

WEBINAR SUMMARY

Agriculture and Drought: Implications for Food Security
July 22, 2015



Introductory [Slide Presentation](#) from Katy Mamen, Water Initiative Coordinator, Public Health Alliance of Southern California

- It is difficult to apply a one-size-fits-all policy approaches to water management in California; agricultural production is highly diverse. Over 400 agricultural products are produced in state.
- We receive many conflicting messages about agriculture and water, including basic information about agriculture's share of water use. When use by the environment is accounted for (in-stream flows, wild and scenic rivers, required Delta out-flow and managed wetlands), agriculture is responsible for 41% of total use. Considering only "developed" water (water withdrawn and used by people), agriculture accounts for 80%.
- The cost of water for agriculture varies widely in different regions in the state. In the South Coast, water costs between about \$400-550 per acre-foot, whereas in the Colorado River basin, it is about \$20 per acre-foot.
- The amount of water used varies widely among foods. High-protein foods such as meat takes much more water per ounce of food than fruits and vegetables.
- The total amount of water used varies a lot as well: Among crops grown, alfalfa production (primarily used as feed for meat production) uses the most water in California in total, followed by almonds/pistachios.
- The effects of the drought on California agriculture have been pronounced. In 2014, the drought cost CA agriculture \$1.5 billion in lost revenue and additional water pumping costs. More than 17,000 agricultural jobs were lost and almost half a million acres were fallowed. Groundwater depletion has been one of the most severe consequences of the drought.

Discussion with Panelists: Paula Daniels, USC and California Water Commission; John Krist, Ventura County Farm Bureau; Christy Porter, Hidden Harvest.

- **Regional diversity in drought impacts:** In Southern California, in general, the drought is affecting coastal agriculture more than inland reaches. Agriculture in coastal areas is more reliant on groundwater; the Colorado River is a major source in the Coachella Valley and other areas inland. The cost of water is especially high for growers along the coast and so is an important factor dictating what is grown there. So far, the drought hasn't had a big impact on shifting what is grown where in SoCal.
- **Relative water footprint of foods:** Alfalfa is a water-intensive crop that is widely grown in California and supports the beef industry. Debate about the degree to which meat should feature in our diets.
- **Role of regional food systems:** There are growing efforts in the health and nutrition communities to expand healthy regional food systems. Institutional procurement policies can support sustainable agricultural production: creating large-scale demand for sustainably grown food through institutions could help shift the market –nudging growers to meet these procurement standards would generate more sustainably grown produce, bringing down its cost in general. One example is the LA Good Food Purchasing Policy.
- **Water security is food security:** The drought affects food security on many levels—including reducing the amount of regional food produced by the agriculture sector and impacting agricultural jobs esp. among low-paid seasonal workers.
- **Increasing farmgate revenue:** Direct marketing and aggregation efforts like food hubs are important ways to get a higher percentage of the dollar spent on food to the producer, which allows more latitude to produce lower-value crops. This could support the goal of a more diversified "market basket" of products that make up a healthy locally produced diet.

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However, many farmers prefer to sell to co-ops or packinghouses in order to reduce time spent on marketing.

- **Urban agriculture:** While urban agriculture is unlikely to feed the population, it is an important piece of the puzzle, especially to improve food security in low-income areas. Removing barriers to greywater use in urban agriculture is important. There is a lot of opportunity to increase the amount of recycled water we use for agriculture—matching water quality to use is important. Recycled water currently makes up less than 1% of water applied to agriculture.
- **Gleaning helps us make the most of our water:** Christy Porter's organization, Hidden Harvest, is gleaning food left behind in the fields and distributing it to the food insecure, in the process providing well-paying jobs to low-income farmworkers. 25% of crops are left in the field (another 27% is thrown away after it reaches the end consumer). Maximizing use of the food we grow is important for getting the most out of the water we apply to crops and improve food security.
- **Grower decision-making vs social needs:** Individual growers make decisions about what they grow based on economic forces. There are ways to provide incentives that will draw growers to produce more of what society is interested in.
- **Public support for wise water use:** While direct farm subsidies benefit a small number of commodity growers, there has been growing funding to support water efficiency and water-wise land management practices.
- **Ecological thinking:** Ecological, or permaculture, principles can and should be integrated into health department planning for water management.

Participant Questions:

Q: It seems to be obvious that a plant-based diet is necessary for a more sustainable and healthy future. What can be done to urge government agencies to adopt a stronger message to do away with animal products and move toward plant-based option? (i.e. WIC/USDA providing large amounts of dairy products, etc)

A: The Los Angeles Food Policy Council's Good Food Purchasing Policy includes points for institutions/restaurants supporting plant-based diet options. An example of an institution that has implemented this is LAUSD, which has adopted "meatless Mondays" in their menu planning.

Q: Christy, you mentioned 25% waste, in addition to 27% of crops wasted in the field—what does that account for?

A: An additional 25% is wasted by the end consumer.

Q: Another important nexus between ag and water is the potential for well-managed working lands to support groundwater recharge and better on-farm water efficiencies. What do you see as some of the opportunities for Californians supporting/incentivizing farmers in providing more of these ecosystem services?

A: In addition to federal funds through farm bill programs (administered via NRCS), there are opportunities that will emerge through AB32 cap and trade funding and new initiatives such as the state's Healthy Soils Initiative.

Q: Questions re AB 1826; will it increase the amount of food recovered for people? And is there enough composting capacity in CA for food waste re-directed from landfills?

A: There is a lot that can be done to build more market for compost as well as additional facilities. In some places, demand exceeds supply; in others supply exceeds demand.