

DPH

Biologicals™



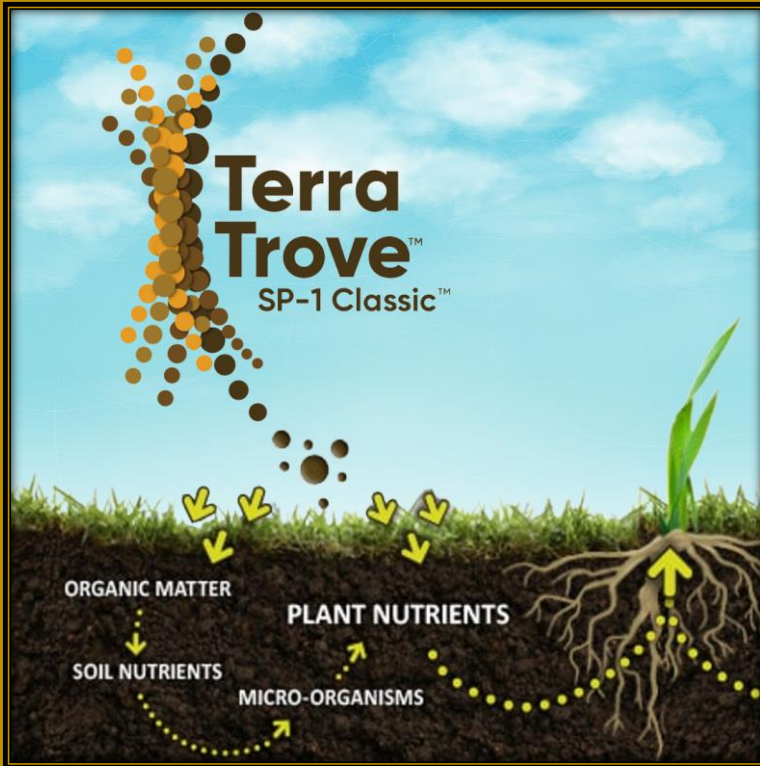


**Terra
Trove™**
SP-1 Classic™



Making Biology Work

TerraTrove™ SP-1 Classic™

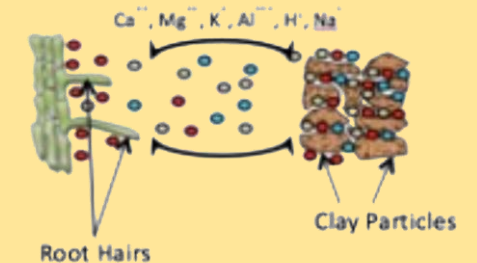


The Complete BioFertilizer

Liquid biofertilizer comprised of a diverse community of Microbes, Plant Based Humus Extracts and Algae, that work together to improve soil structure, make more nutrients available and ultimately increase yield.

1. Proprietary Plant-Based Humus Extract Creates an Ecosystem for Water, Nutrients and Microbes, building a symbiotic environment that is conducive to the exchange of essential nutrients, ultimately attaching them to the roots for uptake.

Humus Extract Improves CEC



2. Plant Growth Promoting Rhizobacteria (PGPR) - Free-living bacteria that colonize the Rhizosphere, breaking down organic matter, fixing Nitrogen, solubilizing phosphorus and cycling nutrients to become more available for the plant.

Consortium of Microbes including PGPRs



3. Algae – Green Manure which quickly breaks down and releases Nitrogen into soil becoming a Food Source for the Microbes & as well as the Plant

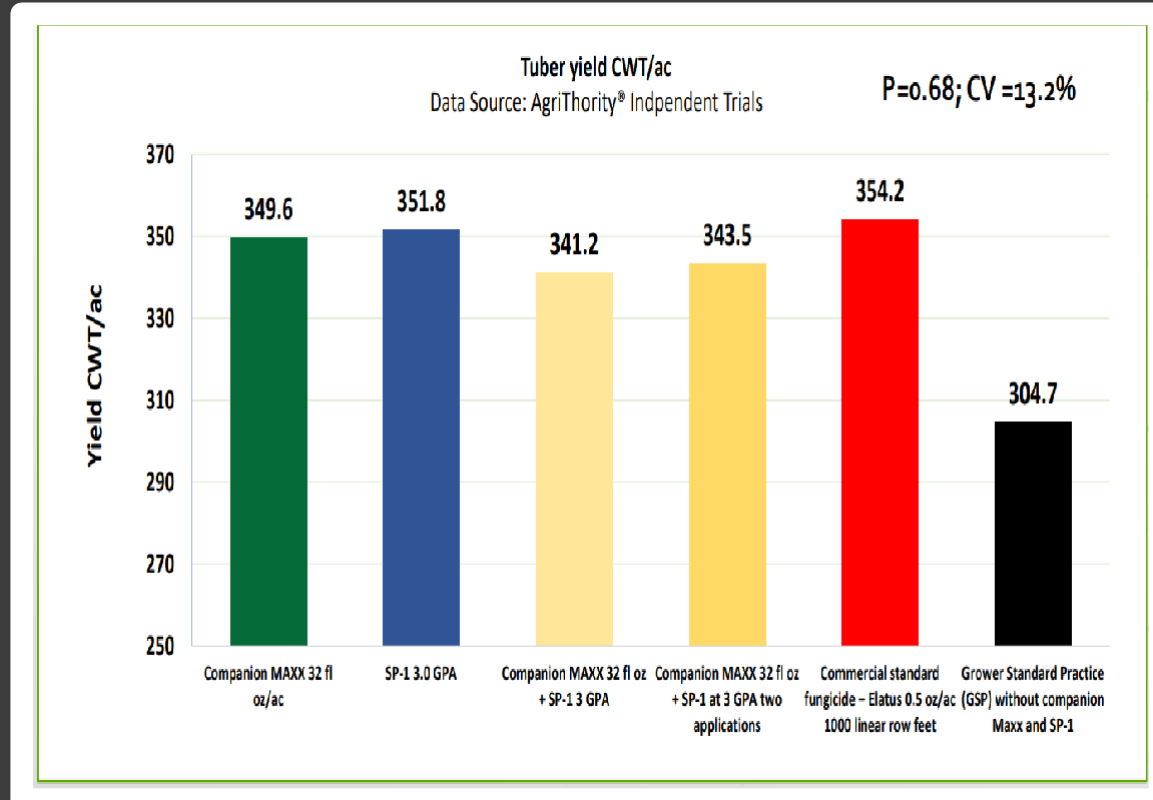
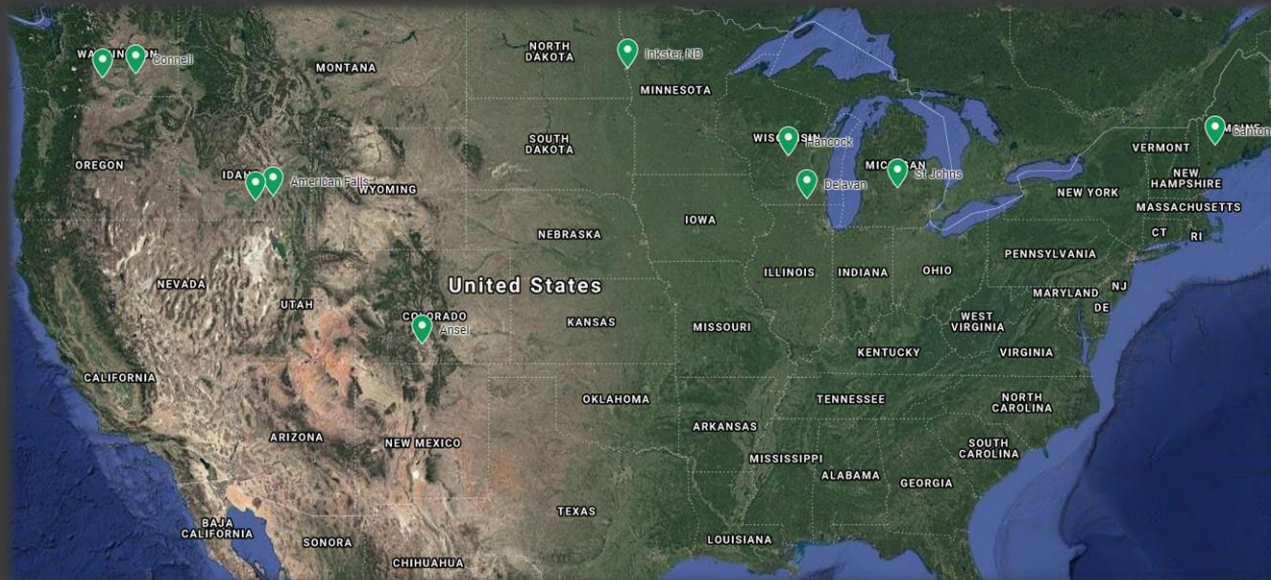
4. Fermented Plant Extract - Diverse blend which impact microbial diversity and stabilize overall formulation.

SP-1 Microbiology Functionality

Nutrient	% Functionality
N Release	75%
P solubilization	36%
K solubilization	36%
Fe	95%
Zinc	56%
Mn	94%
S	99%
Ca	64%
Mg	64%

SP-1 utilizes multiple microorganisms (both bacterial and fungal) to support plant nutrition. This table outlines what percentage of organisms contribute to specific nutrient cycling.

SP-1 Shows Exceptional Performance on Potatoes



- Up to 20% yield increase and improved quality in potatoes
- Able to harvest faster and soil comes off much easier, resulting in less transportation of dirt and a higher ROI



TRIAL DETAILS

Product: SP-1

Crop: Potato

Location: Eltopia WA

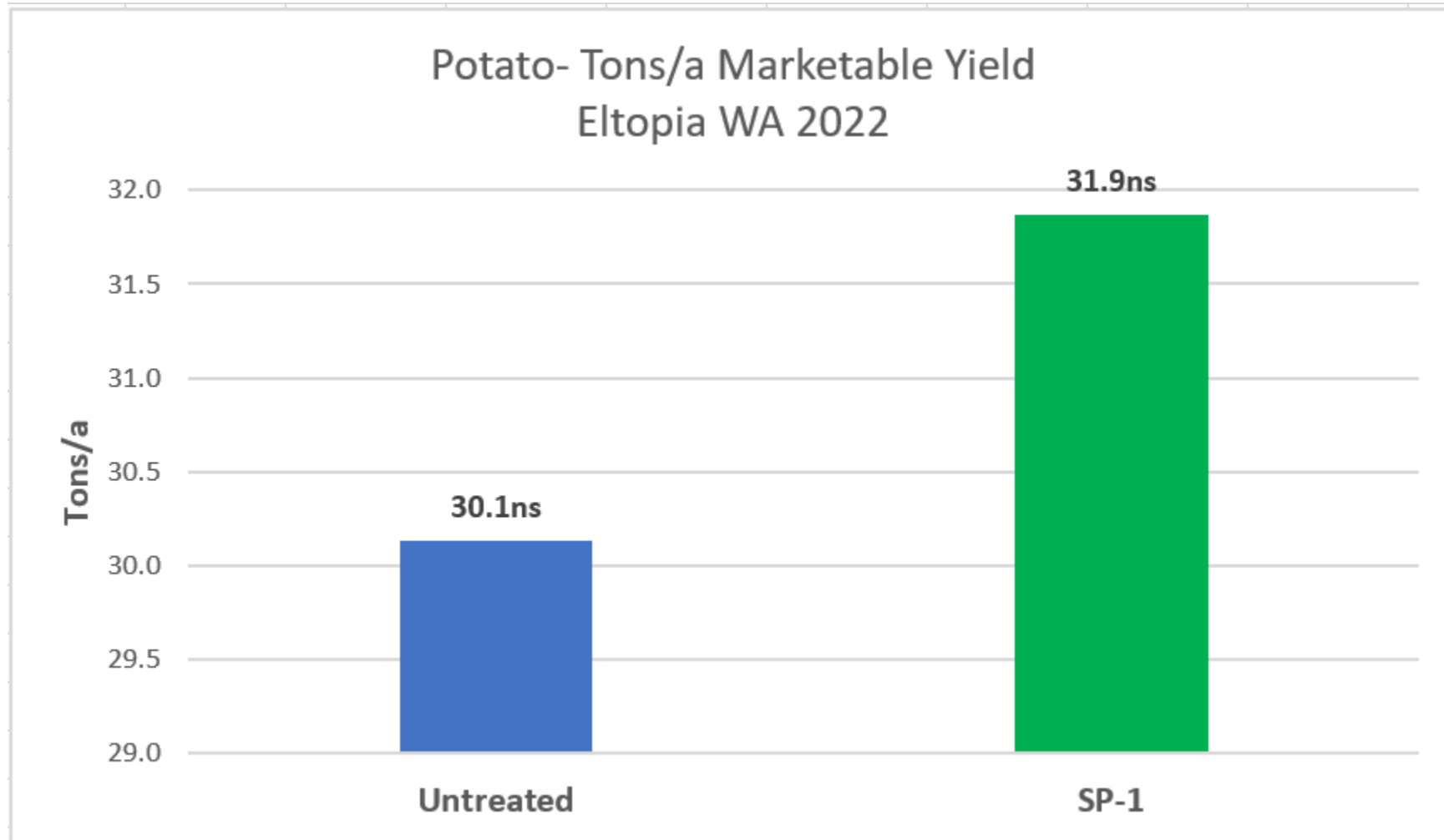
Objective: Evaluate effect of SP-1 applied @ 3 gal/acre at planting on marketable tuber yield

Cooperator: Hatton Farms

Trial #: SP-1-998-WA-22

RESULTS:

SP-1 treated potatoes had 1.7 more Tons/acre marketable yield than untreated grower standard



Confidential

ns = not significantly different LSD: $\alpha=0.10$

TRIAL # SP-1-998-WA-22

Potato Results Balcolm & Moe 54

- SP-1 (north half of field:)
- Higher average specific gravity
- Higher field run yield (28.1 tons/ac versus 27.5 tons/ac., diff. of 0.6 tons/ac.)
- Higher percentage of marketable tubers (those greater than 4 oz.)*
- (SP-1 @ .9093% marketable versus UTC @ .8833%)
- Higher marketable = 1.26 tons more per acre

2022 Trial Summary

SP-1 in Blueberry

State: WA



TRIAL DETAILS

Product: SP-1

Crop: Blueberry

Location: WA

Objective: The purpose of this study is to evaluate Blueberries for their response to the DPH bio-fertility technology SP-1

Cooperator: Alan Schreiber

Trial #:

Treatments: 3

Design: Randomized Complete Block Design (RCBD) with 4 replications per treatment. 10 bushes per plot

Plot size: 30 feet by 10 feet

.Application: Irrigation injection

Agronomic practices: Standard regular irrigation, crop protection, and fertility practices.

Treatment #	Detail	Mode of application
1	SP-1 at 2.0 GPA at Bloom, Berry set, Post-harvest	Irrigation injection (Or Drench)
2	SP-1 at 4.0 GPA at Bloom, Berry set, Post-harvest	Irrigation injection (Or Drench)
3 (check)	No Fertility	



RESULTS: SP-1 on Blueberry- Eltopia WA

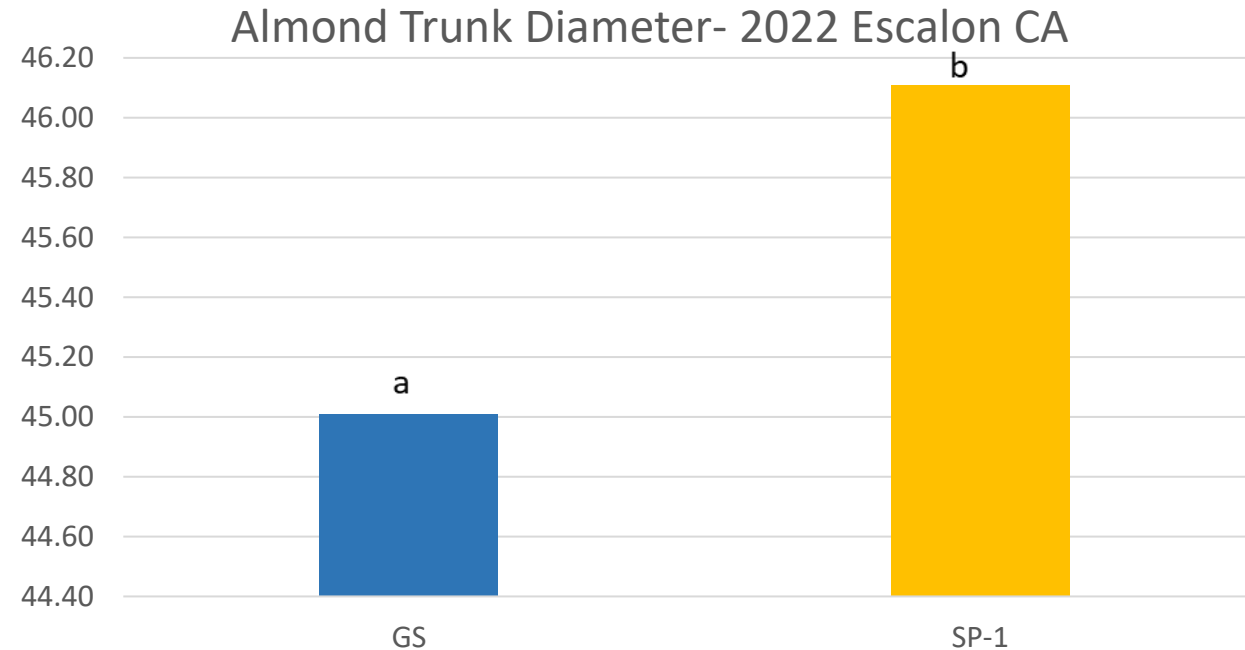


	7/21/2022	7/28/2022	8/4/2022
	Marketable yield	Marketable yield	Marketable yield
	tons/a	tons/a	tons/a
1 Untreated Check	5.42	5.49	2.28 -
2 SP-1 2gpa	6.29	5.62	2.08 -
3 SP-1 4gpa	7.74	5.08	2.79 -
LSD P=.10	1.497	1.42	0.516
Standard Deviation	2.123	2.014	0.732
CV	32.74	37.32	30.68
Grand Mean	6.483	5.397	2.386

SP-1 Almond Trunk Caliper Diameter

2022- Escalon CA

- One year old trees
- GS- Grower Standard check
- SP1- (5 gal/a applied 3X through micro emitter irrigation)
- Caliper measurements taken from 20 trees- 4 replications



Letter followed by different letter significantly different at $p= 0.20$

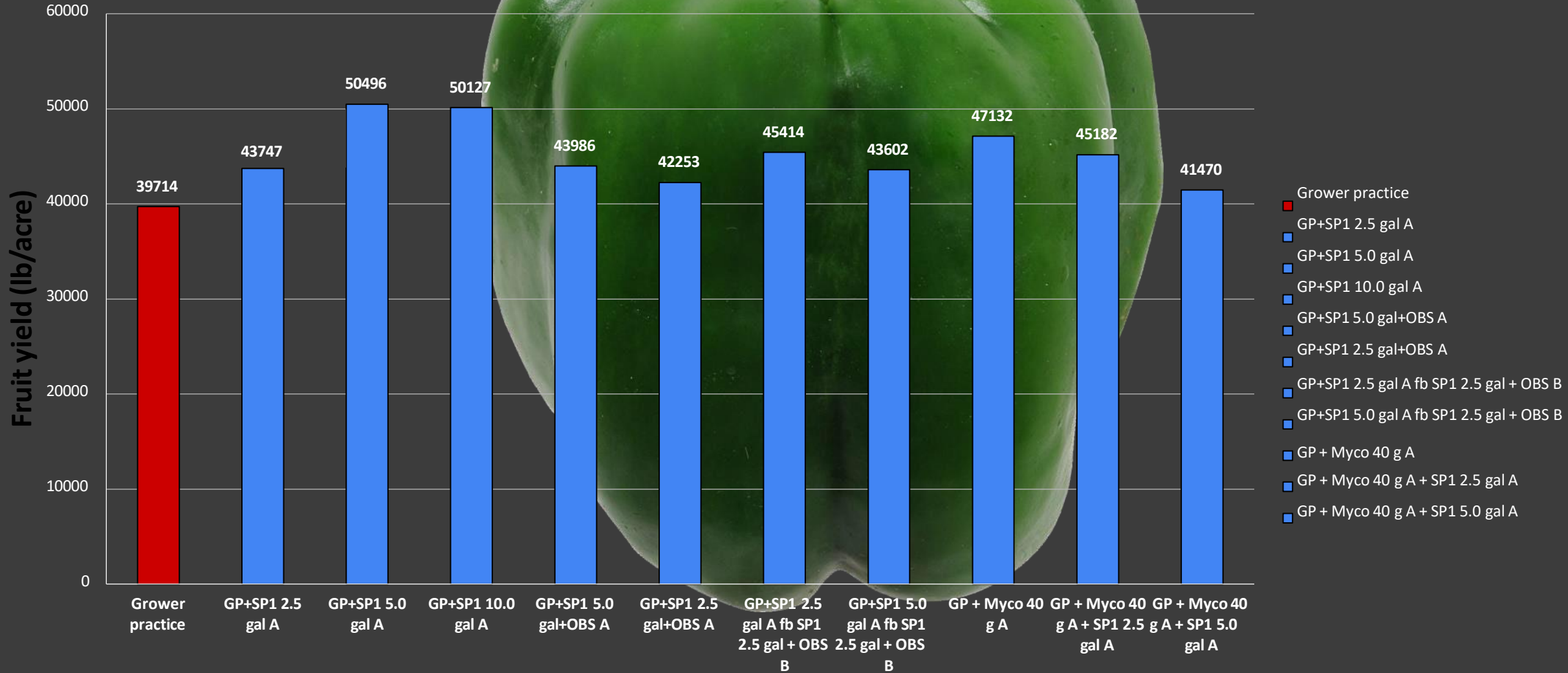
SP-1 Almond Trunk Caliper Diameter

- SP-1 treated trees had significantly larger trunk diameter than the Grower Standard
- A larger trunk may lead to an earlier fruit-bearing tree
- Healthy early development potentially results in stronger trees that have higher yields and net profit over the life of the trees.

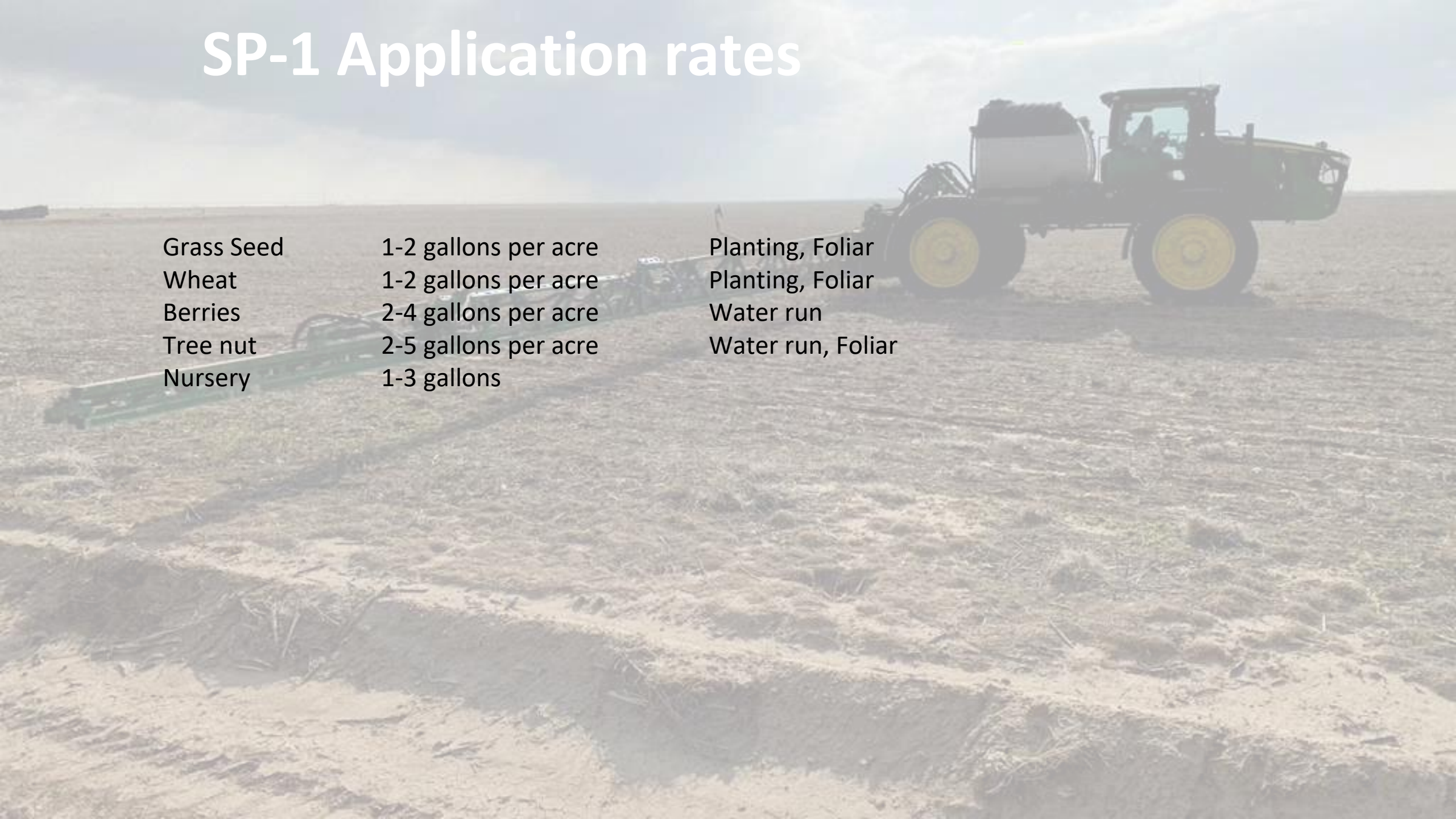
SP-1 Does Peppers!



Bell Pepper Yield, Florida, 2021



SP-1 Application rates

A tractor with a large white tank is pulling a long green agricultural implement across a field. The tractor is on the right side of the frame, moving towards the left. The field is a mix of brown soil and sparse green vegetation. The sky is overcast with grey clouds.

Grass Seed	1-2 gallons per acre	Planting, Foliar
Wheat	1-2 gallons per acre	Planting, Foliar
Berries	2-4 gallons per acre	Water run
Tree nut	2-5 gallons per acre	Water run, Foliar
Nursery	1-3 gallons	