Biodynamics

Biodynamic Grape Growing

Washington Tilth November 12th 2017





SPIRIT

Through awareness, practice and intuition we connect with the spirit of a place.

WORKING WITH THE RHYTHMS OF NATURE

All plants evolve with an intimate connection to their environment, including the movement of the sun, the seasons and lunar cycles.

BIODYNAMIC PREPARATIONS

The eight preparations regulate and stimulate the life processes in plants and grapevines, connecting them to a site.

CLOSED NUTRIENT SYSTEM

All organic waste is recycled through composting, encouraging the growth of indigenous yeasts and bacteria that ultimately contribute to farm individuality.

SELF-REGULATING SYSTEMS

A healthy and diverse habitat of plants, animals and micro-organisms leads to a self-regulating system of predator/prey relationships, honoring the idea of reciprocal maintenance.

BIODIVERSITY AND ESTATE FARMING

Cultivation of a polyculture in and around the vineyards is as important as healthy grapevines.

This diversity is reflected in the individuality of the wine.

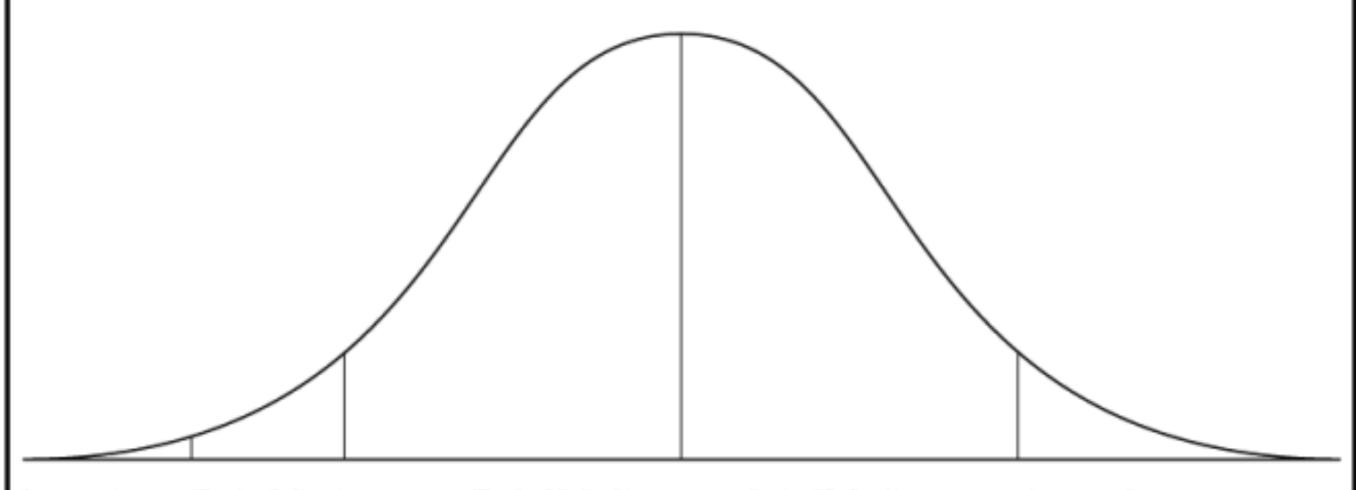
PERSONAL CONNECTION TO THE LAND, OBSERVATION, ANTICIPATION

A deep, personal relationship with the land heightens our ability to anticipate and avoid problems in the vineyard while encouraging conditions that promote quality.

Diffusion of Innovations

The Technology Adoption Curve

As captured by Everett Rogers in his book Diffusion of Innovations, people tend to adopt new technologies at varying rates. Their relative speed of adoption can be plotted as a normal distribution, with the primary differentiator being individuals' psychological disposition to new ideas.



Innovators

(2.5%) are risk takers who have the resources and desire to try new things, even if they fail.

Early Adopters

(13.5%) are selective about which technologies they start using. They are considered the "one to check in with" for new information and reduce others' uncertainty about a new technology by adopting it.

Early Majority

(34%) take their time before adopting a new idea. They are willing to embrace a new technology as long as they understand how it fits with their lives.

Late Majority

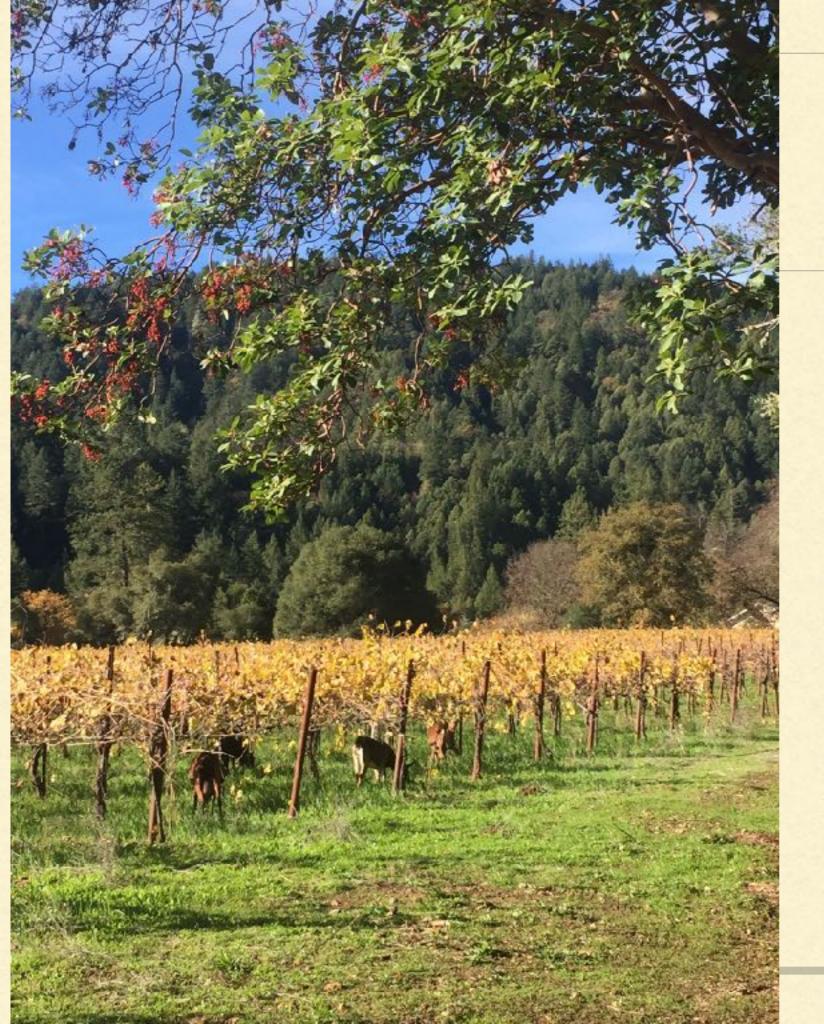
(34%) adopt in reaction to peer pressure, emerging norms, or economic necessity. Most of the uncertainty around an idea must be resolved before they adopt.

Laggards

(16%) are traditional and make decisions based on past experience. They are often economically unable to take risks on new ideas.







- -Frey Vineyards joined CCOF (California Certified Organic Farmers) in 1980.
- By 2008 they sourced fruit from 30 different growers, many they helped to Organically certify their property.
- Out of the 1000 acres
 on the estate, only 100
 are planted for a 90%
 Biodiversity to
 production ratio

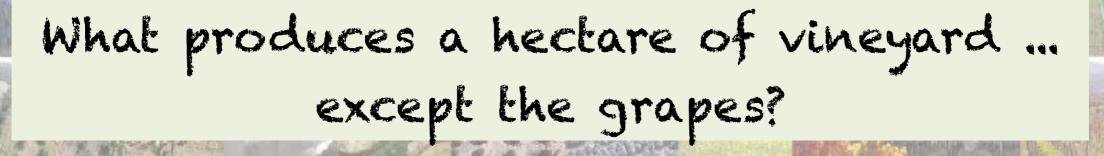












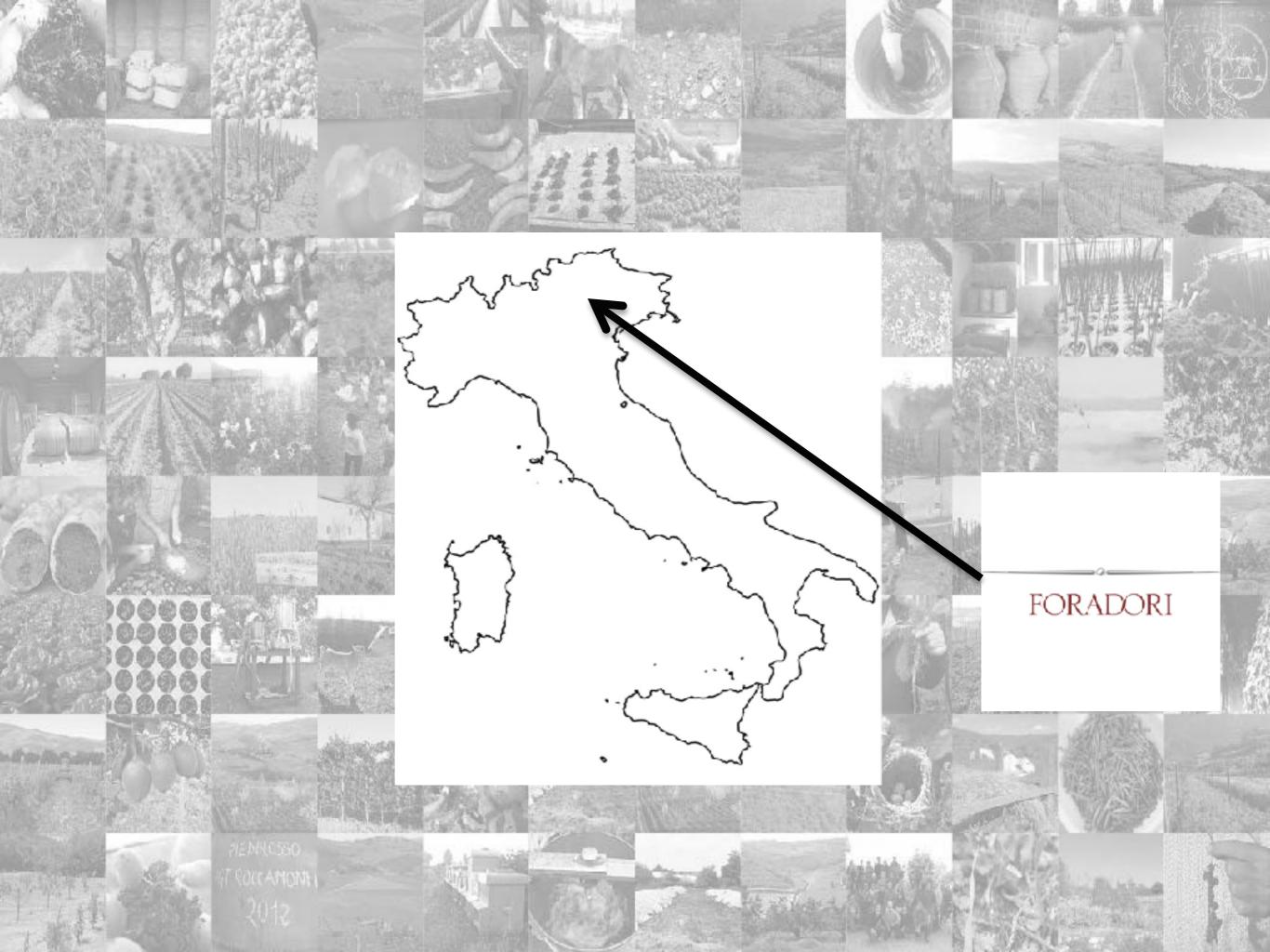
2,5-4,5 T of pruning wood

2-6 T Leaves

2-4 T marc/pomace

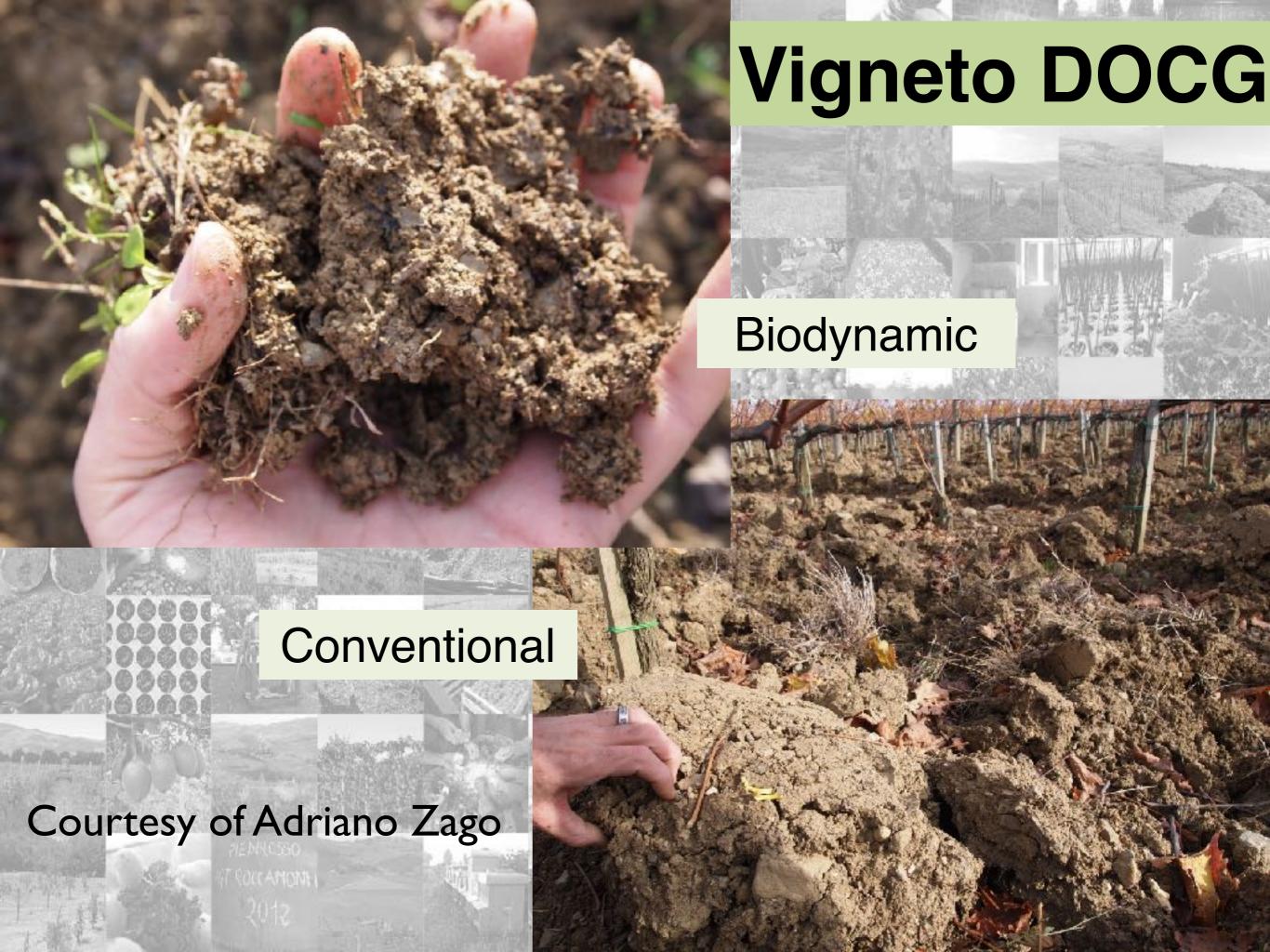
1 T di grapes stalk

In total about 6-15 T biomass from which we can have: 1-2 T of mature compost per ha



































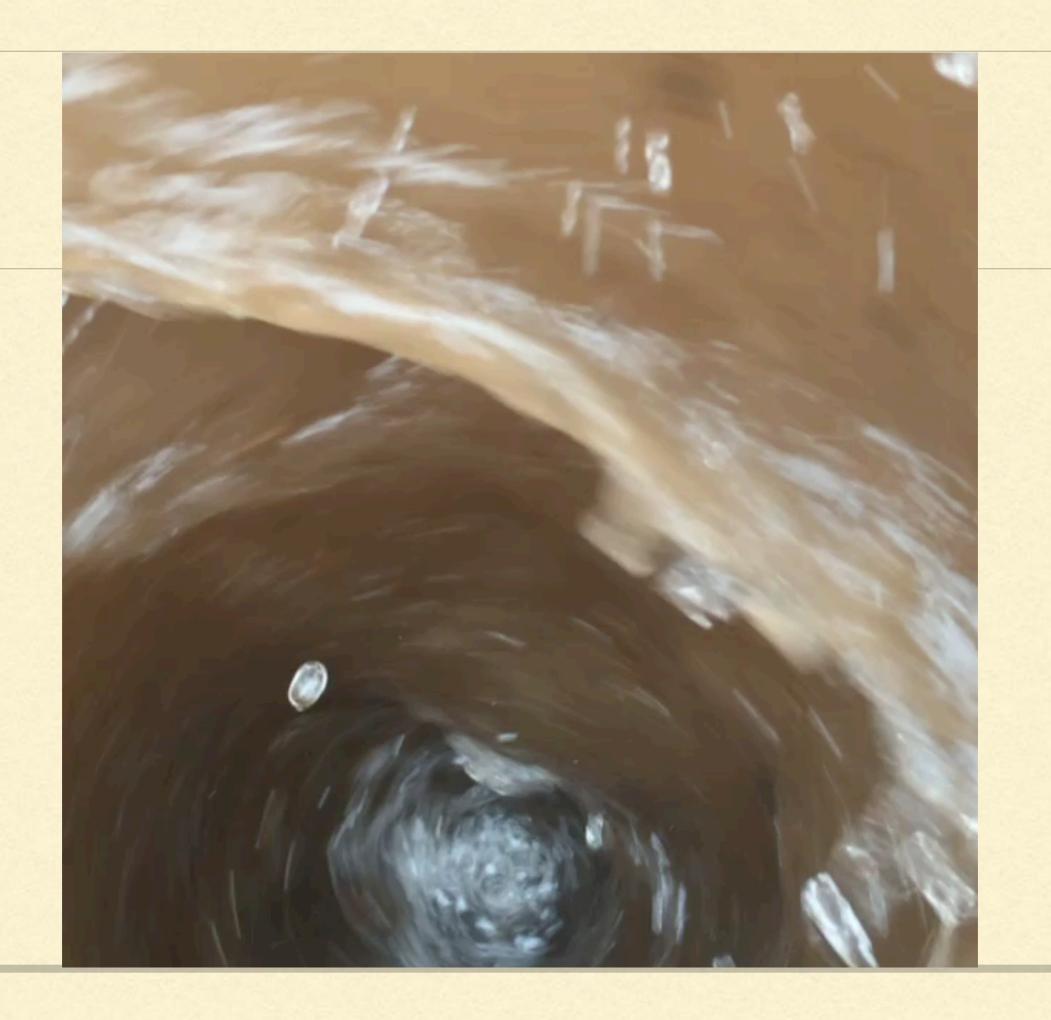








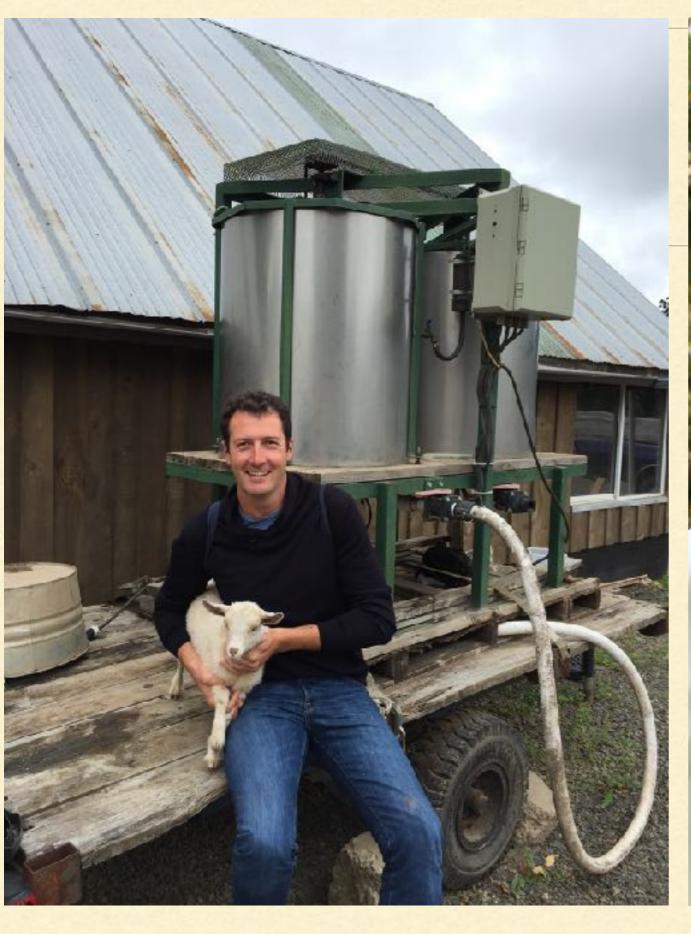
VIX anchor-BK 3 Row #1 500/tea 501 501 - Aug 11 - Whites Oct 11-13 Aug 29-Sept & - optimil rid Sept 11 Sept 11 Oct 20-22 Nov 7-9 Nov 17-18 Sept 26 DUM Oct 9



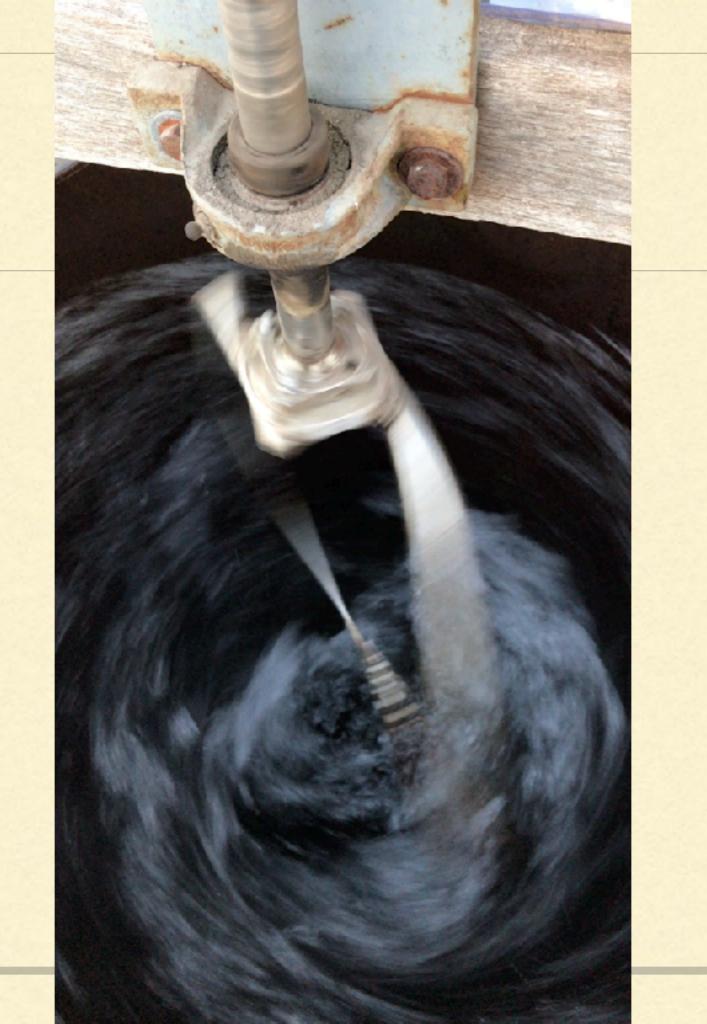
















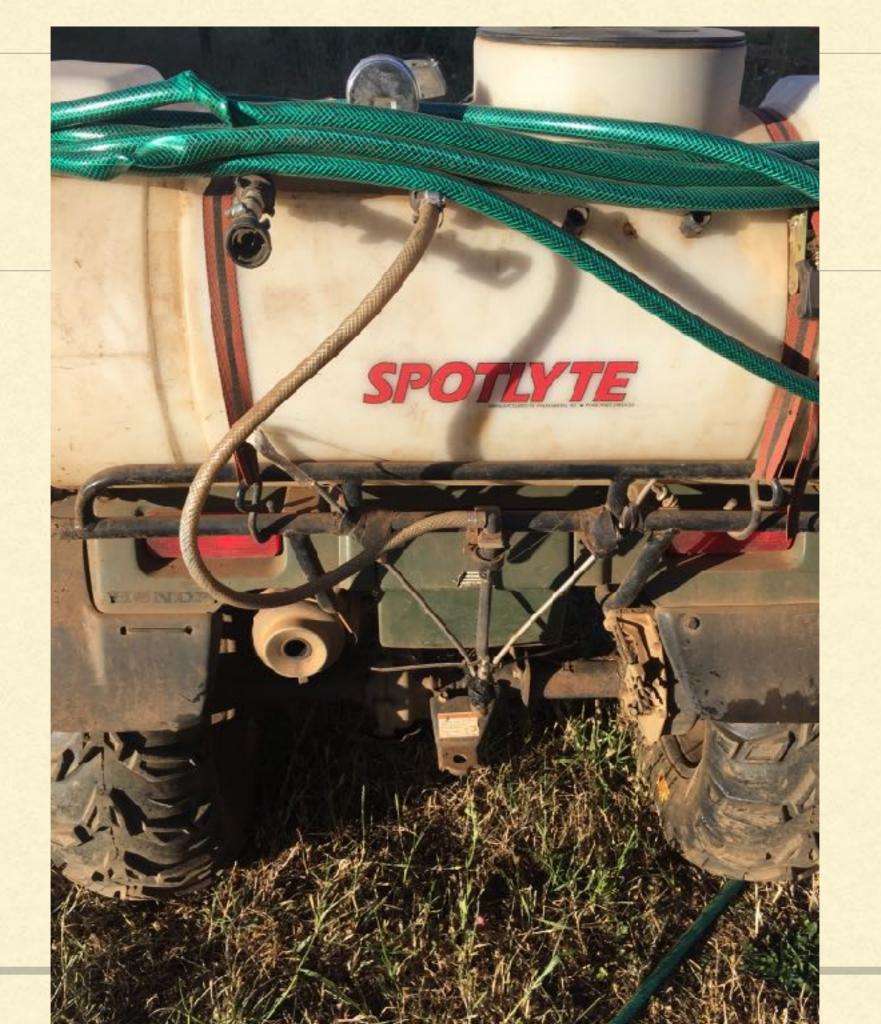
Biodynamic Equisetum Preparation (508)

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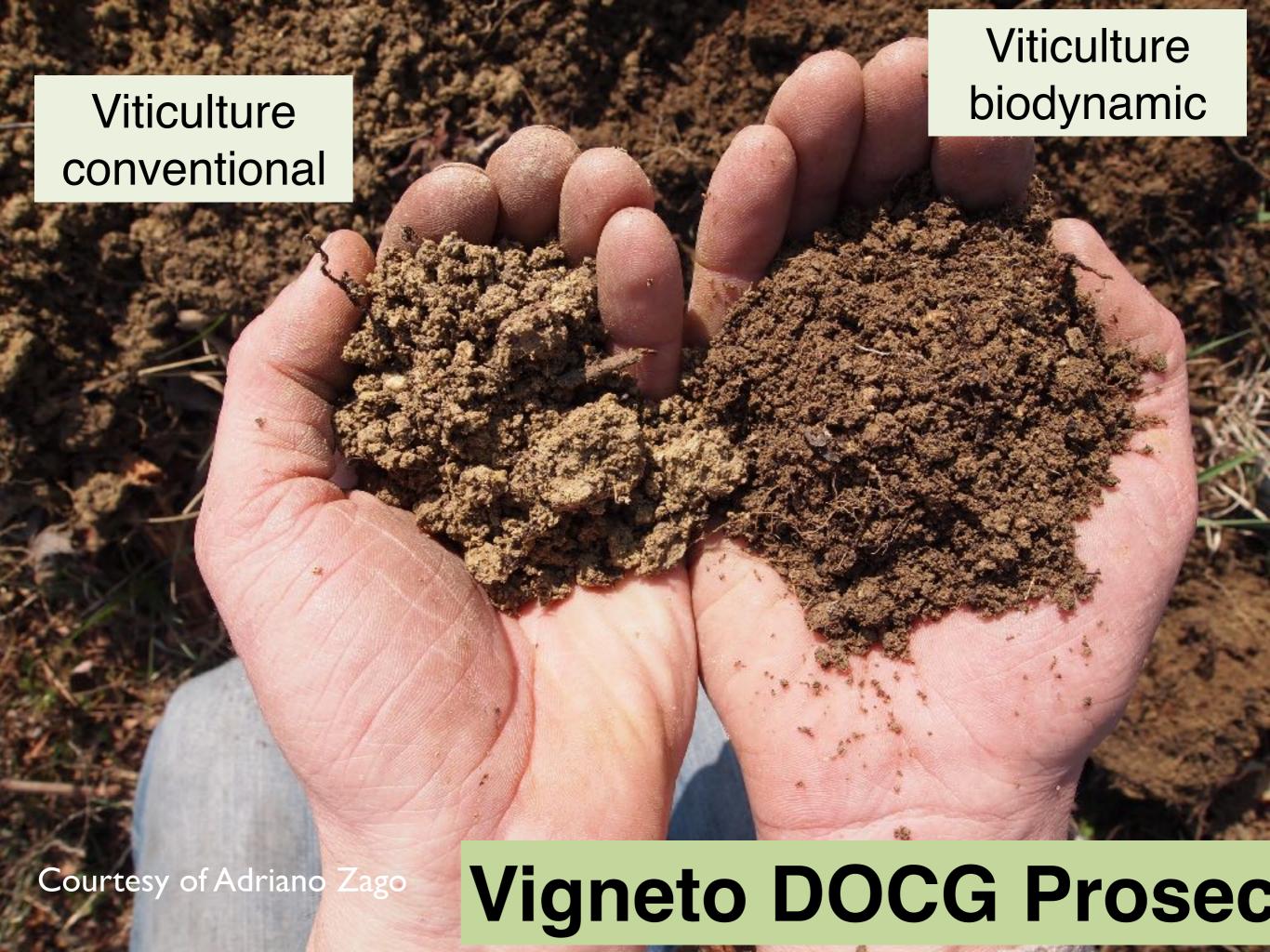
The fresh 508 tea is the form suggested for use as a foliar spray to control fungus.

The fermented 508 tea is mostly suggested for use as a soil spray to prevent fungus. Either form has both preventative and prophylactic properties.



501 Distribution





YAN = YEAST ASSIMILABLE NITROGEN

Low must YAN leads to low yeast populations and poor fermentation vigor, increased risk of sluggish/stuck/slow fermentations, increased production of undesirable thiols (e.g. hydrogen sulfide) and higher alcohols, and low production of esters and long chain volatile fatty acids.

High must YAN leads to increased biomass and higher maximum heat output due to greater fermentation vigor, and increased formation of ethyl acetate, acetic acid and volatile acidity. Increased concentrations of haze-causing proteins, urea and ethyl carbamate and biogenic amines are also associated with high YAN musts. The risk of microbial instability, potential taint from Botrytis-infected fruit and possibly atypical aging character is also increased.

Intermediate must YAN favors the best balance between desirable and undesirable chemical and sensory wine attributes. (3)

http://gwi.missouri.edu/publications/enology-news-winter-2014.pdf



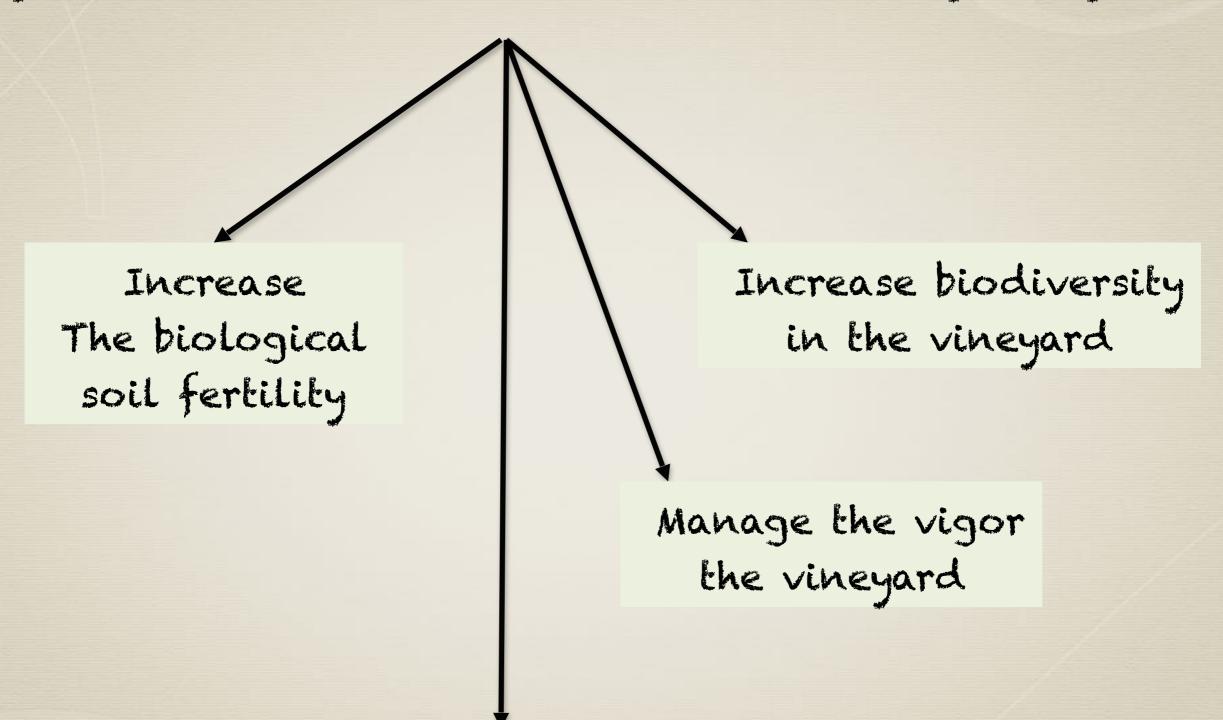
Steiner's design during the Course for farmers, 8 conferences

The plant communicate with each other through roots and radical ambience.

The diversity and complexity of the system lead to balance, stability, durability.

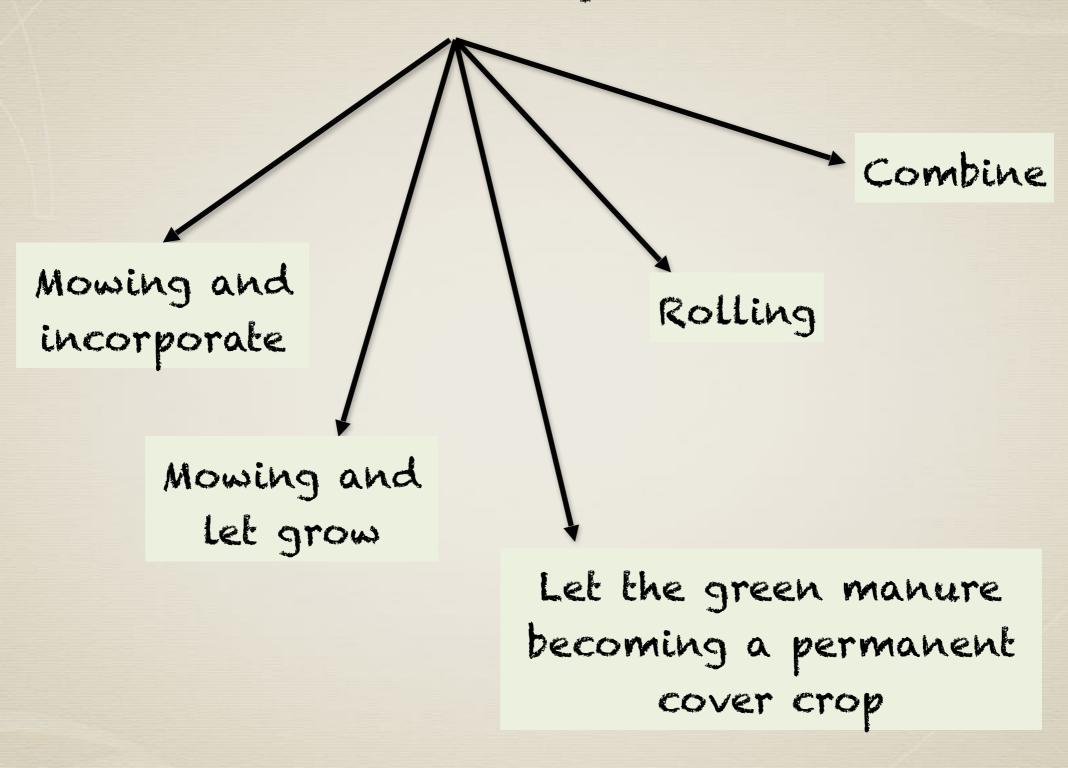
Also for this reason a large biodiversity in the vineyard is important for the vine's roots.

Why do I want to grow green manure in my vineyard?



Increase the rate Of organic substance

How can I manage my green manure?

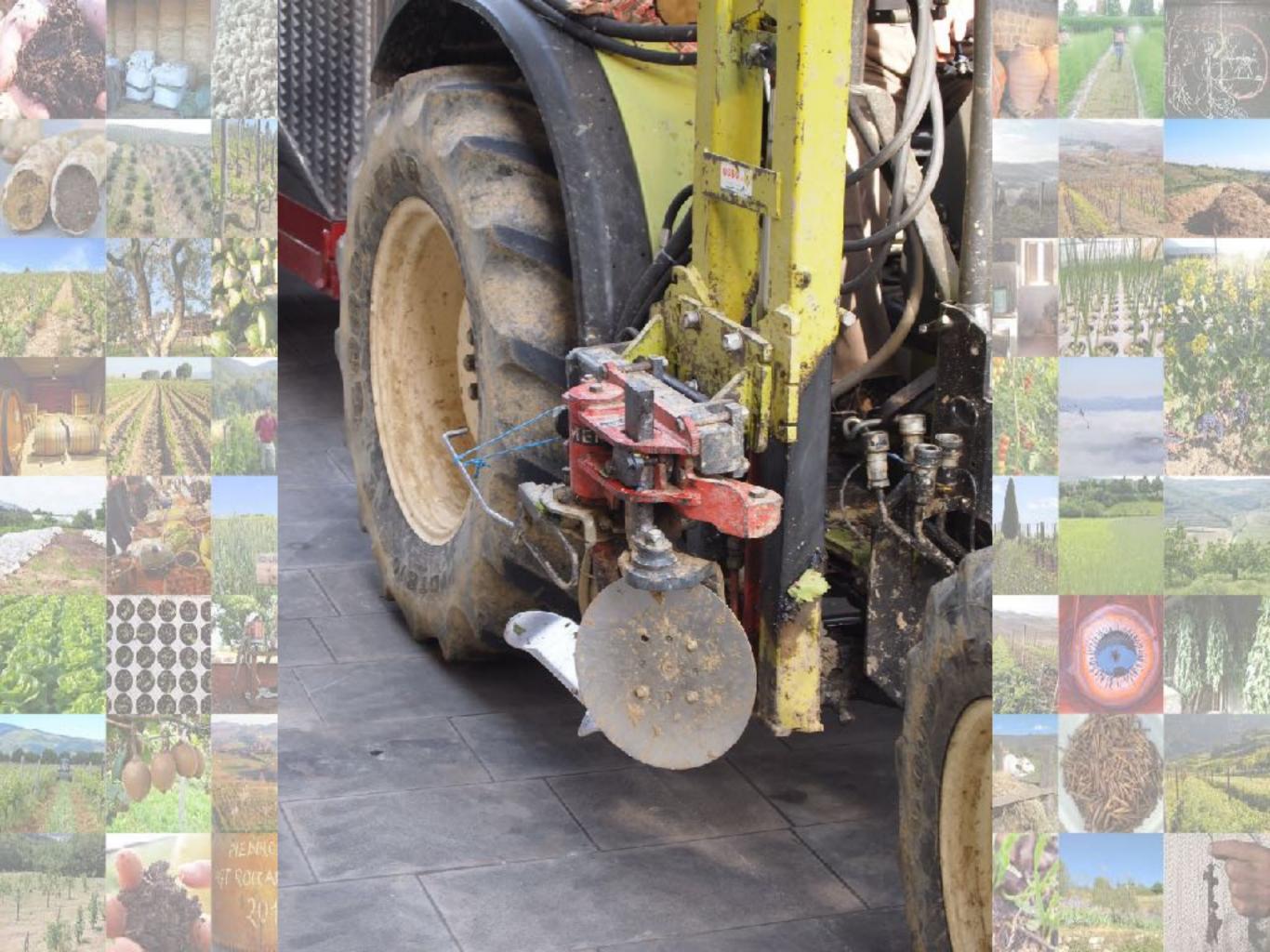






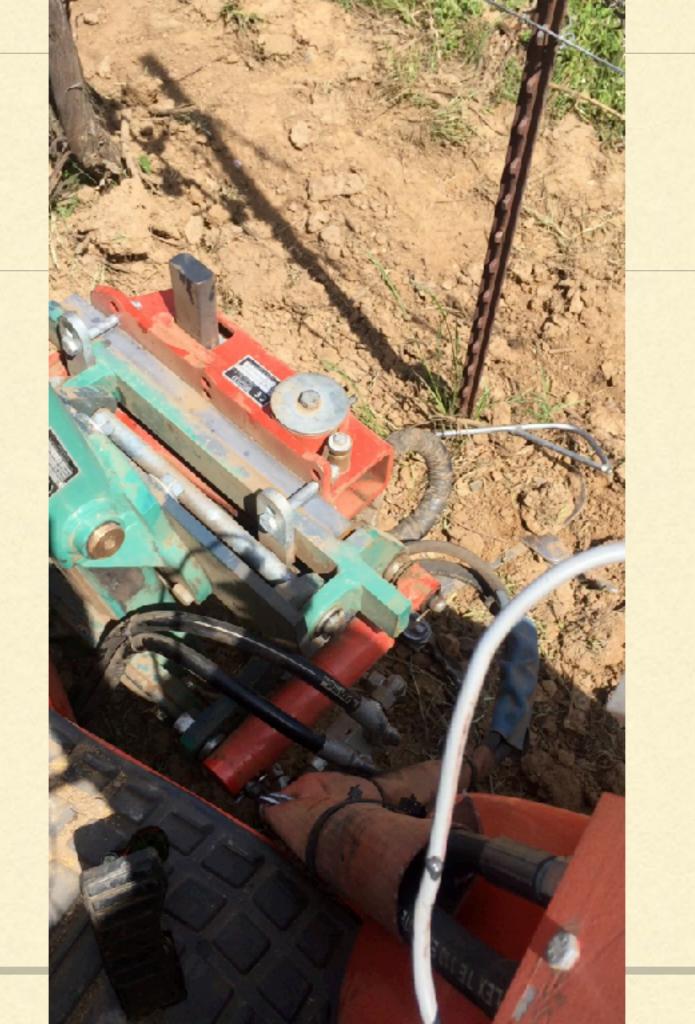






















Unconventional Farm Supply and Services LLC.



