

# California's drought is extreme, but the government is making it worse

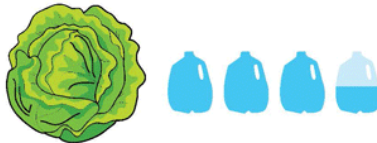
## How Thirsty Is Your Food?



One head of broccoli 5.4 gallons of water



One walnut 4.9 gallons of water



One head of lettuce 3.5 gallons of water



One tomato 3.3 gallons of water



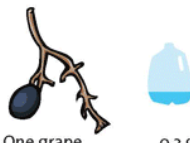
One almond 1.1 gallons of water



One pistachio 0.75 gallons of water



One strawberry 0.4 gallons of water



One grape 0.3 gallons of water

Figures indicate how much water it takes to bring each crop to maturity in the US, if using only irrigated water. Data: Mekonnen, M.M. and Hoekstra, A.Y., "Water footprints of derived crop products (1996-2005)". Art: Nikiteev, Konstantin, Asya Alexandrova, Igor Zakowski/Shutterstock; Kate Vogel/Noun Project.

Mother Jones

Farmers in California right now are trying to figure out how to respond to an extreme drought, culling their herds and tearing out their almond orchards. This year might prove even drier than 1580, which scientists believe is the driest year of any in the last 500 or so.

The state isn't really ready for the dry conditions, and part of the reason is water subsidies. For many years, Washington and Sacramento have subsidized the water farmers use to irrigate, enabling them to avoid agricultural practices that would be more resilient and efficient in the event of a drought. Meanwhile, urban residents, who collectively account for far less water consumption than do farmers, have been left with expensive water bills and rationing during dry years.

California produces nearly all of the country's broccoli, walnuts and almonds, report Alex Park and Julia Lurie in Mother Jones, but these crops require heavy watering. A single walnut, for example, requires nearly 5 gallons of water to produce, as shown in the chart above. Without federal subsidies, farmers would have been forced to find ways of watering their fields with less water. Sprinklers and irrigation ditches lose more water to evaporation than do permeable or perforated pipes (the technique known as drip irrigation). Just as many farmers now use sensors and algorithms to decide when and where to plant, the same tools could provide more information on when their crops need to be watered, ensuring that not a drop goes to waste.

Alternatively, farmers would abandon their driest fields and their thirstiest crops, and find other, more productive uses for the land.

California's drought might not be a result of climate change. Over the millennia, intense droughts that have lasted decades have been surprisingly frequent in western North America, according to paleoclimatologists. Still, warmer global temperatures mean that the current dry spell is likely to last longer and is more likely to recur in the future.

"It's going to take more efficient irrigation to deal with that drought if it's as long-term and persistent as some people fear," said Craig Cox at the Environmental Working Group's office in Ames, Iowa.

It isn't just environmentalists who are worried about the subsidies, however. Some experts with conservative views dislike what they see as a giveaway by the government that wastes both water and money. "The government vastly underprices the water," said Chris Edwards, an economist at the libertarian Cato Institute who has written about the drought.

"There's a proper balance here, and we're not finding it. We want water in the rivers. We want free-flowing rivers where salmon and other fish can live. Water is not being allocated efficiently," he added.

Any day Know More can cite both an economist from the Cato Institute and a pair of journalists at Mother Jones in the same post is a good day on the blog. Copious thanks to Park and Lurie for the use of the charts. Click below for more of their coverage of conditions in California.