REGENERATIVE ORCHARD PROTOCOL

SOIL SEED & WATER

SOIL HEALTH & CONSERVATION

Arizona Citrus Grove Protocol

Regenerative soil health for established citrus groves. Improve water-use efficiency, nutrient uptake, and fruit quality while keeping trees balanced and productive.

ARIZONA CITRUS (ORANGE) GROVES

GROVE CONTEXT

The Citrus Opportunity

Citrus rewards consistency: steady moisture, steady nutrition, and steady soil biology. In arid and alkaline conditions, irrigation efficiency and micronutrient availability often become the limiting factors.

15–22%	50+	+30%	Quality
WATER REDUCTION*	YEAR GROVE POTENTIAL	INFILTRATION	PACKOUT + BRIX

**Targets depend on soil texture, water quality, and irrigation system. Results vary by site.*

Program Objectives

Water Efficiency

Better soil function so irrigation runs do more work

Nutrient Access

Improve uptake of micronutrients in alkaline soils

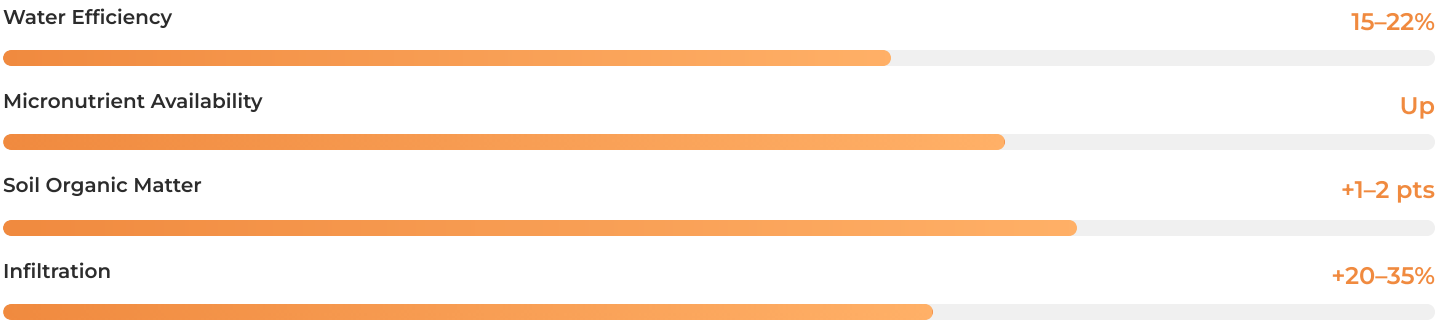
Soil Structure

Reduce crusting and compaction near the wet zone

Fruit Quality

Support Brix, peel quality, and consistent sizing

Expected Performance Improvements



> **Plain-English Summary:** We improve the root zone so trees can access water and nutrition more reliably. That usually shows up as steadier growth, fewer stress swings, and better fruit consistency.

SOIL BIOLOGY APPROACH

The Biology Protocol

Citrus performs best with a balanced-to- fungal soil biology. The goal is efficient roots and consistent fruit—without stimulating unnecessary canopy flush.

~1.2:1	AMF	Regulate
FUNGAL : BACTERIAL	MYCORRHIZAE TYPE	NOT “PUSH”

Year 1: Three-Step Foundation

1. **Compost Band (Under Canopy)**
   Stabilized compost to build carbon and improve wet-zone structure.

2. **Woody Carbon Cover**
   Thin woody layer to protect biology and reduce evaporation.

3. **Extract Program (2–3x / Year)**
   Balanced-to-fungal extract through micro/drip for root-zone support.

What This Avoids: Over-stimulating nitrogen, bacterial-heavy “growth” teas, and aggressive disturbance that breaks structure.

Expected Outcomes

More Consistent Fruit — Higher stability

Water-Use Efficiency — 15–22%

FIVE-COMPONENT SYSTEM

Program Components

01 Compost Blend

02 Woody Carbon

03 Extract Drench

04 Mycorrhizae (AMF)

05 Seriokai's Secret

Implementation Timeline

1

Foundation

WINTER–SPRING

2

Fruit Set Support

SPRING

3

Summer Balance

SUMMER

Application Rates & Methods

COMPONENT	YEAR 1	MAINTENANCE	APPLICATION METHOD
Compost Blend	½–1"	Top-up	Banded in wet zone under canopy
Woody Carbon	2–4"	Top-up	Under canopy, breathable layer
Extract Drench	3x	2–3x	Drip/micro: early season, fruit set, summer
Mycorrhizae (AMF)	Seasonal	As needed	Applied to wet zone, watered in
Seriokai's Secret	Targeted	Targeted	Micronutrients based on leaf/soil test (pH-aware)

Simple rule: Build biology and structure first, then fine-tune nutrition. Citrus responds best to consistency, not spikes.

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

INVESTMENT RATIONALE

Capital Investment

This is an investment in consistent root function and fruit quality — the foundation of packout and long-term performance.

Soil Asset Value
Build fertility that increases land value and productivity.

Production Capacity
Support consistent size, peel quality, and Brix.

Water Security
Better soil function means better irrigation efficiency.

Long-Term Stability
Less stress volatility and more predictable crop cycles.

Projected 5-Year Snapshot

METRIC	BASELINE	YEAR 3	YEAR 5
Water Use (example)	100%	86–90%	78–85%
Micronutrient Efficiency	Limited	Improving	Stable
Root Function	Variable	Improving	More stable
Fruit Consistency	Variable	Improving	More consistent

**Illustrative snapshot. Actual results vary by soil, water quality, climate, and management.*

Key Performance Indicators

Water Efficiency — 15–22%

Nutrient Efficiency — Higher

Estimated ROI — Site dependent

Management Philosophy: Citrus doesn't want "more" — it wants consistent. This program uses biology to stabilize and regulate the system.

CONTACT

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