



WINEMAKING IN THE AGE OF AQUARIUS... **BIODYNAMICS** COMES INTO ITS OWN

Part I. Sonoma and the North Coast

BY CHRISTY MCGILL

Driving through the silvery fog that hugs the slopes and fertile floor of the Sonoma Valley in the cooler months of the year, one is reminded that this is the type of weather that separates the tourist from the winemaker. To those who think of northern California's wine country as a destination for spa treatments, balloon rides, and the constant warmth of an ever-radiating sun, a day of damp, soupy fog might be a bit of a buzz-kill. But to the area's vintners there's no better way to start the day than waking to cool temperatures and a nice, thick mist clinging to the vines. That, and for those practicing biodynamic viticulture, the knowledge that cow intestines stuffed with dandelions lie buried in the soil of your vineyard...

The land that fans out around Sonoma's Russian River possesses the kind of rare microclimatic qualities capable of turning out blockbuster pinot noir, that noble and finicky grape that is the stuff of the most lauded wines of Burgundy. What interested me as I drove from Marin towards the Russian River one cold, foggy afternoon was just how far some folks here were going to ensure that their soil—the essential material for their vineyard's crops, fruit and ultimately their wine—was rich, unadulterated and truly emblematic of this unique place. The French call it "terroir" and it's a very exciting thing that an increasing number of our local winemakers are after.

But to what lengths are they willing to go? *Cow intestines stuffed with dandelions, astral planting calendars, red deer bladders filled with yarrow blossoms, cow horns packed with manure, cow skulls stuffed with ground quartz, and cow skulls stuffed with mulched oak buried for months and then unearthed.* Had Salvador Dali started a winemaking cult when I wasn't looking? Those were just some of the methods I'd heard that biodynamic farmers use and they hardly sounded "normal" or practical (although certainly highly resourceful when it comes to use the use of a cow). They definitely sounded interesting. I had heard that more and more winemakers were converting to these esoteric methods. So what exactly was this biodynamic

viticulture, and how would it help these winemakers achieve the ever elusive but highly prized "terroir" in a bottle?

First, a bit of history. Biodynamic farming has its roots with the early 20th century Austrian philosopher, Rudolf Steiner (1861-1925). The very same Rudolf Steiner who brought us the Waldorf school was also the father of a spiritual philosophy he termed "anthroposophy"—a view that the spiritual world is accessible to man via the cultivation of the inner self. Steiner held that science was not separate from but integrated with the extra-sensory dimensions of the universe. He believed that human intellect had the capability to connect with the spiritual world—naturally, these ideas would come to find a home in California.

Rudolf Steiner was an iconoclast, to some an "utter crank" and to others a genius. He was obsessed with the interrelatedness of all organic earthly matter with the universe and beyond. In 1924, Steiner developed a series of lectures emanating from his philosophies that were specifically directed to address the problems that many European farmers were facing regarding the deterioration of their soil, their crops and the health of their livestock. These ideas birthed biodynamic agriculture, the most "organic-y" of organic farming methods. Steiner viewed the farm itself as an alive organism, self-contained and wholly individual. He staunchly advocated a prohibition of any external inputs. His vision of a farm was a sort of virtuous cycle where everything used on the farm, from manure to fertilizers, would be home-made, truly indigenous and as fully recyclable and self-sustainable as possible.

Winemakers took note—rich soil, rich vine, rich grape. Steiner's methods for preparing homeopathic teas and composts and his insistence on strict rules for maintaining biodiversity, livestock, pest and weed control and seed protection are what must be practiced to become certified as biodynamic.

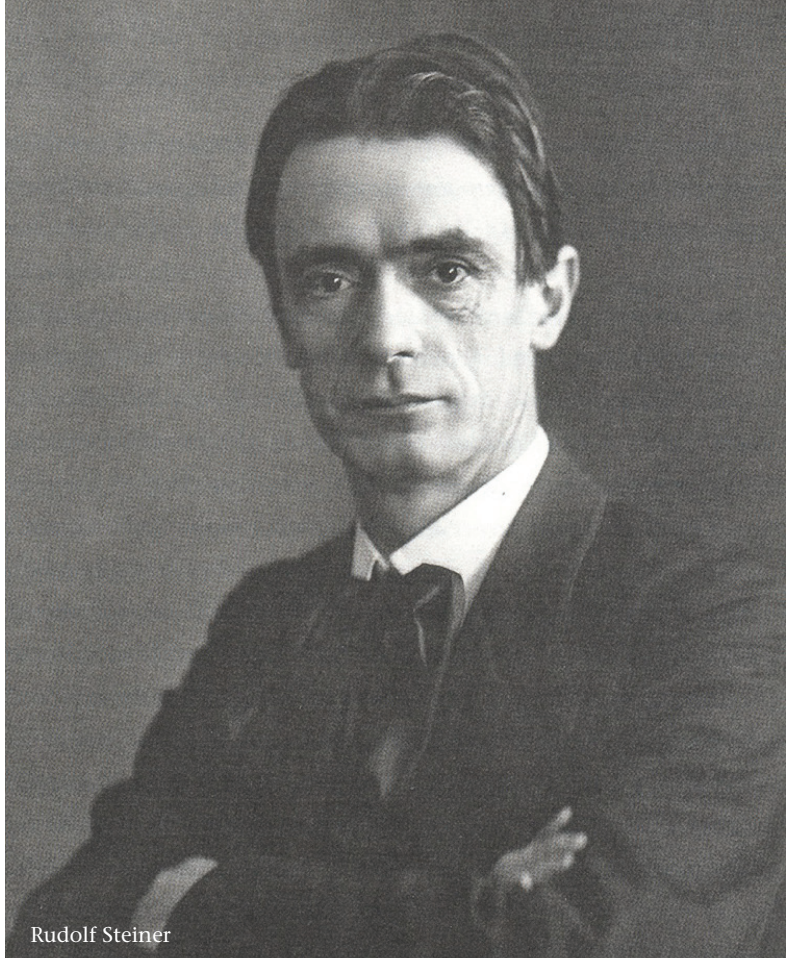
The Russian River towns of Graton, Forestville, Occidental and Sebastopol are part of the western gate to Sonoma's winemaking region known as the "Petaluma Gap." It's an

unpretentious area full of low-key charms. Driving from Guerneville Road towards Sebastopol, I passed, fittingly, a Waldorf school, some sheep and their lambs grazing between vineyard rows and a pasture where a few horses stood outside in their winter blankets. Across the road, a big brown hog lazed in a patch of sun in the middle of a field he shared with a half a dozen blasé sheep. In an adjacent lot, workers tended to vines, pruning the leafless, fruitless stalks that look no more capable of yielding ripe clusters of healthy fruit than a rotted log. This is definitely not an area of huge, splashy chateaus nor dotted with destination restaurants, but of Yerba Matte cafes, acupuncturists and crystal shops. But don't be fooled—tucked away on nondescript backroads there is some incredible winemaking going on.

BROADCASTING FROM THE HILLS

In a small former apple barn in Forestville, with nothing but a picnic table and a couple of chairs out front, and, I might add, a total absence of signage, I finally located the winery of Radio-Coteau. With Robert Parker consistently praising his wine in the 90+ top tier, you'd think winemaker Eric Sussman might spring for a sign. Then again, this is a small, boutique operation and he's a busy man. Sussman trained with some of the most famous winemakers in Bordeaux and Burgundy before coming to Northern California to work at a number of wineries. When he was able to start his own place he named it "Radio-Coteau," a French phrase for "word-of-mouth" but that literally translates as "broadcasting from the hillside." And that, Sussman says, is what he's after—a wine that reflects a location's soil, season, people and place. As a winemaker who buys his fruit from carefully vetted vineyards, he was especially excited about the coastal farm in Bodega where the grapes for his highly rated Terra Nuema Pinot Noir are grown. Owned and managed by the Benziger wine family, leaders in the movement of biodynamic viticulture, the biodynamic-certified Terra Nuema vineyard has provided Sussman with a source for outstanding fruit. He visits the vineyard frequently, working closely with farmers to assess the viability and readiness of the flavor-packed grapes which, in the cold, foggy and blustery climate of coastal Bodega, are low yield and subject to longer hang-time.

Back at Radio-Coteau, which has received biodynamic certification as a producing operation, Sussman oversees a scrupulous winemaking process intended to protect the grape and basically get out of its way. When the grapes are properly raised and handled, a wine can essentially make itself, Sussman says. These biodynamic enthusiasts all talk like that—about the importance of keeping the wine unadulterated, about a transparent process that disallows external influences, frowns on tinkering, and that bows to the essential work done in the vineyard and carried on in the winemaker's facility. It's a simple approach, unalloyed, a nod to the nobility of the soil, the vine and the grape. There's no fining and no filtering, and no additives except the elective use of naturally occurring sulphur (allowed by biodynamic guidelines).



Rudolf Steiner

"MORE COW HORN" — THE PREPARATIONS

This is where the proverbial "manure meets the road." The following are the nine specific homeopathic preparations devised by Rudolf Steiner and mandated for biodynamic certification.

Preparation no. 500: Cow manure is packed and fermented in a cow horn, buried in autumn and left to decompose throughout the winter. It is then recovered in the spring to be sprayed on the soil to stimulate root growth and humus formation.

Preparation no. 501: Quartz is ground and mixed with rainwater and packed in a cow's horn for burial in spring. It is recovered in autumn and used as a crop spray. This compound is intended as an antifungal and to stimulate plant growth by enhancing light metabolism.

Preparation no. 502: Yarrow blossoms are stuffed into the urinary bladders of Red Deer stags, placed in the sun during the summer to ferment, then buried in the earth during the winter. They are then recovered in the spring and applied to compost.

Preparation no. 503: Chamomile blossoms are packed into cow intestines, buried in autumn and then recovered in the spring to be applied to compost.

Preparation no. 504: Stinging nettles, in full bloom, are packed tightly in peat and buried underground for a year before being applied to compost.

Preparation no. 505: Oak bark is mulched and stuffed into the skull of a cow or other domesticated animal, surrounded by peat and then buried in the soil in a location near running rainwater. Once it is recovered, the bark is applied to compost.

Preparation no. 506: Dandelion flowers are packed into cow intestines, buried during winter and recovered in the spring for application to compost.

Preparation no. 507: Valerian flowers are extracted into water and their juices applied to compost.

Preparation no. 508: A tea made of Horsetail plants is made and used as a foliar spray to suppress fungal disease on the vines.

It's much harder than they make it sound. With no additives come no quick fixes, and these vintners have to think long term about how to age the wine without upsetting its natural balance. It's very tricky winemaking—achieving stability and balance in the wine with no filtering, fining or additives comes with greater risks, but results in more complex flavor profiles. The 300 cases of Radio-Coteau Terra Neuma Pinot Noir that Sussman painstakingly produces are hot ticket items, sold exclusively to high-end Northern California restaurants or directly from the winery to customers. The wine itself reflects the cool coastal vibrancy of its provenance—the nose has traces of forest floor giving way to bright flavors, red fruit intensity, balance and natural acidity. You can imagine pairing it with Dungeness crab or wild salmon, which just happen to also be native delicacies of Bodega. I found it to be a world-class wine and one that reflects a distinct sense of this special place.

TENDING THE VINES

Crafting a top-rated pinot noir requires a ton of work and attention in the field. Each aspect of the fruit's progress on the vine must be monitored and great care must be taken when determining when to harvest and when to leave the fruit on the vine. Less than a ten minute drive from Radio-Coteau sits DeLoach Vineyards, prettily perched on a hill on Olivet Road in Santa Rosa. Eric Pooler is the vineyard manager and wine-grower who oversees DeLoach's Biodynamic efforts, which he views as more a philosophy than a science. Pooler, the one who actually sources a deer bladder and makes sure it's properly stuffed with yarrow blossoms, believes Steiner's methods are really just "a change in thinking with respect to fruit quality and farming" and not mystical hoo-ha. He sees first-hand how that change in thinking creates marked improvements in crops and has a beneficial effect across the winemaking process.

What's really happening with the cow horn preps, he explains, is a breakdown of bioorganic material over the period of time that it's buried. Pooler points out that a cow's intricate intestinal design is what makes its manure so rich. Rudolf Steiner believed that the cow horn itself possesses abundant energy properties (in addition to nutrients such as calcium which leach into the soil) and that the animal's enormous energy properties restrained over its lifetime are captured in its horn. With his preparations, Steiner posited that those energy values are released, giving off a rich and super-concentrated cocktail of micronutrients that when recovered are so richly condensed they need only be distributed in small quantities into compost to greatly impact the nutritive value of soil. Is that really so nutty an idea—especially if the results are there? Pooler strongly believes the processes work. He uses the composting preparations to promote an extremely micro-biodiverse soil in the vineyard,



Photo courtesy of Boisset Family Estates

and the proof is in the pudding, so to speak.

One of the principles of biodynamic farming is the use and care of livestock on the property. At DeLoach, you'll find chickens, sheep and beehives. Extensive vegetable and herb gardens are also used in medicinal preparations and as cover crops. DeLoach, which just received its Demeter certification after a number of years carefully working towards that goal, will produce its first vintage of totally biodynamic wine with a specially designated pinot noir and a chardonnay in the next year.

Jean-Charles Boisset, the Burgundian born proprietor of DeLoach whose family purchased the vineyard in 2003, greatly appreciates the attributes of both his homes. What has really impressed him most about Sonoma are the open attitudes and collaborative spirit of the farmers DeLoach works with (in addition to their proprietary vineyards, they buy fruit from 55 local growers). The Boissets had been practicing eco-conscious farming in their estate vineyards in France for generations and were dedicated to bringing DeLoach into

biodynamic certification, ripping out some former award-winning vines and resetting their vineyards and their agricultural practices according to Demeter-certified standards. What Boisset has found in Sonoma has delighted and inspired him. "We've seen an incredible movement in Sonoma, a real trend towards a sense of place and a sense of 'terroir.'" Boisset is bullish about biodynamic viticulture's future here, and lauds local farmers and their drive to be proud of their harvest and for their openness and willingness to challenge their methods and partner with vintners. This, Boisset says, is distinctly American in spirit and, as someone raised in

the old world and steeped in tradition, he believes this makes Sonoma an ideal place to advance the craft.

BUILDING A MOVEMENT

You'll find no greater enthusiast for biodynamic farming and its philosophical and historical underpinnings than Owsley Brown III, founder and proprietor of Magnanimus Wine Group in Mendocino county. Brown, who cut his teeth working Napa vineyards in the '90s, was quick to embrace the biodynamic methods he discovered when his family's company, Brown-Forman, purchased Fetzer Vineyards and he was exposed to biodynamic practices. For Brown, forming Magnanimus in 2004 was a chance to build a line of wines made completely from sustainable, organic and Biodynamic certified vineyards that reflect the unique flavor profiles of Northern California's coastal vineyards. Their Mendocino Farms label makes Rhone varietals, Cabernet Sauvignons, and Zinfandels from three fully certified biodynamic vineyards in and around Hopland where farmers had long been practicing environmentally progressive agriculture before anyone started talking about biodynamic certification.



Brown explains that it was the late, legendary British horticulturist Alan Chadwick who first brought Rudolf Steiner's agricultural ideas of holistic ranch management to California. Chadwick, who was tutored by Steiner himself in Europe, founded the groundbreaking farm Round Valley Garden Project in Covelo, and was one of the original architects of the gardens at Green Gulch farm in Muir Beach. Chadwick was a sort of Johnny Appleseed of French biodynamic horticulture and taught the principles to Alan York, probably the most influential current educator on biodynamic viticulture in the world. York has advised many wine country vintners including Mike Benziger, whose Benziger family winery's biodynamic-certified vineyards are a major source for grapes around the Sonoma valley.

The Magnanimus crew has committed to supporting the whole orbit of eco-forward practitioners, going as far as introducing their own "Green Credits" program that places designations on their wine labels to reflect a vineyard's specific environmental practices. They have, for example, created a "Fish Friendly" stamp of approval for those farmers that have taken the pains to protect their local salmon-populated waterways. "It's a lot more interesting to engage all eco-conscious people," says Brown, who cautions that too much delineation among organic growers can create false divisions that can be counter-productive to the greater movement of environmentally progressive practices. Organic, sustainable, and biodynamic—all of these practices contribute to collective improvement of viticulture and, Brown reminds, provide important advances to the quality and environmental credibility of our local winemaking.



KEEPING IT CREDIBLE

Demeter USA, based in Philomath, Oregon, is the non-profit certification organization that possesses the biodynamic trademark. It's Demeter's job to verify the cow-horns, the deer bladders and the winemaking facilities alike, and they are one busy outfit. Jim Fullmer, Demeter USA's Executive Director, says the demand is strong for certification. Applications from

vineyards and wine processors are growing steadily at a rate of about 15-20% per year, with significant push from west coast operations. Demeter provides certification in two ways, for farming standards and processing standards. In each case, those standards are not easy to meet.

One challenge for Sonoma and Napa Valley farmers is the requirement that 10% of a property must be set aside to promote biodiversity. In a region where land values defy gravity, this mandate is a significant hurdle. Demeter's agronomic guidelines also stipulate biological diversity within the farm landscape, diversity in crop rotation or perennial planting schemes, maintenance of adequate green cover, utilization of a fertility system based on generating fertility from within the life of the farm, and the practice of water conservation. Care must be taken to protect a property's integrity, and many vineyards have to provide buffer zones to keep any spray drift of conventional pesticides or fungicides from neighboring farms. Fullmer notes that the Demeter standard baseline marketplace definitions are actually minimal and are there to protect both the consumer and the producer. By attaining the right to trademark the term, Demeter hopes to protect what biodynamic "means" and keep the term from becoming adulterated.

"Green, sustainable, organic—these terms are horribly misused and misleading," Fullmer says, and stresses that biodynamic guidelines should be viewed as minimums. Yikes, I thought, thinking of the deer bladder prep that seemed sort of 'maximum' to me. But, he's talking about the whole goal of creating biodiversity in the soil and the farm. "We encourage people to take it way beyond the guidelines." Individuality is the goal, and all farms are different and so should be the wine. "Each farm is a little thumbprint," he says, "and this drives some people nuts because they can't apply uniformity." It's that thumbprint, of course, which is the whole expression of "terroir."

DeLoach's Eric Pooler echoes these sentiments. "Homogenization is the worst possible thing for wine." All the character that was once in the grape is driven out of the wine when the business becomes too tinkered with. These farmers, vineyard managers, and winemakers practicing biodynamic farming and processing are part of a growing community that is slowly but steadily pushing back against big corporate tides of conventional, homogenous winemaking and as they do so, discovering the wonders of their own 'terroir.' It adds up to healthy farming practices, healthy soil, healthy workers, healthy livestock, healthy vineyards, and healthy fruit. Doesn't sound that kooky to me, after all.

I'm just glad I'm not a cow.

In the next issue... Part II. Biodynamics in Napa Valley, the "Celestial Calendar" and what the future may hold.

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