California Department of Food and Agriculture
2023 HSP Demonstration Grant – Applications Awarded*

Application Rank**	Applicant Organization	Project Type	Project Description	Funds Requested	County	GHG Reduction Estimation (MT CO2 eq/year)
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. Research has shown that soil health and ecosystem processes such as hydrologic functioning, primary production, nutrient cycling and soil functioning may be significantly improved through implementation of these practices. And ecosystem services such as clean water and air, biodiversity, wildlife habitat, and climate regulation are thus enhanced. However, very few of these practices has been seen in the Sierra Foothills. Our project will include replicated experimental plots to demonstrate the improvement of soil health and ecosystem services from compost application and range planting against the control. Point Blue Conservation Science will assist in data collection, while the University of California Cooperative Extension (UCCE) and Sierra Resource Conservation District (SRCD) will participate in outreach events to disseminate project outcomes.	$150,000.00	Fresno	2
2	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, and subjectively feel that this practice is helpful. A side-by-side comparison of commercial compost's effects is needed to help growers better understand benefits and cost effectiveness. The Hodson lab at University of California Davis is partnering with a grower, California Olive Ranch to conduct a field test. We will be responsible for experimental design and set-up, take measurements on soil health and carbon pools, and assist with outreach including field days.	$144,765.29	Fresno	192
3	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 crop and compost application on winter tomatoes. The control plots with no cover crops will provide reference data. Tomatoes will be transplanted with consistent density at post-cover crop incorporation and compost application. We will collect data on cover crop biomass, soil health indicators, and tomato yield. Outcomes will be shared through field days, meetings, workshops, and conferences to facilitate 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

Application Rank**	Applicant Organization	Project Type	Project Description	Funds Requested	County	GHG Reduction Estimation (MT CO2 eq/year)
4	The Regents of the University of California, Agriculture and Natural Resources	Type B	This project will evaluate implementation of hedgerows in annual cropping systems in Colusa County, as hedgerows are not commonly used in these cropping systems in the region. The annual crops 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 all annual crop growers in the Sacramento Valley. We will be primarily collecting data on changes in soil properties 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 growers' feedback on the success and challenges of hedgerow planting. All information will be incorporated into outreach materials with the goal of increasing adoption of hedgerows in the region.	$149,985.53	Colusa	1
5	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 winter fallowing. Soil health parameters will be measured 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. We will provide a cost benefit analysis and the ecosystem benefits of carbon storage in the field. Total 9 outreach events will be provided to California farmers and agricultural stakeholders on the management and benefits of cover crop and their value for achieving agronomic, regulatory and environmental benefits.	$149,897.27	Monterey	1
6	University of California Cooperative Extension	Type B	This project will investigate soil health benefits of utilizing heat-tolerant cowpea cover crop and compost in Coachella Valley okra cropping system. Especially, cover cropping is barely practiced in Coachella Valley due to water limitation in the desert. These two practices will be compared to a fallow treatment as a grower standard. Data collection will include soil organic matter, aggregate stability, water infiltration, macro- and micronutrients, nematode community, soil respiration, salinity, soil moisture, and plant growth and yield parameters. Findings will be disseminated through field days and other outreach and extension events. 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.	$150,000.00	Riverside	1

Application Rank**	Applicant Organization	Project Type	Project Description	Funds Requested	County	GHG Reduction Estimation (MT CO2 eq/year)
7	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 conservation 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
8	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 evaluate the effects of two summer cover crop treatments (sudangrass, and mixed cowpea and tepary) on soil health and vegetable production in the Imperial Valley. 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 workshops, field days and demonstration tours, 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

*The 2023 HSP Demonstration Projects application information was extracted from the online application system, AmpliFund, as submitted, therefore, CDFA cannot guarantee accuracy of the information.
**Application rank is determined by the average score from technical review.