

California farmers wasting water or providing benefits?

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California's historic drought has taught us a lot about how water is used and who uses it the most.

Well-publicized reports and studies have broken down the amount of water needed to grow food in California. And while the numbers were known to farmers, they weren't to many non-growers, with some reacting strongly and openly criticizing the agriculture industry for its water usage and crop choices.

The numbers show that it takes millions of gallons to grow alfalfa, almonds or raise livestock. An often-repeated statistic is that it takes one gallon of water to produce one almond.

But the numbers don't tell the whole story of California's role as one of the world's largest agricultural machines. The state's latest revenue figures show agriculture was a \$46 billion industry in 2013, providing 450,000 jobs.

Water: Beyond the drought crisis

The Bee presents a four-part series on the most vital resource for the San Joaquin Valley's agriculture, the No. 1 farm economy in the country.

June 7: New supplies from salty water

Today: The full picture on crop water use

June 21: The largest groundwater basin in California

June 28: Farm irrigation efficiency in the 21st century

David Zoldoske, director of the Center for Irrigation Technology at Fresno State, says California agriculture's water usage can be eye-opening, but it's also important to understand that it takes that much to produce more than half of the nation's fresh fruits, nuts and vegetables.

Still, despite California's farming prowess, Zoldoske says most people are far removed from fields, orchards and rangeland, and can't grasp how much water is used.

"When people order a cheeseburger, they don't realize how many thousands of gallons it took to produce that," he says. "And they should."

Most studies calculate water usage by looking at the amount used to grow, process, pack and cool the crop. For example, an eight-ounce steak requires at least 1,232 gallons of water, the highest amount in agriculture. But that figure also includes the water it takes to grow cattle feed — including alfalfa and corn — and the water used to process the beef.

"Irrigating a farm is not like watering your lawn," Zoldoske says.

Critics contend that the water usage data is proof that agriculture's consumption needs to be curtailed. They suggest that government should be regulating what crops farmers can grow. Adding urgency to that argument is the continued drop in ground water levels.

Managing water 'footprint'

As California endures its fourth dry year, a lack of surface water has forced many San Joaquin Valley farmers to furiously pump from underground wells, raising concerns about depleting ground water resources. Many farming critics have pointed a finger at the booming almond industry that has become Fresno County's second \$1 billion crop, next to grapes. Almond farms are among the top water users in agriculture.

Water conservation advocates say people should pay closer attention to their water footprint, especially in times of drought. They say that along with not watering the lawn or letting things mellow in the toilet, consumers should also be mindful of food choices.

That's part of the mission of the Grace Communications Foundation, a New York-based organization that promotes sustainable food and energy choices. The group has also created an online water footprint [calculator](#) to help people estimate their total water use.

Peter Hanlon, program director for Grace's water and energy programs, says that by simply eating less conventionally raised beef, consumers can reduce the water footprint. Most of the beef raised in the U.S. starts out in a pasture, then is moved to a feedlot where it is fed a grain-heavy diet. Hanlon says pasture-raised beef is better for the environment.

"We aren't saying eat less meat; we are saying eat better meat," Hanlon says.

The foundation also suggests eating less ready-made meals because of the water used to create them. Also, cut back on food waste. Wasted food is wasted water, Hanlon says.

Are we all supposed to eat Cheetos and Diet Pepsi?

Amy Horn, a wife, mother and healthy food advocate who lives in Clovis

Amy Horn, a wife, mother and healthy food advocate who lives in Clovis, says she doesn't understand why crops such as almonds are being attacked while processed foods seem to be given a pass: "I don't understand why we are demonizing industries that are providing healthy foods. I don't understand the point of that. Are we all supposed to eat Cheetos and Diet Pepsi?"

Horn is concerned that if people take the water data to the extreme, they may be cutting out foods that are essential to a healthy diet.

"And if they avoid foods that take a lot of water to use, are they going to turn to more processed foods?"

Standing up for ag

Farmer and pesticide applicator Erik Wilson says he, too, has seen the list of thirsty crops and has grown weary of the farmer bashing. He and friend Steve Malanca wanted to combat the negative attention by showing people the faces and stories of California's farmers. Three weeks ago, they launched a Facebook page called [My Job Depends on Ag](#). The page has about 22,000 likes.

"I have always felt there must be a better way to educate the people about ag without yelling and screaming," Wilson says.

Wilson wants people to know that farming is a huge industry and involves thousands of jobs at multiple levels from the field worker to the truck driver.

Irrigating a farm is not like watering your lawn.

David Zoldoske, director of the Center for Irrigation Technology at Fresno State

“It’s true, you can’t drive down a country road and not see almond trees — you see them everywhere,” Wilson says. “But what people don’t realize is how many thousands of acres of fields have been fallowed that won’t be growing anything this year.”

Aubrey Bettencourt, executive director of the California Water Alliance, says that as the drought worsens, farmers need to begin having a conversation with the public of how consumers benefit from the water farmers use.

“This isn’t about how much water, but what does the water do,” Bettencourt says. “We are talking about providing something that is beneficial to the economy — food, fiber and fuel.”

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