

# Case Study: Climate-Friendly Farming

## Fetzer Vineyards

You can drive down almost any road in Napa, Sonoma, and Mendocino counties and you will see acre after acre, row after row of grapevines. You can visit beautiful tasting rooms and sample fine wines, but you will not find a vineyard that is a more evocative model of sustainability than Fetzer Vineyards, nor one with more heart and soul.

In 1950, Barney Fetzer gave up the lumber business and moved with his wife Kathleen and their eleven children from Oregon to a dilapidated ranch in California's Redwood Valley. The family started Fetzer Vineyards in 1968, first using standard conventional growing methods. In 1987, impressed with the natural flavors of the vegetables produced in their organic garden and the soil recovery evident there, Fetzer started to transition their vineyards to organic methods. Three years later released the first bottle of Bonterra ("good earth") wine made with organic grapes. The Fetzer legacy continues today. With 960 acres under organic production, Bonterra currently is the largest producer of certified organic wine grapes in California and the number one seller of organic wines made in the U.S.

The move to organic growing was just the first step in the journey to make Fetzer Vineyards a leader in economically, ecologically and socially sustainable winery practices. The winery has implemented many innovations that have dramatically reduced the winery's impact on the environment and set an example for others to follow. In recent years, the company has integrated a focus on climate change and greenhouse gas emissions (GHG) reductions into its sustainability programs.

### Soil Building & Carbon Storage

The quality and health of the soil at Fetzer are maintained by adding back into the soil compost produced from leftover grape skins, stems, and seeds. Cover crops planted between the vine rows protect against soil erosion, attract beneficial insects to manage pests, and eliminate the need for fossil-fuel based synthetic chemicals that can damage the soil and environment (and that require considerable energy inputs and GHG emissions to produce). All of these practices are valuable for storing (sequestering) carbon.

### Conserving Biodiversity

Fetzer protects and maintains the natural oak woodlands and riparian habitat on about 45 percent of its property. They also plant habitat corridors with dozens of species of perennial shrub, grasses and trees to protect riparian zones and harbor beneficial insects and native birds that help with pest control. On some of their property, they also use sheep grazing in the vineyards for weed control and soil fertility, as well as chickens for cut worm control and soil fertility.

All of these practices benefit both their organic farming effectiveness — by providing habitat for beneficial species and protecting the resources upon which the vineyards depend — and they also sequester carbon that helps mitigate climate change. These approaches are also likely to build in significant resilience to buffer against a changing climate.

### Renewable Energy Production

In recent years, Fetzer has greatly increased the company's reliance on renewable energy. They reduced GHG emissions at their winery by approximately 1,500 tons per year primarily by using a renewable energy contract for the winery's electricity.

"Many Fetzer employees are actively involved in creating a 'culture of sustainability' while also maintaining a commitment to producing quality wine."

- Ann Thrupp



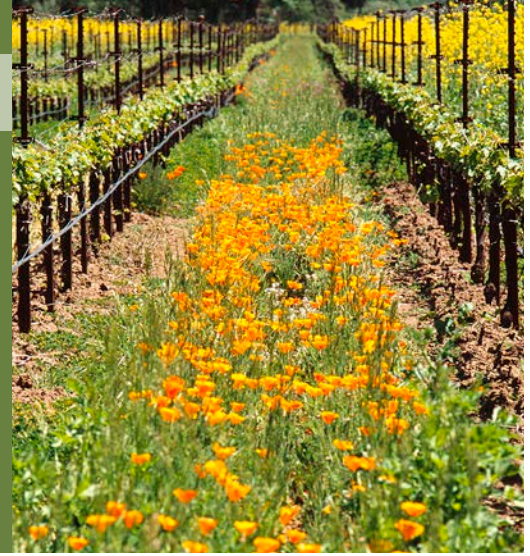
Ann Thrupp  
Manager of Sustainability and  
Organic Development



## Sustainable (and Accountable) By Choice

In 2006 Fetzer joined the Climate Action Reserve (CAR), a non-profit collaboration of companies from North American states and territories. It is responsible for setting consistent and transparent standards to calculate and report on greenhouse gas (GHG) emissions. As a participant in CAR, Fetzer Vineyards voluntarily measures its GHG emissions and implements methods to reduce them.

Fetzer also participates in a third-party sustainability certification program called California Certified Sustainable Winegrowing. This program is part of the California Sustainable Winegrowing Alliance, a non-profit organization that aims to “increase the sustainability of the California wine industry by promoting the adoption of sustainable practices and ensuring continual improvement.”



They also used the roof of a barrel room to install an 899 kilowatt array of solar panels with the potential capacity to generate 1.1 million kilowatt hours per year (kwhr/yr) — enough to power about 100 average American homes.

### Energy Conservation

Conservation of energy also plays an important role in reducing GHG emissions. Fetzer has insulated many of their wine tanks, which has an estimated energy savings of 30 percent for cooling the room and many thousands of dollars in utility bills. They also converted 436 light fixtures to high-efficiency linear fluorescent lights, saving them an estimated \$28,500 annually plus a rebate from their utility company.

### More Crop Per Drop

Pumping water for growing crops requires energy and has corresponding GHG emissions. On-farm water conservation practices reduce the operation’s carbon footprint and also make it more resilient as climate change impacts are expected to exacerbate California’s chronic water shortages. As with energy conservation, growing more “crop per drop” can also help the farm’s bottom line. Fetzer has installed water meters

to detect leaks and monitor use. Irrigation is carefully timed and drip irrigation is used for maximum efficiency. Ponds are installed around the property to catch and store river water when flows are high as well as winter and spring rain. Pond water is used for irrigation and to spray water on vines for frost protection. This practice of creating on-site water storage is a more ecologically sustainable for three reasons — it avoids the use of river water during critical periods, it recharges local groundwater, and it creates wildlife habitat. Going above and beyond on environmental stewardship, Fetzer has also undertaken two creek restoration projects on their properties, recognizing their dependence on the health of their watershed.

### Efficient Packaging

Reducing the emissions in their packaging is another way Fetzer contributes to the reduction of GHGs. In 2008, they rolled out a lightweight bottle initiative and reduced the weight of 23 million bottles annually by 17 percent per year. By reducing the energy necessary to produce the bottles as well as the fuel for transporting them, it is estimated that almost 3,000 tons of CO2 emissions are avoided annually and 4.4 million kilowatt-hours of energy are saved throughout the supply chain.

### Multiple Benefits Approach

Fetzer is a model operation in their use of practices that provide multiple benefits to the environment, while thriving economically. This table illustrates some of the ecosystems services provided by Fetzer.

Practice	Benefits					
	Carbon sequestration	Reduced GHG emissions	Wildlife & Pollinator Habitat	Biological Diversity	Water Quality	Air Quality
Eliminate synthetic pesticides, herbicides & fertilizers		✓			✓	✓
Cover cropping	✓		✓	✓	✓	✓
Compost application	✓			✓	✓	
Preserving woodlands & planting perennial borders	✓		✓	✓		✓
On-farm ponds		✓	✓		✓	
Water conservation		✓			✓	
Energy & fuel efficiency		✓				✓
Renewable energy use		✓				✓

Produced in partnership by CalCAN and the Community Alliance with Family Farmers.

Many thanks to Fetzer Vineyards for their cooperation ([www.fetzer.com](http://www.fetzer.com)). Photos provided by Bonterra Vineyards.

The California Climate and Agriculture Network (CalCAN) is a coalition of California’s leading sustainable agriculture organizations advocating for policy solutions on climate change and agriculture. We cultivate farmer leadership to face the challenges of climate change and to serve as California’s sustainable agriculture voice on climate change policy.

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