



2023 ANNUAL MEETINGS

SAN LUIS OBISPO, VENTURA, TEMECULA

MAY 8 - 10, 2023



Leadership Team

- Jeff Oberman, President and CEO
- Ken Melban, Vice President, Industry Affairs and Operations
- Terry Splane, Vice President of Marketing

Priorities

- Industry Affairs
 - Support California Avocado Growers through advocacy on key legislative and regulatory issues
- Marketing
 - Ensure Priority Demand and Premium for California Avocados with Buyers in Retail and Foodservice Sectors
- Production Research
 - Focus on efforts that have a high likelihood for value to California Avocado Growers



Headwinds

- Market Conditions
- Imports
- Labor
- Water

Opportunities

- Water Replenishment
- Sustainability and Telling the California Avocado Grower's Story
- Production Research
- Advocacy
- New Market Opportunities



INDUSTRY AFFAIRS



Discussion Points

- Global production
- U.S. market conditions
- Legislative efforts
- Sustainability

Global Avocado Trade

Global Fresh Fruit Trade - 69.4 mt in 2020

| COMTRADE-CIRAD | mt | % W. trade |
|-------------------|------------|-------------|
| 1 Bananas | 21.4 | 31% |
| 2 Apples | 7.6 | 11% |
| 3 Oranges | 6.1 | 9% |
| 4 Soft Citrus | 4.4 | 6% |
| 5 Grapes | 4.1 | 6% |
| 6 Pineapples | 3.0 | 4.3% |
| 7 Pears | 2.7 | 3.9% |
| 8 AVOCADOS | 2.5 | 3.6% |
| 9 Mangos | 2.3 | 3.4% |
| 10 Lemons | 2.3 | 3.3% |

5.5 billion lbs.



Global Fresh Fruit Trade - 85 m US\$ in 2020

| COMTRADE-CIRAD | millions US\$ | % W. trade |
|-------------------|---------------|-------------|
| 1 Bananas | 13,817 | 16% |
| 2 Grapes | 8,848 | 10% |
| 3 Apples | 7,612 | 9% |
| 4 Avocados | 6,600 | 8.0% |
| 5 Oranges | 5,294 | 6% |
| 6 Cherries | 4,572 | 5% |
| 7 Blueberries | 4,412 | 5% |
| 8 Mangos | 3,637 | 4% |
| 9 Kiwifruit | 3,413 | 4% |
| 10 Soft Citrus | 3,126 | |



- Imported/exported volumes – excluding local production sold on the local market
- Calculation made from COMTRADE/CIRAD data

A changing panorama upstream:

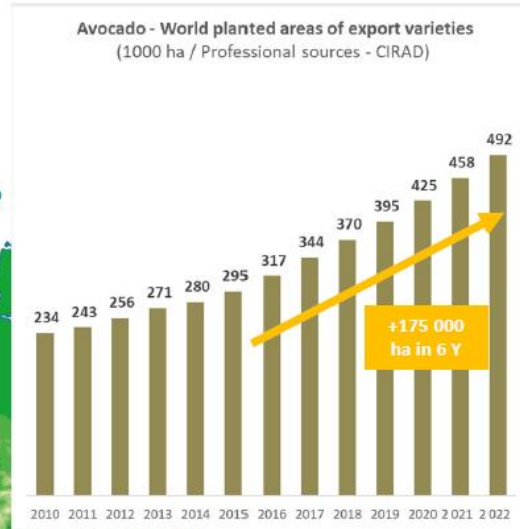
AVOCADO

World export planted areas

490 000 ha in 2022

Professional sources, CIRAD

1.2 mm acres



- A sharp increase of the plantation rhythm since 2016 ! **+432k acres**
- +175 000 ha in a six-year time / +29 000 ha/Y
- Former six year period (2010->2016): **+138k acres**
+56 000 ha / + 9 400 ha/Y

California

4%

19 000 ha

47k acres

Mediterranean

9%

45 000 ha

111k acres

Latin America

76%

375 000 ha

927k acres

Africa

6%

33 000 ha

81.5k acres

Oceania

4%

19 000 ha

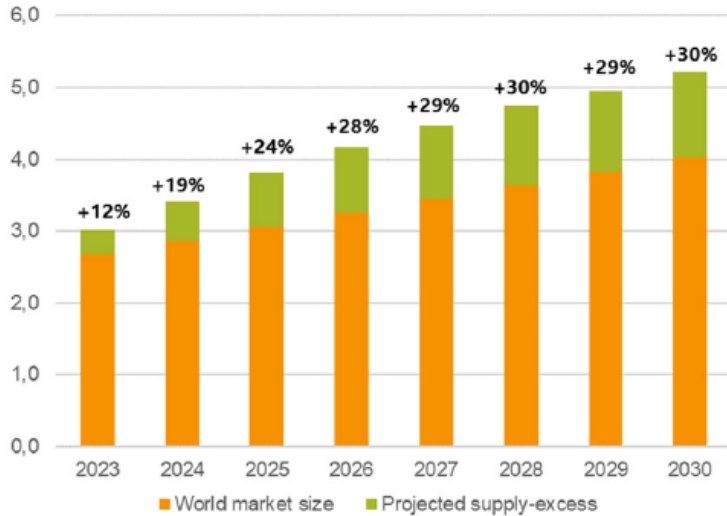
47k acres



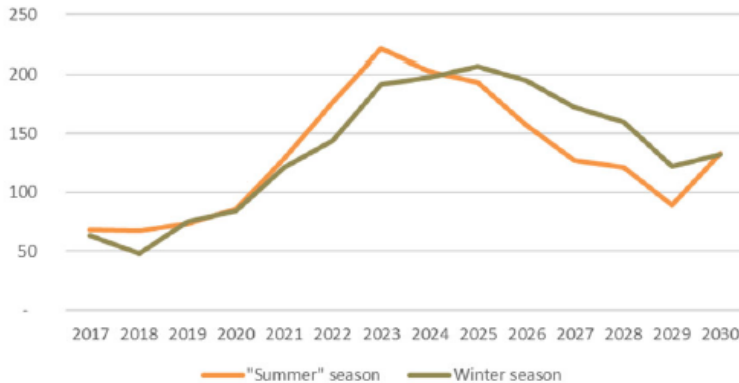


INDUSTRY AFFAIRS

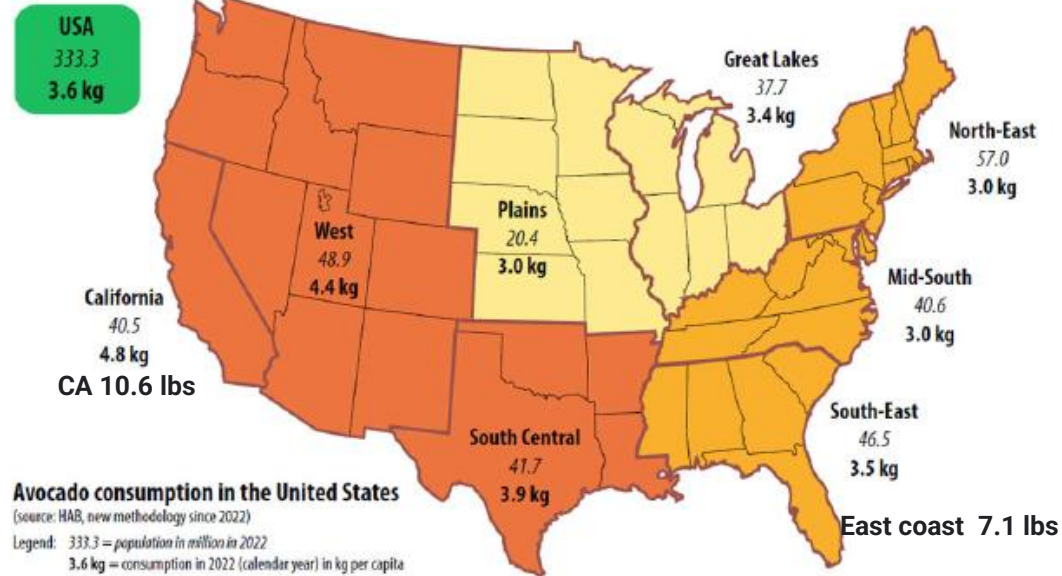
World market projection - offer x supply
million t - CIRAD



Avocado - Annual growth of world exportable production by season *
1 000 t - CIRAD



Per capita consumption: USA 7.9 lbs. (MX 17.9 lbs.)



Avocado consumption in the United States
(source: HAB, new methodology since 2022)
Legend: 333.3 = population in million in 2022
3.6 kg = consumption in 2022 (calendar year) in kg per capita

50% total world avocado production sold in U.S.

CAC met with world avocado leaders recently
Message:

- HAB model has built U.S. demand
- Markets in EU & Asia must be built
- U.S. can no longer be the only cash cow



Legislative Activity

- AB 865 – sponsor, Eduardo Garcia, Sale of agricultural products (*bell peppers, blueberries, dates, honeydew melons, lemons, olives, or table grapes*): requirements for sale (previously AB 710, introduced 2021)
 - A grower or producer that sells an agricultural product to a distributor shall attest to the distributor under penalty of perjury, using a **self-attestation form** developed by the department pursuant to subdivision (e), whether the agricultural product was produced in compliance with specified California health and environmental protection laws and specified California labor laws.
 - The bill would provide that a violation of these provisions is subject to a \$500 civil penalty for each violation.
 - **Support:** California Date Commission, California Farm Bureau Federation, California Fresh Fruit Association, Hadley Date Gardens, Riverside County Farm Bureau, Twenty-nine Palms Band of Mission Indians
 - **Opposition:** California Grocers Association, California Retailers Association
 - **CAC board position:** monitor the bill
 - **Bill status:** referred to Committee on Appropriations
 - https://leginfo.legislature.ca.gov/faces/billStatusClient.xhtml?bill_id=202320240AB865



Legislative Activity

- H.R.176 – sponsor, Doug LaMalfa (R-CA-1)
 - Previously H.R. 7305 – sponsor, Mike Thompson (D-CA-4)
 - Introduced in House (01/09/2023)
 - To amend the Internal Revenue Code of 1986 to establish a deduction for attorney fees awarded with respect to certain wildfire damages and to exclude from gross income settlement funds received with respect to such damages
 - This bill allows a deduction from gross income (above the line deduction) for attorney fees and court costs awarded with respect to a qualifying wildfire disaster (i.e., any forest or range fire that is a federally declared disaster, occurs in a disaster area, and occurs in 2015 or later)
 - Bill Status: House Ways & Means Committee
 - Current language calls for payouts in a "Qualified Settlement Fund" account
 - CAC working with congressional members to broaden scope
 - <https://www.congress.gov/bill/118th-congress/house-bill/176?q=%7B%22search%22%3A%5B%22hr176%22%5D%7D&s=1&r=1>



Legislative Activity

- USDA/USTR Fresh Fruits & Vegetables Agricultural Technical Advisory Committee (ATAC)
 - April 2023, submitted Resolution to the Administration requesting creation of an Advisory Committee Panel to pursue assistance to specialty crop farmers negatively impacted by imports
 - CAC advocating for exploring all possible options
 - Heavy lift



Whereas a growing number of U.S. fruit and vegetable sectors are increasingly concerned regarding low priced imports;

Whereas traditional U.S. trade remedies to counter unfair import competition – mainly antidumping and countervailing duty actions – may not be viable options for some highly impacted fruit and vegetable growers;

Whereas some countries may allow the use of labor standards and practices the U.S. considers unacceptable, as reported in various Country Reports on Human Rights Practices issued by the the U.S. Department of State ;

Whereas in October 2022, USTR officials announced plans to establish a private sector industry advisory panel which would work with USTR and USDA to develop possible administrative actions or legislation to promote the competitiveness of U.S. fruit and vegetable sectors struggling against low-priced import competition; now, therefore, be it

Resolved, that the ATAC for Trade in Fruits and Vegetables

Requests USTR to promptly appoint appropriate members from geographically diverse regions and commodities in the U.S. to this previously announced private sector industry advisory panel.



Sustainability

- Why?
 - Buyers/consumers care, increasingly
 - Write our story before someone else does
- In-grove carbon sequestration project, UCR (2014)
- Study on California's laws/regs (CAC 2018)
- Grower workgroups (CAC 2019)
- Consumer facing messaging (2021)
 - No till farming; erosion control; carbon sequestration; water use and conservation; eco-friendly energy; locally grown goodness
 - <https://californiaavocado.com/avocado101/california-avocado-sustainability/>
- Moving to beta development stage
 - Fish Friendly Farming
 - Around \$500 every five years
 - Pursue SCBG funding
 - Recommend Board provide initial rebate to growers (GAP)



MARKETING



2023 MARKETING AGENDA

Work smarter so it's works harder!

- Who's the right target?
 - Get specific to elevate effectiveness – insights driven
 - Be where they consume Media
- What's the right Marketing Mix?
 - Marketing funnel activation
 - Comprehensive integrated approach
- What message resonates for greatest results?
 - Consumer insights driven
 - Some exciting “NEW” news!!!



TARGET: PREMIUM CALIFORNIANS

Psychographics

Who Are They??

- Avocado purchasers
- Influential Foodies
- Prefer locally sourced food
- Pay for high-quality items
- Seek out name-brand products
- Seek adventure
- Value honesty
- Environmentally conscious

Demographics



48% Male
52% Female



55% Children in Household



Mean HHI
\$97K



50% Now Married



Median Age
35



74% Employed



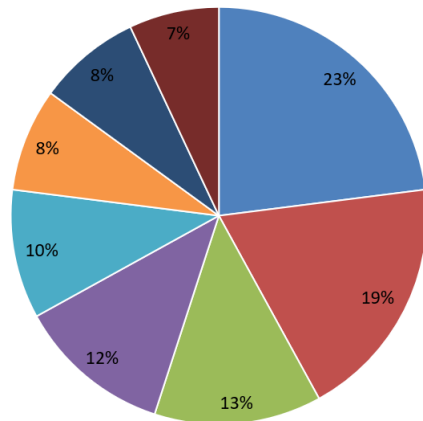
39% Bachelor's or Above



69% White
11% Black
6% Asian
17% Hispanic



Media Usage



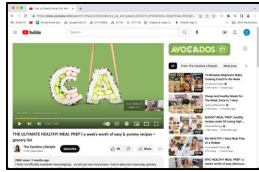
- Streaming Video/On Demand
- Broadcast/Cable TV Live
- Social Media
- Gaming
- Digital
- Premium Cable TV Live
- Streaming Audio
- AM/FM Radio

Psychographic= research that identifies personality, lifestyle, activities, interests and attitudes

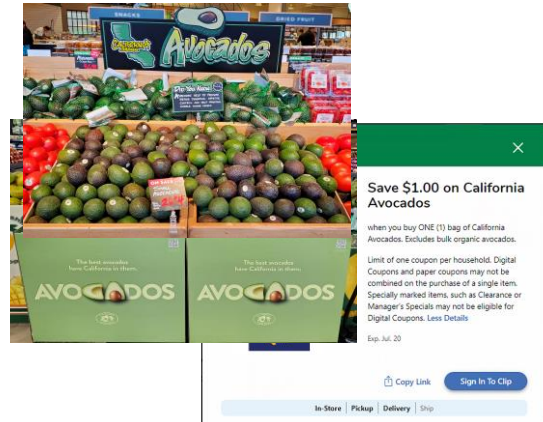
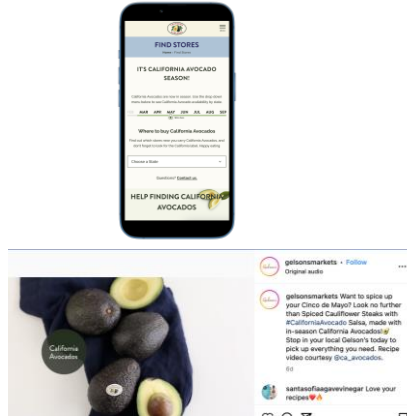
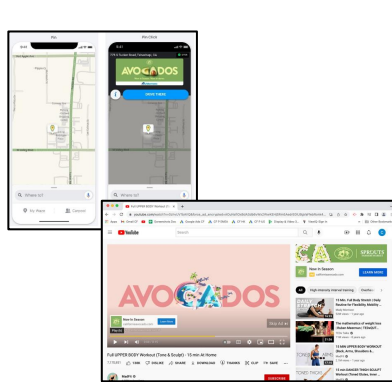


2023 CONSUMER MARKETING FUNNEL

Consumer Marketing



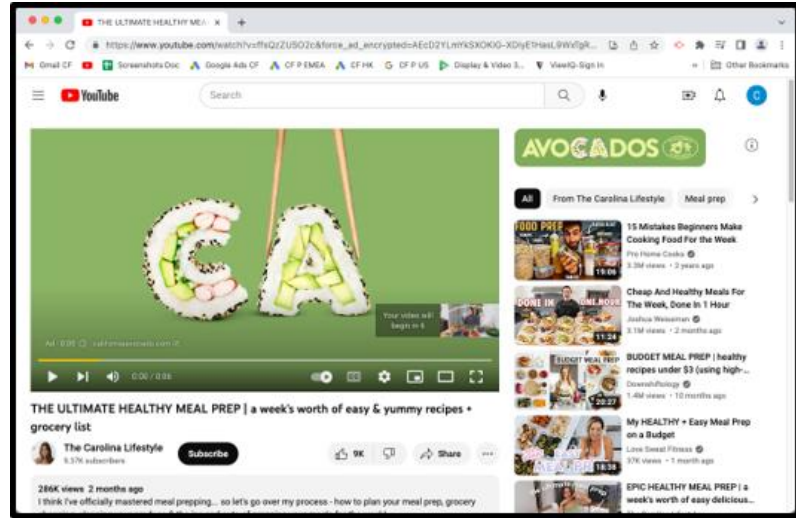
Consumer Trade





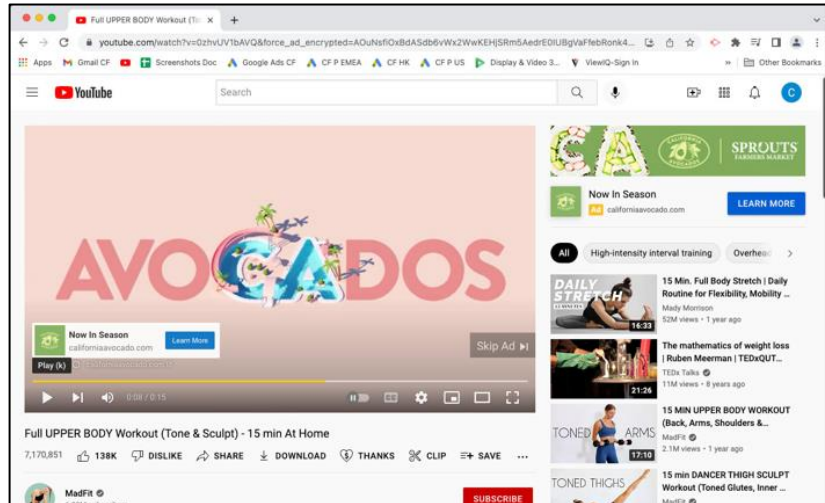
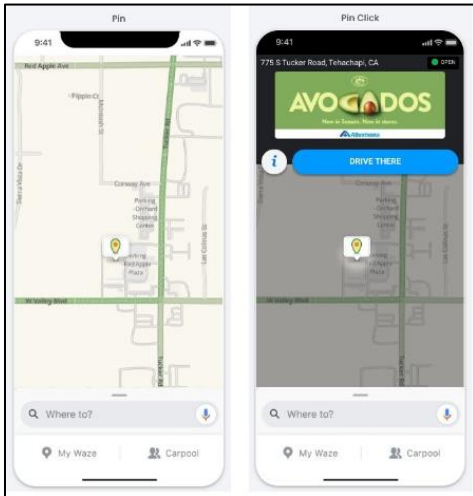
2023 CONSUMER MARKETING PROCESS

Consumer Marketing



Awareness (What)

Consumer Trade





2023 CONSUMER MARKETING PROCESS

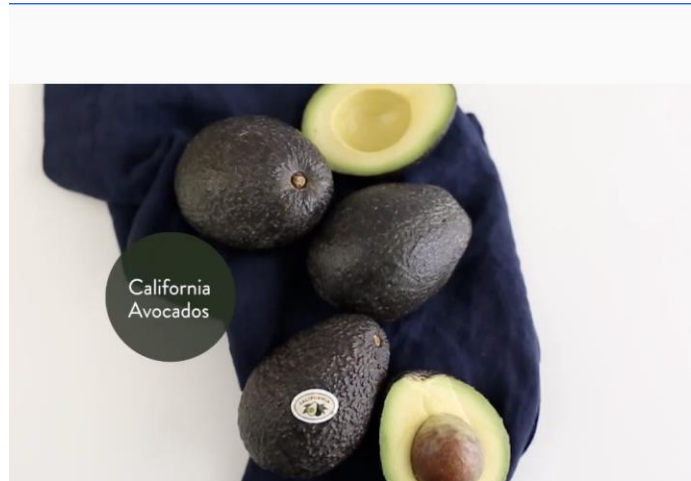
Consumer Marketing



Consideration (Why)



Consumer Trade





2023 CONSUMER MARKETING PROCESS

Consumer Marketing



Conversion
(The Buy)

Consumer Trade



Conversion (The Buy)



LOYALTY MEMBERS, LET'S CELEBRATE!
NATIONAL AVOCADO DAY IS JULY 31

Hass Avocados

\$2.49 ea

MEMBER-ONLY PRICE

\$1.99 ea

SAVE \$0.50ea

Coupon Details ✕

Save \$1.00 on California Avocados

when you buy ONE (1) bag of California Avocados. Excludes bulk organic avocados.

Limit of one coupon per household. Digital Coupons and paper coupons may not be combined on the purchase of a single item. Specially marked items, such as Clearance or Manager's Specials may not be eligible for Digital Coupons. [Less Details](#)

Exp. Jul. 20

[Copy Link](#) [Sign In To Clip](#)

Consumer Trade



The Message That Resonates

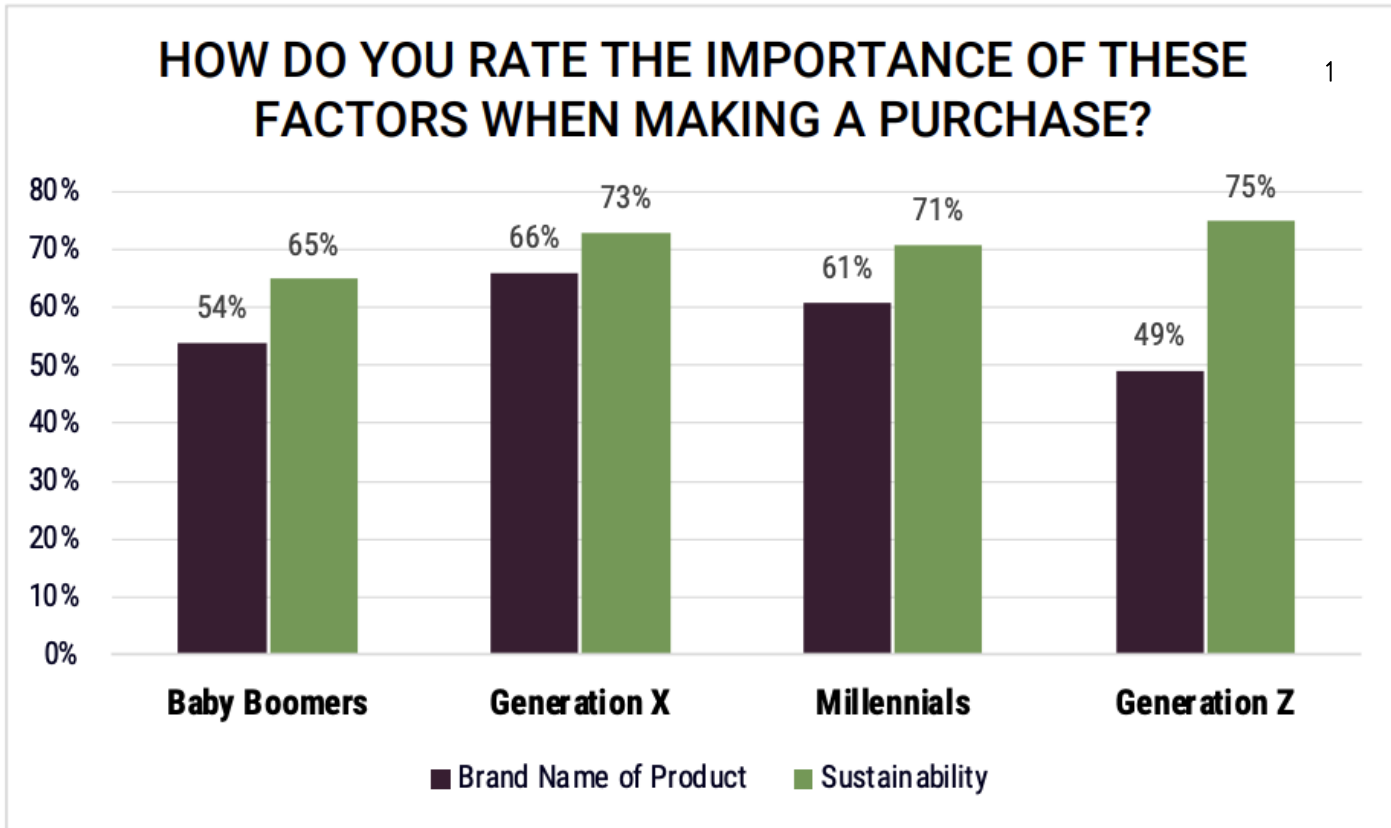


- **Superiority (Best/Premium/Quality)**
 - The best avocados have California in them
 - Premium California avocados
 - Top quality California avocados
 - California Avocados are worth paying more for

- **Grown in California**
 - Locally Grown
 - “Freshest” to Market
 - Farm to table in a few days

- **Availability**
 - Now in Season
 - In season spring through summer
 - Peak availability from April through July

NEW
NEWS



77%²

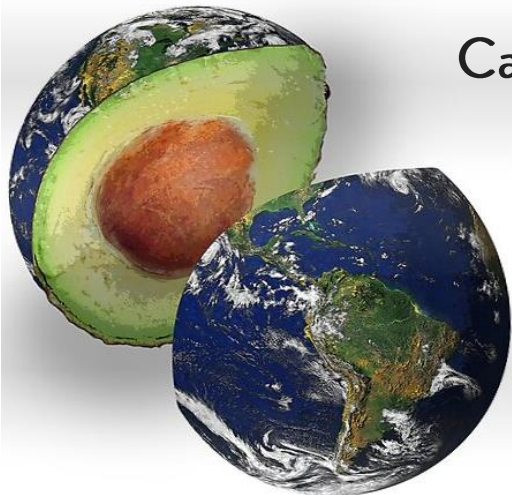
Of consumers believe sustainability is important when selecting products to buy, up from 69% in 2021

32%²

Of Gen Z and millennials — seek out retailers that carry sustainable products (27% General Population)



The Message That Resonates



California Avocados; Grown Locally, Farmed Responsibly

- **Sustainably Grown**
 - Environmentally friendly farming
 - Locally grown = less transport = fewer carbon emissions
 - Ensured worker safety and well-being



PRODUCTION RESEARCH



Focus on Grower-driven Projects with a High Likelihood of Success

- Project topics are determined by PRC members
 - CAC reaches out to researchers who could work on the PRC determined topics
 - No open calls for proposals
 - Primarily short duration projects: 1-3 years
- Securing other funding to supplement CAC funding is encouraged and projects with other funding are prioritized
 - Maximizing every grower dollar
- Grower Resources
 - Communication and Education
 - Publications
 - Webinars
 - Field Days



Recently Completed and Currently Funded Projects

- Pests and Disease
 - Avocado Branch Canker
 - Avocado Seed Weevils
 - Ecology of the Avocado Lace Bug
- Breeding and Genetics
 - Commercial-scale field testing of five advanced rootstock selections
- Cultural Management
 - Chloride Mitigation: Technology Review & Treatment Prediction
 - Water use and effective irrigation management for more profitable and sustainable avocado production



The Effect of *Phytophthora* Root
Rot Tolerant Rootstocks on
Establishment, Growth and
Health of ‘Hass’ Avocado
(*Persea americana* Mill.)

Rashaan Souikane and Lauren Garner
Plant Sciences Department
Cal Poly
San Luis Obispo

Research Objectives

Evaluate the early establishment, growth, and health of 'Hass' avocado grafted to 'Dusa,' PP35, PP40, or PP45, in a commercial orchard with a history of PRR

Site Preparation

- In 2020, a mature avocado orchard on Cal Poly's campus with a known history of *P. cinnamomi* was removed
- The area was deep ripped and there was no treatment for *P. cinnamomi*
- Trees were planted:
 - One month later
 - On raised beds (~3' H x 10' W)
 - With spacing of ~15' x 20'



Plant Material

Randomized complete block design

- Three blocks

'Hass' scions grafted on:

- T1 - 'Dusa' (95 trees)
- T2 - PP35 (96 trees)
- T3 - PP40 (96 trees)
- T4 - PP45 (97 trees)

Experimental unit $n=10$

- 8-10 observational units





Data Collection

Data was collected 2 months after transplanting and during the spring (Mar.), summer (Jul.) and fall (Oct.) flushes of 2021 and 2022

Tree size measurements

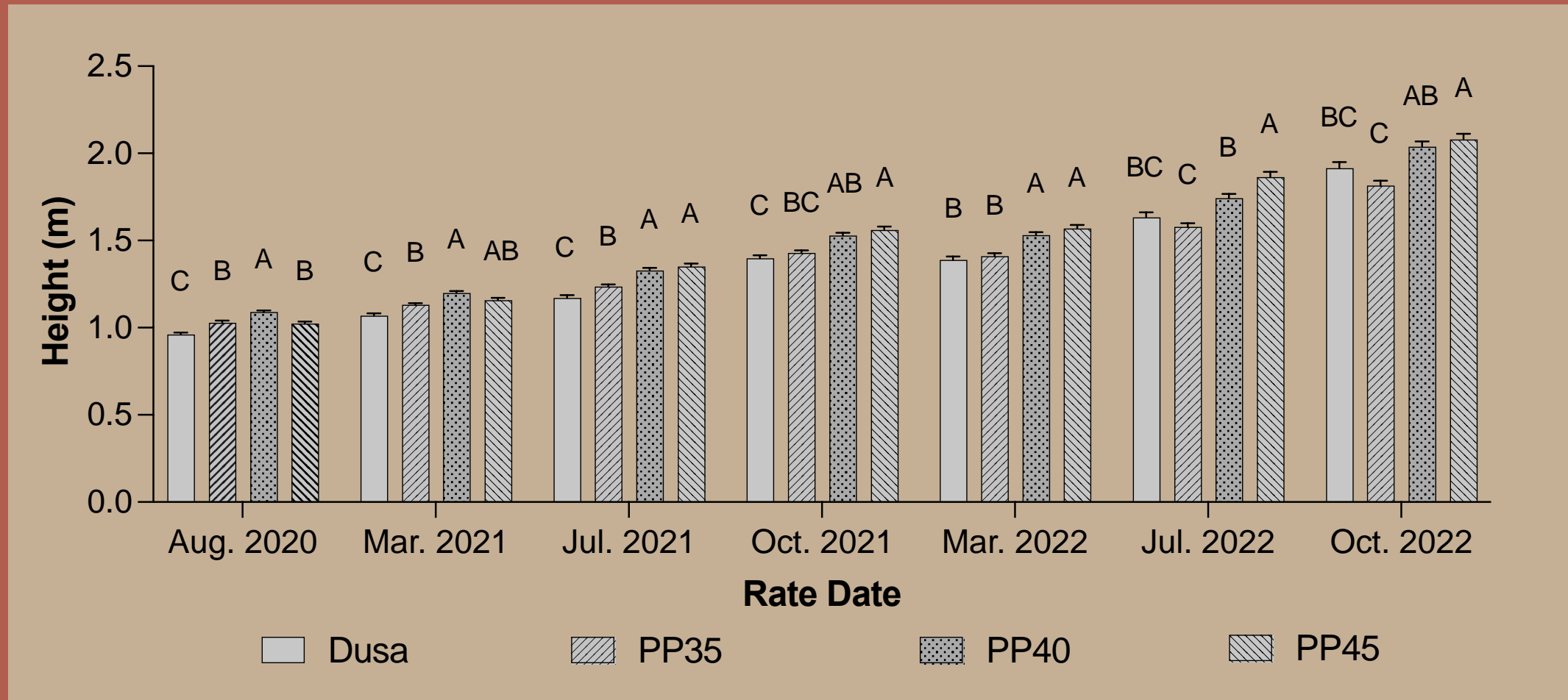
- Tree height (m)
- Scion circumference (mm)
- Rootstock circumference (mm)

Tree health and productivity ratings

- Overall health
- Heat and salinity damage
- Percentage of canopy in flush and bloom

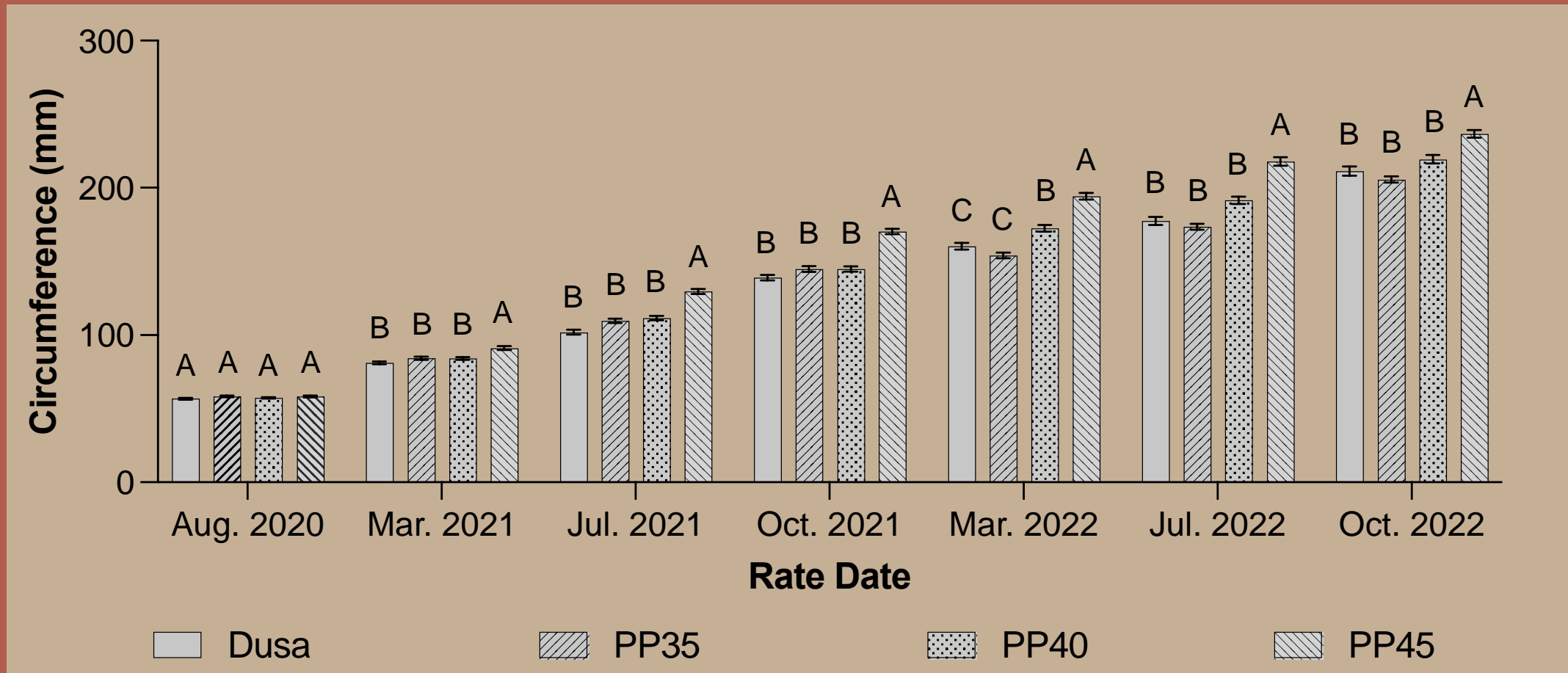
Tree Height

Trees on PP40 and PP45 rootstock typically had significantly greater mean height compared to trees on 'Dusa' and PP35 throughout the experiment ($P < 0.0001$)



Trunk circumference

Trees on PP45 typically had a significantly greater mean trunk circumference than all other rootstock above and below the graft union ($P < 0.0001$)



Overall health, heat damage and salinity damage

- No significant differences in average overall health rating were observed between rootstocks within a single rate date ($P = 0.1412$)

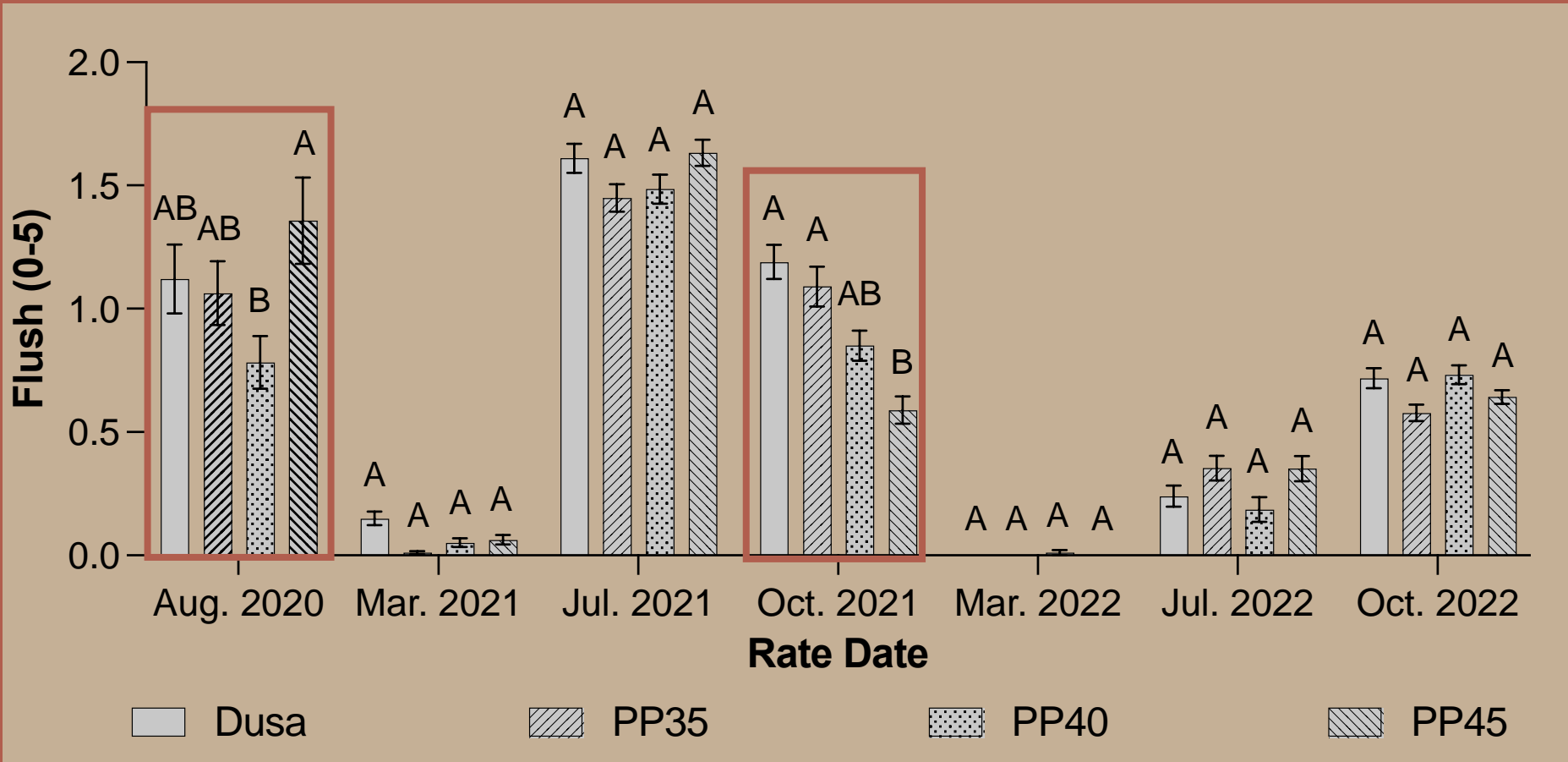


- No significant differences in average heat damage or salinity damage ratings were detected between rootstocks within a single rate date ($P = 0.0949$)
- The majority of trees had a rating score of 0 or near 0 throughout the experiment for all three variables



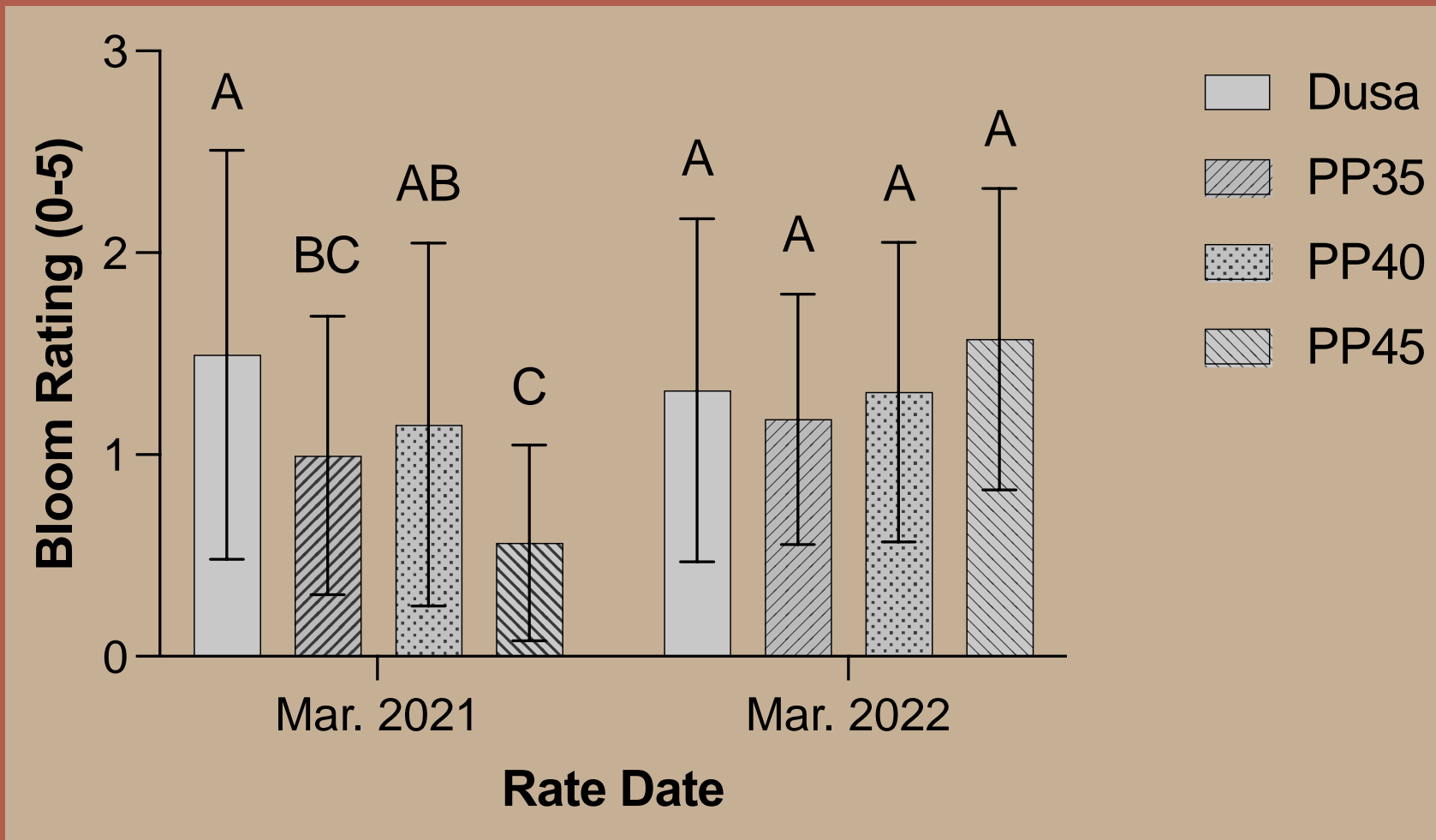
Vegetative flush

Significant differences in mean vegetative flush rating across all four rootstocks were typically not detected across rate date and were inconsistent when observed



Bloom

Trees on 'Dusa' and PP35 had a significantly greater average bloom rating in March 2021 ($P < 0.0001$), but no significant differences were detected in 2022 ($P = 0.1547$)



Conclusions

- 'Hass' avocado trees on PP45 rootstock had significantly greater vigor with respect to height and trunk circumference above and below the graft union compared to those on 'Dusa'
- There were no significant differences in overall health, heat damage and salinity damage detected between the UCR experimental rootstocks and 'Dusa'
- None of the experimental rootstocks evaluated displayed grafting incompatibilities with the 'Hass' scion

Further conclusions and future plans

- Establishment and early growth of 'Hass' avocado trees was successful on PP35, PP40, and PP45
- Current and future roles of the San Luis Obispo study site
 - within the statewide rootstock trial
 - for avocado growers in District 5
 - for Cal Poly students and future graduates



Questions?



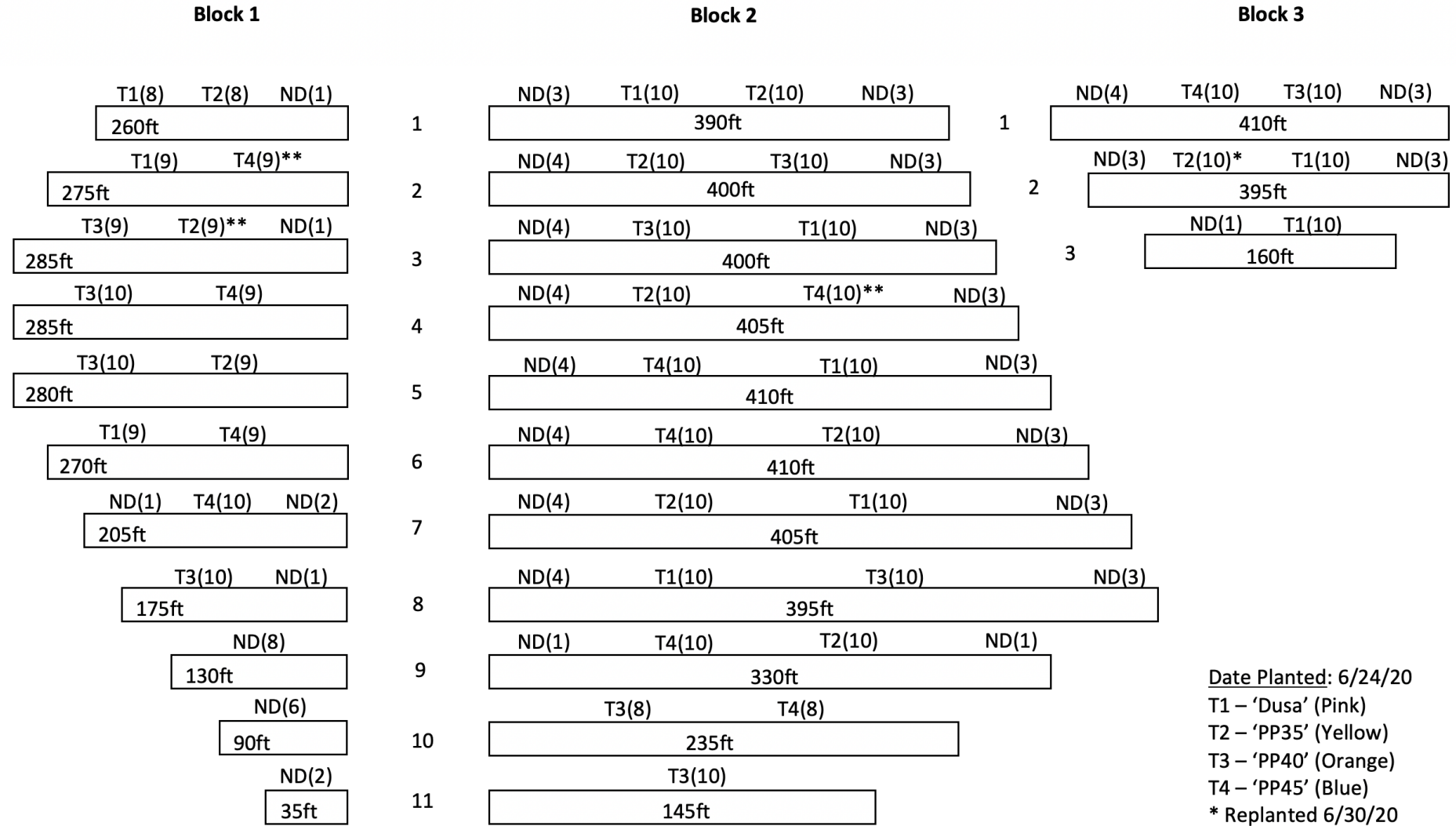


Categorical rating scale

| Score | Overall Health | Heat Damage | Salinity Damage | Flush | Bloom |
|-------|--|-------------|-----------------|-------------------------|-------------------------|
| 0 | Perfect looking trees | 0-5% damage | 0-5% damage | 0-5% of canopy in flush | 0-5% of canopy in bloom |
| 0.5 | Slightly off (small leaves, less leaves, lack of flush) | 5-10% | 5-10% | 5-10% | 5-10% |
| 1 | Chlorosis and/or small leaves | 11-20% | 11-20% | 11-20% | 11-20% |
| 2 | Exposed branches, wilting leaves, small chlorotic leaves | 21-40% | 21-40% | 21-40% | 21-40% |
| 3 | Branch dieback, very few leaves remaining | 41-60% | 41-60% | 41-60% | 41-60% |
| 4 | Nearly dead | 61-80% | 61-80% | 61-80% | 61-80% |
| 5 | Dead | 81-100% | 81-100% | 81-100% | 81-100% |

Map

← South Highway 1 North →



Deer-Fence Gate

Date Planted: 6/24/20
 T1 – 'Dusa' (Pink)
 T2 – 'PP35' (Yellow)
 T3 – 'PP40' (Orange)
 T4 – 'PP45' (Blue)
 * Replanted 6/30/20
 ** Replanted 7/13/20

Cal Poly Radio Tower: Avocado Planting

Developing tools and information on crop water use and effective irrigation management in California Avocados



Ali Montazar, PhD
University of California
Cooperative Extension

Real example of water management in Avocados

Water delivery: 9.5 gph per tree

Winter: 8-12 hrs./once per week → 400 gallons/month

Spring: 15-24 hrs./ once a week → 760 gallons/month

Summer: 15-24 hrs./twice per week → 1,500 gallons/month

Fall: 15-24 hrs./once a week → 760 gallons/month

Water applied=10,260 gallons per season

This avocado orchard doesn't need more than 7,300 gallons/season as crop water requirements.

Nearly 28% over irrigation

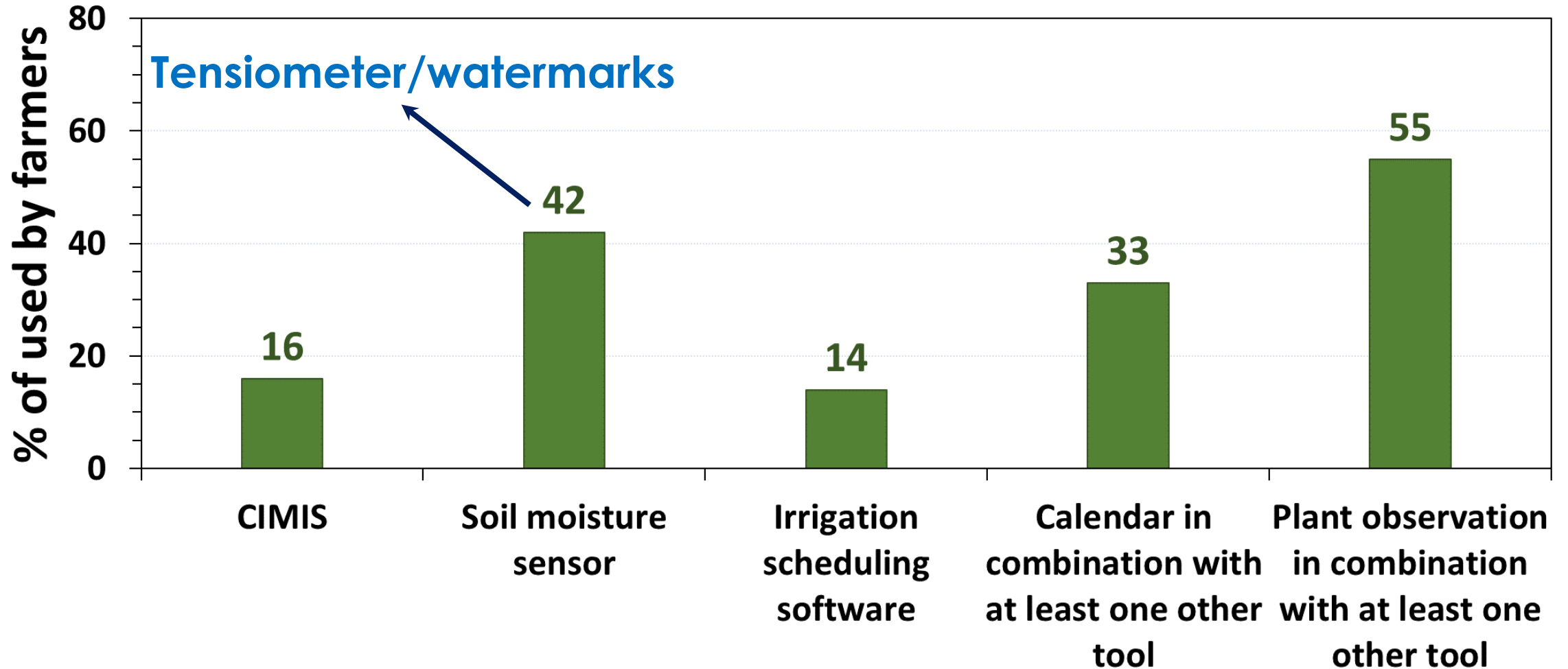
**You pay \$1,500/acre
more water cost in SD CO.**

Range of irrigation water applied reported by CA growers for avocado orchards:

2.3 to 4.8 ac-ft/ac



Which irrigation tools do avocado farmers use in CA?



[Instructions for the Irrigation Scheduling Calculator](#)

English
 Español

[Principles of Irrigation](#) Select a Crop:

[Kc Source:](#)
 English Units
 Metric Units

[Reference Evapotranspiration \(ET_o\):](#) in./day or period
 [Data Source:](#)

[Crop Coefficient \(K_c\):](#) Get Kc for a month

[Distribution Uniformity \(DU\):](#) %

[Leaching Requirement \(LR\):](#) %

Method: Trees per Acre:
 Tree Spacing by ft.

Number of Emitters per Tree:

Surface area under tree canopy (ft²): (enter only when surface area covered by canopy is less than 65%)

Emitter Output (Gal/Hour):

Grove Size (acres):

All fields with yellow boxes must be filled out, white fields are optional.

Click on 'Calculate' after any changes are made to recompute totals.

Water per tree per day or period: gallons

Watering time per tree per day or period: hours, minutes

Total Water Requirements for Grove: gallons

Allocated Water for Grove: gallons

Shortfall: gallons

Irrigation Scheduling Calculator for Avocados

Crop coefficient ???

$$ET_c = ET_o \times K_c$$

Avocado ET Potential ET

What if I mistakenly use a Kc of 0.75 instead of 0.65???

Experimental Avocado Sites

- 12 mature avocado sites in different climates
- Various row orientations/slopes (0% to 44%)
- Various tree spacings (108 to 360 trees/ac)
- Various soil textures (sandy loam to silty loam)
- Elevation from 160 to 1,500 ft. ASL
- Various water sources: Colorado River, Wells, and Reclaimed water





Site 1



96.4%

Site 3

Canopy feature of avocado grove makes a difference!



Site 6



Site 5

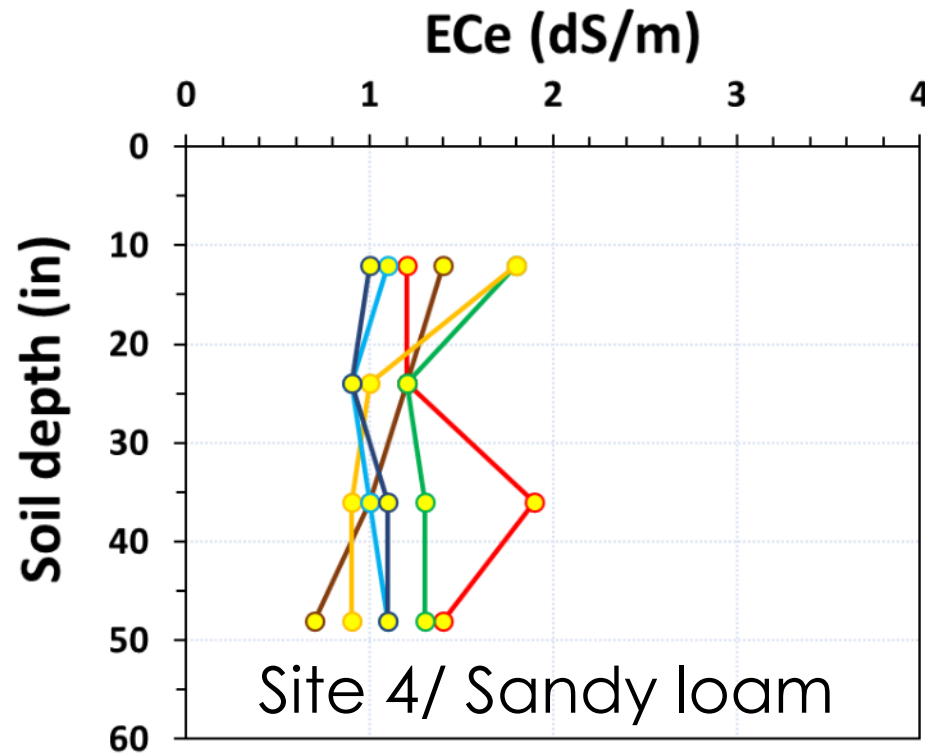
49.6%

Light interception!
Canopy cover percentage!

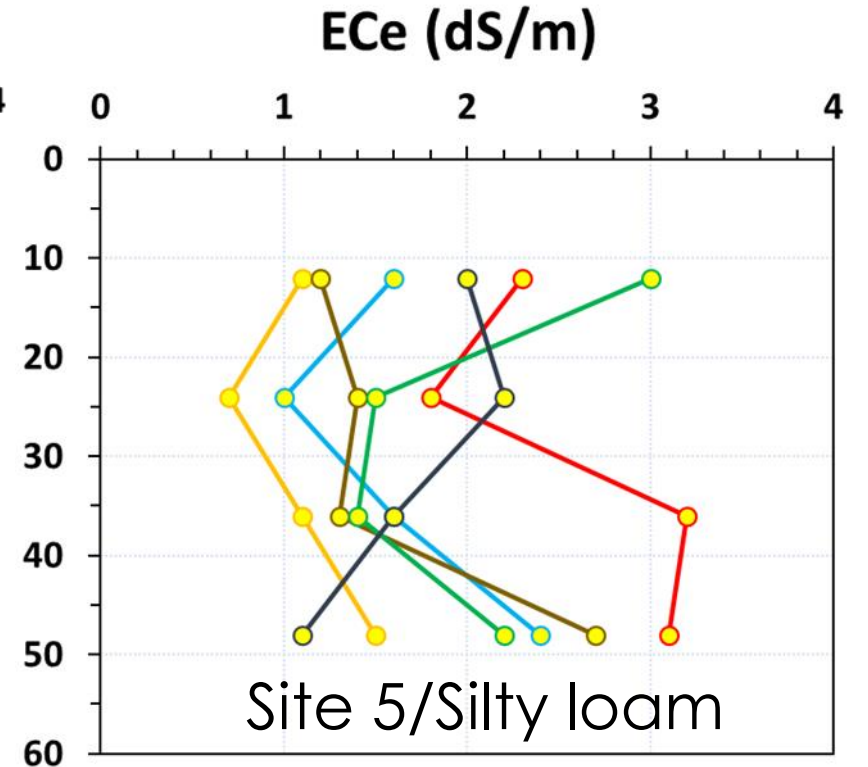
Soil salinity within the soil profile



**Running EM-38
(avocado site 5)**

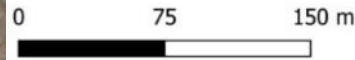
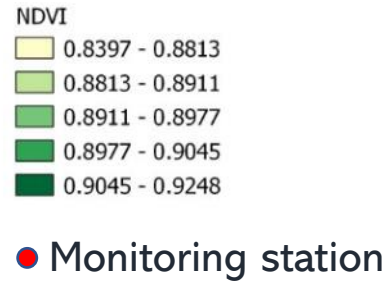


District Water (1.05 dS/m)
Chloride (water)= 110 ppm

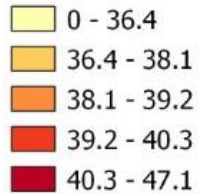
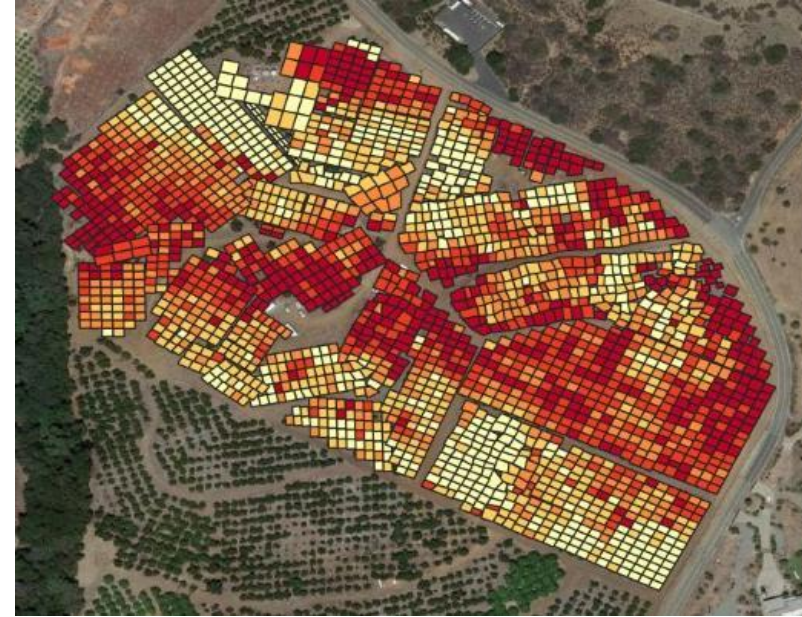


Reclaimed Water (1.48 dS/m)
Chloride (water)= 193 ppm

NDVI Map



Thermal Map

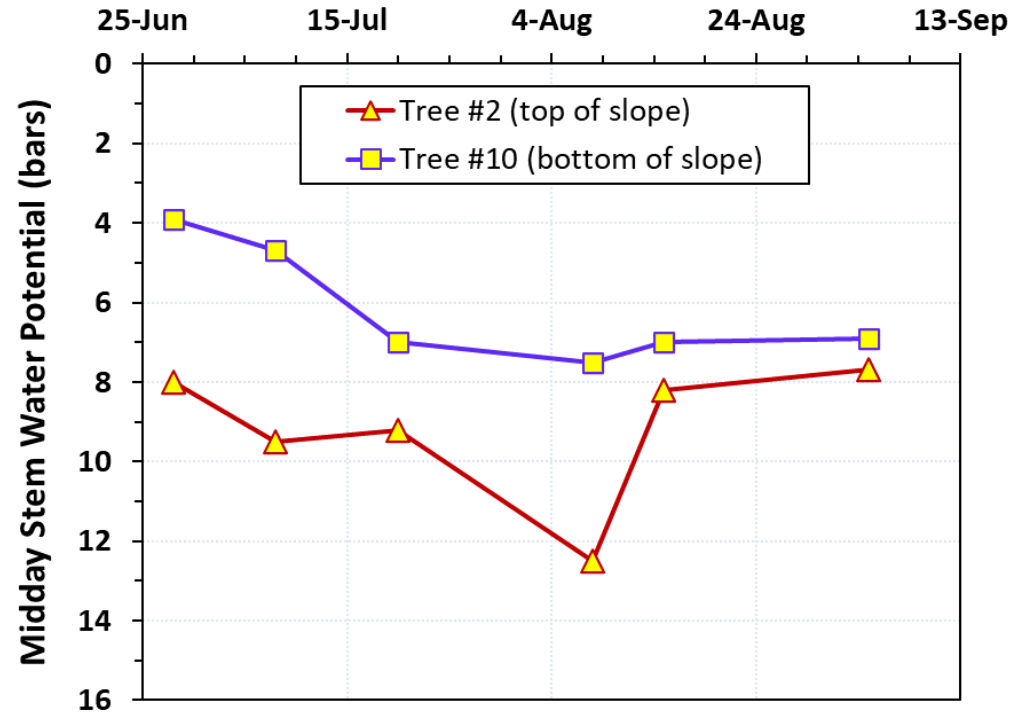


Avocado trees may have variable water needs and/or be under different level of water stress in a grove.

Midday stem water potential readings



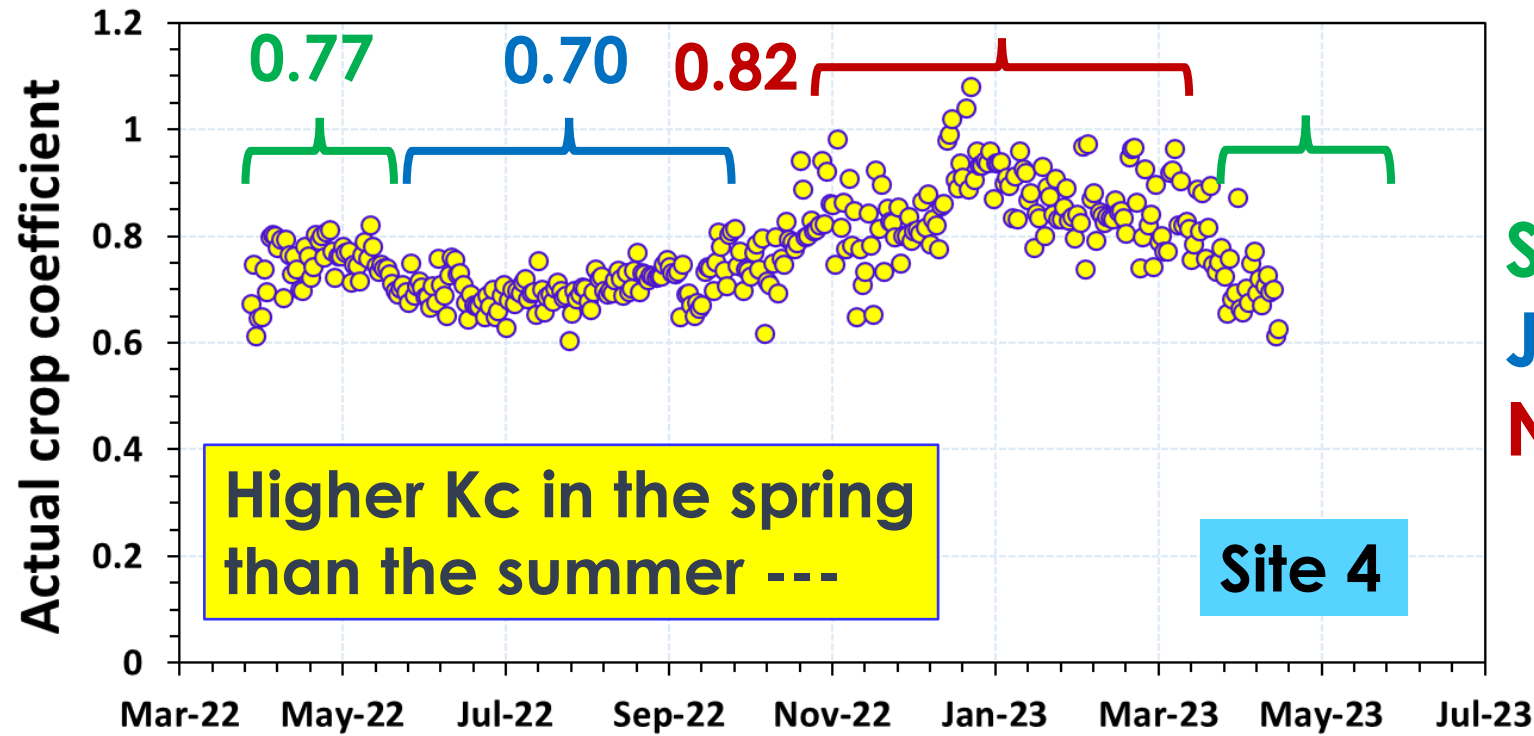
Pressure chamber readings



Site 1

- 220 tree readings in 5 sites.
- The readings varied from 3.7 to 13.8 bars.
- The measure was mostly below 11 bars (nearly 6% of trees greater than 11 bars).

Avocado crop coefficient values over the season



Spring + October //
Jun-Sep //
November + Winter

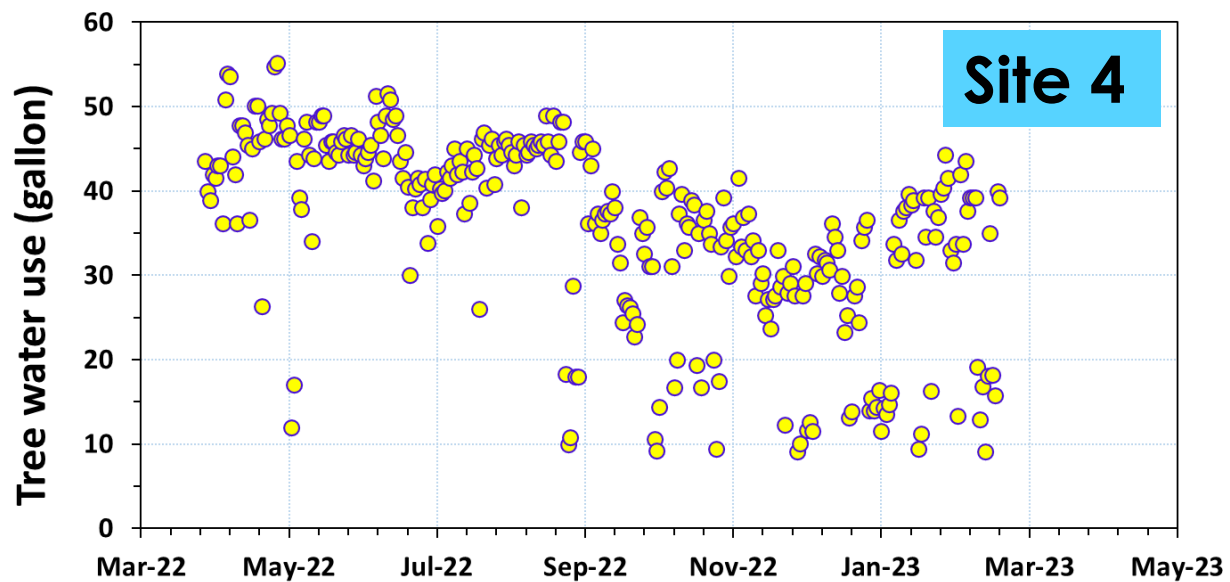
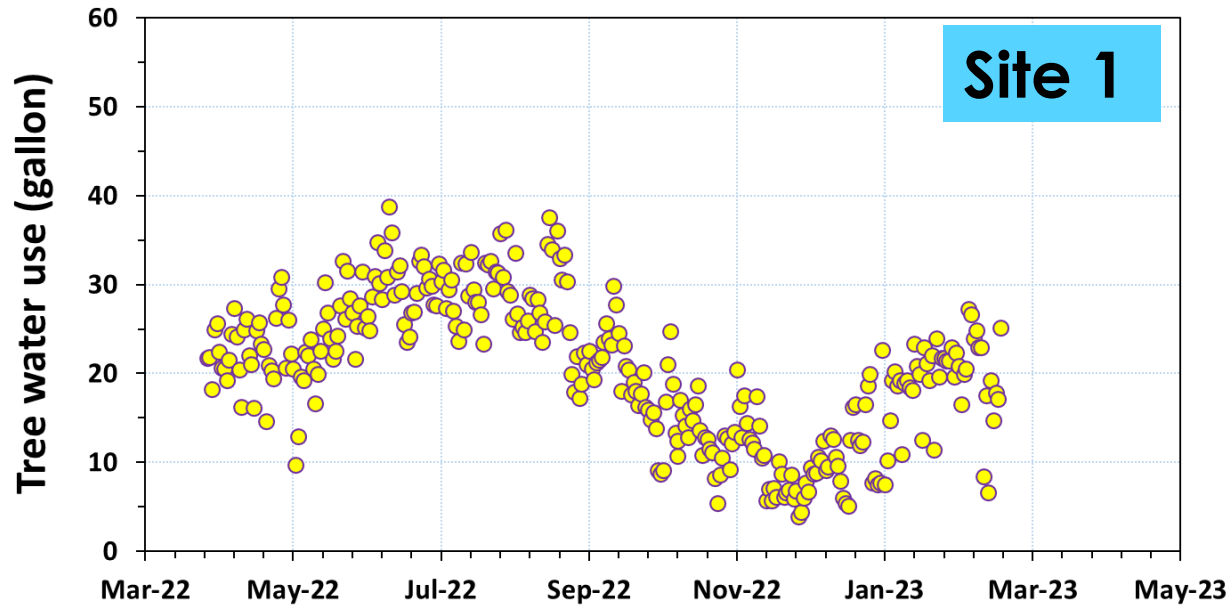
Crop water use in avocado orchards

Water demand (July)

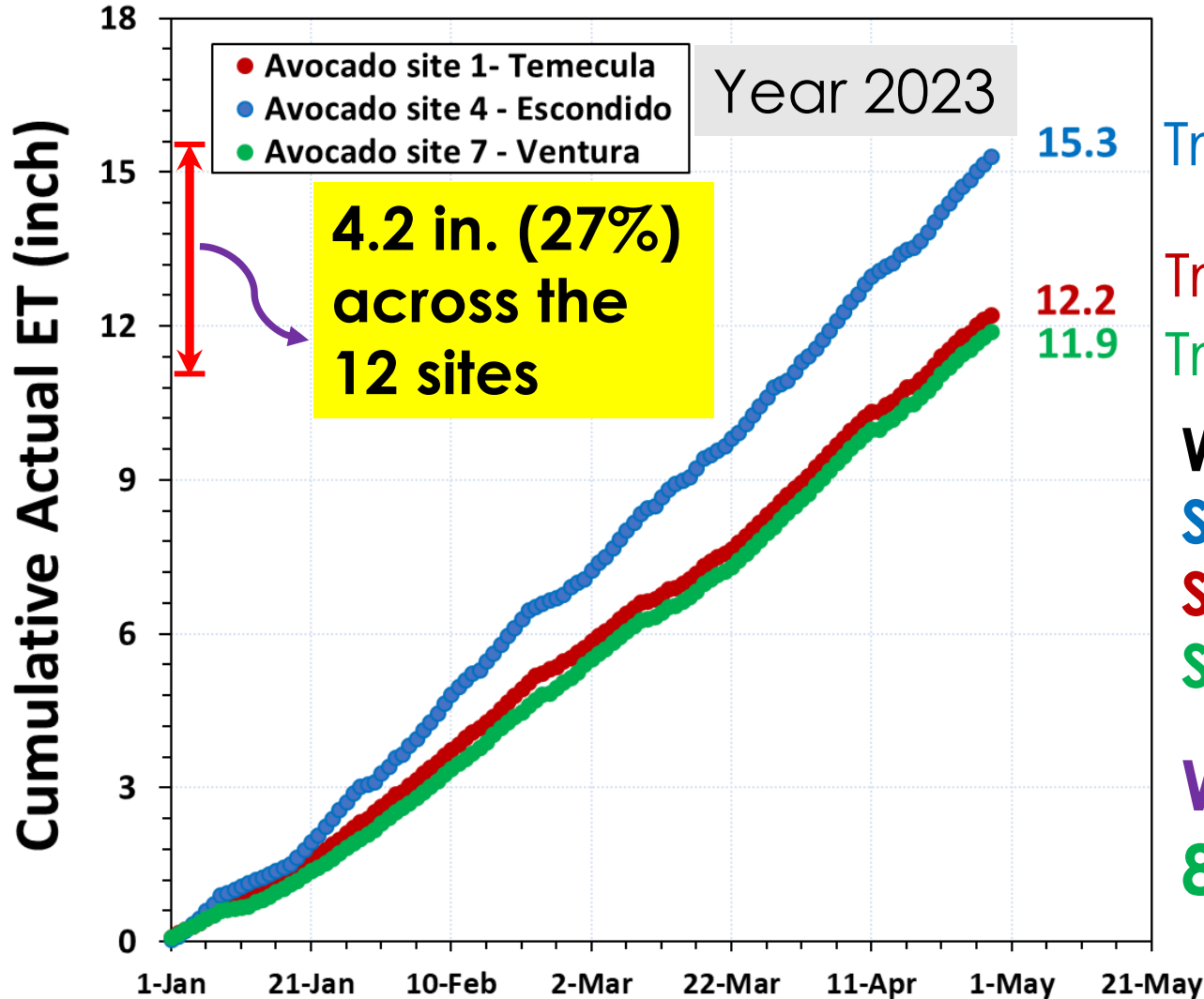
Site 1: 29.2 GPD

Site 4: 40.9 GPD

40%



Crop Water Consumption vs. Water Applied



Tree spacings = 19×20 ft./44% South

Tree spacings = 15×20 ft./20% Southeast

Tree spacings = 19×20 ft./16% West

Water applied (rain + irrigation)=

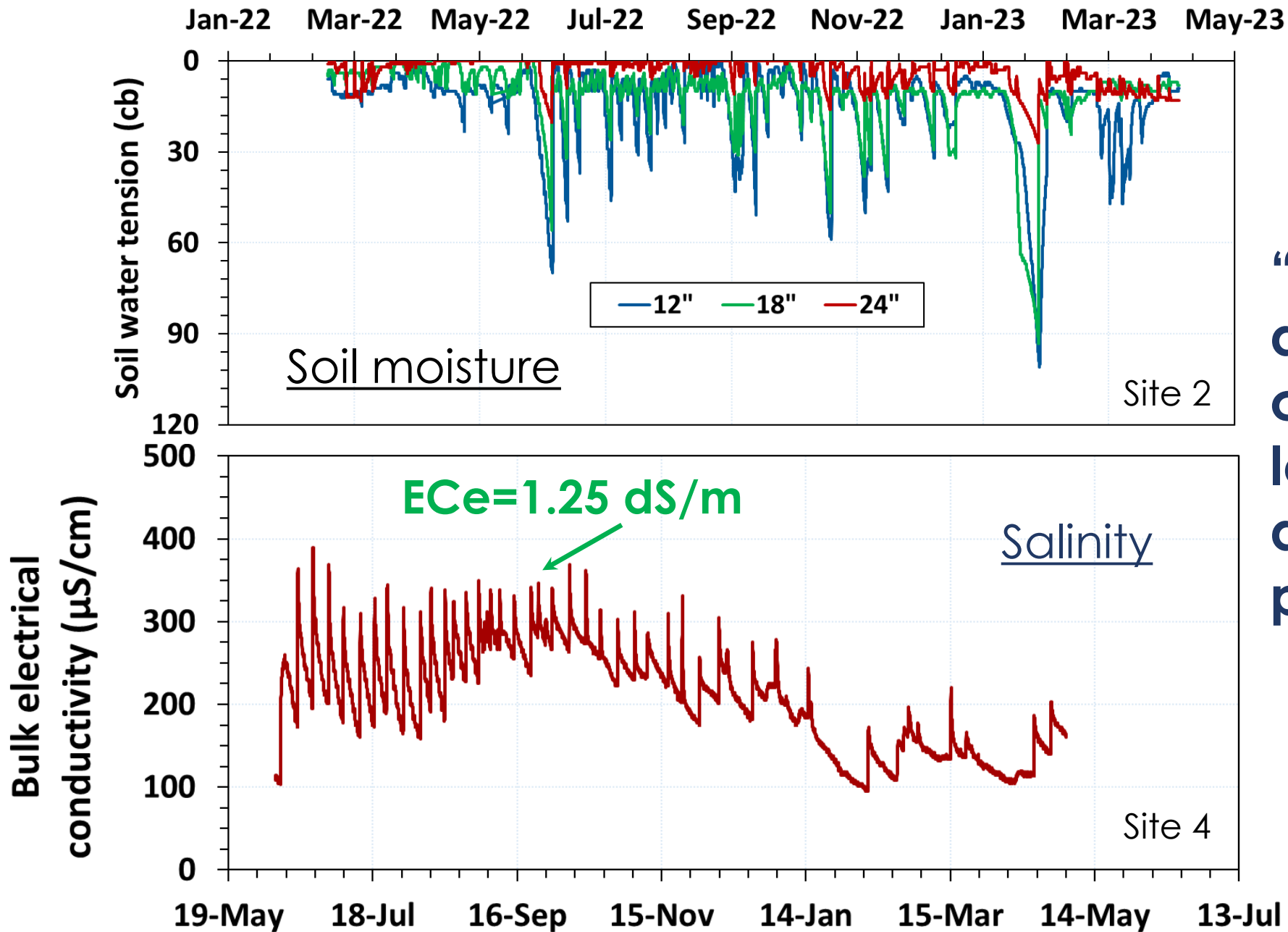
Site 4: 24.1 in. (=19.3+4.8)

Site 1: 21.7 in. (=18.4+3.3)

Site 7: 22.5 in. (=17.8+4.7)

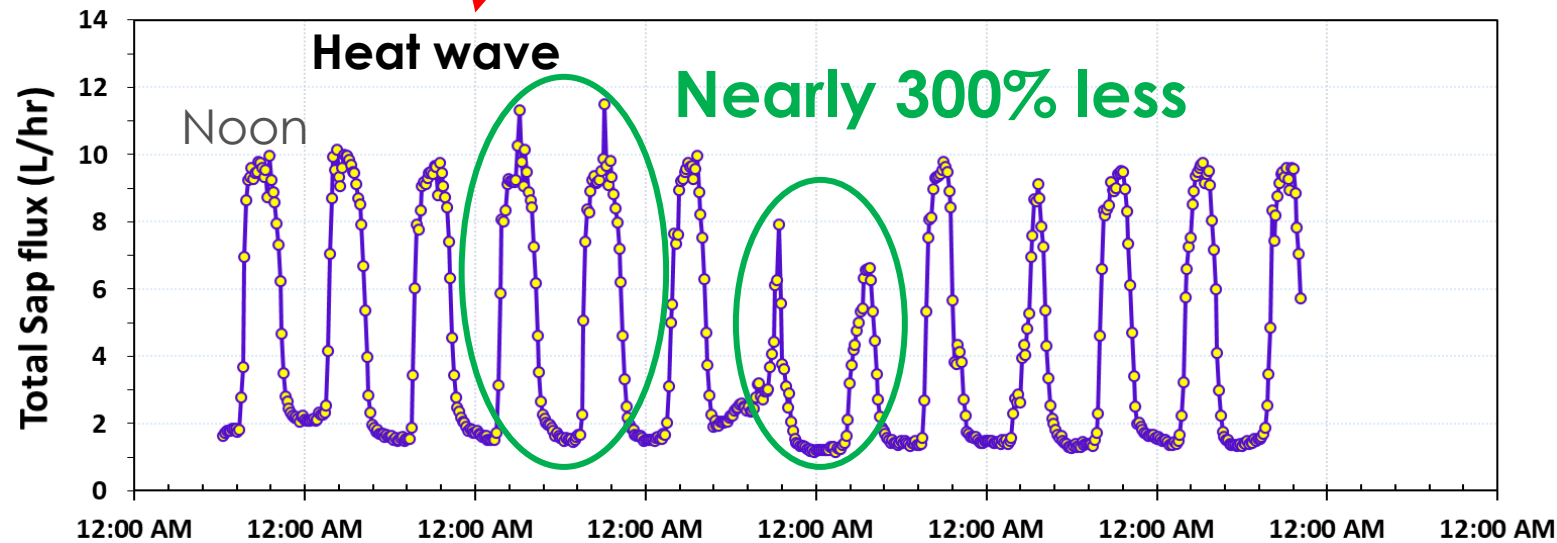
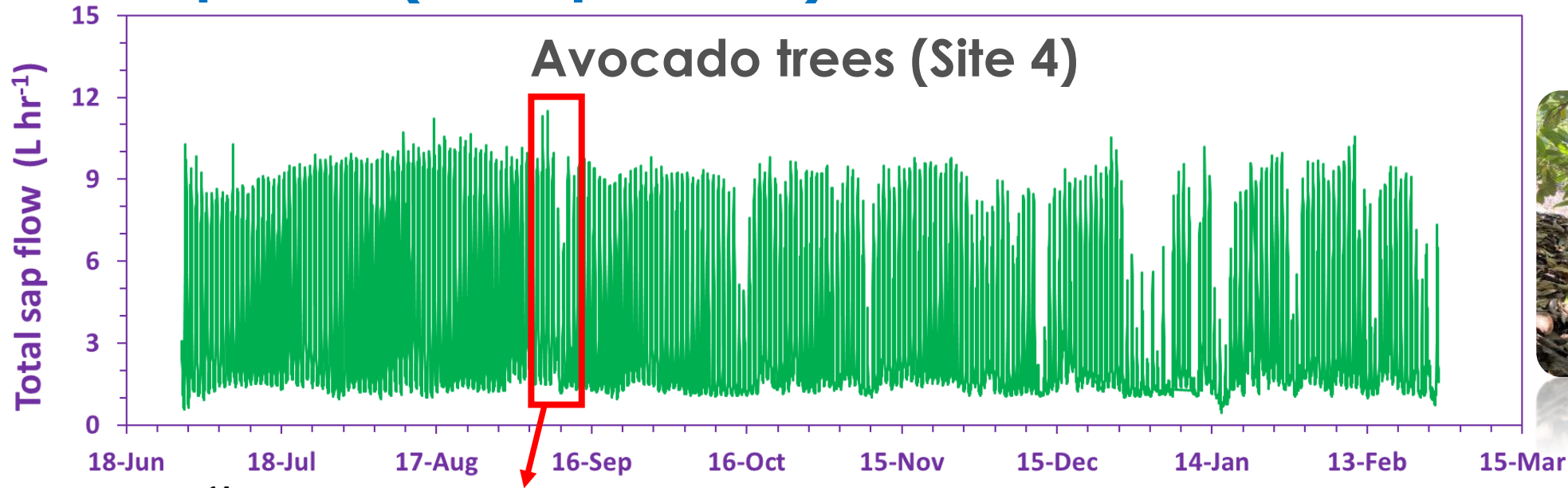
Water applied/Actual ET =

89% ---- 77% ---- 57%



“Winter rains had a significant contribution on leaching salts and refilling soil profile.”

Sap flow (transpiration) variations over the season



Thank You (Q & A)

Special thanks to:

- **USDA - CDFA**
- **California Avocado Commission**
- **Cooperating farmers**





THANK YOU