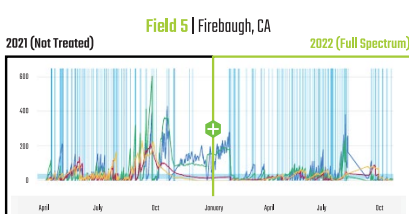
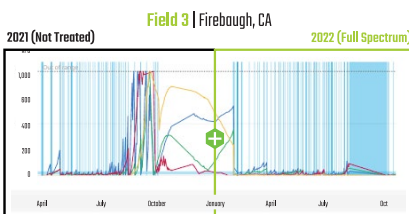
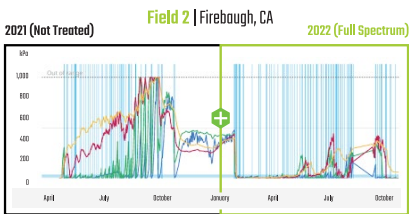
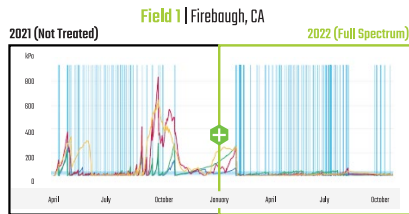
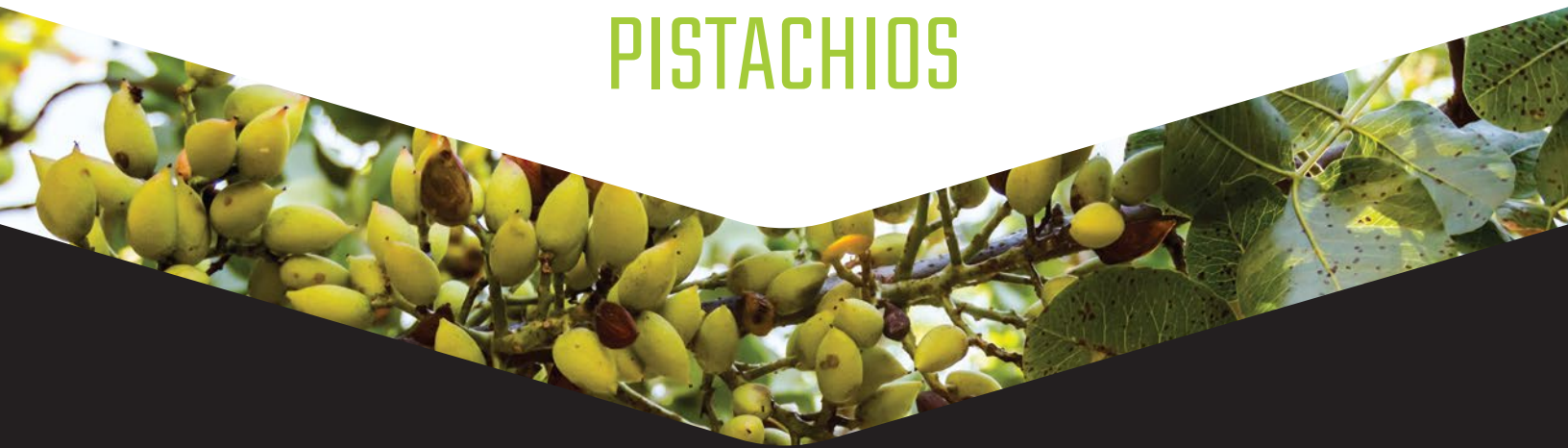




# COMMERCIAL TRIALS

## PISTACHIOS



## COMMERCIAL TRIAL | 1,300 ACRES PISTACHIOS

After a full season of applying a Penny Newman Full Spectrum program across 1,300+ acres of pistachios on the Westside of the San Joaquin Valley, several field tensiometer stations within trial area show a significant decrease in soil tension between 2021 season where gypsum was applied and 2022 season where Full Spectrum program was applied.

Decrease in soil tension means water is getting deeper through the soil profile allowing roots to push deeper, and salts to leach. Less salts in the root zone means more water and nutrients can flow into the crop.

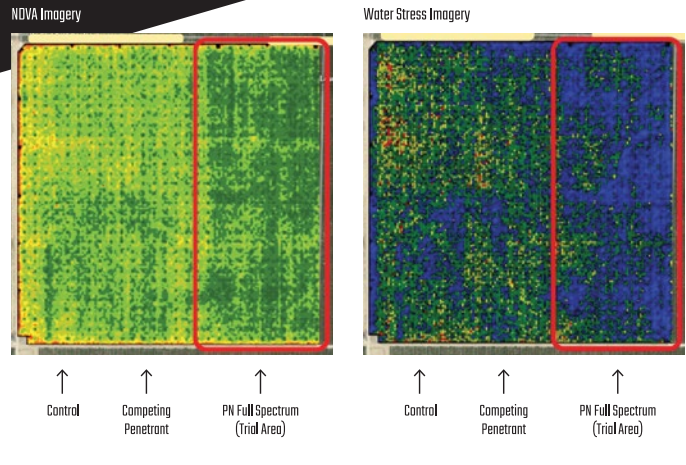
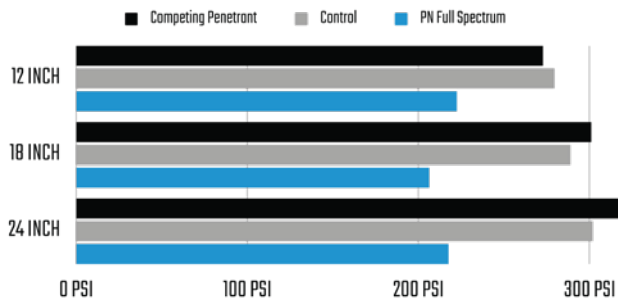
This reduced tension also enhances the environment for beneficial microbes to thrive and coupled with Full Spectrum's proprietary carbon source, the resulting decrease in compaction can sustain the larger population of soil biology. It truly is a Full Spectrum solution to improving soil health!

# COMMERCIAL TRIAL | 150 ACRES PISTACHIOS

Full Spectrum reduced soil compaction between 18-32% across three different soil depths vs control and competing penetrant!



Penetrometer Data Measuring Soil Compaction  
(Lower PSI Reading = Less Soil Compaction)



**Left Image:** Red Outlined area showing increase in NDVI canopy cover after first application of Full Spectrum C+P. More water and nutrients are getting to the trees!

**Right Image:** Red outlined area showing less water stress and more uniformity in the field. More water is getting to the trees!

These results were generated from a commercial trial where Penny Newman’s Full Spectrum was applied to 50 acres of pistachios on the westside of the Central Valley and compared side by side against 50 acres of a competing penetrant and 50 acres of untreated control. The grower took soil compaction measurements from 400 different data points on each block to replicate and reinforce these findings.

The first image shows NDVI imagery of the 150 acre trial site on which there is a clear and visible detection of increased canopy and chlorophyll content (vigor!) in the trees in addition to a visible reduction in water stress. The second image shows the significant decrease in soil compaction across three different soil depths (between 18-32%) that Full Spectrum was able to accomplish when compared against the competing penetrant and control.

We’re constantly vetting Full Spectrum against other solutions that are intended to enhance water delivery and improve soil structure and, so far, nothing has been able to hold a candle to its performance. We’re thrilled about these results and will continue sharing our findings from the field!

