



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



- 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

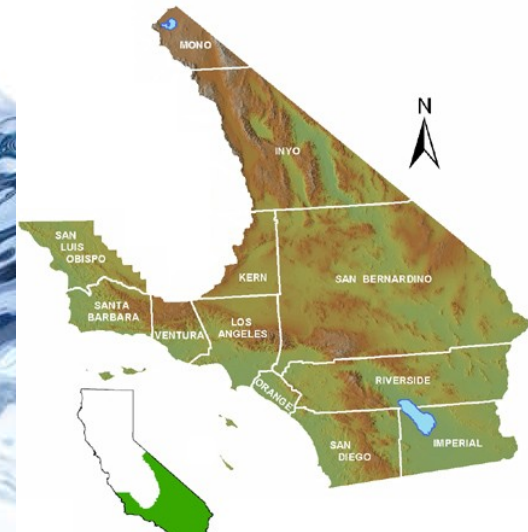


# Water

- 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://wwwdpla.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%20irrigation.htm)

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



Coastal San Luis  
Resource Conservation District

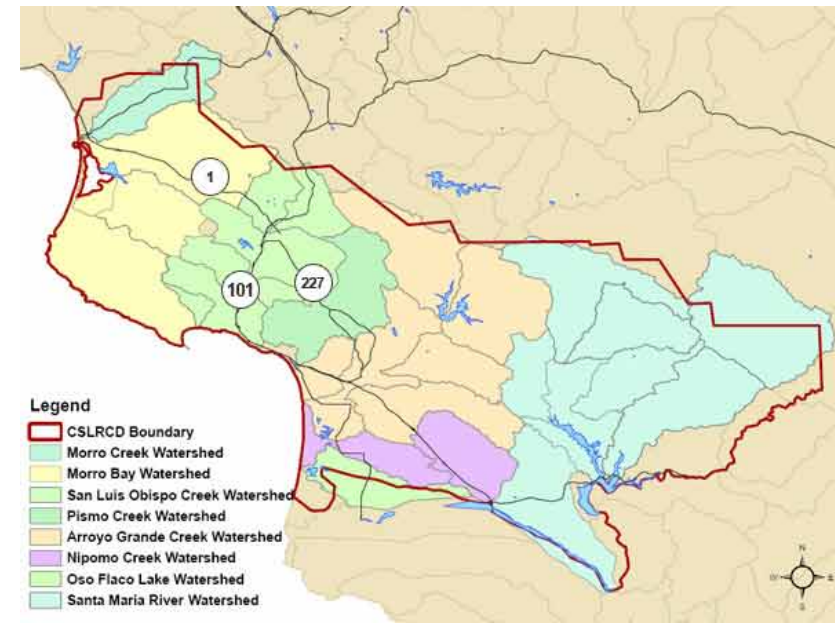
Search



<http://www.coastalrcd.org/>

## Low cost Services:

- Mobile Irrigation Lab
- Irrigation Efficiency
- Nutrient Management
- Erosion Control







# Agricultural irrigation system evaluation

## Information brochure

### The Evaluation

We review your irrigation operation and inspect your system to evaluate the performance. Measurements of pressure and flow can determine your Distribution Uniformity with calculations that will indicate how to improve efficiency.

#### Services include:

- Irrigation Scheduling Assistance
- Nutrient Management Assistance
- Water Quality Analysis
- Distribution Uniformity Analysis
- Pump Efficiency Analysis
- Equipment Recommendations

### Contact Information

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Visit us at [www.coastalrcd.org](http://www.coastalrcd.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](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](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](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>

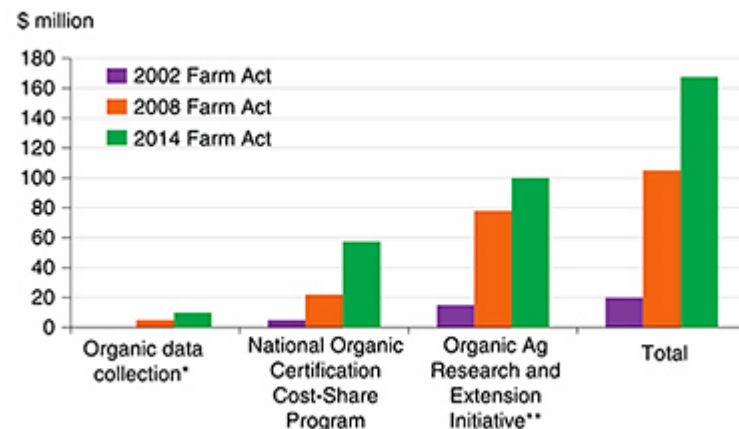


# Organic Production

- 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](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](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:** spirodiclofen, 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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