs include L.I.V.E., VINEA, Organic and Biodynamic, but it does not stop there. Other programs to reduce energy and environmental design, water recycling and clean energy also exist. Although, not all are certified, many of the vineyards and wineries practice sustainable farming and LEED on a voluntary basis by employing these practices and principles in their vineyards and wineries.

LIVE (Low Input Viticulture & Enology) LIVE, Inc. is a sustainable agricultural program which provides growers a list of practices that are either required or prohibited. Once fulfilled, it takes three years of probation and inspections to demonstrate compliance. When successful, the applicants are certified Low Input Viticulture & Enology (L.I.V.E.). Live, Inc. provides vineyards and wineries with official recognition for their sustainable agricultural practices

that are modeled after international standards. These standards are highly regarded by winemakers and consumers worldwide. They provide assurance of fruit quality and practices used to achieve this quality. The basic goals of LIVE are to minimize off-farm inputs such as agricultural chemicals and fertilizers, and to maximize biodiversity. It is a point-based program that fluctuates based upon ecological and individual vineyard and winery practices.

LIVE, Inc. is a non-profit organization providing vineyards and wineries with official certification for using sustainable farming practices based on international standards of Integrated Pest Management. The program has 112 Certification members and 1,310 Certified Sustainable vineyard acres throughout the state of Oregon. LIVE is the first organization in the United States to be certified by the International Organization for Biological Control (IOBC), which sponsors the use of sustainable, environmentally safe, socially acceptable control methods of pests and diseases of agricultural and forestry crops. Because the LIVE certifica-

tion is so rigorous, certified vineyards automatically receive the Pacific Rivers Council's Salmon Safe certification for farming practices that restore water purity to salmon habitats. Salmon Safe, is an organization dedicated to restoring and maintaining healthy watersheds. These programs aim to provide a solution for wine grape growers that are, socially responsible, environmentally sustainable, and economically viable. For more information, visit www.liveinc.org.

VINEA – The Winegrowers' Sustainable Trust is a voluntary group of winegrowers that have taken a pledge to produce grapes and wine using environmental, economic and social sustainability practices. Vinea has strict environmental standards and require high quality farming practices. The program has 27 vineyard members, representing 954 acres through the Walla Walla Valley, amounting to about 66% of the valley's total acreage. Vinea growers are dedicated to holistic, environmentally friendly viticulture practices that respect

the land, conserve natural resources, support biodiversity and provide for long-term vineyard viability. For more information, visit www.vineatrust.org. Their MISSION IS TO: develop and implement a sustainable vineyard management program, synonymous with the Walla Walla Valley (the Walla Wally Valley AVA is shared by both Oregon and Washington State), internationally recognized for its strict environmental standards and high quality farming practices. **Goals: 1) Membership:** Attract Walla Walla Valley and other winegrowers dedicated to investing in sustainable viticulture and implementing these practices over the long term. **2) Stewardship:** Implement proven

Large Picture Right: A vibrant Biodynamic compost heap at the Beaux Frères vineyard. The compost heap is inoculated with a biodynamic mixture. This innoculant stimulates biological activity and produces a more active and nutritious compost and healthier vine.
Inserted Picture: Shows a small hole, about 15 cm deep, that we dug. Initially steam poured out as the hole was exposed. Although the dissipating heat wasn't measured, I estimate that it must have been over 110°F.





holistic, environmentally friendly viticultural practices that respect the land, conserve natural resources, support biodiversity and provide for long-term vineyard viability. Obtain international recognition through certification with the International Organization of Biological Controls I.O.B.C.

3) Quality: Produce world-class wines of distinction by further strengthening the partnership between growers, vintners and consumers. **4) Viability:** Enhance the image and prestige of Walla Walla Valley wine grapes, specifically those grown by members of Vinea, the Winegrowers Sustainable Trust. Establish Walla Walla as a leader in sustainable viticulture and generate awareness and regard for this position among Washington state vintners, growers, elected officials, the community at large, members of the trade, media and consumers. For more information, visit www.vineatrust.org.

Tilth Certified Organic. Founded in 1974, Oregon Tilth is a nonprofit research and education membership organization

Large Picture Right: Healthy Pinot Noir Grapes farmed Biodynamic at the Beaux Frères vineyard. Inserted Picture: A well forming Pinot Noir berry from the same vineyard.

dedicated to biologically sound and socially equitable agriculture. It is an agricultural organization with a unique urban-rural viewpoint. Primarily an organization of organic farmers, gardeners and consumers. Tilth offers educational events throughout the state of Oregon, and provides organic certification services to organic growers, processors, and handlers internationally.

Demeter Certified Biodynamic®. Based on international standards since 1928, the Demeter Association certifies farms and products Biodynamic. The certification is offered for agricultural farms, processing industry and handlers coming in contact with certified products. In order for a farm to be certified it must demonstrate that it has undergone Biodynamic stewardship for a minimum of two years. This stewardship is defined by the certification guidelines. Processors and handlers must also demonstrate compliance to their respective standards but a two-year minimum is not required. In general, organic farming certification and the Demeter certification have many of the same practices. However, Biodynamic agriculture does have certain practices that are unique: 1) The whole farm has to be managed as a living organism. 2) The maintenance of a healthy, diverse ecosystem. This

embraces the expectation that the farmer supports a broad ecological perspective which includes not only the earth, but the rhythms of the earth and as well the cosmic influences. 3) Soil husbandry and nutrient self-sufficiency. The use of Biodynamic inoculants to build healthy soil through more active (naturally enriched) compost, thus stimulating plant health. 4) Integration of livestock with a requirement that at least 80% of livestock feed comes from the farm. This is not mandatory and some horticultural operations may be excused from this requirement. 5) The use of genetically engineered plant materials and organisms have been prohibited since 1992.

Biodynamic® In-Conversion Biodynamic status is given to farms that are operating according to Demeter Certified Biodynamic® standards but have yet to fulfill the two-year minimum stewardship requirement.

LEED® The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a nationally accepted benchmark in the United States for the design, construction, and operation of high performance “Green Buildings.” LEED promotes a whole-building approach to

sustainability. This performance is recognized in five key areas of environmental and human health. These are:

- 1) Sustainable site development
- 2) Water savings
- 3) Energy efficiency
- 4) Materials selection
- 5) Indoor environmental quality.

The LEED Rating System was created with consistent, credible standards for what constitutes a green building. The rating system is developed and continuously refined via an open, consensus-based process that has made LEED the green building standard of choice for Federal agencies and state and local governments nationwide. It has been proven that LEED-certified buildings have reduced operating costs, whilst at the same time providing healthier and more productive occupants, and conserving natural resources. Certification requirements and prerequisites are based on the “credits” or points achieved within each category. A building can achieve a total of 69 possible points, and certifications are based upon the total amount of points. The levels are:

Certified 26-32 pts., **Silver** 33-38 pts., **Gold** 39-51 pts. & **Platinum** 52-69 pts.

Sustainable Sites (14 Possible Points)

Prerequisite - Erosion & Sedimentation Control
Site Selection / Urban Redevelopment / Brownfield Redevelopment / Alternative Transportation / Reduced

Site Disturbance / Storm water Management / Landscape & Exterior Design to Reduce Heat Islands / Light Pollution Reduction.

Water Efficiency (5 Possible Points)

Water Efficient Landscaping / Innovative Wastewater Technologies / Use Reduction.

Energy & Atmosphere (17 Possible Points)

Prerequisite - Fundamental Building Systems Commissioning. Prerequisite - Minimum Energy Performance
Prerequisite - CFC Reduction in Equipment
Optimize Energy Performance / Renewable Energy / Additional Commissioning / Ozone Depletion / Measurement & Verification / Green Power.

Materials & Resources (13 Possible Points)

Prerequisite - Storage & Collection of Recyclables
Credit 1 Building Reuse / Construction Waste Management / Resource Reuse / Content / Regional Materials / Rapidly Renewable Materials / Certified Wood.

Indoor Environmental Quality (15 Possible Pts.)

Prerequisite - Minimum IAQ Performance
Environmental Tobacco Smoke (ETS) Control / Carbon Dioxide (CO₂) Monitoring / Increase Ventilation Effectiveness / Construction IAQ Management Plan / Low-Emitting Materials / Indoor Chemical & Pollutant Source Control / Controllability of Systems / Thermal Comfort / Daylight & Views.

Innovation & Design Process (5 Possible Pts.)

Innovation in Design / LEEDTM Accredited Professional

GravityFlow

 or Free Flow.

An ideal gravity flow facility could have as many as seven levels: **1)** grape receiving, sorting and loading, fermentors and presses, **2)** fermentor unloading and pomace removal, **3)** settling, **4)** barrel storage, **5)** blending, **6)** bottling, and **7)** the dock

for truck loading. The purpose of “Gravity Flow” is to reduce unnecessary pressure on the grapes and wine and naturally to reduce energy too.

Carbon Neutral[®]

Oregon Governor, Ted Kulongoski signed the Climate Change Integration Act (HB 3543), establishing state goals for reductions in greenhouse gas emissions, creating a Global Warming Advisory Commission for the state, and initiating the Climate Change Research Institute within the state’s university system including the Carbon Neutral Initiative for Wineries.

There are three steps to this program. The first step for participating wineries is to conduct an energy audit. Reducing energy use is one of the keys to reduce carbon emissions. The Energy Trust of Oregon will provide free energy audits for any winery/vineyard that uses either PGE or Pacific Power for its current electricity use or Northwest Natural Gas or Cascade Natural Gas. Energy Trust will also work with interested participants to conduct a solar power assessment.

The second step entails measuring greenhouse gases (basically carbon/CO₂) and creating a footprint for the winery and/or

vineyard operation. A group of consulting firms (Ecos Consulting, Maui Foster & Alongi, Inc. and Quantec) have agreed to coordinate development of a carbon assessment tool which will address issues specific to the Oregon wine industry.

The third and final step is the development of a “Carbon Reduction Plan.” The plan needs to identify energy reduction strategies for the winery.

Seventeen wineries and vineyards have joined the Carbon Neutral Challenge Initiative, and many others are considering joining. The participants include: Abacela, A to Z/Rex Hill, Benton-Lane Winery, Bethel Heights Vineyard, Chehalem Winery, Cooper Mountain Vineyards, King Estate, Lange Winery, Lemelson Vineyards, Mahonia Vineyards, Resonance Vineyard, Seven Hills Winery, Sokol Blosser Winery, Soter Vineyards, Stoller Vineyards, Torii Mor Winery, and Willamette Valley Vineyards. For further information see The Oregon Environmental Council’s web site at <http://www.oeconline.org/>.

Picture Right: A healthy organic leaf at King Estate in Southern Oregon.

