

“Let the Vine do its Job!” An Introduction to Biodynamic Winemaking

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Mindfulvine.com

I specialize in European wine tastings; recently clients have started asking for biodynamic tastings, so I have run a few of those.

I also teach at San Francisco State U. and occasionally at SF City College.

Still working on a book on Germany's lesser known wine regions...

Overview of today's SWEbinar

- ▶ 1. How do we define “biodynamic”?
 - ... and how is it different from organic, sustainable, authentic, or natural wine?
- ▶ 2. Whose idea was it?
- ▶ 3. What do biodynamic vineyard and cellar practices look like?
- ▶ 4. Who makes biodynamic wine?
- ▶ 5. Why drink biodynamic wine?

1. What is “biodynamic”?

- ▶ “A way to heal and revitalize the earth.”
—Rudolf Steiner, 1924
- ▶ “In *biodynamie* we are connecting the vine to the frequencies it needs. Like tuning a radio, we are tuning the vine to the frequencies that bring it to life.”
—Nicolas Joly, cited in *Wine Science* by Jamie Goode, 2013
- ▶ “This controversial practice has produced some impressive results but without the reassurance of conclusive scientific explanation.”
—*The Oxford Companion to Wine*, 2015

Biodynamic ≠

- ▶ **sustainable**, which seeks to reduce the carbon footprint in wine production → go green!
- ▶ **organic**, which focuses on elimination of chemicals in vineyards, and minimal intervention in the cellar → don’t do harm!
- ▶ **natural**, which focuses on using natural yeasts and no added sulfur—not regulated (yet) → don’t “doctor” your wine!
- ▶ **authentic** or **handcrafted** or **artisanal**, which emphasizes “true and honest” production of wine—not regulated

Biodynamic =

- ▶ heal, revitalize, improve the earth
- ▶ über-organic
- ▶ organics plus metaphysics
- ▶ voodoo or yoga in the vineyard
- ▶ a way to work the vineyard where you “let the vine do its job!” (Nicolas Joly)
- ▶ “a methodology of arriving at a different state of consciousness that’s not drug-induced” (Alan York)

To be biodynamic, a grower...

- › considers the farm as a whole system, where earth, plants, animals, humans and cosmos are connected to each other
- › focuses on promoting plant health, rather than combating disease, and "pays extreme attention to vines" (*Matt Kramer on Wine*)
- › uses compost, herbal & mineral preparations [BD 500-508]
- › follows the lunar calendar to time vineyard and cellar work, in order to align plants and barrels with beneficial cosmic forces

To be biodynamically certified, a producer needs to...

- › be audited annually
- › pay a membership fee to Demeter, as well as 2% of revenues from selling trademarked goods [bottled wine or grapes]



since 1928



CERTIFIED
BIODYNAMIC®
since 1985

Other labels to look out for:



1990 National Organic Food Act
 -> 100% Organic
 -> Organic [>95%]
 -> "With Organic..."



CA Certified Organic Farmers,
 1973, Santa Cruz



EU organic, 2007



Germany, 1985

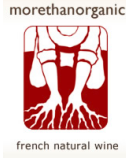


France, 1985

Labels specifically for wine:



2007, Austria



1995, France; certifies entire bioD estates

CERTIFICATION LOGOS:



Indicates wine is made in a CERTIFIED SUSTAINABLE winery with grapes from California certified vineyards.

created in 2010 by the CA Sustainable Winegrowing Alliance (2003)

Deep Divides

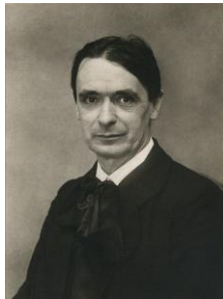


Photo grabbed from Marko Kovacs's facebook page. I've no idea where he found it.

From Alice Feiring's blog page:
<http://www.alicefeiring.com/>

2. Whose idea was it?

- ▶ Rudolf Steiner (1861–1925)
- ▶ Austrian philosopher, social reformer, esotericist
- ▶ member of Theosophical Society (1902); founder of Anthroposophic Society (1913)
- ▶ founder of Waldorf Schools
- ▶ founder of Weleda cosmetics and homeopathic remedies
- ▶ firmly opposed to rising influence of Nazi party and nationalism



1924 Lectures on Agriculture

- ▶ Troubled by Justus von Liebig's discoveries of chemical compounds to produce fertilizers, Steiner advocated for a more traditional view of agriculture
- ▶ Steiner claimed to be clairvoyant and saw a disconnect between material and spiritual worlds, which was creating a deep imbalance
- ▶ Some believe the biodynamic instructions in these lectures came to Steiner in a trance...

.... while others believe...

- ▶ Steiner combined various strands of knowledge into one:
 - Goethe's botanical writings
 - Indian zodiac
 - Zoroastrian beliefs
 - Hindu beliefs
 - Farmers' Almanacs



Steiner launched biodynamics...

- ▶ ... when Europeans and Americans were alarmed by new/increasing rates of diseases in humans, animals, and plants
- ▶ ... when anthropologists reported about "healthy natives" in other parts of the world
 - Hunza tribesmen from northwest India knew no cancer, heart disease, diabetes, or other common Western diseases; also knew few plant diseases
- ▶ ... when doctors became aware of the role of diet in human health -> you are what you eat
- ▶ ... when the organic food movement took off

Ehrenfried Pfeiffer (d. 1961)



- ▶ Biochemist, microbiologist, agronomist, and global agricultural consultant
- ▶ ran biodynamic research experiments at Loverendale Estate in Holland, and the Dornach Laboratory in Switzerland
- ▶ toned down Steiner's spirit language
- ▶ settled in New York state in 1938, where he founded the Biodynamic Farming & Gardening Association

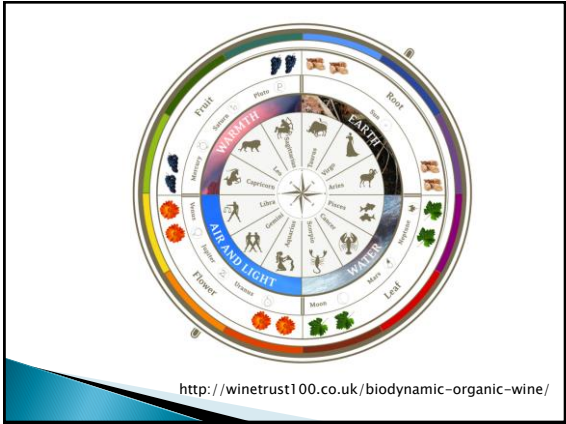
Maria Thun (1922–2012)

- ▶ agricultural researcher
- ▶ daughter of a small farmer
- ▶ studied at the Institute for Biodynamic Research in Darmstadt, Germany
- ▶ experimented with Steiner's astronomical calendar, dividing year into root, leaf, fruit/seed and flower days, depending on the position of the moon (1963)



Thun's Biodynamic Sowing and Planting Calendar in the Vineyard

- ▶ harvest grapes or rack your wine during fruit days when moon crosses fire constellations of Aries, Leo, or Sagittarius
- ▶ prune your vines during root days when moon passes through earth sign constellations of Taurus, Virgo or Capricorn
- ▶ leave vineyards alone during flower days, when moon passes through air signs
- ▶ spray anti-fungus horsetail tea during waxing moon, when water levels are rising



Clemens Busch, Mosel

with his biodynamic calendar outside his estate, pointing out days he will not go into the vineyard, because he would be working against the prevailing force of the moon.

organic since 1984
biodynamic since 2006
VDP since 2007

Matthias Thun

WHEN WINE TASTES BEST 2019

2019

NORTH AMERICAN EDITION

THE **Maria Thun** BIODYNAMIC ALMANAC

OVER 100,000 COPIES SOLD IN ENGLAND

A Biodynamic Calendar for Wine Drinkers

Alan York (1952–2014)

- ▶ Biodynamic consultant, horticulturalist, avid yogi
- ▶ president of the Biodynamic Association
- ▶ editor of the quarterly *Biodynamics* journal
- ▶ consulted widely in California and Oregon, Chile, Argentina, South Africa, Italy, Israel, and France



Nicolas Joly, Savennières, Loire

- ▶ took over his family's estate Château de la Roche aux Moines in 1977 after a career in banking
- ▶ turned estate over to biodynamic farming in 1984
- ▶ Wrote *What is Biodynamic Wine? The Quality, the Taste, the Terroir* (2007)



Claude & Lydia Bourguignon



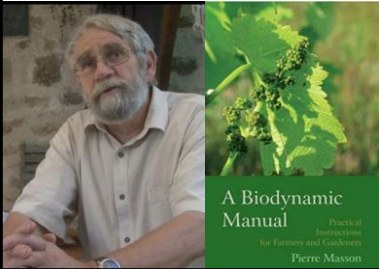
Photo taken in El Dorado County's Madroña vineyard, where Bourguignons evaluated soils and vine roots in 2012. Clients in over 30 countries: DRC: Chateau de Beaucastel, Harlan Estates, Bonny Doon, etc.

- ▶ "Burgundy vineyards contain less life than Sahara desert sand."
 - soil microbiologist Claude Bourguignon, 1989



Pierre Masson

- ▶ author & consultant on biodynamic farming and viticulture



With Vincent Masson, co-owner of BioDynamie Services which offers all biodynamic preparations, farming equipment, training courses in biodynamic farming, as well as individual consulting

3. What does bioD look like?





Acc. to Demeter, biodynamic practices create...

▶ *"a farm system that is minimally dependent on imported materials, and instead meets its needs from the living dynamics of the farm itself. It is the biodiversity of the farm, organized so that the waste of one part of the farm becomes the energy for another, that results in an increase in the farm's capacity for self-renewal and ultimately makes the farm sustainable."*

<https://www.demeter-usa.org/for-farmers>



Get your cow horns and bury them...

Horn Burying Party during fall equinox at Hedges Estate Vineyard, Red Mountain AVA, WA



Preparation 500

- ▶ Cow horn packed with manure of lactating bovine, buried 2.5–5 feet underground during winter to absorb earth vitality
- ▶ by spring, manure looks like pulverized coffee grounds, and smells like fresh earth
- ▶ in small doses, this “aged manure” is diluted in water, stirring for an hour to “dynamize” it
- ▶ the solution is sprayed on vineyard soil in spring and autumn to support root health and root growth

Preparation 501

- ▶ take ground quartz powder and mix it with water to dough-like consistency
- ▶ bury inside a cow horn over the *summer* months, where it absorbs growth energy of the earth
- ▶ diluted in small quantities in water, stirring for an hour, the quartz solution is sprayed on leaves in spring to promote bud break, photosynthesis, and fruit ripening

Preparation 502

- ▶ Dried yarrow flowers stuffed in deer bladder, buried over winter
- ▶ add to compost pile to encourage vine's absorption of nutrients



"Native Americans used yarrow for wounds, infections and bleeding. Chinese medicine gives it praise for the ability to affect the kidney, spleen, and liver. Animal studies have also shown support for the use of yarrow in cleansing wounds and controlling the bleeding of wounds, cuts and abrasions."

-- from www.herbwisdom.com

Preparation 503

- ▶ Chamomile flowers packed in cow intestines and buried for the winter
- ▶ add to compost pile to stabilize nitrogen and improve plant growth



"Chamomile is an age-old medicinal herb known in ancient Egypt, Greece and Rome. Chamomile's popularity grew throughout the Middle Ages when people turned to it as a remedy for numerous medical complaints including asthma, colic, fevers, inflammations, nausea, nervous complaints, children's ailments, skin diseases and cancer."

--from herbwisdom.com

Preparation 504

- ▶ Stinging Nettle, dried in early summer, and buried for a whole year until fully decomposed
- ▶ add to compost pile to support humus creation and the vine's nutrient absorption capacity



"Stinging Nettles have been used for centuries to treat allergy symptoms, particularly hayfever which is the most common allergy problem. It contains biologically active compounds that reduce inflammation."

--from herbwisdom.com

Preparation 505

- ▶ Oak bark pieces, packed into skull of a farm animal and submerged in rain barrel with decomposing plant matter [or a swamp] for winter, so bark undergoes anaerobic decomposition
- ▶ add to compost pile to increase calcium and raise pH of soil, which helps prevent plant diseases



Preparation 506

- ▶ Dried dandelion blossoms, stuffed into cow's stomach tissue (mesenteries) and buried over winter
- ▶ add to compost pile to strengthen potassium and silica content



"Dandelion has been used for centuries to treat jaundice and the yellowing of the skin that comes with liver dysfunction, cirrhosis, hepatitis and liver disease. Modern naturopathic physicians use dandelion to detoxify the liver and reduce the side effects of prescription medications."

--from herbwisdom.com

Preparation 507

- ▶ Valerian blossoms pressed into juice, which is diluted and sprayed onto compost pile
- ▶ brings phosphorus to the soil



"Valerian is a valuable treatment for insomnia, the sedative effect due to the valepotriates and the isovaleric acid. At least two double-blind studies have demonstrated that valerian extract can significantly reduce the amount of time it takes people to fall asleep without changing the stages of sleep."

--from herbwisdom.com

Preparation 508

- ▶ Horsetail tea
- ▶ sprayed on soil in springtime to prevent/control fungal diseases



"Horsetail is a member of the Equisetaceae family; the sole survivor of a line of plants going back three hundred million years. ... Because of its content of silica, this plant is recommended when it is necessary for the body to repair bony tissues. Silica helps to fix calcium, so that the body can store more quantity of this mineral and then use it to repair bones, collagen and other body tissues. Horsetail can therefore be useful for osteoporosis (and a host of other diseases, such as fevers and inflammatory ailments)."

--from herbwisdom.com

How do you do it?

- ▶ You can learn about biodynamics at the
 - Rudolf Steiner College in Fair Oaks, CA
 - Michael Fields Agricultural Institute in East Troy, WI
 - Pfeiffer Center in Chestnut Ridge, NY
- ▶ Some vintners do their own preparations from scratch, others purchase them from the Josephine Porter Institute or local suppliers



<https://jpibiodynamics.org/>

4. Who does it?

- ▶ Saahs Family, Nicolaihof, Wachau, Austria
- ▶ Several Grand Cru Domaines in Burgundy: Lalou Bize-Leroy & Aubert de Villane, co-owners of DRC until 1992; and Anne-Claude Leflaive, Domaine Leflaive
- ▶ Bob Blue, Bonterra, Mendocino, CA
- ▶ Alvaro Espinoza, Antiyal, Maipo Valley, Chile
- ▶ and lots of wineries in Oregon!

Nikolaihof, Wachau, Austria

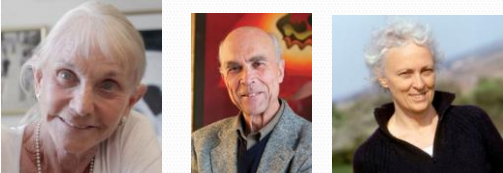
- ▶ First known winery to convert from organic to biodynamic in 1971
- ▶ Demeter certified since 1998
- ▶ Familie Saahs: Christine and Nikolaus Jr./Sr.



▶ 1995 Vintothek Riesling (12.5%) was the first Austrian wine to receive 100 Parker Points - the wine was first bottled in 2012

Domaine Leroy, DRC & Domaine Leflaive

- ▶ Lalou Bize-Leroy turned to biodynamics in 1989; left DRC in 1992 to run her own estates; and Aubert de Villane turned all DRC's vineyards biodynamic in 2008
- ▶ Anne-Claude Leflaive took the reigns of the family winery in 1994 and, in consultation with the Bourguignons, turned entire estate biodynamic in 1998



Domaine Leflaive, DRC, Lafon and Roulot

- ▶ Co-founders, in 2008, of *Ecole du Vin et des Terroirs* in Puligny-Montrachet, which teaches ecological wine making practices, in courses titled
 - Sensitive Crystallization/Energetic Quality of Wine
 - Listening to Wine
 - Life of Soils and Wines of Terroir
 - Unlearning to Taste, etc.

Bob Blue, Bonterra, CA

- ▶ founder and winemaker for Bonterra, Fetzer's organic and biodynamic wine segments
- ▶ vineyards 100% organic since 1987
- ▶ biodynamic McNab, Blue Heron and Butler Ranch
- ▶ recipient of 2016 American Winery of Year Award by Wine Enthusiast



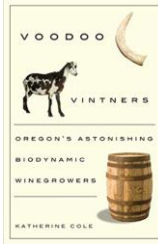
Álvaro Espinoza, Chile

- ▶ First to bottle single-varietal Carmenère in Chile
- ▶ 1992-2000 winemaker with Carmen; Fetzer-Bonterra connection, 1995
- ▶ owner of Antiyal, Maipo since 1996
- ▶ Since 2000, consultant for Viñedos Orgánicos Emiliana, Concha y Toro's biodynamic arm



A shout out to Oregon, where...

- ▶ nearly 6% of vineyard area is farmed biodynamically--as opposed to 0.1% nationally
- ▶ Beaux-Frères, Bergström, Brick House, Brooks, Cooper Mountain, Cowhorn, Domino IV, Fullerton, Johan, Keeler, King Estate, Maysara, Montinore, Ponzi, Solena, Winderlea, Youngberg



<https://wineryhunteregon.com/biodynamic-oregon-wineries/>





5. Why drink biodynamic wines?

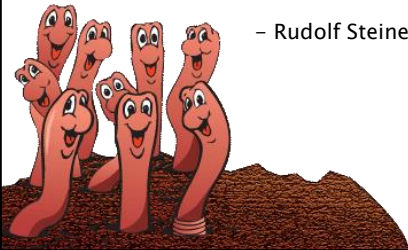
Because

- ▶ you support meticulous vineyard and cellar work...
- ▶ you want to honor people who take the road less traveled...
- ▶ you prefer old-fashioned over new-fangled...
- ▶ you are intrigued...
- ▶ etc.

Why not drink biodynamic wine?

- ▶ “We need cow horns to do this work, but that doesn’t mean we should become bull-headed in advocating it.”

– Rudolf Steiner, 1924



Helpful Resources

- ▶ Anson, Jane. *Wine Revolution: The World’s best Organic, Biodynamic & Natural Wines* (London: The Quarto Group, 2017)
 - ▶ Cole, Kathleen. *Voodoo Vintners* (Corvallis: OSU Press, 2017)
 - ▶ Conford, Philip. *The Origins of the Organic Movement* (Glasgow: Bell & Bains, 2001)
 - ▶ Goode, Jamie and Sam Harrop. *Authentic Wine: Toward Natural and Sustainable Winemaking* (Berkeley: U of CA Press, 2011)
 - ▶ Hemleben, Johannes. *Rudolf Steiner: A Documentary Biography* (Sussex: Henry Goulден Limited, 1975)
 - ▶ Joly, Nicolas. *Biodynamic Wine Demystified* (South San Francisco: Wine Appreciation Guild, 2008)
 - ▶ Masson, Pierre. *A Biodynamic Manual* (Edinburgh, UK: Floris Books, 2011/2014)
 - ▶ Thun, Maria. *Gardening for Life: The Biodynamic Way* (Gloucestershire, UK: Hawthorne Press, 1999)
 - ▶ Waldin, Monty. *Biodynamic Wine* (London: Mitchell Beazley Classic Wine Library, 2006)
- <http://www.wineanorak.com/biodynamic1.htm>
