WINE'S ECO-EVANGELISTS

SAVING THE WORLD ONE GLASS AT A TIME
WHAT IS AN ECO-EVANGELIST?
ECO

Short for Ecology/Ecological. Referring to the interaction between humans (wine lovers) and our environment.

EVANGELIST

Used in the less common context of simply someone who advocates or promotes an idea enthusiastically. Not the more common religious uses.
UNDERSTANDING THE RELATIONSHIP BETWEEN IDEOLOGIES IN PURE FORM

Modern vs. Historic Agriculture

Modern

Sustainability

Organics

Biodynamics

Historic
UNDERSTANDING THE RELATIONSHIP BETWEEN IDEOLOGIES IN REALITY

Organics

Biodynamics

Sustainability
HISTORY OF AGRICULTURE

• Three Main Phases in History of Agricultural Technology.

• Agricultural Revolution (Around 10,000 BCE)

• Industrial Revolution (Around mid 18th to mid 19th century)

• Green Revolution (About WWII to mid 1970's)

• Green revolution
HISTORY OF THE ECO-MOVEMENTS

• Beginning of 20th century reacting to the changes from industrial revolution.

• Largely seeking to return to historic and traditional agricultural models.

• Related to concerns about safety, disconnection from land, uneasiness about new techniques among other reasons.
HISTORY OF ORGANICS

• Early organics movements were some of the earliest Eco-movements.

• Early organics movements sought to return to agriculture pre-synthetic fertilizers, pesticides, etc.

• Due to nature of many historic agricultural practices many early organic movements focused heavily on philosophy.
HISTORY OF BIODYNAMICS

• Created from principals of Rudolph Steiner and his Philosophies related to Anthroposophy.

• Started with lectures given in 1924.

• Developed following Steiner's death by members of the Anthroposophical Society and pathetic Goetheanum.

• Movement spun off to form Demeter around 1928

• Arguably the earliest remaining Organic movement.
GOALS OF ECO-IDEOLOGIES
COMMON GOALS

• The Promotion of Environmentally friendly vineyard practice.
• To minimize ecological harm or repair the environment.
• The difference is in the delivery.
GOALS OF SUSTAINABILITY

• Sustainability is a vague and often undefined term.

• The difference between true Sustainable Viticulture and "Sustainable Viticulture" is important.

• For true sustainability the goal is to create a business that operates in a manner conducive to the continued well being of the business, its employees and the environment.
GOALS OF ORGANICS

• In its modern form, Organics is ultimately based around the elimination of synthetic chemicals in viticulture.

• **Organics does not imply natural**

• This modern form evolved as a quantifiable technique. As mentioned previously, early organics were simply based on pre-green or industrial revolution agricultural methods.
GOALS OF BIODYNAMICS

- Can be described two ways.
- The goal is ultimately to increase biodiversity through the use of natural composts, sprays and other practices.
- In strict terms of anthroposophy the goal is to promote harmony in the life forces of living organisms and channel the energies of the universe to create a healthier vineyard.
WATER CONSERVATION
INTEGRATED PEST MANAGEMENT (IPM)
COVER CROP USAGE
WINERY DESIGN

• LEED (Leadership in Energy and Environmental design).
• Gravity fed wineries
• Underground/Geothermal Barrel cellars
VINEYARD MANAGEMENT
PACKAGING

• The two largest determinant of a wines environmental footprint have nothing to do with the wine making process.

• Packaging is one of these.

• The weight of the packaging relative to volume will cause increases or decreases in carbon emissions.

• The shape and packing efficiency will also determine the environmental impact of transportation.

• The material and style will determine the environmental impact of producing the item itself.
TRANSPORTATION

• As an agricultural product, most wine must travel to its destination.

• As a luxury product, these destinations greatly influence the environmental impact of a given wine.

• In most typical situations, container ships are the most efficient followed by trains, trucks, and finally aircraft.

• The entire supply chain must be taken into account.
IN-DEPTH
UNDERSTANDING ORGANICS
ORGANIC REQUIREMENTS

• A giant mix of varying requirements.
• Difficult to regulate in the winery.
• General rule across organics is auditing of vineyard practices by an independent organization.
• Primary concern in almost all cases is the use of synthetic chemicals and prohibited practices.
ORGANIC METHODS

- Organics exists as a huge spectrum.
- On one end is ultra traditional agriculture such as biodynamics.
- At the other is the "marketing organics".
- Somewhere in the middle we find a happy combination of Organics incorporating modern scientific methods and sustainability.
WHAT TO DO WITHOUT THE SPRAYS?

• Trick Question

• The level of spray usage varies by climate, vineyard management and disease pressure.

• Most common are copper and sulfur based sprays such as the lime and copper sulfate based Bordeaux Mixture.

• Many other biological control methods exist.

• For insect control sometimes deterring can be as effective as eliminating.
PROS AND CONS OF ORGANICS

- **Pros**
  - Potentially less chemical pollution.
  - No pesticide residues in finished wine.
  - Increased health of soil microbiology.
  - Less ecosystem disruption.

- **Cons**
  - Can be expensive
  - Can be potentially more polluting than conventional farming.
  - Increased risks
  - Most methods preventative very little help for established problems.
BIODYNAMICS CERTIFICATION

- Demeter International oversees the vast majority of biodynamics certification.

- Biodyvin is a smaller organization based in France formed with a focus on wine.

- Focus on Demeter as major certifying body.

- The primary requirements to be certified biodynamic are to be certified organic and to farm using the compost and spray preparations.
BIODYNAMIC PRACTICES
BIODYNAMIC PREPARATIONS

- 9 Preparations required as part of biodynamic farming.
- Numbered 500-508
- 501 and 508 are sprays for the plant.
- 500 and 502-507 are for the soil and compost.
- 500: Cow Manure buried in Cow horn over winter.
- 501: Ground Quartz buried. Spring to fall in cow horn.
- 502: Yarrow flower heads fermented in stag's bladder.
- 503: Chamomile flowers buried in soil.
- 504: Stinging nettle tea.
- 505: Oak bark fermented in the skull of a domestic animal.
- 506: Dandelion flowers in Cattle's colon.
- 507: Valerian flower juice.
- 508: Horsetail tea.
DYNAMIZATION

• Given that biodynamics is based on anthroposophy the importance of the spiritual science or energy cannot be bypassed.

• In the process of dynamization the goal is to imbue the memory or energy of a substance into a larger quantity of water to then be sprayed.

• Must be sprayed within 2-3 hours of dynamization.
BIODYNAMIC CALENDARS

- Several biodynamic/lunar/cosmic calendars exist.
- In wine the most commonly used is the Maria Thun Biodynamic Calendar.
- Now created by her son Matthias.
- Other calendars created by national biodynamics organizations and other practitioners.
USING THE CALENDARS

- Designed to translate the natural rhythms and energies in useable practices.
- Two main considerations: ascending or descending moon.
- Fruit, Root, Flower and Leaf days.
- Based largely on the position of the moon within the constellations.
ANTHROPOSOPHY

- The philosophical movement started by Rudolph Steiner in the early 1900's
- Influenced by the thinking of Goethe.
- Seeks to understand the spiritual component of the universe.
- Anthroposophy theorizes that in addition to the world we can understand with our senses there is also a supersensible world we can't detect.
- Believes that living beings aren't only composed of matter but also an energy component.
- Referred to these concepts as a spiritual science.
GOETHEANUM

- Series of two buildings designed by Steiner to house Anthroposophical Society.
- First from 1913 - 1922
- Second was started in 1925 and finished around 1998.
- Houses art exhibits, performances, lectures.
- Home to School of Spiritual Science to explore the various concepts of anthroposophy.
DOES BIODYNAMICS WORK?

- Domaine Leflaive
- Domaine Leroy
- Marcel Deiss
- Zind Humbrecht
- Chapoutier
- Millton
- Felton Road
BIODYNAMICS AND SCIENCE

- Constantly at odds.

- Funding for research on biodynamics outside of biodynamics institutes themselves is limited.

- Difficult to create solid controlled studies due to the all encompassing nature of the theories.

- Current research at odds with itself.

- Most research points to the compost itself as a likely source of the benefits of biodynamics.
BIODYNAMICS
THE FARM AS AN ECOSYSTEM
FLIGHT #1
As of 2012 94% of New Zealand Wines were certified sustainable. 7% were also certified organic.

Goal is to be 100% sustainable and 20% organic by 2020.

Government supported not mandated.
WINES FLIGHT #1

- Mondillo Pinot Noir, Central Otago, 2010
- Felton Road Bannockburn Pinot Noir, Central Otago, 2012
- Kim Crawford Pinot Noir, Marlborough, 2013
- Mud House Pinot Noir, Central Otago, 2013
FLIGHT #2
FLIGHT #2 LOIRE VALLEY CHENIN BLANC

• Loire valley is a large and very traditional wine region.

• Home to one of the most iconic of Biodynamic Producers Nicolas Joly and Coulée de Serant vineyard.

• Traditional agriculture is alive and well here both certified and non-certified.
FLIGHT #2 LOIRE VALLEY CHENIN BLANC

- Nicolas Joly Savennieres Les Vieux Clos 2010
- Domaine des Baumard Savennieres Clos du Papillon 2009
- Huet Vouvray Clos Bourg Sec 2012
- Champalou Vouvray 2013