

News from the California Climate & Agriculture Network

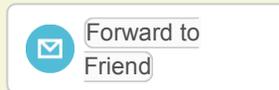
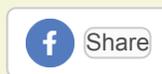
January 13, 2016

Good News for Climate-Friendly Agriculture Funding!

CalCAN has long advocated for cap-and-trade funding for farmland conservation and on-farm practices that have climate benefits. We are very pleased to report two big steps forward in the past few weeks.

Governor Brown's budget proposal includes over \$100 million for climate-smart agriculture

At a time when California's farmers are still feeling the brunt



of the state's severe drought, Governor Brown has proposed expanding the opportunities for climate-smart agriculture that will help reduce greenhouse gas emissions and avoid the worst impacts of climate change.

The Governor's budget includes \$20 million for the Healthy Soils Initiative, \$20 million for [agricultural water conservation](#) projects, \$35 million for dairy digesters, and ongoing annual funding for farmland conservation ([currently \\$40 million](#)) through the Strategic Growth Council's Affordable Housing and Sustainable Communities program (see below for more details).

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Farmland conservation gets funding boost

In mid-December, the state of California greatly expanded funding for the country's first climate change and farmland conservation program. The Sustainable Agricultural Lands Conservation Program (SALCP) funds conservation easements on agricultural lands to permanently protect them and reduce sprawl development. The program also funds efforts by local governments to improve their land use planning and policy development to support long-term conservation of agricultural lands in their region.

The Strategic Growth Council, made up of members of Governor Jerry Brown's cabinet and appointed public members, voted on Dec. 18th to increase SALCP funding to \$40 million, up from \$5 million last year. The SALCP funding of \$40 million represents nearly half of what the state has invested in farmland conservation in the past 18 years through its California Farmland Conservancy Program.

This decision marks an important success in the efforts of CalCAN and dozens of partners in the land use, conservation and agriculture community who have collectively advocated for this funding increase for over a year.

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CalCAN is a coalition of organic and sustainable agriculture organizations that advances policies to provide resources for climate-friendly farming practices.

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Climate Leader Profile: Conservation Agriculture Systems Innovation Center

Soil health management is key to solving the climate change problems attributable to farming systems. One way to improve soil health is through adopting sustainable conservation systems that include conservation tillage (CT), cover cropping and other practices. CT describes a variety of cropping methods that involve leaving the previous year's crop residue on top of the soil and planting the next crop right into it. To increase organic matter both above and below the soil surface, cover crops of a single or multiple plant species can also be grown between major crop rotations. Minimizing mechanical disturbance to the soil reduces erosion and runoff, increases water infiltration rate and retention, and increases carbon sequestration—all important strategies in climate change mitigation.

Starting in 1998, Dr. Jeff Mitchell of UC Agriculture and Natural Resources and a group of farmers, researchers, and agriculture professionals have been collaborating in California's San Joaquin Valley to optimize the techniques and benefits of CT. Together, they formed the [Conservation Agriculture Systems Innovation](#) (CASI) Center with the goal of increasing the adoption of conservation farming systems to over 50% of California's cropping acreage by 2028. CASI conducts research, demonstrations, and outreach to growers, agencies, and environmental and consumer groups.

[Read more...](#)

Research:

Study of Organic Farms Shows Climate and Yield Benefits

A research team at UC Davis addressed a central challenge for growers: how to supply sufficient nitrogen (N) for high yields while limiting N loss in the form of nitrates leaching into groundwater or nitrous oxide (a potent greenhouse gas) escaping into the atmosphere. The researchers studied 13 organic tomato farms that use compost, cover crops and other forms of organic fertility instead of synthetic nitrogen fertilizer. They found that nitrogen use by the plants on the organic farms is highly efficient—what they call “tightly-coupled N cycling”—and had optimal combination of high yields and low nitrogen loss.

The researchers used a technique that measured levels of N metabolism genes in the root zone to determine the level of N cycling, rather than a more traditional measurement of soil nitrates that is indicative of either a N-deficient system or a highly efficient one with little nitrate leaching. Their findings point to the need for new monitoring tools and metrics to guide organic and conventional growers in deciding how much N to apply. They suggest developing cost effective tools that measure N cycling and/or labile soil organic matter fractions because higher soil carbon availability can increase both microbial N demand and gross soil N transformation rates.

The study is entitled “Tightly-Coupled Plant-Soil Nitrogen Cycling: Comparison of Organic Farms across an Agricultural Landscape” and authored by Timothy M. Bowles, Allan D. Hollander, Kerri Steenwerth, Louise E. Jackson. [Click here](#) to see the full paper.

Funding

Fertilizer Research and Education Grants (FREP) Due January 29, 2016

CDFA is accepting concept proposals for FREP’s competitive grant program funds research that advances the agronomic and environmental performance of fertilizing materials. Priorities for funding include projects with any of the following elements:

- Fill gaps in nitrogen management information for specific crops, including corn, pima cotton, processing tomatoes, baby lettuce, walnuts, citrus, and deep rooted vegetables such as carrots
- Develop or promote practices that optimize water and/or nutrient efficiency

- Evaluate strategies and potential technologies to increase crop nitrogen use efficiency
- Develop integrated decision support tools
- Research on reducing nitrous oxide emissions associated with the use of nitrogen fertilizers
- Address barriers to adoption of effective management practices, including cost and benefit, economic thresholds, incentives, and diffusion of innovation studies
- Quantify nitrate movement in deep soil as related to management practices, and the role of soil organic matter and organic fertilizing materials in nutrient management
- Training, education, and outreach opportunities on efficiently managing irrigation systems and fertilizing materials

Applicants are invited to submit two-page concept proposals, and selected proposals will be invited for development into full project proposals. Concepts submitted should be in line with at least one of the program's identified priority research areas.

Further information on the 2016 FREP request for concept proposals, including timelines, application criteria, priority research areas, and examples of successful proposals are available [here](#).

Events

Blueprint for an Organic World: CCOF Annual Meeting

February 29, 2016

Sacramento, CA

For over 40 years the grassroots participation has helped make California the capital of organic and a bright spot in the national agricultural economy. Help us build upon this leadership by drafting a plan to advance the organic movement and create a world where organic is the norm. The 2016 Annual Meeting will kick off the day of events, featuring an inspirational keynote address from Nikiko Masumoto—a CCOF member who is an organic farmer, author, and agrarian artist.

[Click here](#) for more information and to register.

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Our mailing address is:
California Climate and Agriculture Network
PO Box 1366