

Presentation to the State Water Resources Control Board

By Matt Roberts,

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I. Family background and experience

My family moved into the Carpinteria Valley in the late 1870's. At that time they were attracted to the area's natural beauty and fertile agricultural soils. The family has been involved in agriculture in the valley ever since.

I have been growing avocados and other tree crops since 1980 beginning immediately after I received a degree in Business Economics from the University of California at Santa Barbara. I also received certifications from the UC Ag extension office in subtropical agriculture especially as it relates to the growing of Avocados and have participated in California Avocado Society conferences ever since.

I have had an eight year tenure acting as the elected representative to the California Avocado Commission and held the position of the Marketing Committee Chairman. The Avocado Committee makes decisions on how to spend grower assessments on marketing and avocado research.

I continue to grow Avocados, lemons, cherimoyas and persimmons on 80 acres in Carpinteria and have served on the Carpinteria Valley Water District Board for the last eight years.

II. Cost of water as it relates to Conservation

The unit cost of agricultural water in the Carpinteria Valley, at about \$600/acre foot, is very expensive, and as such acts as a strong incentive for a grower to use water carefully and conserve whenever possible. Farmers are in the business to make money. With \$600 per acre foot as the area water cost, water is the second most costly input next to labor. Obviously, we are constantly working to maximize the utility of every water dollar we spend. In order to do this we look to a variety of tactics and technologies.

III. Conservation measures used on my Ranch

- A. Drip and micro sprinkler irrigation. Our area soils are mostly heavy clays and consequently they are readily susceptible to water run off. To combat this, we exclusively use micro sprinklers or drip irrigation. By applying water more slowly, we improve water penetration, greatly reduce runoff and create better growing conditions.

- B. Use of pressure regulated sprinklers on sloped plantings. The result is that each sprinkler head applies equal amounts of water independent of elevation. This in turn avoids the over watering of some areas to compensate for areas receiving lower pressure.
 - C. Use of cover crops to promote a mulch layer that retains moisture and nutrients. Certain annual grasses are promoted to improve the organic content of the soils, help prevent top soil erosion and improve the biodiversity of the soil.
 - D. Use of mulch supplements to cover crops, further enhancing moisture and nutrient retention. We have imported thousands of yards of plant mulch. This mulch is then distributed around the drip line of the trees to help maintain a better moisture level in the soil. This helps to reduce irrigation frequency especially in warm weather.
 - E. Use of nighttime irrigation applications to minimize evaporation losses. This is especially helpful in the micro-sprinkler irrigated areas during warmer and dryer days when daytime irrigation can have significant evaporative losses.
 - F. Use of information exchange organizations such as the UC Extension and the California Avocado Society (funded by the growers) to keep abreast of new ideas and changing technology.
- IV. Conservation measures used by others in the Carpinteria Valley
- A. Use of moisture sensors, such as tensiometers:
 - B. Use of water reclamation systems by covered agriculture such as green house operations
 - 1. Estimated at 200,000 gal/day or 224 AF/year
 - 2. Many greenhouse growers use water a second time on open field crops
 - C. Use of soil polymers to promote growth and also retain water;
 - D. Use of CIMIS (California Irrigation Management Information System) information;
 - E. Use of Cachuma Resource Conservation District water audit services.