

TINY FISH, BIG CONTROVERSY: THE CALIFORNIA DELTA SMELT



BY KIMBERLY SEARS

Feeding a family isn't as easy as it used to be. In only one year, from 2013 to 2014, grocery prices rose 2.7%.¹ In the last few years we've seen huge price increases in fresh foods: fruits, vegetables, dairy, eggs, poultry, and especially meat—since 2009, the cost of beef has gone up by a whopping 35 percent!² And experts predict that food prices will rise faster than inflation in 2015—which means that, for the average family, wages won't increase enough to keep up with the growing cost of eating in America.

Spiking food prices have us clutching our wallets, keeping one wary eye on grocery store prices and the other on our home gardens and food storage. But what really has us scratching our heads is why prices are increasing so much. How can food prices be at an all-time high—and

still rising—when gas prices are at their lowest in five years?

The answer may surprise you. One of the biggest contributors to increasing food costs is a tiny 2.5-inch northern California minnow. Known as the Delta smelt, it's at the heart of the biggest environmental controversy in California, and America's mounting food crisis.

CALIFORNIA'S WORSENING DROUGHT

Despite December storms, snowpack in California's Sierra Nevada is still at half of its long-term averages.³ January, usually San Francisco's wettest month, saw [no measurable precipitation](#). UC Berkeley paleoclimatologist B. Lynn Ingram, who studies tree rings to glean historical climate data, claims that [2014 was the driest year in California](#) since Sir Francis Drake visited the west coast

in 1580. For a state that leads the nation in population and agriculture, the current state of drought is alarming. It raises the conundrum of how to allocate water to serve everybody's needs; and much of the debate centers around the California Delta smelt.

WHAT IS THE CALIFORNIA DELTA?

The Sacramento-San Joaquin Delta, or California Delta, is a 1,100-square mile inland river delta in northern California. The delta empties into Suisun Bay, then San Pablo Bay, and finally into San Francisco Bay. Fed primarily by the Sacramento River from the north and the San Joaquin River from the southeast, more than 30 million acre feet move through the delta each year—about 50 percent of all of California's runoff.

More than 60 islands and tracts, criss-crossed by natural and man-made channels, comprise the California Delta. Two-thirds of it is below sea level, so a network of levees (more than 1,100 miles of them⁴) holds back the ocean and protects the reclaimed marshland from flooding.

The delta was first used for agriculture during the California Gold Rush, when farmers planted orchards on the fertile islands to grow fresh fruit for mining camps in the Sierra Nevada. Beginning in the 1850s the first levees were built, mostly by

Chinese laborers. Since fresh water was available year-round, it was one of California's richest farming regions until the 1940s, when federal water projects made it possible to transport water from the delta to the Central Valley and begin irrigation there. Today the delta is still one of the most productive farming regions of the U.S., and the home to more than 400,000 Californians.⁵

THE DELTA SMELT

The region is also home to the Delta smelt, a tiny fish found only in the Sacramento-San Joaquin Estuary. The smelt live in brackish water with a salinity range between 2 and 14 parts per thousand.⁶ Because of its one-year life cycle and relatively low reproduction rate, its population is very susceptible to environmental changes.

In 2004, the smelt was found to be endangered. Since then, measures enacted to protect its population have reduced the amount of water from the delta available for pumping. In 2007, federal judge Oliver Wanger famously (or infamously) ruled in favor of the smelt, severely curtailing the pumping of water from the delta for agricultural use. Tens of billions of gallons of freshwater once diverted for agriculture are now dumped into the San Francisco Bay and thereby the Pacific Ocean—a policy that hurts California's multi-billion dollar agricultural industry in the Central Valley.

WATER AND CALIFORNIA AGRICULTURE

Aside from being an agricultural asset in its own right, the Sacramento-San Joaquin River Delta is the nexus of California's statewide water system.



“It's like someone cut in front of you in line at the In-N-Out. Some of my neighboring farmers that don't have groundwater will have to let their groves die. [Agriculture] is told to live without water...tell me, how many meals can you skip?”
- Arlen Miller, Central Valley Farmer

Water is pumped from the southern end of the delta and exported to the San Joaquin Valley, to Southern California, and to portions of the Bay Area to supply water to over 23 million people and to 1,130,000 acres of farmland in Southern California and the Central Valley.

On less than 1 percent of the farmland in the United States, the Central Valley produces 8 percent of the nation's total agricultural output. One sixth of all the irrigated land in the U.S. is in the Central Valley. It's America's primary source for tomatoes, grapes, cotton, apricots, asparagus, and almonds. In fact, Central Valley farmers produce more than 70 percent of the world's supply of almonds!⁷

And allocation of water from the delta isn't just an issue for Californians to worry about. Let's face it, America can't eat without California. Aside from apricots, almonds, grapes, and tomatoes, California also produces almost all of our dates, figs, kiwi fruit, nectarines, olives, pistachios, peaches, plums, and strawberries.⁸ California also leads the nation in the production of avocados, broccoli, carrots, cauliflower, lettuce, onions,

peppers, spinach, and walnuts, says the [USDA 2012 report on California agriculture](#). California also leads the nation in milk production, so the production of butter, cheese, and other dairy products are affected by water availability, too. Agriculture currently uses about 80 percent of California's water.

THE DROUGHT AND THE SMELT CONTROVERSY

Since Judge Wanger's ruling in 2007, the smelt and the allocation of freshwater from the Delta have been the subject of numerous appeals and have been a hot button in every election. In March of 2014 a federal appeals court once again upheld restrictions on pumping water from the delta.

The continuing drought (the Sacramento and San Joaquin Rivers now face [a water deficit of 11 million gallons](#)) means that there's no longer enough water to dump tens of billions of gallons into the ocean and



have enough for agriculture. In 2013, for the first time in six decades farmers on the east side of the San Joaquin Valley received no federal irrigation water.⁹

Some farmers are coping with the water shortage by drilling wells. But since no government agency monitors how much water is being drilled, no one knows how much water is being depleted from California's aquifers, or when it will run out.

Other farmers are staying in business by idling their fields. Instead of planting annual crops, they're focusing scarce water resources on keeping their orchards alive and raising more lucrative cash crops, like almonds. Still others have had no choice but to watch their crops die. All of this is devastating for California's economy, because when fields lay fallow, jobs for farm workers are lost. A recent [UC Davis study](#) predicted

that idling fields would eliminate more than 17,000 jobs. Also, when farmers reduce their total acreage to cope with water shortages, produce prices increase—not just for this year but for years to come.

The indignance of California farmers is articulated by Central Valley farmer Arlen Miller: "It's like someone cut in front of you in line at the In-N-Out. Some of my neighboring farmers that don't have groundwater will have to let their groves die. [Agriculture] is told to live without water...tell me, how many meals can you skip?"¹⁰

Not many. Maybe 2015 will be the year that ends the California drought; maybe this will be the year in which anti-pumping restrictions in the delta are relaxed. We're hopeful. But we're hedging our bets with our home gardens and our food storage.

1 Leubsdorf, Ben and Jon Hilsenrath. [As Food Prices Rise, Fed Keeps a Watchful Eye](#). The Wall Street Journal, 6 Jul 2014, accessed Feb 2015.

2 Domenech, Ben. [Food Prices are Soaring and Washington Doesn't Care](#). The Federalist, 8 Jul 2014, accessed Feb 2015.

3 Llanos, Miguel. [California Drought: Early Months of 2015 Will Be Critical](#). NBC News, 4 Jan 2015, accessed Jan 2015.

4 [California's Water: Sacramento-San Joaquin River Delta](#). Association of California Water Agencies, accessed Jan 2015.

5 Idem.

6 [Revive the San Joaquin](#). Delta Smelt, accessed Jan 2015.

7 Purdum, Todd S. [California's Central Valley: Where the Mountains are Almonds](#). The New York Times, 6 Sep 2000, accessed Jan 2015.

8 Holthaus, Eric. [10 Percent of California's Water Goes to Almond Farming](#). Slate, accessed Jan 2015.

9 Siegler, Kirk. [Fields and Farm Jobs Dry Up With California's Worsening Drought](#). NPR, The Salt, 22 Apr 2014, accessed Jan 2015.

10 Holthaus, Eric. [10 Percent...](#)

