



10 in 60
Hot Topics
for Avocado Growers
Covering what you need to be
aware of as a grower

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- PSHB
- Food Safety
- Water – availability, price, quality, reclaimed and grants available to growers
- Irrigation management
- Nutrition – N, K, Plant Growth Regulators
- Labor – adequacy, immigration
- Organic
- Harvest costs and Innovative Marketing
- Pest control – ants, perseas mite, thrips, weeds

Polyphagous Shot Hole Borer

- > 110 species of trees affected
- Biology and ID

<http://eskalenlab.ucr.edu/avocado.html>

- Distribution Map

<http://eskalenlab.ucr.edu/distribution.html>



Food Safety



- Private
Increasing demand on part of distributors and consumers to meet minimum requirements
- Public – Food Safety Modernization Act (FSMA):
Does this rule apply to you?
<http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm415031.htm>

Key Revisions: Proposed Rule on Produce Safety
Water, soil amendments, covered farms,
compliance dates – awaiting release

<http://www.fda.gov/downloads/Food/GuidanceRegulation/FSMA/UCM412921.pdf>

Food Safety Plans

1. Traceability
2. Record Keeping/Self-Audit
3. Varieties and Rootstock
4. Site History and Management
5. Soil and Substrates
6. Fertilizer
7. Irrigation and Fertigation
8. Crop protection
9. Harvesting
10. Produce Handling
11. Waste Pollution Management
12. Worker Health and Safety Training
13. Environmental Issues
14. Complaints
15. Security

Water



- Increasing issues of shortages – districts, wells delivering less
- Water quality is decreasing, esp. w/out rain to leach
- Increased use of reclaimed water – Orange, San Diego Riverside all currently have deliveries to avocado groves

DWR website

<http://www.dpla.water.ca.gov/sd/>

Irrigation Management

- Improved:
 - management and maintenance
 - irrigation controls
 - soil/atmospheric/plant monitoring systems to improve timing



UC websites

[http://cesanluisobispo.ucanr.edu/Drought Information/](http://cesanluisobispo.ucanr.edu/Drought%20Information/)

[http://ciwr.ucanr.edu/California Drought Expertise/](http://ciwr.ucanr.edu/California%20Drought%20Expertise/)

[http://lawr.ucdavis.edu/ce irrigation.htm](http://lawr.ucdavis.edu/ce_irrigation.htm)

<http://biomet.ucdavis.edu/>



<http://missionrccd.org/>

Low cost Services:

- **Well Water Management**
- **Soils /Water**

****To be used as guidelines****

***Serving Fallbrook, Bonsal & Rainbow**

***Free* agricultural irrigation system evaluation**

- Assesses the existing irrigation system: pressure, system uniformity, flow-rates, and application rates.
- Visual inspection of other factors and conditions affecting system.
- Soil characteristics & rooting depth are ascertained in
 - Determine the on-site soil-plant-water correlation.
- Report that details the evaluation's findings, includes: results of the uniformity test, ranking of the existing irrigation system's total efficiency and problematic areas in the irrigation system.
- Recommendations for improving overall system efficiency, includes a irrigation schedule.
- Program Director will discuss observations made of the system while in the field & provide information on the use of CIMIS, irrigation scheduling, water budgets & Best management practices .
- Lance Andersen, the District's Ag Program Director, at (760) 728-1332 or lance@missionrcd.org.

Energy Technology (WET) Program- California Energy Commission that will be launched and solicited soon (Summer 2015), that includes irrigation systems improvements in terms of hardware and operations, up to \$3 M available. Up to \$7 M available: (**Need to meet specific requirements**)

- Conversion from high to low pressure drip/Irrigation system to be installed must meet minimum specifications
- ***SWEEP program***, drought-related emergency funds up to \$150K per farm. The first round of solicitations for the SWEEP program ended on June 29th, but there will be at least another round in July and depending on the availability of funds, there might be a third round of application submissions.

link: <http://www.energy.ca.gov/wet/>.

Proposition 1 -Department of Water Resources- \$35 M, Water Measurement/Volume-Based Pricing

August 2015	Post Draft Guidelines and hold workshops
Winter 2015	Post Final Guidelines
Spring 2016	Announce Grant Awards

Natural Resources Conservation Service (NRCS)- Nearly \$40 M is being made to help drought-impacted growers. Can help with conservation practices. Reimbursement rates typically cover about half the cost of the practice.

- Protecting soils made vulnerable due to water cut backs/ Protecting drought-impacted rangeland/ Stretching every drop of irrigation water using improved hardware and management.
- <http://www.nrcs.usda.gov/wps/portal/nrcs/main/ca/newsroom/features/>

Other Resources Available

Water Conservation:

<http://www.water.ca.gov/wateruseefficiency/finance/>

SLO County Integrated Regional Water Management Plan:

<http://www.slocountywater.org/site/>

State Bonds and Grants Information:

http://resources.ca.gov/bonds_and_grants



Nutrition and Plant Growth Regulators

- Adequate foliar N going into bloom and after yields greatest yields
- Uniconazole-P trials unsuccessful
 - <http://www.californiaavocadogrowers.com/articles/disappointing-results-uniconazole-p-field-trials>
- Registration of other PGRs is being pursued

CAC website

<http://www.californiaavocadogrowers.com/research/research-library>

Labor

- Trained labor availability when needed

http://giannini.ucop.edu/media/are-update/files/articles/V17N6_3.pdf

- Immigration policy

http://giannini.ucop.edu/media/are-update/files/articles/V18N2_3.pdf



- **H-2A Temporary Agricultural Workers**
H-2A Processes:

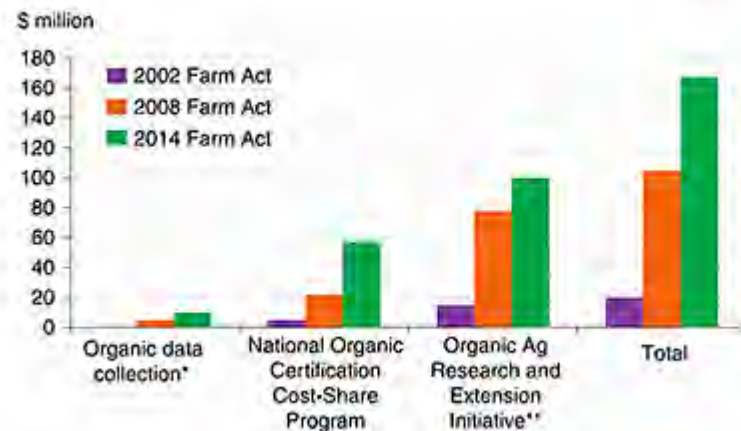
<http://www.uscis.gov/working-united-states/temporary-workers/h-2a-agricultural-workers/h-2a-temporary-agricultural-workers>

Organic Production

- Organic production and sales still increasing
~%5 of total sales

<http://www.thepacker.com/marketing-profiles/organic-produce/tight-avocado-supply-pressures-california-growers>

http://www.avocadosource.com/CAS_Yearbooks/CAS_90_2007/CAS_2007_V90_PG_055-056.pdf



Harvest Costs and Production

http://coststudyfiles.ucdavis.edu/uploads/cs_public/63/ff/63ff6438-9231-4e91-ab1f-fb8894c9ecf1/avocadoconventionalvsbslo2011.pdf

- Chemical costs are not increasing as fast as inflation because oil costs have come down

Innovative Marketing

- New ways to access markets
 - promotion planning
 - social media activity
 - graphic design
 - marketing material design
 - tradeshow and networking



Pest Control

Some new herbicides registered



- **Weeds:** Scythe (organic), Suppress (Organic), & Shark

<http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=12765>

<http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=16597>

- **Thrips control:** spinetoram and spirotetramat good rotation with abamectin

<http://www.ipm.ucdavis.edu/PMG/r8300311.html>

- **Persea mites:** spiroadiclofen, etoxazole and fenpyroximate for rotation with abamectin



<http://www.ipm.ucdavis.edu/PMG/r8400211.html>

Ants: New ant control baits coming from Mark Hoddle (UCR) from ACP research



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