Grgich Hills Estate

Economics of Organic Viticulture

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Grgich Hills Estate Vineyards

5 Vineyards, 366 Acres, 100% Estate Grown

Farming Practice	Started in
Organic	2001
Biodynamic	2003
Regenerative	2019

Conventional vs Organic/Regenerative

	Conventional Farming	Regenerative Organic
	Oversimplification of Complex System	Based on an Agro-Ecological Orientation
Chemical use	**Intensive** use of pesticides, herbicides and fertilizers	**Minimal**, Only Organic Products
Use of External Resources	"**Subsidizing**" nutrients through chemical fertilizers →High input	**Cycling** nutrients within the farm; predominantly farm produced materials →Low input
Soil Preparation	**Extensive** Plowing and Tilling	**No/Minimal** Soil disturbance
Weed Control	**Chemical** Herbicides and mechanical weeding → **Huge Oportunity Cost!**	(**Crop Rotation**) Considered Companion Plants, Essential, provide service while alive and when dead as mulch layer.
Pest control	**Chemical** Pesticides	**Biological** control, competition, predation
Long Term / Sustainability	Using up soil fertility (**Soil mining**) resulting in OM degradation, Soil loss, Water pollution and loss of biodiversity	**Conservation** of soil fertility, Organic Matter, Microbiome, water quality and agroecosystem diversity.
Cost	**Expensive** due to High Input Costs	**Lower costs**, Low input and using farm-based resources

= **Savings & Optimization of Resources**

Our Regenerative Practices

- Living roots → Diverse Cover Crop
- Minimal Soil Disturbance / No-Till
  - Sheep Grazing
  - Crimping / Mowing
- Keep Soil protected
- Biodiversity
  - Natural enemies and competition
  - Reduced pesticides + Use Natural Products
- Animal Integration

Three claims of apprehension for converting to organic growing ("Myths")

1. "Weeds" compete with vines
2. Ineffective at controlling Pests or Disease
3. Produces a lower yield
4. Too expensive to maintain

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Companion plants feed vines and improve soil

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Higher Diversity Above and Below Ground
→ Competition and predation
→ Disease suppressive soils
Better nutritional and water status of the vines

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Organic Grape yield

Chardonnay yield

Year	Chardonnay Yield (Tons/Acre)	
	Napa Avg.	Grgich Hills Avg.
2016	4	3.2
2017	3.2	2.3
2018	4.6	4.5
2019	3.5	4.8
2020	2.3	2.5
2021	2.4	3.1
2022	2.4	3.1
2023	-	3.4
2024	-	2.9
AVERAGE	**3.20**	**3.31**

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Soil Cover Management

2024	
Mowing Event	**Cost**
Sheep Grazing	$100 per acre
Tractor Mowing/rolling (2 times)	$64 per acre
Shovel Pass/Hand Mower (1 time)	$85 per acre
Total Cost:	**$249 per acre**

We are working toward a cover crop that grows low and tight, so mowing becomes unnecessary.

Total Faming Cost and Vineyard Longevity

Age	# of Acres	% of all Chardonnay Vines
< 5 years	5 acres	4%
14 years	13 acres	12%
23 years	54 acres	21%
33 years	40 acres	36%
	112 Acres Total	

Total Faming Cost and Vineyard Longevity

	Yearly Farming Cost per Acre	Yearly Depreciation of Vineyard per Acre
Napa Valley Average	$15,000	$3,800
Grgich Hills Average	$11,000	$1,300

“Intangible” Benefits

- ***“something that exists but that cannot be touched, exactly described, or given an exact value”***
- **Higher nutrient density = Higher quality grapes**
- **Improved customer perception**
- **Health and wellbeing of farm workers.**

Thank You