

# The Almond Project: Ensuring Livelihoods for Generations to Come

Launched in 2021, The Almond Project began with the development of a five-year study in California's Central Valley, implementing and researching a variety of soil health practices. This project was the winner of the 2024 INC Excellence in Sustainability Award – Back to the Planet.



Intentional inclusion of animals such as sheep in cropping systems can improve soil biology and fertility, increase biodiversity, and help manage cover crop and weed growth through grazing. Photo: Treehouse California Almonds.

The Almond Project's founding members represent a rare coalition of cross-functional advocates, spanning from third-generation almond growers (Pacific Ag Management) and processors (Treehouse California Almonds) to pioneering food brands (Simple Mills, Daily Harvest and Cappello's) and non-profit conveners (White Buffalo Land Trust). The collective has since grown to include several additional partners and further programming.

This partnership was born out of a need to evolve the way orchards are farmed to prioritize soil health, enhance water use efficiency, preserve natural resources, enable ecosystem regeneration, protect farming communities and ensure the livelihood of nutritionally-rich almonds for generations to come. With stakeholders across the supply system working together pre-competitively, the project seeks to ascertain how the business of purchasing and selling almonds to customers can enable and support the on-farm sustainability shifts that are necessary for the long-term viability of growing almonds.

Healthy soil is key to the longevity of almond farming—but practical research is hard to come by. The Almond Project aims to identify approaches to

almond farming that improve soil health, increase biodiversity and empower local farming communities. The project began in 2021 as a five-year soil health study in Kern County, California. In the study, 80 acres of conventionally managed almond orchards and 80 acres of organically managed almond orchards are testing the impact of various soil health practices:

- **Increased compost application:** The use of compost has been shown to increase soil organic matter, microbial activity in the soil and moisture retention. Manure compost from dairy cows was applied throughout all 160 acres to assist in increasing soil organic matter and moisture retention, and to develop microbial activity in the soil. The compost was spread in bands over the tree rows to increase nutrient concentration over root systems.
- **Multi-species cover crops:** Cover crops can help prevent erosion, increase soil organic matter, improve soil structure, create habitat for beneficial microorganisms and enhance water infiltration. Multi-species cover crop mixes, including legumes, grasses, brassicas and non-legume broadleaves, were designed in partnership with a

technical assistance partner to aid in the development of soil structure, increase soil organic matter, enhance water efficacy and build microbe habitat. The seed mixes were developed with key goals in mind: fostering biodiversity on the conventional block and encouraging both biodiversity and nitrogen fixation on the organic block.

- **Animal integration:** Intentional inclusion of animals such as sheep in cropping systems can improve soil biology and fertility, increase biodiversity, and help manage cover crop and weed growth through grazing. Sheep (ewes and lambs) are being rotated through the 160 acres in an effort to graze cover crop and weed growth, contribute to soil fertility and increase biodiversity.
- **Input reduction:** Through the implementation of the aforementioned soil-health practices, the team is working to reduce the application of fertilizers, pesticides, herbicides and fungicides, with a view to improving farm economics and building ecosystem health.

“ *The Almond Project has set a new standard for how marketplace competitors can come together and work towards evolving the industry as a whole.* ”

Key outcomes of these practices are being measured across soil and ecosystem health, such as water holding capacity and infiltration, carbon sequestration and ecosystem biodiversity in comparison to neighboring baselines.

The impact of The Almond Project has already been significant in the almond industry. The project has set a new standard for how marketplace competitors can come together and work towards evolving the industry as a whole. The farm research is delivering key learnings about soil health practices and their effect on water infiltration and carbon sequestration. The work of The Almond Project has inspired additional industry efforts to invest in soil health, with major processors learning from the project’s work and creating their own soil health commitments or programs.

In 2024, the coalition is growing in membership and the scope of its work is expanding into new areas:

• **Economic modeling and business models:** The aim of this work is to understand how it can be economically viable to sell almonds in the marketplace at a price point that is affordable for companies and customers and, at the same time, incentivizes land stewards to tend to soils, biodiversity, and water and carbon cycles at their highest forms of health. In essence, the aim is to figure out how business models can support the transition of on-farm practices to meet these greater ecological goals. The project will explore premiums, subsidies and long-term contracts, as well as new ideas beyond these traditional models.

• **Trialing certifications:** The Almond Project is researching all the possible verification and certification programs that can certify “regenerative almonds” or “climate-beneficial almonds.” A few programs will be trialed to identify those which will best serve all stakeholders in the supply system — farms, processors, brands, retailers and customers.

• **Farm Practices Innovation Advisory Board:** A diverse group of almond farmers and technical assistance specialists is being assembled to create an advisory board that will meet regularly. The board will work together to creatively envision how almond growing can evolve with the goals of biodiversity, efficient water use, carbon sequestration, chemical reduction and soil health. It will produce a final report to explore what additional practices can be trialed in the future beyond cover crops, compost application, sheep grazing and input reduction.

• **Nutrient density testing:** The Almond Project is working with a lab at the University of California, Davis to compare the nutrient density of almonds in the soil health blocks to that of almonds in traditionally farmed blocks. Samples were taken from the 2023 harvest and will be taken from the 2026 harvest.

Looking further ahead, The Almond Project seeks to develop proof points to incentivize farmers and food companies to adopt practices that have the potential to regenerate California’s working lands, contribute to balancing our climate crisis and enable the sustainability of farming in the Central Valley for future generations. ■



Healthy soil is key to the longevity of almond farming. Photo: Treehouse California Almonds.

For more information about The Almond Project, visit: [www.thealmondproject.com](http://www.thealmondproject.com)



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