

Almond Orchard Systems Research at Fresno State



FRESNO STATE

Jordan College of Agricultural
Sciences and Technology

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Almond Research Trials at CSU Campus:

- Ultra High Density Almond Orchard System
- Almond Rootstock Evaluation Trial
- Pruning Responses and tree architecture

FRESNO STATE

University Agricultural Laboratory

Current Production system: Issues

- 🌰 Inverted pyramid shaped tree > large volume of shaded canopy
- 🌰 Dust issues during harvest from orchard floor
- 🌰 Current cultivars with Bearing habit> On spurs



Almond Bearing Habit



Spur-type



Dard-type

High Density Plot: Objective

- 🌰 Upright growth habit
- 🌰 Self-fertile cultivar
- 🌰 Planted at 18 X 10 ft, 18 X 7 ft, 15 X 10 ft, 15 X 7 ft
- 🌰 Dard-type bearing habit
- 🌰 Central leader
- 🌰 Slender-pyramid type training



- 🌰 Better shake-ability?
- 🌰 Better light harvesting?
- 🌰 More yield due to closer planting?
- 🌰 Suitable for shake and catch dust free harvest?





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A sister trial plated in South Australia, June 2018



Almonds Down Under!

Rootstock Evaluation Trial, Planted March 2017



Comparison of two Cultivars

 Non-Pareil

 Monterey

on 7 different rootstocks:

 Nemaguard

 Lovell

 Guardian

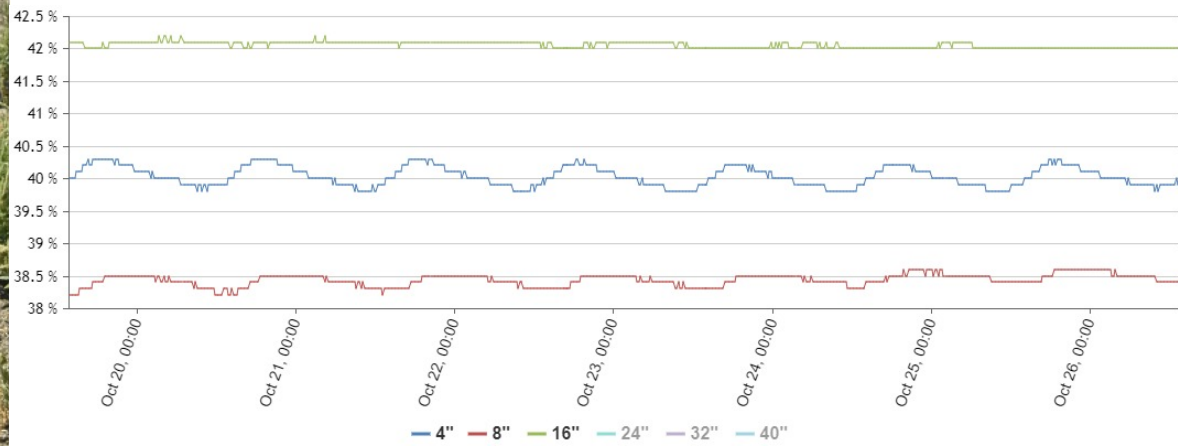
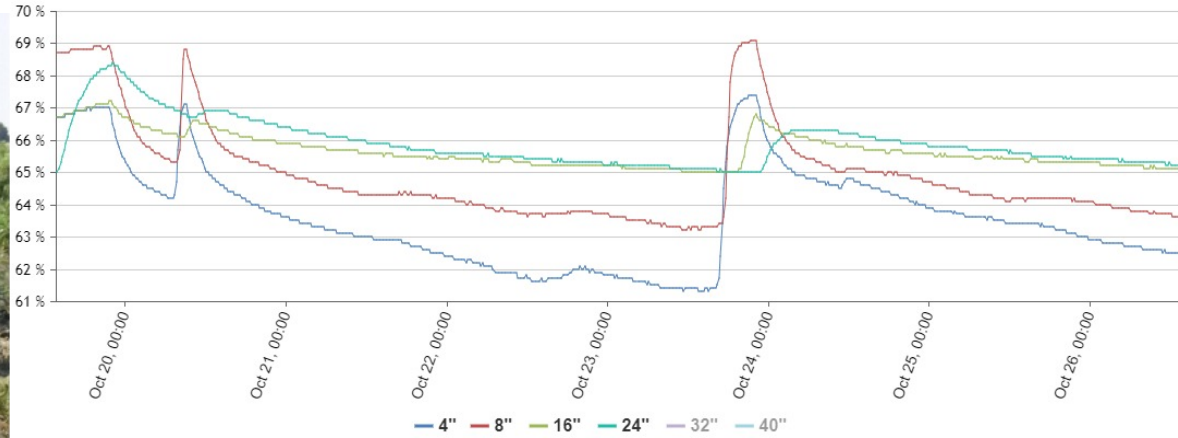
 Empyrean1

 RootpacR

 Rootpac20

 Cornerstone

Rootstock Effect of Water Use Efficiency?



Pruning Responses Trial: Tree Architecture

Control 1. Heading cut plus side branches trimmed in nursery, no further pruning

Control 2. Heading cut plus side branches trimmed in nursery, narrow "palmette" prune in field in Year 2

Central Leader 1. No heading cut or trimming in nursery, no further pruning

Central Leader 2. No heading cut, but side branches trimmed in nursery to produce "bare pole"

Non-Pareil



Winters



Wood-Colony



Monterey



Thank you!

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