CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
2023 Healthy Soils Demonstration Program - Applications Submitted to CDFA*

Applicant Organization	Project Type	Project Description	Funds Requested	County	GHG Reduction Estimation (MT CO2 eq/year)**
Agriculture and Land-Based Training Association	Type B	ALBA's project focuses on the Conservation Cover practice and will be showcased on a 1-acre demonstration field. The conservation cover will consist of native flowers, grasses and forbs to provide soil health and water quality benefits, GHG reduction, and other eco-systems services, such as, habitat for pollinators and beneficial insects for integrated pest management purposes. Additionally, ALBA will provide 3 x 1/2-day field days, 3 x 1-hr workshops on vegetative cover, and 3 field trips to a local operation doing innovative work with conservation cover and soil health. Lastly, ALBA will provide technical assistance to farmers wishing to implement the practice. ALBA's project team is comprised of staff members with strong credentials in agronomy, extension and outreach, and will be further supported by a group of collaborators that includes private and public agricultural service providers.	$97,972.00	Monterey	6
California Marine Sanctuary Foundation	Type B	The California Marine Sanctuary Foundation (CMSF) and Dole Fresh Vegetables will collaborate on an experimental trial adding winter cover crops to conventionally managed vegetable production, compared with the normal practice of fallowing the field for the winter. Important soil health parameters will be measured through the trial including soil organic matter, soil organic carbon, bulk density, infiltration rate and aggregate stability. Crop production parameters will also be tracked including addition of fertilizer and water, crop health, weed control, biomass, and yield. A cost benefit analysis will evaluate the costs and benefits to the farming operation and the ecosystem benefits of carbon storage in the field. A total of 9 outreach events will provide California farmers and agricultural stakeholders information on the management and benefits of cover cropping and their value for achieving agronomic, regulatory, and environmental benefits.	$149,897.27	Monterey	1
Sierra Foothill Conservancy	Type B	Sierra Foothill Conservancy (SFC) and partners will demonstrate rangeland compost application and rangeland planting on 1-acre of Sierra Foothill rangeland near Prather, California. Soil health may be significantly improved by compost application and native plant introduction, enhancing ecosystem processes such as hydrologic functioning, primary production, nutrient cycling and soil functioning. As a result, ecosystem services such as clean water, clean air, biodiversity, wildlife habitat, and climate regulation may be enhanced. However, little application of these practices has been seen in the Sierra Foothills. Our demonstration area will be divided into 8, 0.125-acre plots where rangeland compost application, rangeland seeding, compost + seeding, a control plot and replicates of each treatment will be delineated. Point Blue Conservation Science will assist SFC in data collection, while the University of California Cooperative Extension (UCCE) and Sierra Resource Conservation District (SRCD) will participate in 3 on-site field events to demonstrate outcomes of the project.	$150,000.00	Fresno	2

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Sutter County Resource Conservation District	Type B	The Sutter County Resource Conservation District (Sutter RCD) wants to help implement and demonstrate the objectives of the HSP program. We will host on farm demonstrations to increase statewide implementation of conservation management practices that improve soil health, sequester carbon and reduce atmospheric greenhouse gases (GHGs). The program will fund on-farm demonstration projects that collect data and showcase conservation management practices (Cover Crop NRCS CPS 340) to mitigate GHG emissions and improve soil health. We will do these demonstrations on two different fields, 1 peach orchard and 1 prune orchard.	$150,000.00	Sutter	25
The Regents of the University of California, Agriculture and Natural Resources	Type B	This project evaluates implementing hedgerows in annual cropping systems in Colusa County. As hedgerows are not commonly used in these cropping systems in the region, we will be evaluating the success and challenges of implementing hedgerows. The annual crops in the field include rice, processing tomatoes, and other field crops. Rice is the primary commodity and is specialized in terms of in season management. Thus, the findings of this project will be relevant for annual crop growers in the Sacramento Valley. We will be primarily collecting data on changes in soil as well as weed pressure. Weed pressure is very important for growers and must be quantified for new management practices. In addition, we will be measuring the success rate of plants during hedgerow establishment and will collect grower feedback on the success and challenges of the project. All this information will be incorporated into outreach materials with the goal of increasing adoption of hedgerows in the region.	$149,985.53	Colusa	1
UCCE Imperial County	Type B	Cover crops have been reported to enhance resource-use efficiency, soil health and the yield of subsequent cash crop. A three-year field experiment will be conducted to explore the effects of summer cover cropping and composting on soil health and vegetable production in the Imperial Valley. Two cover cropping treatments (sudangrass, and mixed cowpea and tepary) and a compost treatment will be evaluated versus a fallow treatment. The cover crops will be grown during summer, chopped at about 40% flowering and incorporate with the soil one month before planting vegetable crop in fall. Cover crop growth and biomass production, soil health parameters, soil salinity, and vegetable yield comparisons will be used to evaluate the impacts of different practices. An effective outreach program will be developed to disseminate project findings to growers and stakeholders including training workshops, field days and demonstration tours of trial field, presentations on various grower meetings, and extension publications. This project may foster long-term agricultural resilience and have a significant impact in the sustainability of crop production in the Imperial Valley, while it intends to develop some supporting data and information and assist local growers to meet the objectives of resource conservation programs in the region.	$150,000.00	Imperial	0.98

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University Corporation at Monterey Bay	Type A	The Elkhorn Slough Foundation harvested 8,500 tons of invasive eucalyptus in Monterey County and converted it into 15 tons of biochar, which will be tested as a soil carbon amendment on cropland in the region. In addition to sequestering carbon, biochar can provide other agroecosystem services, including greater soil water retention and nutrient holding capacity, reduced nitrate leaching and nitrous oxide emissions, improved soil structure, and enhanced crop root growth. These benefits can vary widely and depend on factors such as the biochar feedstock source and pyrolysis temperature and soil properties. Before any application recommendations can be made for eucalyptus biochar, it should be field-tested on cropland using management practices and cool season specialty crops that are typical in the region. We will collaborate with them to monitor impacts on greenhouse gas emissions and soil health and provide demonstration events to educate other growers in the region about biochar.	$299,997.97	Monterey	135
University of California Cooperative Extension	Type B	Demonstrate efficacy of soil heath practices to be assessed by UCCE on vineyard utilizing a blend of cover crop, reduced tillage, and spreading of compost throughout the growing periods. The farming practices will begin in September 2023 with reduction of tillage and then the planting of cover crop and spreading of compost in December 2023. Working with UCCE and DuBois Ranch, the soil will be tested to determine the impacts the new practices are having. Each year a Field Day will be hosted with invitations to the local farming community through associations with all the organizations including but not limited to Fresno State Ag Department, Fresno County Farm Bureau, American Vineyard Magazine, CCOF, and others. Attendees will be asked to fill out a brief survey to share their thoughts on the information that was shared and to express their interest in beginning to implement some of these strategies.	$150,000.00	Fresno	58
University of California Cooperative Extension	Type B	This project will investigate soil health benefits of utilizing heat-tolerant cowpea cover crop and compost as soil treatments in Coachella Valley okra cropping system. Especially, cover cropping is barely practiced as a soil conservation practice in Coachella Valley due to water limitation in the desert. These two soil conservation management practices will be compared to a fallow treatment as a grower standard. Data collection will include soil organic matter, macro and micronutrients, nematode community analysis, soil respiration, salinity, soil moisture, and plant growth and yield parameters. Findings will be demonstrated in 3 field days and several outreach and extension talks. It is the aim of this project to generate science-backed data on cover crop and compost use in the desert for the growers to make an informed decision, and this project is in the right direction to do so.	$150,000.00	Riverside	1

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University of California, Davis	Type B	Compost application is known to increase soil organic matter and reduce GHG emissions. In olives, growers routinely apply compost to marginal soils, at substantial cost, and subjectively feel that this practice is helpful. However, a side-by-side comparison of commercial compost's effects will help growers determine if these inputs are worth the costs to achieve their goals. The Hodson lab at University of California Davis is partnering with a grower, California Olive Ranch in applying for a Healthy Soils Initiative project from CDFA. We will provide input on experimental design and set up, assist with outreach during field days, and take measurements on soil health and carbon pools.	$144,765.29	Fresno	192
University of California, Agriculture and Natural Resources (UC ANR)	Type B	Our project seeks to boost San Diego small farmers' soil health and yield through an integrated approach. We will assess the synergistic effects of summer cover crops and organic compost on winter tomatoes. Utilizing cowpea cover crops and compost at rates of 25, 50, and 75 t ha−1, we aim to enhance soil quality and crop productivity. A control group with no cover crops will provide reference data. Post-cover crop incorporation and compost application, tomatoes will be transplanted with consistent density. We will rigorously track cover crop biomass, soil health indicators, and tomato yield. Outcomes will be shared through field days, meetings, workshops, and conferences, facilitating the adoption of sustainable practices. By disseminating valuable insights, our project will empower local farmers to make informed decisions for improved soil health and successful crop production.	$150,000.00	San Diego	2
Yellow Clay Farm Co	Type B	Seeking funding for compost and cover crop for all applicable acres of our two parcels in Napa Valley.	$80,467.60	Napa	-9

* The 2023 HS Demonstration Program application information was extracted from the online application system as submitted, therefore, CDFA cannot guarantee accuracy of the information.

** Annual GHG emission reduction is estimated by the applicant and has not been verified.