the Birds & the Bees

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In biodynamics, the moon, the stars, and a flock of sheep have everything to do with a GLASS OF WINE.
On a sunny Wednesday afternoon last spring, winemaker Rudy Marchesi and his wife Susan Fichter received a frantic phone call. A swarm of bees had gathered on Main Street in their town of Forest Grove, Oregon. “Smack in the middle of the farmers market, on a tree branch about 15 feet off the sidewalk, right over the heads of all these people,” Marchesi recalled.

Grabbing a bee box loaded with honeycomb-covered frames, the couple rushed to the scene. A friend showed up with a ladder, and Marchesi—wearing jeans, a T-shirt, a Carhartt jacket, and no protective bee suit or helmet—climbed up and began sawing the branch off the tree. A large crowd of shoppers began to gather. When the branch dropped to the ground, the onlookers jumped back with a collective shudder.

But Marchesi and Fichter knew that Italian honeybees that are swarming—looking for a home—are relatively docile. So Marchesi descended the ladder, picked up the buzzing tree branch and shook it gently over the open bee box. Fichter drummed on the outside of the box with her hand, and the remaining bees, like well-trained soldiers, marched calmly inside.

For Rudy Marchesi, moments like these are all part of the process of making wine. Because understanding, embracing and even communicating with the insect world is, in his opinion, essential to raising healthy grapevines. The way Marchesi sees it, farming isn’t just about raising a single crop; it’s about supporting and maintaining every form of life in an entire ecosystem. Because Marchesi believes in a holistic farming philosophy called biodynamics.

Biodynamic farmers don’t focus solely on their primary crop; they talk in terms of soil health and the long-term. A vineyard isn’t just a group of vine rows, but an organism, of which every beehive and sheep and earthworm is an integral part, contributing to the dynamic circle of life. Like many organic farmers, biodynamic growers nourish their soil with natural
compost rather than chemical fertilizers. They plant cover crops and maintain wild buffer zones to create habitat for natural predators. But they do more, too. And this is where biodynamic farming gets a little quirky.

**What Lies Beneath**

When I visited Marchesi last October at his winery, Montinore Estate, we walked through the vineyard and past a reservoir where ducks floated peacefully while goats munched on blackberry brambles along its banks. Beyond a barn and behind a stack of rusty old pipes, we stopped where four stakes emerged from the bare earth, marking Marchesi’s ... burial spot.

Marchesi began digging the soft soil. Every time the tip of his shovel struck something hard, he knelt down, plucked a cow horn out of the dirt, then placed it in a bucket. In a few minutes, he had 14 of them. The horns were strangely beautiful after having been buried for six months: Their exteriors were mottled with pink, yellow and green fungus, and teeming with tiny insects, while snow-white quartz powder spilled from their cavities.

But what were they? Here’s where biodynamics diverges from more widely practiced forms of agriculture. The quartz powder, packed into cow horns and buried, was Marchesi’s “501 preparation,” or “prep” for short. Later, Marchesi would dump this powder into three food-grade plastic hundred-gallon water tanks, each fitted with a copper stirring arm; he’d then flip a switch to make a machine stir the water and powder, switching directions every minute, for an hour. Finally, he would spray this “dynamized” water over 300 acres of grape vines.

Biodynamic agriculture calls for the application of at least nine different preps like 501. These homeopathic treatments for farms are added to compost piles, to the soil and directly to plants. They range from the simple—such as herb teas—to the bizarre, like oak bark packed into an animal skull, or dandelion heads stuffed into a cow’s stomach. Or those quartz-filled cow horns, buried, then dug up, stirred and sprayed.

Marchesi makes his own cow-horn preps, 500 and 501. He also makes his own 507, by pressing valerian blossoms and spraying the juice over his compost pile, and 508, or horsetail tea. In addition, he concocts a special barrel compost that combines all the preps with cow manure, basalt and eggshells.
What’s the point of supplementing a basic organic farming regimen with all of these odd herbal remedies? “It’s really all about quality,” Marchesi says. “You have to be a good farmer to start with. This is something to do in addition, in order to enhance and improve quality.”

And so, since Oregon was experiencing a cold and wet harvest season, Marchesi was preparing to spray the 501 prep to bring “heat and light” to his still-green fruit, to nudge ripening along. Already, he felt that an initial application of 501 in the early summer, at bloom, had helped: “We’re getting good sugars, and we seem to be a lot further along than the other vineyards in the area,” he says confidently. “The function of 501 is to bring the energy of the atmosphere into the plant.”

Another unusual aspect of biodynamics is the adherence to a cosmic calendar. Every day, Marchesi studies a farming journal that notes the phase of the moon, as well as what Mercury, Saturn, Venus, Uranus, Mars, Neptune, Jupiter and Pluto are up to. By referring to this, he can decide whether, astrologically speaking, it’s a good day to prune in the vineyard, rack barrels or bottle wine.

If this all sounds a bit far-fetched, it’s worth remembering that all humans once farmed this way. Visit a traditional culture and you’ll see similar herbal remedies and atavistic practices. Even today in the United States, if you browse through the current edition of The Old Farmer’s Almanac, you’ll find references to moon phases, constellations and astrological signs that look a lot like the cosmic calendar Marchesi uses at Montinore Estate.

It’s only in the past century that most farming has been commercialized to the extent that crops now grow by the acre rather than by the plot, that chemicals have replaced compost and herbal additives, and that agricultural decisions are made according to the bottom line rather than the position of the stars in the sky.

Little Italy

On his five-acre homestead in Forest Grove, Marchesi keeps up traditions learned from his grandparents. In Lombardy, northern Italy, his grandmother’s family raised sheep, wheat, fruits and vegetables, and kept a vineyard; they sold their house-made wine to neighboring villagers, who would fill their own straw-wrapped carafes from a large cask. Marchesi and his family still share a converted barn on a piece of ancestral property in the town of Romagnese, where they gather annually to vacation, visit with relatives, and, of course, dine and drink well.

Marchesi’s barn at home in Oregon is like an old-fashioned Italian cantina, fragrant with his house-cured salumi and charcuterie. Fichter cans and preserves produce while Marchesi always has a batch of vinegar going, still using his grandmother’s “mother,” or vinegar starter. The couple keeps more than 100 chickens and maintains a massive vegetable garden: 150 tomato plants, six different types of peppers, corn for polenta, beans for drying, cabbage, kale, chard, escarole—you name it.

And, of course, there are jars of honey, produced in the couple’s seven hives. “If you discount olive oil, coffee, salt and pepper, we really do eat mostly what we grow,” Marchesi says.

This sort of self-reliance—with a helping hand from nature—is echoed on a larger scale nearby at Montinore Estate, which Marchesi owns and runs with the help of his daughter, Kristin.

In 2001, Montinore wasn’t producing great wine. But it was situated on an idyllic piece of land. Gently sloping and protected from weather by Bald Peak and the Chehalem Mountains, the estate included a 15-acre reservoir that attracted beneficial birds. Intrigued, Marchesi left his cushy job—as vice president of brand development for Allied Beverage Group in New Jersey, where he worked with European biodynamic wine labels—and joined the Oregon winery as vice president of operations, determined to improve the quality of the wines.

Looking around the property, Marchesi found vines that looked pale and limp. The ground was rock-hard and riddled with gopher holes; water ran right off of the earth instead of soaking in. And the devastating root louse, phylloxera, was eating its way through the older sections.

He thought about the natural way his Italian grandparents had farmed. Following his instincts, he began converting the estate to organic agriculture and building compost piles. Then, in 2003, he took a year-long course in biodynamics. He began testing biodynamic sprays on a couple of vineyard blocks that were underperforming, and within a few months, he saw results. “Both blocks responded tremendously,” he recalls. “Canes that had been wimpy and spindly were suddenly healthy-looking.”

In 2005, Marchesi purchased the estate and converted the entire property to biodynamic. “To me, organic was just substituting clean materials for chemicals. But it was the same mindset as conventional farming,” Marchesi says now. “I felt like we were just dealing with the symptoms rather than the cause. I liked that biodynamics builds up the immune system. It’s working on overall health rather than just treating symptoms.”

At the same time, biodynamic farming was enjoying a renaissance. The Austrian intellectual Rudolf Steiner first described this form of agriculture in a series of 1924 lectures that came about as a reaction to the chemical fertilizers that were being produced in First World War munitions plants. Biodynamics served as the inspiration for organic agriculture and the CSA movement, and yet for decades, it has remained on the sidelines while other forms of sustainable agriculture have flourished.

But that has changed over the past decade as, according to Demeter USA (the American certification agency for biodynamic agriculture), the number of certified-biodynamic farms in the United States has grown by 250 percent, with vineyards leading the way at an 800-percent growth rate, from just nine in 2001 to 80 in 2011. And beyond those who have gone to the trouble of getting certified, many other winemakers are dabbling in this back-to-nature style of agriculture.

Why is the biodynamic philosophy spreading so rapidly in viticulture? Because, unlike other crops, which are turned over and rotated annually, grape vines can live on the same plot of land for decades, even centuries. The soil, therefore, must be carefully tended. And for wine purists, enhancing soil nutrients with the help of chemical fertilizers isn’t an option, because such products might interfere with the sense of place, or terroir, in the finished wine.

Good Shepherd

Today, the vineyards at Montinore are certified-biodynamic (and certified-organic). The vines are healthy—even those that were formerly dying from the phylloxera infestation are looking vibrant and green. The fruit is clean, the flavors are pure and the wines are delicious.

For a couple of months every winter, a herd of sheep graze between the vine rows, pulling up weeds, loosening the earth and leaving their own natural fertilizer behind. In the fallow zones, a resident population of goats munches on brambles, making way for native grasses to thrive. And two hives of bees pollinate the cover crops between the vine rows and the wildflowers in the buffer zones, creating habitat for beneficial insects.
With biodynamics, winemaking is about the whole farm—the goats, the bees (fed by Susan Fichter, top left), even the Marchesi family garden. Bottom right: Rudy Marchesi cures pork in his barn.
Nothing is wasted: Not only is composting carried out with a religious zeal, but Marchesi makes as many of those obscure biodynamic preps on-site as possible. Even the green fruit that is “dropped” (pruned) just prior to harvest, to concentrate flavor in the ripest grapes, is saved and pressed to make verjus, a tart juice suitable for salad dressings and cocktails.

A visit to the Montinore’s wine cave is an olfactory treat. In addition to the usual smells of fermenting fruit, oak and dank cement, there’s another, wonderful odor emanating from wheels of aging cheese. Marchesi typically makes asiago, havarti and gouda-type cheeses (he trades his chicken eggs for the cow’s milk, from a neighboring farm); during the holiday season he also dabbles in white mold cheeses like camembert. They sit in a corner of the barrel cellar, where the humidity and temperature create the perfect conditions for ripening.

For Marchesi, getting up and going to work each day requires more than thinking about when he should prune his vines and how to make and sell his wine. He also has to consider where his goats are, what the hawks are up to and whether it’s time to bring the sheep in. He thinks about his humming beehives and his next batch of cheese.

In Marchesi’s view, this is all essential to understanding how to grow and make great wine. It’s the mindset of a biodynamic vintner and that of a son of Romagnese. “It’s just part of my fabric,” he says with a shrug. “The reason I started in the first place was that I realized some of the greatest wine producers in the world were biodynamic. Then, when I started practicing biodynamics, it just resonated so deeply with me. It reflected my worldview. I had the pleasure of doing something I believed was the right thing to do.”
Montinore Estate
Willamette Valley “Borealis—The Northern Whites” 2010, $16
A delicate, intoxicating blend of Müller-Thurgau, Riesling, Pinot Gris and Gewürztraminer. Aromas include fresh rose petals, citrus and crabapple; the palate refreshes with a spritzty texture and notes of yellow-plum tart, tangerine and lime. Fresh-crushed thyme on the dry finish—plus just 11.5% alcohol by volume—make this an ideal aperitif.

Pacific Rim Columbia Valley Wallula Vineyard Riesling 2009, $32
A rich, Alsatian-style Riesling suitable for standing up to pork. The vines are intentionally trellised 66 inches off the ground at Wallula Vineyard in Washington’s Columbia Gorge so that sheep can wander down the rows and “prune” the vine trunks without harming the fruit.

Brick House Vineyards
Ribbion Ridge Chardonnay 2009, $25
Creamy, silky and spicy, with an underlying minerality, this Willamette Valley Chard lays fresh notes of fennel and tarragon over a richer foundation of pear, apple and white pepper. Pair with roasted chicken.

Ca’ Del Solo
Monterey County Dolcetto 2007, $18
Bright acidity makes for a lip-smacking Italian-style red, with juicy notes of black cherries and lingering earthiness on the finish. Pair with pasta or pizza; red sauce is a must.

Maysara McMinnville
“Asha” Pinot Noir 2008, $39
For the members of Oregon’s Mommazi family, biodynamic farming is a way of continuing traditions practiced by their Persian ancestors. Notes of blackberries, ferns, nettles, stones, earth and exotic spices make a complex Pinot Noir. Serve it alongside a winter stew.

Bonterra Vineyards
Mendocino “The Butler” 2007, $35
Mostly Syrah, with small amounts of Grenache, Mourvedre and Petit Sirah blended in for complexity. This weighty Rhône-style red blend hits the palate with black plum, licorice and sweet spice. From a California ranch that has been certified-biodynamic since 1993.

Get our tips for picking great biodynamic wines: imbibemagazine.com/JF12