

Everything you get with a handful of

Almonds

Getting the most out of every drop

33% reduction in water used to grow each almond between **1990s–2010s**¹

15% more reduced between **2018–2022**, part of a 20% reduction goal by **2025**²

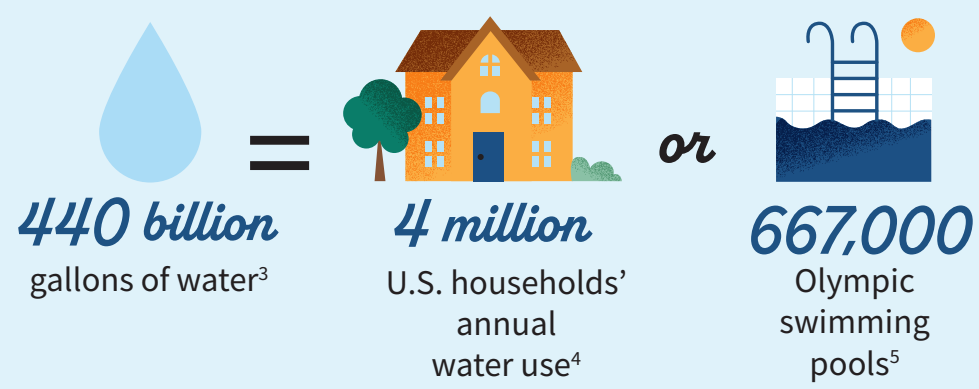
Four crops for every *drop*

Water used to grow almonds actually grows four products: the kernel you eat, which grows in a shell, protected by a hull, on a tree productive for approximately 25 years.



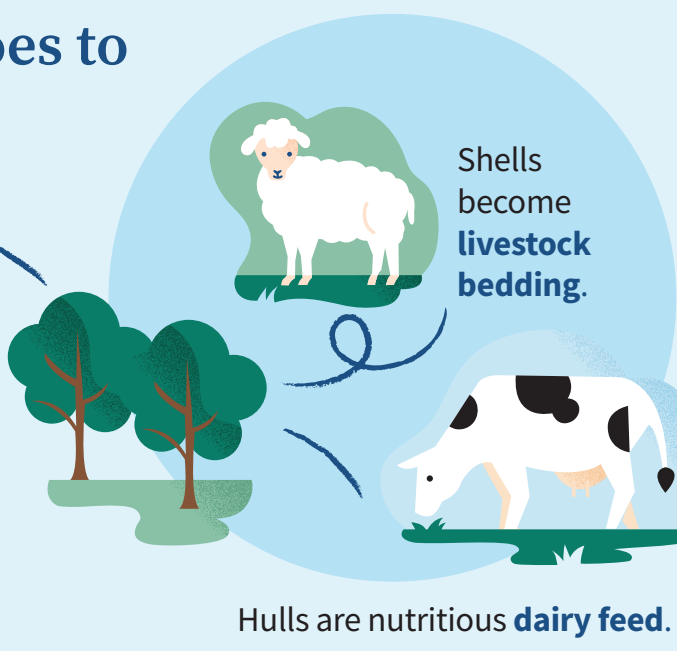
Reducing the water needed to grow other feed *crops*

Hulls can replace alfalfa hay pound for pound in up to 20% of dairy feed formulations, reducing the acreage needed to grow it by 386,000 acres and saving **440 billion gallons of water**.³



Nothing goes to *waste*

Trees store carbon and are transformed into electricity or ground up into the soil at the end of their lives.



Building biodiversity

Growing more than *almonds*

42% of California almond orchards (685K acres) **maintain cover crops** between tree rows.¹¹

86% of all U.S. **bee-friendly certified farms** are almond farms.¹⁴

Helping honey *bees*

Bees get their first food of the year in almond orchards as they collect nutritious pollen¹⁵ and nectar.¹⁶ Beekeepers report their **hives consistently leave stronger** than when they arrived.¹⁷

Environmentally friendly *pest management*

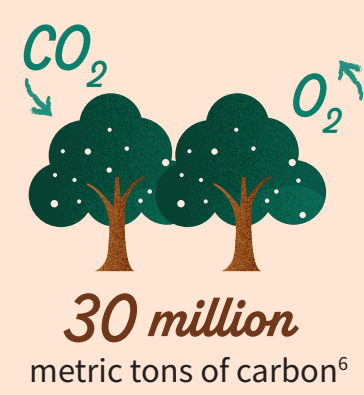
California almond farmers are on track for a **25% increase** in environmentally friendly pest management practices by 2025.⁷

1 in 3 bites of food depend on pollinators.

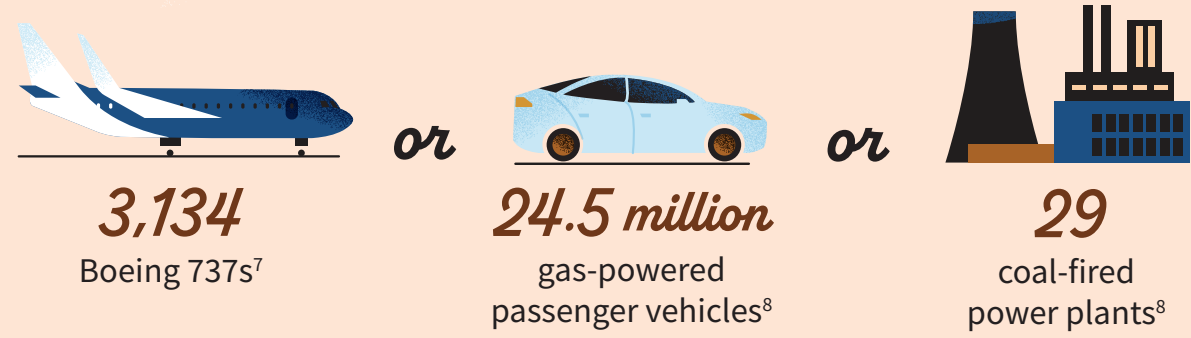
Climate smart farming

Almond trees store a lot of *carbon*

Compared to other fruit and nut trees grown in California, almonds store one of the **highest amounts of carbon per acre**—18 metric tons annually. When you look at carbon stored in all of California's almond trees (1.63 billion acres), this nets out to 30 million metric tons.⁶

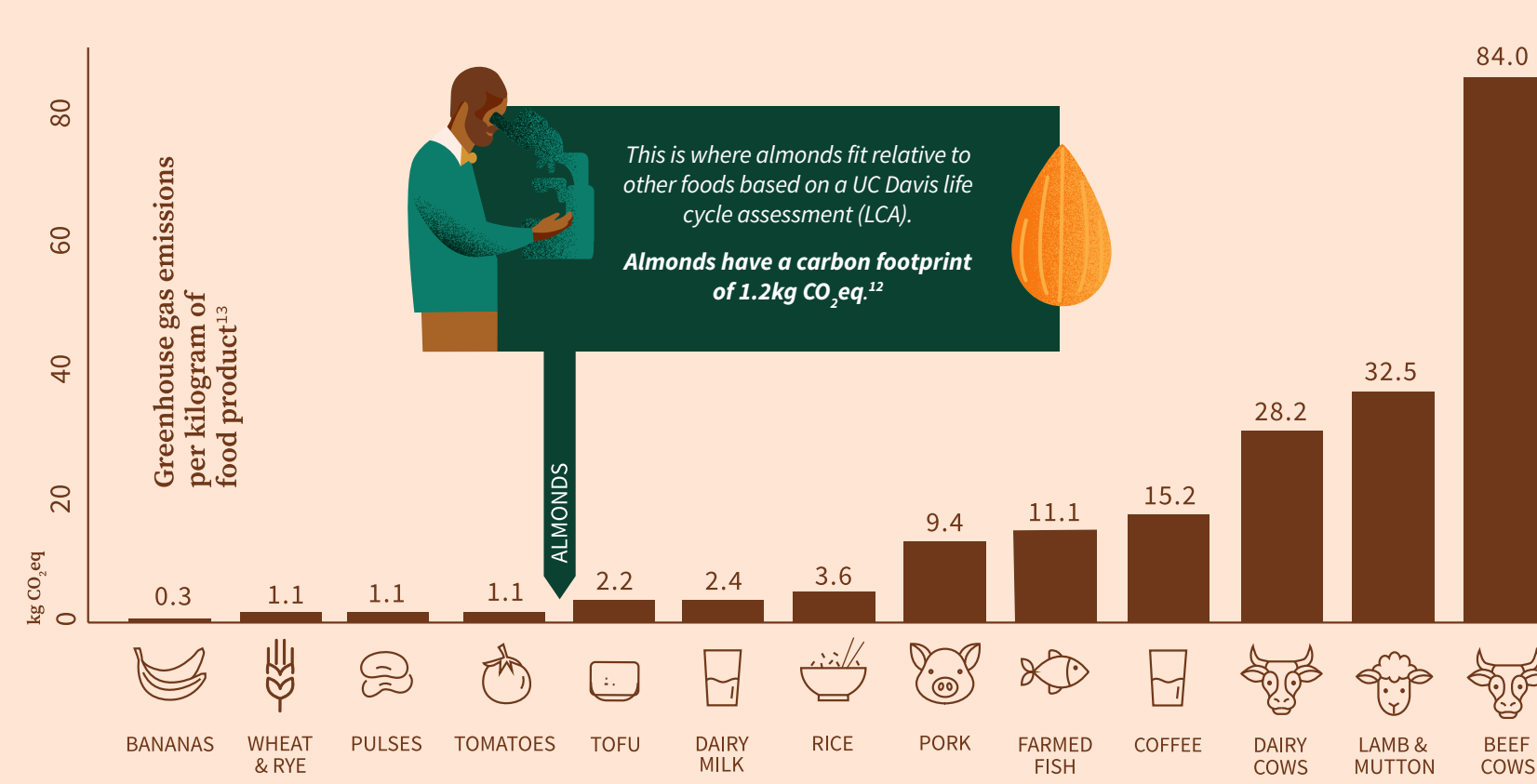


That's equivalent to the annual emissions of:



A low-carbon *footprint*

Almonds have a lower carbon footprint than many other foods.



Whole orchard *recycling*

Farms that recycle their orchards capture 2.4 tons of carbon per acre,⁹ each one **equal to living car-free for a year**.¹⁰

25-year lifespan
Almond orchards are a **no-till environment** for their 25-year lifespan.

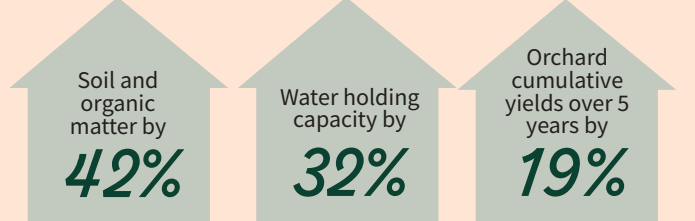


Back to the soil
At the end of their productive lives, whole trees are ground up and incorporated back into the soil, extending their sequestration.

On-farm adoption

Since this practice was **introduced in 2017**, nearly half of almond farmers replanting orchards have used this approach.¹¹

Whole orchard recycling helps farmers too, increasing:⁹



Health and nutrition

One portion of almonds provides¹⁸:

6 grams of protein

50% of daily vitamin E

77 milligrams magnesium

13 grams unsaturated fats

13% of daily fiber

Equivalent to¹⁸:

4.8x as much quinoa

16.9x as much cooked asparagus

3.8x as many cooked black beans

3.9x as much avocado

5.7x as many bananas

or

or

or

or

or

2.3x as many chickpeas

12.5x as much raw spinach

9x as much tofu

6.3x as much salmon

13.3x as much pineapple

No food waste here

America throws away nearly 60 million tons of food every year—that's almost **40% of the entire U.S. food supply**.¹⁹ Less than 1% of almonds are thrown out thanks to their **two-year shelf life**.²⁰



Almonds are a shelf-stable food which means they are **shipped around the world by boat**. Cargo ships produce **50x less CO₂ per kilometer** than travel by plane.²¹

Why California?

Family farms

There are 7,600 almond farmers in California: **90% are family farms**, and 70% of orchards are 100 acres or less.²²



Ideal climate

California is **1 of only 5 Mediterranean climates** on Earth, essential to growing almonds.

High standards

California's growing environment is one of the **most regulated globally**, with strict laws protecting the environment, worker and food safety.

1. University of California, 2010. Food and Agriculture Organization of the United Nations, 2012. Almond Board of California, 1990-94, 2000-14. 2. California Almond Stewardship Platform. Almond Orchard 2025 Goals MidPoint. SureHarvest. November 2022. 3. UC Davis. Department of Agricultural and Resource Economics. Sample Cost Study Alfalfa Hay and Organic Alfalfa Hay, 2020. 4. United States Environmental Protection Agency. How We Use Water, 2023. The average US household uses 109,500 gallons annually. 5. Phinixy Center for Water Sciences, 2023. An Olympic-size swimming pool holds about 660,000 gallons. 6. California Air Resources Board. An Inventory of Ecosystem Carbon in California's Natural & Working Lands, 2020. 7. Reuters. Boeing jets emissions data highlights industry's green challenge, April 2021. Assesses industry average 25-year operable lifespan. 8. U.S. Environmental Protection Agency. Greenhouse Gas Equivalencies Calculator, July 2023. 9. Emad Jahanzad, et al. Orchard recycling improves climate change adaptation and mitigation potential of almond production systems. PLOS ONE, March 2020. 10. Seth Wynes, et al. Climate mitigation gap: education and government recommendations miss the most effective individual actions. Environmental Research Letters, 2017. 11. California Almond Stewardship Platform. November 2023. 12. Alissa Kendall, et al. Lifecycle Based Assessment of Energy and Greenhouse Gas Emissions in Almond Production. Part 1: Analytical Framework and Baseline Results. Journal of Industrial Ecology, 2015. Almond LCA captures emissions through brownskin almond processing. 13. Joseph Poore, et al. Reducing food's environmental impacts through producers and consumers. Science, June 2018. Emissions are measured in kilograms of carbon dioxide equivalents (kg CO₂eq). Data captures emissions from land use change, farms, animal feed and processing. 14. Pollinator Partnership. January 2023. 15. Ramesh Sagili, Oregon State University, Department of Horticulture. 16. JP Tauber, et al. Colony-level effects of amygdalin on honeybees and their microbes. Insects, 2020. 17. Ellen Topitzhofer, et al. Assessment of Pollen Diversity Available to Honey Bees in Major Cropping Systems During Pollination in the Western United States. Journal of Economic Entomology, 2019. 18. United States Department of Agriculture, Agricultural Research Service. USDA National Nutrient Database for Standard Reference, Release 28, 2015. 19. United States Food and Drug Administration. Food Loss and Waste, February 2023. 20. Jean Buzby, et al. Food Loss Data Help Inform the Food Waste Discussion. United States Department of Agriculture, Economic Research Service, June 2013. 21. Joseph Poore, et al. Reducing food's environmental impacts through producers and consumers. Science, June 2018. 22. United States Department of Agriculture. Census of Agriculture.