

Harmony at Red Tail Ridge Winery: The Practice of Sustainability

Sustainability has become a phrase that is rolling off several tongues lately, but not many are clear about what it really means. For co-owner and winemaker at Red Tail Ridge Winery, Nancy Irelan, practicing sustainability at the winery is a no-brainer, “We are farmers and we live off the land so we want to sustain it as much as we can. You can’t keep taking from the land and not give something back.”



But sustainability is more than environmental awareness. Sustainability should encompass a three-prong approach that balances environmental, social and economic components.

Here at Red Tail Ridge Winery, sustainability on all three levels has been at the heart of the winery’s conception and continues to drive the vineyard and winery practices for owners Nancy

Irelan and her husband Mike Schnelle. “Sustainability was always a large component of the work I did in California, so I have brought that mindset here to our winery,” Nancy says.

Green Design: The Winery Building

For anyone who has visited Red Tail Ridge, you can’t miss the enormous windows which line the front of the winery allowing for natural sunlight to replace traditional lighting. The modern looking building differentiates itself from the traditional rustic looking wineries that line the Finger Lakes. However, the modern look isn’t just about aesthetics; it is about creating a building that minimizes the carbon footprint as much as is possible.

In fact, the winery also holds the acclaim of being New York State’s first LEED® Gold certified winery. LEED® stands for Leadership in Energy and Environmental Design and is a third party certification process for green buildings through the U.S. Green Building Council. The building was rated on water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design.



Giving a tour of the building Nancy and Mike both note they primarily rely on the natural light that shines through the large double pane windows sealed with inert gas. “The only time we really flip the light switches on, is in the dead of winter” Mike says. Nancy adds, “And we get all the benefit of the sunlight without the heat energy.”

The building itself runs completely on geothermal heating and cooling that allows the pair to cut back their energy use by over 50 percent. The system uses the earth’s constant temperature to heat or cool

liquid that moves through two sets of heat pumps. The system is incorporated in the floors and tank jackets of the winery allowing for controlled zone heating or tank chilling.

Furthermore, the construction of the building utilizes recycled materials and fieldstone sources from the vineyard ground. The frame of the winery is composed of galvanized steel that has high recycled content.

Inside the winery, all the waste products from cleaning tanks and barrels are collected through drain pipes that line the center of the floor. This means everything Nancy uses to clean, mostly a ton of very hot water, is biodegradable since all this waste is settled out and composted in the vineyard.

Environmental Awareness: Sustainable Grape Growing



In the vineyard at Red Tail Ridge, sustainability is utilized in multiple ways. While the winery is not certified organic or biodynamic, they minimize their chemical footprint by utilizing integrated pest management (IPM) practices.

Control strategies are based on routine inspection, and scouting in the vineyard. Course of action is based on critical risk assessment of the overall level and rate of crop damage, and what control steps may or not be needed at a given time. When treatments are warranted, the most dilute solutions are utilized and chemicals rotations are used to

ensure that pests and diseases don't develop tolerance or resistance to treatments.

Mike uses lasers to plant the vines in precise straight rows. This allows him to use mechanized weed cutters to eliminate herbicide use. "The mechanical blade cuts down the weeds, but retracts at each vine to avoid injuring them," Nancy says.

Permanent cover crops are used to hinder weeds, as well as replenish nitrogen and organic content within the vineyard. Cover crops also compete with neighboring vines for soil moisture, thereby reducing soil water content and improving canopy vigor control. The vineyard is designed with contour drain tiling to minimize excess soil moisture. Drip irrigation is also available when needed for incremental, targeted water application.

Vertical Shoot Positioning (VSP) trellis is utilized for all varieties in the estate vineyard. Red Tail Ridge practices shoot positioning and thinning, as well as leaf pulling and cluster thinning when necessary to optimize vine balance between



canopy and fruit yield. Handwork is part of the standard viticulture practices at Red Tail Ridge.

Little experiments currently underway include:

- Allelopathic cover crops to inhibit weed seed germination
- Alternate tilling to minimize soil compaction
- Biopesticides and biological control agents to control disease

As for those sometimes detrimental forest creatures that surround the vineyard, Nancy and Mike opted to go with an eight foot deer fence and grape netting to avoid bird damage as a humane approach to deter the critters.

Being a Good Neighbor: Community Outreach

The economic sustainability of a small business hinges upon the health and wellbeing of its community. Nancy explains, "If your community thrives, so do you. It is all about balance within the environment you are running your business in."



Red Tail Ridge's main community outreach program is through the sales of their appropriately named wine "Good Karma." With the help of Foodlink in Rochester NY, ten percent of the gross profits per bottle of Good Karma are donated to food banks across the US.

Nancy says after researching charity options, Foodlink was the perfect fit for this charity wine. Initially, the fund allocation was entirely local. "There are a lot of people in this area that can't afford to eat properly, and don't normally have access to nutritious foods," she says. "Foodlink is not only about feeding people but also teaching people about nutrition by working with kids in the local school system, which I think is as important as feeding people. Educating folks about nutrition is a direct route to making better choices, eating properly and living a healthy, long life."

As of the 2012 vintage, Good Karma has become a national project. Foodlink will be redistributing the charity funds to the state where the bottle was sold.

Financially Worthwhile: Sustainability Pays Off

Economically, Nancy admits it does take a while to become completely self-sufficient but what makes sustainability so popular is that it is a financially viable option. "It does take time, but the hope that you can make a living off of a business improves with sustainable practices." In fact, the geothermal energy system installed in the winery was



estimated to only take about two and a half to three years to pay for itself.

By cutting back on the amount of chemicals used in the vineyard Red Tail Ridge has also contributed to the economic component. Furthermore, recycling as many everyday materials as possible is also practiced within the winery and tasting room. Actually, the winery's recycling container is much larger than their normal trash receptacle.

Overall, Red Tail Ridge continues to strive to meet all three elements of sustainability and hopes to build on the foundation they have created. Nancy ends with her main reason for practicing sustainability, "It is a choice to be sustainable, but if you are going to be a successful farmer, you have to take care of your natural resources or else your business will fail. Also, you are not the only one using those resources so you have a responsibility to the community socially and environmentally; it really comes down to maintaining harmony."

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