

Wine Grape Vineyard Protocol

Regenerative soil health for established vineyards. Improve water-use efficiency, nutrient uptake, and fruit quality by rebuilding fungal-leaning soil biology—without pushing excessive vigor.

The Vineyard Advantage

Great wine starts in the soil. When vineyard biology is weak, vines have to work harder for water and nutrition, and fruit quality becomes less consistent. This protocol rebuilds the biological foundation that supports terroir expression.

15–20%

WATER REDUCTION*

40+

YEAR VINE LIFESPAN

+40%

INFILTRATION

+2–3°

BRIX POTENTIAL

*Targets depend on soil type, irrigation system, and management. Results vary by site.

Program Objectives



Soil Structure

Improve aggregation, reduce compaction, and increase infiltration



Water Efficiency

Better soil water-holding and smarter irrigation outcomes



Nutrient Efficiency

Unlock nutrients and support uptake without excess inputs



Fruit Quality

Support Brix, tannin development, and consistency

Expected Performance Improvements

Yield Stability

More consistent

Brix Potential

+2–3°

Soil Organic Matter

Up

Infiltration

+30–45%

Plain-English Summary: This protocol builds soil that feeds vines better. When soil biology thrives, vines handle stress better and express more terroir in the fruit.

The Biology Protocol

Wine grapes thrive in fungal-dominant soil. This protocol builds a fungal-leaning biology that regulates growth and improves fruit quality—without increasing excessive vigor.

~1.5:1

FUNGAL : BACTERIAL

AMF

MYCORRHIZAE TYPE

Regulate

NOT FORCE

Year 1: Three-Step Foundation

1

Banded Compost (Under Vine)

Light stabilized compost band in the vine row to build carbon and biology.

2

Woody Carbon Cover

Clean woody fiber or prunings to protect fungi and reduce evaporation.

3

Extract Program (2-3x / Year)

Fungal-leaning compost extract through drip/micro at key timing.

What This Avoids: Excess nitrogen stimulation, bacterial-dominant teas, unnecessary disturbance, and incompatible mycorrhizal products.

Expected Outcomes

Balanced Vigor

Not excess growth

Water-Use Efficiency

15-20%

Program Components



Implementation Timeline



Application Rates & Methods

| COMPONENT | YEAR 1 | MAINTENANCE | APPLICATION METHOD |
|-------------------|----------|-------------|---|
| Compost Blend | ½–1" | Top-up | Banded in vine row (under vine) |
| Woody Carbon | 2–4" | Top-up | Breathable woody layer to protect fungi |
| Extract Drench | 3x | 2–3x | Drip/micro: early season, fruit set, pre-veraison |
| Mycorrhizae (AMF) | Seasonal | As needed | Applied through irrigation or watered in |
| Bucchas Blend | Targeted | Targeted | Micronutrient support based on tissue/soil tests |

Simple rule: Wine grapes don't want force — they want balance. This program uses biology to regulate, not accelerate.

Rates customized by soil test, irrigation water quality, and vineyard conditions.

Capital Investment

This is an investment in fruit quality and vineyard longevity — the foundation of premium wine production.

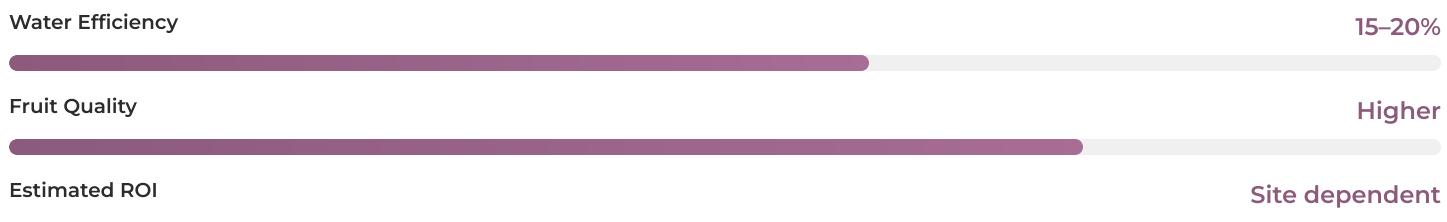
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|  Soil Asset Value Build long-term fertility and land value. |  Fruit Quality Support Brix, tannin structure, and consistency. |
|  Water Security Reduce irrigation dependency through better soil function. |  Vineyard Longevity Designed for long-term stability and resilience. |

Projected 5-Year Snapshot

| METRIC | BASELINE | YEAR 3 | YEAR 5 |
|---------------------|----------|-----------|-----------------|
| Water Use (example) | 100% | 85–90% | 80–85% |
| Soil Organic Matter | Low | Up | Up |
| Fruit Quality | Variable | Improving | More consistent |
| Vine Resilience | Variable | Improving | Higher |

*Illustrative snapshot. Actual results vary by site conditions, weather, and management.

Key Performance Indicators



Management Philosophy: Wine grapes don't want force — they want balance. This program uses biology to regulate, not accelerate.

CONTACT

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