water efficiency

FURTHER REDUCING THE WATER USED TO GROW ALMONDS

Over the past two decades, almond farmers have successfully reduced the amount of water needed to grow a pound of almonds by 33% via improved production practices and adoption of efficient microirrigation technology.[1] By 2025, the California almond community commits to **REDUCE THE AMOUNT OF WATER USED TO GROW A POUND OF ALMONDS BY AN ADDITIONAL 20%.**

Progress toward this goal is being measured against almond farmers' annual irrigation water applied per unit of crop yield. The data underlying this metric is derived from the California Almond Sustainability Program's (CASP) irrigation management module in which almond farmers assess and report their practices.

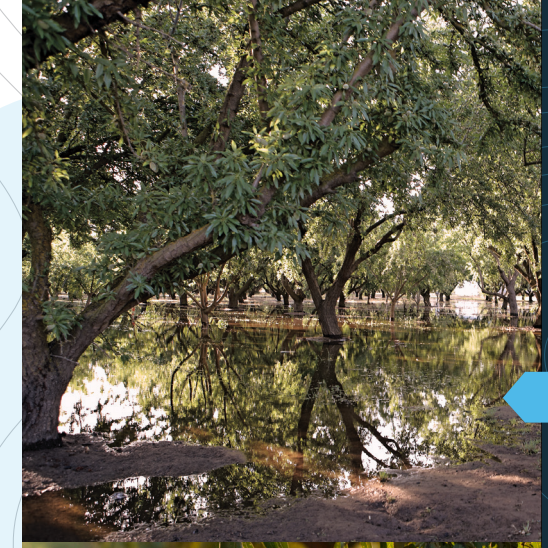
In addition to tracking goal achievement via CASP, the Almond Board of California is monitoring almond farmers' progress up the Almond Irrigation Improvement Continuum. Created by external irrigation experts, the Continuum outlines key irrigation management practices and how to achieve increasing levels of precision in each.

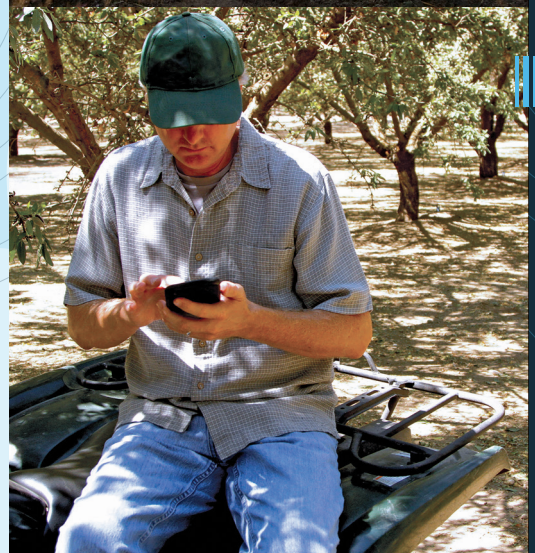
GOING FURTHER: ALMOND IRRIGATION IMPROVEMENT CONTINUUM

"By adopting practices outlined in the Almond Irrigation Improvement Continuum, I'm using 10% less water, my power bill has dropped significantly, and I've addressed disease problems in my orchard. What's more, by fine-tuning my approach, I've increased crop yields significantly, all while becoming a better steward and manager of this important resource."

Heith Baughman, ALMOND FARMER, BAKERSFIELD

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 Sustainability Program. August 2019





pursuing continuous WATER improvement

PAST

The California almond community began investing in research in 1982 to determine if a new irrigation method—microirrigation—could work in almond orchards. **PREVIOUSLY, FARMERS HAD FLOODED THEIR FIELDS OR USED LARGE SPRINKLERS.** The research showed positive results and farmers began implementing this technology as they planted new orchards.

PRESENT

Today microirrigation has been widely adopted in California's almond orchards, with **NEARLY 80% OF FARMS USING MICROSPRINKLERS OR DRIP SYSTEMS**[2]. These systems conserve water by applying it directly to the trees' roots rather than the entire field. Adoption continues to grow as older orchards are replaced.

FUTURE

While almond farmers have made strides in the area of irrigation efficiency, further improvements are underway. With tools like the **ALMOND IRRIGATION IMPROVEMENT CONTINUUM AND NEW TECHNOLOGIES**, farmers can better measure each orchard's irrigation needs, how much water is applied and monitor key factors like system performance, soil moisture and plant water status.