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Green Revolutionaries

West Coast Winegrowers Fight To Save the Environment

By Dana Nigro
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Drive up Napa Valley's Highway 29 in the springtime, and you can witness a revolution. In one vineyard, the vines stretch in neat lines, bare dirt beneath them, some short grass down the middle of the rows. No birds or other wildlife are evident. But across the road, bright yellow mustard and tall grasses obscure gnarled vine stumps. A few birds swoop by, chasing insects, while two hawks circle above.

The shift from controlled and barren to wild and full of life reflects an increasing change in the way grapes are grown and wines are made. Over the past two decades, much of the wine industry in the United States has been moving away from conventional farming—away from chemical pesticides and fertilizers and a monoculture of grapes. Instead, the more environmentally friendly practices of sustainable, organic and biodynamic farming (for an explanation of these terms) are being embraced here and around the world.

This revolution has enlisted boutique producers as well as large corporations such as E. & J. Gallo and Kendall-Jackson. Its champions even include the highest echelons of Napa Cabernet producers: Araujo, Joseph Phelps, Shafer and Staglin, to name just a few. These prestigious estates don't need a green label to market their wines. They simply believe it's a better way.

"All we're doing is going back to practices that were common 100 years ago," says Bart Araujo. Decades ago, struggling U.S. grapegrowers were sold on the idea that chemicals would make their work easier, their crop more bountiful. Only later did they realize that those modern methods might also harm the soil, air and water on which they depend. Araujo, who has dropped the use of synthetic chemicals altogether, says, "We don't want to just be takers. We also want to be giving back to the land."

GREEN GOES MAINSTREAM

In California, at least 1,165 vineyards and wineries have assessed the sustainability of their farming practices and are reducing their use of chemical pesticides, according to a 2006 report from the California Sustainable Winegrowing Alliance. These businesses account for 33 percent of the state's 522,000 acres of winegrapes and 53 percent of its annual production of 273 million cases, reports the alliance, which was founded by two of the largest statewide associations of wineries and growers.

Though Oregon's wine industry is small by comparison, its growers have been very progressive. Out of the 15,600 planted vineyard acres in the state in 2006, about 23 percent were certified sustainable, organic or biodynamic as of March 31, according to the Oregon Wine Board. That number is expected to reach 32 percent this summer.

While these "green" growers all speak with passion or enthusiasm, their motivations range from the pragmatic to the idealistic to the spiritual. Some hope to cut costs or to protect the health of their family and workers. Some feel a sense of responsibility to their community, a desire to save the planet. Some seek to reconnect to the land, to find a vital life force that they feel is missing from the modern world. Almost all believe that their practices result in better-quality, more unique wines—a claim difficult to prove objectively, though at the highest levels, the wines serve as compelling testimony for what is possible.

Some wineries seek to gain from the growing market for green products. The U.S. organic food market grew 16.2 percent in 2005 alone, accounting for $13.8 billion in consumer sales, according to the 2006 manufacturer survey of the Organic Trade Association (OTA). While that's only 2.5 percent of total U.S. food sales, the number has grown steadily since 1997 and is expected to continue growing through 2025, reports the OTA, which represents all segments of the organic industry.

In the United States, sales of all organically grown wines rose even faster—by 28 percent in 2005, to $80 million, according to the OTA. Again, that's just a drop in the bucket, as wine sales in the country totaled $20.8 billion at retail in 2005, according to *Impact Databank*'s 2006 edition of *The U.S. Wine Market Report*. But it leaves a lot of room for growth.

With natural foods going mainstream, vintners are responding to consumers' demands for authentic products, and to demands from retailers such as Whole Foods. "You turn on the news and you can't help but hear something about what we're eating and how we're growing it," says Craig Williams, director of winemaking for Joseph Phelps Vineyards.

CLEANING UP WINE'S IMAGE

Wine benefits from its reputation as a natural product. Winegrowers' connection to the land and the importance of *terroir* have long been tied to the image of quality.

But wineries and vineyards can have a substantial negative impact on their surroundings. "It takes 8 gallons of water to make 1 gallon of wine," says biodynamic consultant Alan York, highlighting the pressure that producers put on local water sources. Soil erosion from vineyards and roads can clog waterways. Pesticides, insecticides and fungicides can seep into groundwater, taint surface water and drift in the air. Volatile compounds in those chemicals can react with sunlight to create ozone, a major air pollutant.

In the late 1980s through the 1990s, California's wine industry came under pressure to deal with these issues. The state's population boom pushed housing development into rural areas, and the vineyards' new neighbors were not very tolerant of the realities of farming. Around the same time, "there was a big growth spurt in the number of acres in vines," says Karen Ross, president of the California Association of Winegrape Growers.

Much of the vineyard development took place in coastal areas, on erosion-prone hillsides and in native oak woodlands, causing outcry from environmental groups over the loss of wildlife habitats and damage done to salmon-spawning streams. Counties such as Napa, Sonoma and Santa Barbara responded with strict land-use and hillside development laws. California began cracking down on pesticides and tightening its protections on air and water quality.

"I remember an article in the *L.A. Times* where a person in Paso said, 'I'd rather see subdivisions than vineyards because at least they plant trees,'" Ross recalls. That attitude shocked many winegrowers, who had viewed themselves as environmentally friendly; in the 1960s, Napa vintners helped to set up the nation's first agricultural preserve to protect the valley from urban sprawl. "People were caught by surprise that we farmers went from being the good guys to being, in a rapidly urbanizing state, the causes of pollution and not good stewards," Ross says.

Spurred into action, winery and grower organizations throughout the state began to educate their members about Integrated Pest Management (IPM) and sustainability. They also began working closely with communities and government regulators.

"I think the winegrape industry broadly has been the leader on this issue for the past eight to 10 years, and has inspired interest among some of the other commodity sectors," says California Department of Pesticide Regulation (DPR) director Mary-Ann Warmerdam.

Since 1993, Warmerdam relates, the DPR has seen growers turn more to low-risk methods, such as sulfur, oils and biopesticides. Meanwhile, use of toxic pesticides is declining. For example, from 2000 to 2005, grapegrowers cut

their use of the fumigant methyl bromide, which can drift and cause illness, by nearly half.

Among those who have changed their practices are Garen and Shari Staglin of Staglin Family Vineyard. When the couple bought a 50-acre vineyard in the Rutherford Bench in 1985, the site was being farmed with chemicals. But the Staglins, who live on the property, decided to cut down on potentially harmful substances when they had to prepare an area for replanting. "We were supposed to apply a chemical to kill the nematodes and then cover the area with plastic and stay away from it because it was very toxic," says Shari. "We thought we should move away from that." By 1990, they were farming sustainably, and the property was certified organic in 2005.

ORGANIC: LIFE AFTER CHEMICALS

It's difficult to tell exactly how many U.S. wineries and vineyards use sustainable, organic or biodynamic practices. There is no national certification for sustainable farming, and the government's National Organic Program doesn't track the total number of vineyards and wineries. But the numbers reported by the largest winegrowing states and established certifiers indicate how substantial the growth has been.

In the 1980s, only a handful of wineries, such as Fetzer and Frey in Mendocino County and Frog's Leap in Napa Valley, were experimenting with organic grapegrowing. Fetzer Vineyards started off with an organic garden at its hospitality center, but the Fetzer team was so inspired by the taste of the produce that they decided to expand into grapes, says former president Paul Dolan, the winemaker at the time.

Dolan recalls his experience of unwittingly tasting the difference between a Sauvignon Blanc grape from an experimental organic block ("[It] had all the fruit characteristics that you'd expect for Sauvignon Blanc") and a conventionally grown berry from a row over ("It was flat and insipid"). The conventionally grown grapes were "going into our everyday table wine," Dolan relates, "but three years after we converted that vineyard to organic, [the grapes] started to go into our top-level Sauvignon Blanc."

In the long run, the cost of organic farming is roughly equivalent to that of conventional farming, says Fetzer's manager of organic development, Ann Thrupp. There are some additional costs during the transition period for new machinery and additional labor, she reports, but those expenses are largely balanced by the savings from cutting out chemicals.

Over at Frog's Leap, owner John Williams, who was intrigued by what Fetzer was doing, arranged to meet with Fetzer's consultant, "Amigo Bob" Cantisano. "It mattered to me that my vineyard was four or five steps out of my front door and we had three small children," Williams says. After achieving organic certification for his first vineyard in 1989, he began the task of convincing his growers that this was the better way, by providing them with information, holding progress meetings and giving them a bonus. Today, Williams works with more than 200 certified acres. Fetzer, now owned by Brown-Forman, owns or leases about 1,800 certified acres in Mendocino and the Central Coast. Fetzer's sister brand, Bonterra, makes about 200,000 cases a year from organic grapes.

Approximately 140 California vineyard sites and wineries are now represented by California Certified Organic Farmers (CCOF), the country's largest organic certifier. "We have had a tremendous increase in the number of wineries in the past two years," says CCOF director of sales and marketing Viella Shipley. In 2000, CCOF had certified 4,921 acres of winegrapes; by the end of 2006, there were 8,370 certified acres. The largest chunk of acreage can be found in Mendocino County, but CCOF clients also include the likes of Coturri, Long Meadow Ranch, Napa Wine Co., Preston, Rubicon, Spottswoode, Sutter Home and Turley.

Oregon Tilth currently certifies 15 organic vineyards (totaling 859 acres) in the state, as well as five winery facilities; the largest overall is King Estate. Eleven vineyards have earned the designation since 2002, the year the U.S. Department of Agriculture's new National Organic Program rules took effect.

The organic movement is probably bigger than official figures reveal, however. "A lot of people produce organically without getting certified," says Brad Grimes of David Abreu Vineyard Management, whose clients include Staglin Family Vineyard. "There's a lot of paperwork."

More producers are focusing on organic grapegrowing than organic wines, because of the latter's additional limitations on adding sulfites as a preservative. Wines labeled "organic," rather than "made with organic grapes," contain no added sulfites. "[Organic wines] have not had great reputations," says Oregon Tilth wine specialist Gwendolyn Wyard. "Everyone likes the idea, but the no-sulfite wines don't hold up very long." Still, a lot of progress has been made in the quality of organic wines, she adds.

BIODYNAMICS: FOR BELIEVERS, A HIGHER WAY

Biodynamics, which treats a farm as a complete ecosystem that's connected to cosmic forces, has received a lot of attention because renowned French domaines such as Chapoutier, Leroy and Leflaive have been successful at producing top-quality wines using its methods.

The Benzigers, who founded Glen Ellen winery, had farmed their Sonoma Mountain estate conventionally during the 1980s. "We made wines that were pretty good but not very interesting," says national sales manager Chris Benziger. When the family sold the Glen Ellen brand in 1993, they thought long and hard about how to proceed with their Benziger Family and Imagery wines. After learning about biodynamics and meeting consultant Alan York in 1996, winemaker Mike Benziger convinced his siblings that biodynamics was the way to go.

The estate was certified in 2000, and after evaluating six vintages, Chris says that he can really taste the difference. The family's first fully biodynamic release, the 2001 Benziger Tribute (a blend of Bordeaux varieties), scored 92 points on *Wine Spectator*'s 100-point scale. It shows dark, plush fruit and a touch of herbs—a character that recurred in subsequent vintages. "Finally, this piece of property has a personality," says Chris.

The biodynamics movement has gotten a big push in the United States from vintner Nicolas Joly of France's Loire Valley, who makes a top Savennières from Coulée de Serrant. Joly has been on an evangelical crusade this decade. Since 2004, he and Return to Terroir, an international group of like-minded natural-farming advocates that includes a few West Coast winemakers, have been holding annual wine tastings and biodynamics seminars in the United States to educate producers, sommeliers and retail buyers in major cities.

"Over the past five years, the total number of folks involved has grown five- or six-fold," says Jim Fullmer, director of Demeter USA, a branch of the international biodynamics certification body. That's notable because Demeter requires estates to develop extensive biodiversity, so certification takes several years. "We send out a lot of applications for certification," Fullmer says, "but a lot of folks get weeded out when they get a grasp of what they have to do to meet the standard."

Led by Paul Dolan and the Frey and Fetzer families, about 35 U.S. winery and vineyard owners have taken the plunge, including Benziger, Bonterra, Ceago Del Lago, Grgich Hills, Mendocino Wine Co./Parducci and Quivira in California (Robert Sinskey is in the process of getting certified); Bergstrom and Brick House in Oregon; and Cayuse in Washington.

To the public, the true agricultural foundation of biodynamics often takes a backseat to its mystical elements. Araujo, whose estate was certified biodynamic in 2005, notes, "Some people think the spiritual aspects are weird. I ask them, 'Do you go to church or synagogue? Do you understand all the tenets of your faith?' It's the same thing."

Araujo Estate had earned organic certification, but wanted to take it a step further. "A lot of people are now seeing organics in Wal-Mart—there's a degradation of the term," says Araujo winemaker Matt Taylor. "We're looking at biodynamics as a way to get back to what organics started out as."

And other converts are on their way. Joseph Phelps vineyard operations director Philippe Pessereau became interested in the concept and began experimenting with 15 acres six years ago at the home ranch near St. Helena, Calif.—"sort of on the sly," quips Phelps' Williams.

Eventually the Phelps team sat down with Pessereau to better understand what he was doing. The meeting focused more on the goals of biodynamics than on its arcane mystical aspects. Williams learned that biodynamics doesn't deplete the earth's resources, since it uses renewable natural remedies to reinvigorate the soil. "I believe this

farming is the truest form of sustainability," he says. They agreed to expand and are now at 140 of 350 acres.

SUSTAINABILITY: GRASSROOTS GROWTH

For every vintner who gives up chemicals or goes biodynamic, far more are either not willing or not ready to commit to the restrictions of official certification. But many are committed to helping the environment. As a result, the greatest growth in environmentally friendly winemaking can be found in the broad category of sustainability.

Doug Shafer of Shafer Vineyards decided to give sustainable methods a try in 1989, after Frog's Leap owner Williams convinced him to hear what Cantisano had to say. "I hadn't had any visions or revelations, but I was curious," Shafer recalls. He ended up deciding to plant the whole ranch to cover crops.

The transition was rough; Shafer's vineyard manager, Alfonso Zamora Ortiz, thought it was crazy. "Our timing was off, we didn't have the equipment—it was a nightmare," Shafer relates. "Alfonso went to a party, came back and said, 'Douglas, my buddies are giving me a hard time.' The vineyards were so trashy looking, and it looked like he wasn't working hard enough. There was a learning curve." But Shafer persevered, taking more steps each year.

Though he has looked into organic certification, Shafer feels he already deals with enough regulations. "We're content knowing what we're doing," he says, adding that he likes sustainability's inclusion of economics and worker relations. "I've got 18 employees, and I have kids and they have kids. I want them to have good medical care." He also likes that sustainability is more flexible. "Maybe one day you'll *have* to use something chemical," he points out. "If you're organic [and you simply can't], you could lose your crop and then you're out of business."

The California Sustainable Winegrowing Alliance concentrates on getting wineries and growers to self-assess their practices and develop a plan of action on what to change. Brought together by the Wine Institute and the California Association of Winegrape Growers, a committee of 50 people across the state's wine industry spent about 18 months creating a Code of Sustainable Winegrowing Practices, unveiled in 2002. "When it's grassroots, coming internally, it really makes a difference," says Alison Jordan, the alliance's current managing director.

The self-assessment handbook, which can be accessed online, walks wineries and growers through an evaluation of their farms based on 227 criteria, using a points system to assess topics such as vineyard water management, ecosystem management, air quality, energy efficiency and solid-waste reduction. The program is being held up as a model by regulators, says Ross of the California Association of Winegrape Growers. "The people in state and federal agencies have evaluated the whole workbook and said these are best practices; these would take people beyond compliance," she relates.

The statewide sustainability program builds on years of work by regional groups, dating back to the early and mid-'90s. Key among them are the Lodi-Woodbridge Winegrape Commission, which published a workbook of best practices based on members' tests of IPM in their vineyards, and the Central Coast Vineyard Team, which developed the Positive Points System self-evaluation.

Over the years, these and other groups have brought together winegrowers, university researchers, farm advisers, government agencies and environmental groups, along with utility company Pacific Gas and Electric, to share sustainability practices. To get the message out, they organize workshops, visits to demonstration vineyards, Spanish-language programs for workers and consumer wine festivals.

"What's exciting is that more than one group is embracing this concept and, depending on the regional setting, making it their own," says Warmerdam of the Department of Pesticide Regulation.

While the Pacific Northwest's path to sustainability in many ways mirrors California's, Oregon's winegrowers have focused more on voluntary certification. They've gotten on board with the Salmon-Safe program, launched by a conservation organization in 1995, which sets best practices for a variety of crops to protect waterways. Soon after, a group of winegrowers led by Bethel Heights Vineyard co-owner Ted Casteel created the Low Input

Viticulture & Enology, or LIVE, certification around international standards. The two programs then teamed up on joint certifications.

Washington came out of the gate a bit later, but the Washington Association of Wine Grape Growers published a sustainability guide, Vinewise, in 2005. Last year, Vinea, a sustainability group in the Walla Walla Valley, brought around 20 Washington members, including Pepper Bridge, Seven Hills and Woodward Canyon, into LIVE's certification program.

LIVE now has 132 certified or transitioning members, and Salmon-Safe encompasses 105 vineyards in the Pacific Northwest (with more finishing certification) and promotes wines from 35 wineries. In the beginning, says Salmon-Safe managing director Dan Kent, "I was banging on doors up and down the Willamette. ... Now we have wine regions coming to us interested in how they can start up a regional Salmon-Safe effort and focus on their watershed impact and sustainability."

A similar certification effort has caught on in California. Fish Friendly Farming, which started in 1999, and its Napa counterpart, Napa Green, help growers set up a customized conservation plan to voluntarily meet local, state and federal water-quality laws, as well as the precepts of the Endangered Species Act. "Because the certification is done by third-party government regulators, it also counts as fulfillment for certain types of regulatory approval," says Laurel Marcus, program creator and executive director of the California Land Stewardship Institute.

Fish Friendly Farming has enrolled more than 160 properties, totaling 65,000-plus acres, including Foster's and Diageo winery groups. So far, the program has assessed and repaired or revegetated about 90 miles of creeks, 24 miles of river riparian corridors and 280 miles of dirt roads.

Such efforts have carried over to local groups of wineries and growers. The Rutherford Dust Society is working to restore more than 4 miles of the Napa River in the appellation, and surrounding districts are joining in. "That's really different from what used to happen—that a group of landowners gets together and decides it's in their interest to do environmental restoration," says Marcus.

Now stepping into certification is the Lodi-Woodbridge Winegrape Commission, which is trying to give an edge to its 750 grower members through a program called Lodi Rules, certified by Protected Harvest. "Looking to the future, we're thinking that sustainability claims are going to catch on, and we want to have legitimate certified claims," says Cliff Ohmart, the commission's research/IPM director, adding, "You can see [the standards] on the Web site."

GETTING THE MESSAGE OUT

Going green has financial costs, but it can also result in financial benefits, both for growers and for wineries.

Salmon-Safe has found that eco-labels can help boost sales, but to make them meaningful, they must be backed by consumer education, says Kent. (In early focus groups, people thought the Salmon-Safe label meant the wine would pair well with salmon.) Every April, the organization works with about 40 Oregon retailers on a campaign in which the stores donate a dollar for every bottle they sell of Salmon-Safe wines to a nonprofit that conducts stream restoration and beach cleanups.

"Typically we see an increase of 15 percent to 20 percent in sales for certified wines during these promotions," says Kent. The organization has also distributed more than 40,000 wine wallet cards, which list certified Willamette Valley wineries, to consumers through stores and tasting rooms.

Until recently, many wineries have stayed low-key about their green farming practices—discussing them in their newsletters, Web sites or tasting-room brochures, but not mentioning them on their labels or centering promotions around them. But marketing efforts are now on the rise. This year has brought a string of announcements about wineries' farming practices and energy-saving methods and even some new, overtly organic brands, such as True Earth, from the producers of Three Thieves. Fetzer is launching a $1 million campaign that includes special bottle tags, a 30-city green tour, donations to plant trees and a sweepstakes for a hybrid Toyota Highlander.

The Oregon Wine Board is making natural farming part of its overall marketing message. It's working on a unifying "Oregon certified sustainable" program to help consumers identify eco-friendly brands without worrying about the distinctions between the different approaches, says executive director Ted Farthing, who adds that the key message will be "made in Oregon, independent third-party certification, period."

Sokol Blosser winery has three different certifications—organic, LIVE and Salmon-Safe—none of which appear on its labels yet. "We don't want to be the organic winery, we want to be the winery that makes great wine," says president Susan Sokol Blosser, who is still struggling with how to communicate the sustainability message, even while customers are requesting it. "That voice is getting louder," she notes. "A lot of retailers around the country say [to us], 'People want to know you are doing this, and we want to tell people [that you are].'"

To the Benzigers, the best way to get the message out is through tastings or by showing people in person. Each year, the winery gets 50,000 to 70,000 visitors who can tour the property on a biodiesel tram or walk through the insect garden to view the winery's practices. Benziger's biodynamic wines are labeled discreetly, with a small Demeter seal on the front, in a muted color. "The last thing we want to do is greenwash it," says Chris Benziger of the label.

Greenwashing is a term that refers to a company's overstating an environmental benefit for marketing purposes. "Now that it's hip to be green, so many people are throwing on this veneer," Benziger says.

That's why many feel that certification is so important. "Having gone through it, I know how hard it is to get," says Sokol Blosser. "I have tremendous admiration for companies who have taken the time to meet standards and fill out the forms and prove that they are doing what they say they are doing."

Kent thinks the wine industry will go in the same direction as the premium coffee market, where some labels now carry three terms: "organic," "fair trade" and "shade grown." "We need to get beyond the unsubstantiated message, and third-party certification will be essential," Kent says. "It's not just about environmental and certification practices, it's also a message about quality."

THE QUEST FOR QUALITY

So do green practices really make better, more unique wines? It will be difficult for producers to sustain environmental efforts if no one prefers the end product.

It's impossible to do a controlled before-and-after-vineyard-conversion comparison of wines. There are too many variables: vintage variation, bottle age, different oak barrels, varying sugar levels in the harvested grapes and so on.

"The differences are subtle and difficult to quantify," acknowledges Shafer. But he believes that by giving the vines nutrients slowly through cover crops and compost rather than a big hit from fertilizer, the vines end up more balanced.

"Does that really mean better-balanced wines? I can't prove it," Shafer says, although he has been examining nutrient levels in his grape must. "I thought the effect was going to be instant. I don't think we saw it for 10 or 15 years. [Now, winemaker Elias Fernandez] has seen an increase in nitrogen and amino acid levels in the must, which makes for happier yeast." And happier yeast, he says, results in cleaner fermentations and cleaner wines.

Araujo says he now sees greater consistency among his vintages because his vines deal with heat waves and other stressful conditions better. "The 2000 through 2005 growing seasons were totally different, but the wines are remarkably similar, with some minimal vintage variation," he notes.

In the end, according to Phelps' Williams and Pessereau, you don't make great wine simply by following one set of practices, but by being more observant and more involved in the vineyard. If natural techniques make you a more careful farmer, then that can result in better wines.

But, Williams says, not all organic and biodynamic wines are compelling or convincing. "Biodynamics is not your

silver bullet," adds Pessereau. "If you don't have sound viticulture, I don't think biodynamics will bring you all these quality aspects."

When talking about natural farming methods, Williams prefers to emphasize the environmental benefits. "That's where I think it's important. ... You go home, you put your head on your pillow, and you feel like you did good today."

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