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# ALL ABOUT NATURAL SUSTAINABLE BIODYNAMIC WINES

RACHEL ZIEMBA

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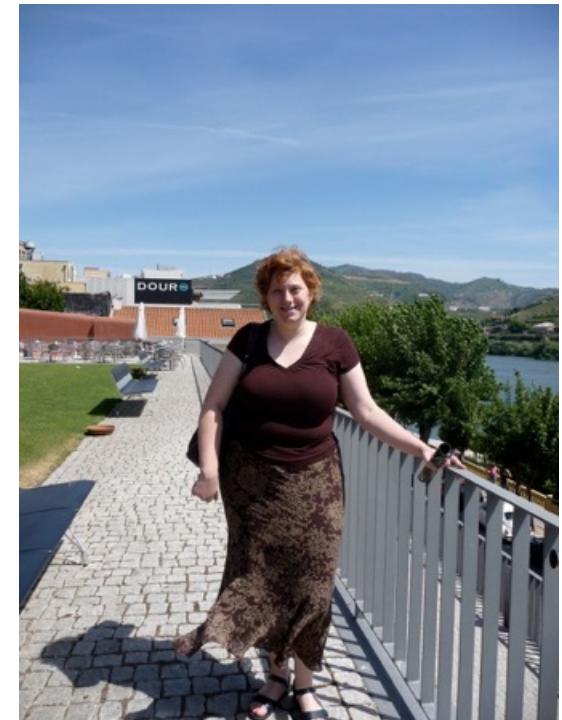


# OUR PLAN

- About me
- Some definitions
- Q&A
- Winery examples: Summerhill, Benziger, Zind Humbrecht, Emiliana and many more
- More Q&A



## Why Wine?



Visiting Tignanello in Tuscany, lunch in the vineyard @Nikmip, the first indigenous owned winery British Columbia, Rachel in Burgundy and in Douro, Portugal

## Exploring terroir, (soil, terrain), what else grows nearby



Wildflowers in Casablanca, Chile, Grapes trellised in Xinjiang China, San Luis Obispo, California, Flowers in Penticton, British Columbia

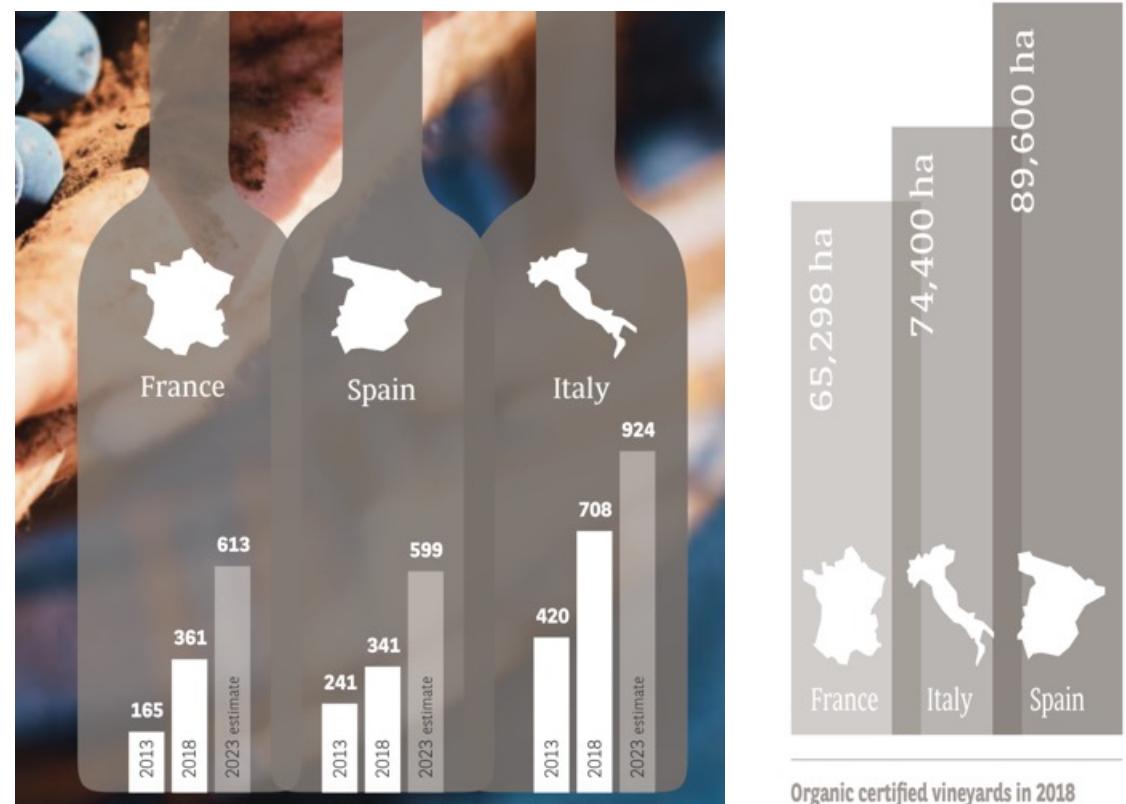
## KEY DEFINITIONS

- Spectrum of definitions based on
  - How grapes grow
  - Approved additives
  - Bottling process
  - Who Decides
- Sustainable
- Organic
- Biodynamic
- Natural



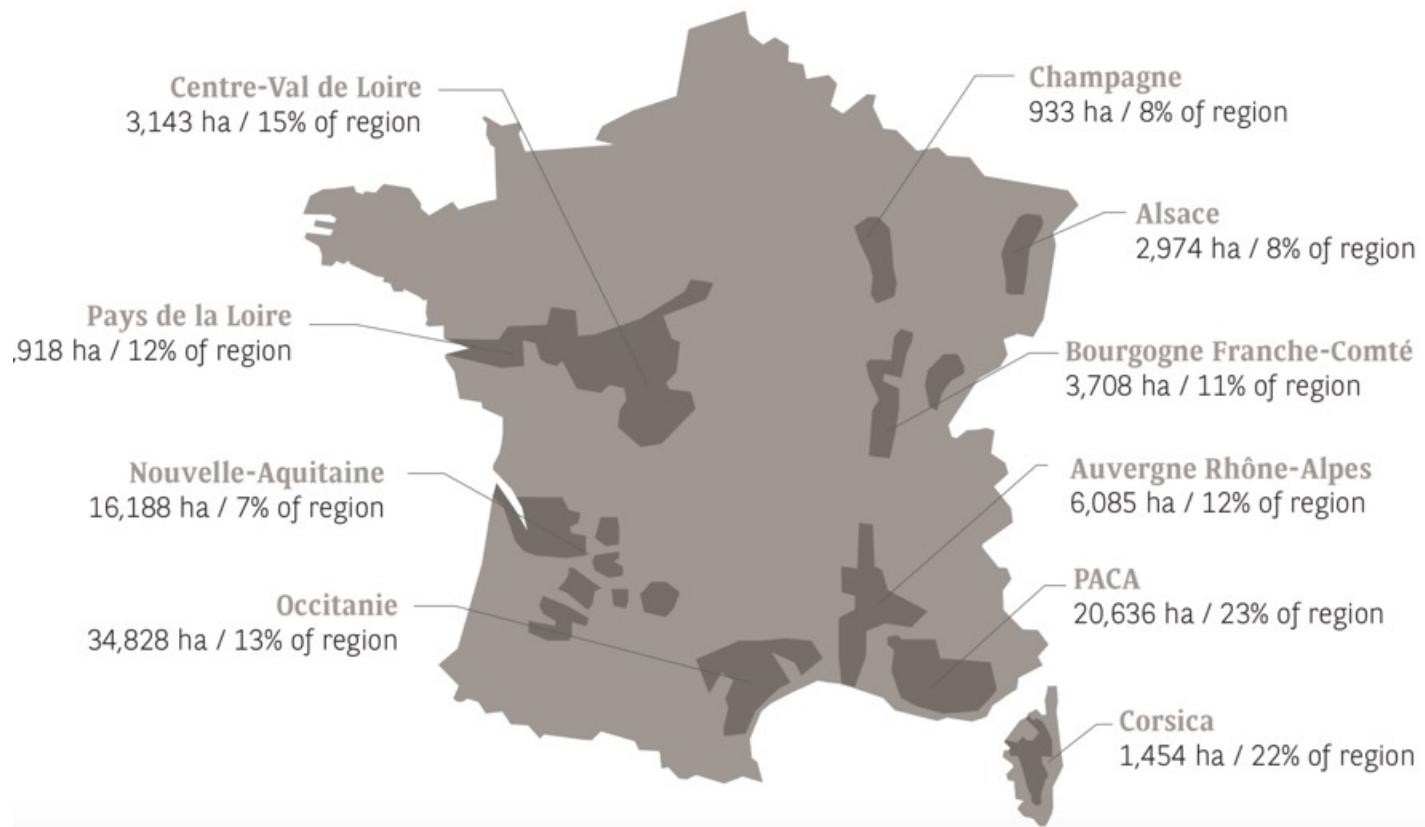
## SCALE OF ORGANIC WINE MAKING

- 87 countries had organic farming regulations in 2016, and another 17 on way
- 2017: About 4.6% of vineyards Organic, about 9% in Spain, Italy 11% France 8%, Italian volumes of organic wine highest
- New Zealand 8%, US only about 2% (but definitions stricter)
- In 2015, 75% of organic vineyards in France, Italy and Spain (small farms), 5% north America, 4% South America



Organic wine production (in millions of cols) Sources: IWSR, Agence Bio

## Organic Wine by region



Source: Agence Bio

## SUSTAINABLE

- winemaking process aims to “protects the environment, supports social responsibility, maintains economic feasibility, and produces high quality wines”
- May include focus on biodiversity, water conservation, reduced fossil fuels use
- Not necessarily Organic or natural –
  - may have additives including sulfites
- Range of certifications especially in California and Pacific NW, often verified by third party auditor
  - In 2020 71 wineries and 2,247 vineyards Certified California Sustainable Winegrowing (CCSW), up 7% and 8% respectively.
  - SIP: Participants measured on 50 requirements and implement practices to achieve 75% of the total available points.



# ORGANIC

- Farming without use of chemical fertilizers, pesticides and other additives.
- Organic Wine
  - All components must be organic
  - Grapes must be grown organically and certified by relevant entity (USDA etc)
  - No added sulfites, nitrates & non organic material. Less than 10ppm naturally occurring sulfites
- Less stringent "wine made with organic grapes"
  - Can include up to 100ppm sulfites
  - Also bottled in organic approved facility
- Costs of certification high, and may require certification in multiple countries



## ALLOWED OR NOT IN ORGANIC

	Conventional	Organic
<b>Potential Wine Additions (ingredients)</b>	Grapes, yeast (genetically modified yeast allowed), yeast nutrient (e.g. diamonium phosphate, thiamin [vit B1]), milk and milk derivatives, malolactic bacteria, tannins, sugar, corn syrup, stabilizing agents ( e.g. CMC, gum arabic), enzymes, tartaric acid, malic acid, citric acid, calcium carbonate, fining agents (e.g. egg whites, gelatin, isinglass [fish bladders]), sulphur dioxide in quantities under 350 parts per million, various other adjuncts and additives to make wine taste better. For an example list of what is available to winemakers please see: <a href="http://www.aebusa.com">www.aebusa.com</a>	Organic grapes, natural yeast, natural yeast nutrient (yeast hulls), organic milk and organic milk derivatives, fining agent (bentonite), oak, sulphur dioxide where needed in quantities under 100 parts per million
<b>Facility and Equipment Sanitizers</b>	caustic soda, quats, phosphoric acid	ozone, steam, scrub brushes, citric sulphite
<b>Certification Standards</b>	Adhere to CFIA standards, all other accreditation and inspections voluntary	Mandatory third party inspections, mandatory ISO 65 accreditation, mandatory trace backs on all ingredients and all finished wines, adherence to CFIA standards

Source: Summerhill Winery

# BIODYNAMIC

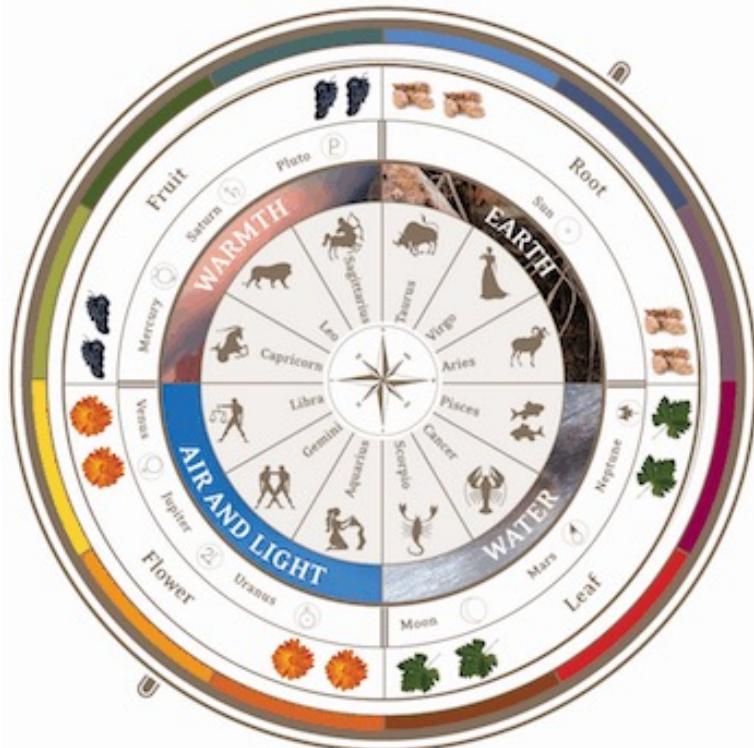
Predates and is stricter than organic farming

- Based on teachings of Rudolf Steiner (1924) who viewed whole farm as organism and wanted to ban pesticides & additives from outside of farm
- uses lunar cycle
  - to determine auspicious planting, harvesting times
  - for application of natural supplements (compost/sprays) to stimulate soil and increase resilience of farm system
- Taken to extreme can be rigid set of rules on when to plant and harvest.



# BIODYNAMIC GROWING

- Each calendar day designated for best practice based on links to Earth, Air, Water Fire
  - **Fruit Days:** Best days for harvesting (grapes),
  - **Root Days:** Ideal days for pruning,
  - **Flower Days:** Let the vineyard grow,
  - **Leaf Days:** good for watering plants.
- Some even say that impacts best days to drink wine (When to Drink Wine app).
  - But we say any day is a good day



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## BIODYNAMIC WINES

- Demeter certification used in 50 countries, based on Steiner methods.
- Biodynamic wine requires natural yeast (no added), no added enzymes (similar to organic wine)
- Can designate grapes grown with biodynamic methods and biodynamic wine.
- Both allow up to 100ppm of sulfites (more than organic)



## NATURAL WINE



jenny & françois selections  
i m p o r t e r o f n a t u r a l w i n e s

- Refers to winemaking style but typically requires biodynamic or organically grown grapes
- Non-interventionist winemaking
- Restricts use of additives including yeast, acid, sugar enzymes to generate types of fermentation
- Only natural sulfites
- Often unfiltered and unfined -> sediment can remain
- “living wine” Risk of refermentation

One set of definitions:

No synthetic molecules in the vines

- Plowing or other solutions to avoid chemical herbicides
  - Use of indigenous yeast
  - Handpicked grapes
  - Low to no filtering
  - Low to no sulfites
  - Winemaking that respects the grapes:  
no pumping or rough handling  
of the grapes, no micro-oxygenation
  - No chaptalization (adding sugar to increase final alcohol content)

## SOME ACADEMIC RESEARCH

- 2020 Research from Kedge Business School(France) and UCLA shows that wine critics in France rate Organic and biodynamic wines higher than conventional ones
  - quality difference for certified organic by a third-party accrediter, not those self-labeled by a industry-backed group  
Used three different wine guides
  - Certified Organic wines deemed 6.2% higher quality, than unlabelled biodynamic 11% better
  - Is it a small numbers issue? Only 4% of wines surveyed certified organic 1995-2000, 7% from 2000-2015

Delmas has previously argued organic and biodynamic producers should emphasize their quality not just good of planet.

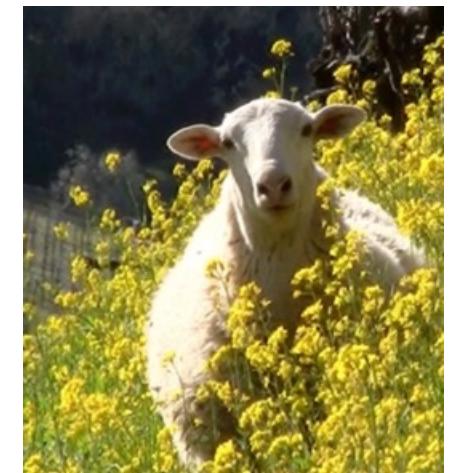


Olivier Gergaud and Magali Delmas

## BENZIGER, SONOMA

BENZIGER  
*family winery*

- All wines from winery from organic grapes, some biodynamic, all sustainable.
- Focuses on biodiversity, reduce fossil fuel use, integrated pest management
- Seed plants that attract beneficial insects
- Tribute wines (first biodynamic wines in Napa/Sonoma)



## FREEFORM, OKANAGAN CRUSH PAD



- One of several linked labels associated with Okanagan Crush pad near Summerland
- Made with organic grapes, natural yeast, no additives.
- Fermented in stainless steel and clay amphora
- Focus on “wines of place”
- Inspired by the minerality of the layers of silt and stone created by the glaciers



## SUMMERHILL



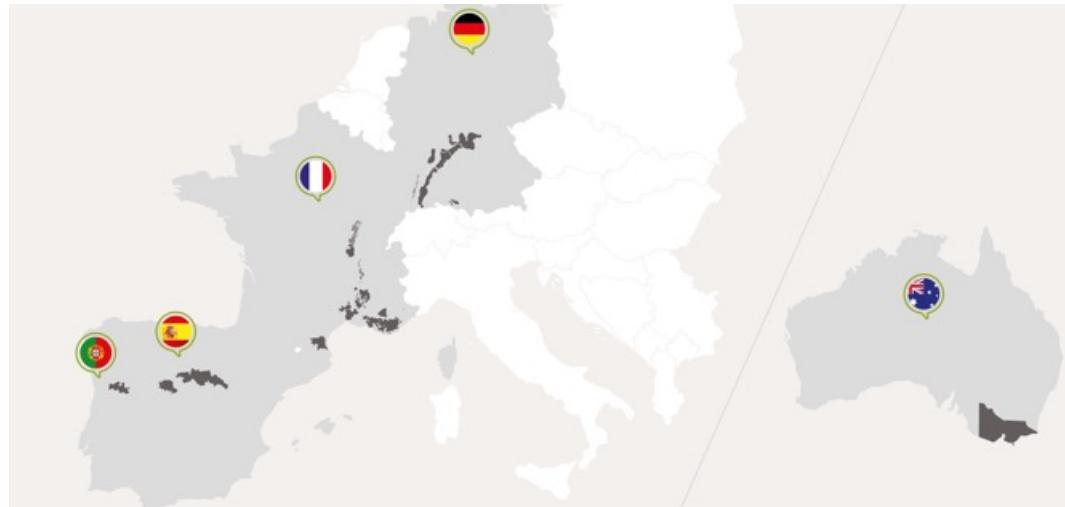
- First certified Biodynamic winery in BC (and Canada), near Kelowna
- Began considering organic viticulture soon after purchase in 1986, entered certification program in 1988
- Demeter biodynamic certification in 2012
- Uses no animal byproducts (gelatin, egg whites, milk)
- Store their wine in a Great Pyramid which they believe concentrates flavors



## M. CHARPOUTIER

L'UNIVERS  
**M. CHAPOUTIER**

- Adopted biodynamic practices in 1991 under Michel Chapoutier, at age 26, one of first French biodynamic growers in Rhone (Hermitage)
- The Maison was founded in 1808 and family Chapoutier became involved towards end of 19<sup>th</sup> C, renamed in 1955



## ZIND HUMBRECHT



- Domaine founded in 1992 in Alsace, now 4 grand crus
- Olivier Humbrecht first Frenchman MW
- Organic and biodynamic farmed since 1997, organically certified (Ecocert) in 1998 and certified biodynamic since 2002
- low impact farming, composting, restricted yields, hand tending of the vines, native yeasts and long fermentations on the lees in oak
- Biodynamic wines, slow fermentations, and wines spend at least 6 months on the lees.



## EMILIANA



- Largest grower of organic grapes in Chile (Colchagua Valley)
- Made first organic wine in 2001, Coyam (Cabernet Sauvignon)
- Transition to biodynamics supported by Alvaro Espinoza who had history at California organic wineries
- Uses high density irrigation, natural fermentation
- As much as 70% of Chilean exported wine sustainably made – has goal of being top sustainable producing country

