





The California Healthy Soils Program: Perspectives from Punjabi Farmers

By Aarij Bashir, MPA 2022



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Cover: Surjan Singh on his family's almond orchard in Fresno County. Photo by Austin Price, BFI Communications Coordinator



About the Author

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Executive Summary

California's agriculture sector has been severely impacted by droughts and climate change. Farmers are increasingly concerned about water as reduced surface water availability has forced them to turn to overdrafted groundwater reserves. Healthy soil practices have significant benefits, such as more water absorption in the soil, carbon sequestration, and reductions in greenhouse gas emissions.

In 2017, the California Department of Food and Agriculture (CDFA) launched the Healthy Soils Program (HSP) to award grants to farmers and ranchers to implement healthy soil practices. HSP's first funding allocation was \$7.5 million in 2017, followed by \$15 million in 2018 and \$28 million in 2020. In 2021, the program got a major funding boost of \$75 million. However, the demand for the program also increased significantly with a total of 1,328 applications for total funding requests in excess of \$90.5 million during the same period.

It has been well-documented, including in internal CDFA reports on equity, that farmers of color, women farmers, and other immigrant farmers face barriers in accessing HSP funding. This policy paper focuses on the experiences of Punjabi farmers in California seeking participation in the Healthy Soils Program, to better understand some of the challenges they face in adopting healthy soil practices and accessing HSP funding.

While farmers in California have strong motivations to adopt healthy soil practices, there are structural barriers that prevent participation in HSP. These barriers include farm size, land tenure, and access to technical expertise, especially for farmers of color and other minority group farmers. These obstacles exist for many mid-scale and even large-scale

Farm size, land tenure, and access to technical expertise are major barriers that prevent participation in the Healthy Soils Program for many farmers, especially farmers of color.



Punjabi farmers face the following challenges in accessing HSP funding:

Complex application process Lack of awareness about HSP Lack of communication and

outreach to Punjabi farming communities

Lack of technical support during early stages of HSP implementation

Rigid grant agreement rules that do not provide farmers with flexibility

Healthy soil practices are more expensive for small-scale farmers as they lack economies of scale

Lack of personalized contact with CDFA staff

farms. However, they disproportionately affect smaller-scale and socially disadvantaged farmers. This group relies heavily on Technical Assistance Providers (TAPs) to help submit their applications due to language barriers or lack of technical knowledge, computer savviness, and grant writing expertise.

CDFA requires the same healthy soil practice to be applied to the same field for a period of three years. Farmers with diversified operations require the flexibility to rotate their crops based on factors such as water availability and weather, which can pose a challenge with regards to this CDFA requirement. The first-come, first-served application process also disadvantages this group, as these farmers often require more time to complete the applications and are more likely to be rejected during administrative review due to minor mistakes. The paperwork has been cited as overly complicated and burdensome for socially disadvantaged farmers and ranchers. Conversely, large farms are well-resourced to apply early for the funding, and some have even been able to apply for and be awarded multiple grants in previous HSP rounds.

To address some of these issues, this report examines best practices and feedback from a comparable state-operated program, the State Water Efficiency and Enhancement Program (SWEEP), which has been cited as more farmer-centric and has a positive reputation among participants based on qualitative interviews. Existing policies related to HSP, and the policy options in this report, are measured against the following criteria: equity, increased adoption, increased number of applicants, farmer centricity, and political and administrative feasibility.

Based on the need for equity in the program as well as making the application more farmer centric, the following policy options are recommended to improve the CDFA Healthy Soils Program:

Make equity-focused administrative improvements to the next round of HSP based on public comments and feedback from stakeholders

This policy option includes 1) introducing a merit-based application assessment, 2) ending first-come, first-served application processing, 3) allowing farmers with short-term land tenures to participate in the program, 4) granting flexibility to farmers in practice implementation, 5) giving TAPs enough time to conduct outreach before opening applications for future HSP rounds, 6) translating HSP materials and applications into multiple languages, and 7) streamlining an application process that is user friendly.

Conduct a targeted participatory block grant pilot with a focus on Punjabi Farmers in partnership with delivery partners

CDFA can partner with University of California Cooperative Extension, the Punjabi American Growers Group, as well as the USDA Natural Resources Conservation Service program to deliver this block grant. There is precedence for similar block grant pilots under CDFA's SWEEP and Pollinator Habitat programs, which demonstrates that this option is politically and administratively feasible.



Introduction

Problem Definition

Farmers of color, women farmers, and small-scale farmers face significant hurdles in accessing funding through California's Healthy Soils Program. They are underrepresented in the awards granted by HSP due to barriers related to language, farm size, land tenure, technical expertise, program awareness and a first-come, first-served application process. This analysis focuses specifically on Punjabi farmers, a large minority farming group in California with documented experiences related to HSP, to understand some of these barriers and offer program improvements that would potentially benefit other minority farming groups seeking to participate in HSP.

[Farmers of color] are underrepresented in the awards granted by HSP due to barriers related to language, farm size, land tenure, technical expertise, program awareness and a first-come, first-served application process.

Punjabi Farmers in California

Punjabi farmers are a relatively large and significant producer group in California. Punjabi refers to a broad category of people who hail from or have roots in the Punjab region, which straddles the present-day border of India and Pakistan. This comprises of people practicing the Sikh faith—who originate mostly from the Indian Punjab—as well as Hindus and Muslim Punjabis, largely from Pakistan. In California, most Punjabi farmers are Sikhs who use both terms, Punjabi and Sikh, interchangeably or in conjunction, Punjabi-Sikh. However, it is important to recognize that Pakistani Muslim and Hindu Punjabi groups were not a focus for this report.

Punjabi-Sikh migration to North America escalated in the early 1900s as Punjabi farmers started settling in California.¹ The Indian state of Punjab is highly agrarian with most Punjabi-Sikhs involved in agriculture. This familiarity with farming enabled them to be actively involved in California's thriving agriculture sector. Currently, Punjabi farmers are concentrated in Fresno as well as Yuba and Sutter

¹ La Brack, "The Sikhs of Northern California: A Socio-Historical Study."



counties north of Sacramento. There are also pockets of Punjabi farmers in Bakersfield and throughout Southern California. Relative to other farmer groups, there is a lack of literature or data available on Punjabi farmers despite their significant contribution to California's agriculture sector. By some estimates, Punjabi farmers are responsible for approximately 95% of all peaches and 70% of all prunes produced in the Yuba City region.² They also produce 20% of table grapes grown in the Fresno region.³

According to estimates by the Punjabi American Growers Association (PAGG), a newly formed farmer group representing the Punjabi farming community in California, Punjabi farmers own and control as much as 700,000 acres of farmland across the state. While there are several small-scale Punjabi farmers in California, the industry is dominated by a few large-scale Punjabi farmers in the Yuba-Sutter and Fresno regions. Didar Singh Bains, prominently known as the "Peach King," was one of the largest peach producers in California.⁴ He died at the age of 84 earlier this year in Yuba City. This history and current participation in California's agricultural economy makes this community of farmers a unique and relevant group to examine the adoption of healthy soil practices and the accessibility of CDFA funding for these purposes.

Punjabi farmers have demonstrated interest in adopting healthy soil practices but lack awareness about program incentives, partially due to lack of engagement with and representation on relevant state boards in California. Like other socially disadvantaged farmers and ranchers, Punjabi farmers do not often participate on agriculture boards or commissions or have industry groups representing their needs. As a result, PAGG formed in 2020 to unite the Punjabi farming community and voice their concerns to state policymakers. PAGG also attempts to raise the profile of the Punjabi farming community by advocating for more representation in agriculture boards and commissions. As a relatively new grassroots level organization, PAGG is involved with many of the immediate issues facing Punjabi farmers, including the provision of technical assistance to growers who do not have access to services provided by University of California Cooperative Extension (UCCE). In addition, PAGG aims to unite small-scale Punjabi farmers for the collective purchasing of farm inputs and reduction of input costs.

By some estimates, Punjabi farmers are responsible for approximately 95% of all peaches and 70% of all prunes produced in the Yuba City region. They also produce 20% of table grapes grown in the Fresno region.

² Sewell, "'This Has to End Peacefully."

³ Sibia, "Sikh Farmers in California."

^{4 &}quot;Didar Singh Bains – Pioneering Punjabis Digital Archive."



Motivations for Adopting Healthy Soil Practices

California is an agriculture powerhouse with an agriculture industry valued at approximately \$50 billion annually. California growers are responsible for one-third of vegetables and two-thirds of all fruits and nuts produced in the country.5 Over the past few years, California's agriculture sector has been severely impacted by droughts and climate change, especially in the Central Valley.6 Farmers are increasingly concerned about water availability, particularly as the groundwater reserves are depleted and surface water runs dry during droughts. Healthy soil practices specifically cover cropping, mulching, planting hedgerows, and reducing tillage—have significant water benefits as they enable more water absorption in the soil and extend availability of surface moisture.7 As a result, water management and conservation should be a major driver for farmers to adopt healthy

soil practices, as long as they have awareness of the potential water benefits.

In addition to water related benefits, farmers are also motivated by the potential of increased yields and better crop quality associated with healthy soil. Most farmers consider themselves stewards of the land they farm and are interested in healthy soil practices due to the long-term environmental benefits as well as reduced reliance on chemical inputs. All of this, however, needs to be demonstrated through the adoption of healthy soil practices that are financially feasible. Farmers take a risk when adopting such practices, and financial incentives offered by HSP serve as a critical motivator for them to experiment with new healthy soil practices in their fields.8

Over the past few years, California's agriculture sector has been impacted severely due to droughts and climate change.

[&]quot;California Agricultural Production Statistics.."
USDA, "Drought Impacts on California Crops."
Ory, Bowles, and Iles, "Connecting Soil Health and Water in California."

Ory and Iles, "Improving Equity, Accessibility and Impact of the Healthy Soils Program in California."

Methodology

The research for this analysis included a literature review of available articles, reports and policy briefs by journalists, policy activists, and researchers from the University of California network. Since HSP is a relatively new program, the report also relies heavily on the data and information publicly available on the California Department of Food and Agriculture's website.

Due to time limitations for this project, it was not possible to establish contact and conduct interviews with a sizeable sample of Punjabi farmers. Instead, we prioritized speaking with Technical Assistance Providers (TAPs), USDA staff, and grower groups that have a history of engagement with the Punjabi farming community and could speak on behalf of them.

In addition to the literature review, the following in-depth interviews were conducted:

- 3 staff members from CDFA responsible for the Healthy Soils Program
- 9 researchers and TAPs—including 2 Punjabi speakers—who work with socially disadvantaged farmers and ranchers, including Punjabi farmers
- 2 USDA staff members who work with underserved farming communities in California, including Punjabi farmers
- 2 representatives from the Punjabi farming community focused on equity and collective action
- 6 Punjabi farmers in the Yuba-Sutter and Fresno regions
- 2 non-Punjabi farmers in the Fresno region
- Participants at a HSP Demonstration Day at Cardoza Ranch in Fresno on April 12, 2022.





Sukhmony Brar (L) and Hardeep Singh (R) with a farmer. Sukhmony and Hardeep work with the UCCE Fresno Small Farms Team. Photo by Aarij Bashir

Healthy Soils Program

Program Overview

The California Department of Food and Agriculture launched the Healthy Soils Program in 2017 as part of its Climate Smart Agriculture Programs, with a focus on improving soil health in the state. The goal of the program is to build soil organic carbon and reduce greenhouse gas emissions in California by incentivizing farmers to adopt climate-smart soil management practices for sequestering carbon. The program has focused on incentivizing practices such as compost application, cover cropping, hedgerow planting, mulching, no-till or reduced tillage on croplands, vineyards, orchards, and grazing lands.9 Some of the other programs under the Office of Environmental Farming and Innovation include the

State Water Efficiency and Enhancement Program, the Alternative Manure Management Program, and the Dairy Digestor Research and Development Program.

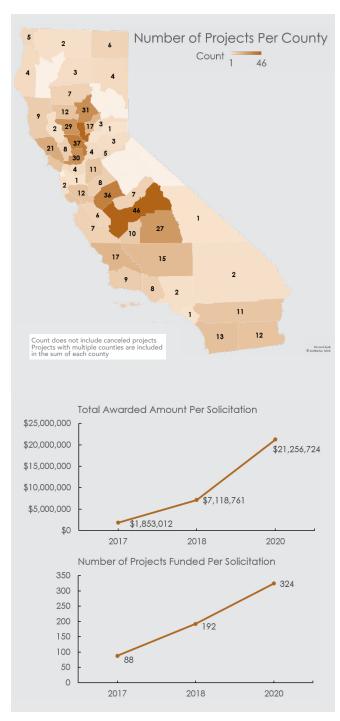
A relatively new program, HSP was initially supported through California Climate Investment's cap and trade funds but has also received one-off bond and general funds from the state legislature. From 2017 to 2020, the HSP Incentives Program funded a total of 604 projects totaling 51,300 acres and resulted in an estimated 100,000 metric tons in greenhouse gas reduction. HSP's first round of funding allocation to farmers under the incentives program was \$1.86 million in 2017, followed by \$7.12 million in 2018 and \$21.26 million in 2020.10 The program had a funding gap year in 2019, and no funding allocations were made in 2021 due to the COVID-19 pandemic.



9 CDFA, "CDFA - OEFI - Healthy Soils Incentives Program."

10 CDFA.

In 2021, the program got a major funding boost of \$75 million—\$50 million through the state's general fund and \$25 million from California Climate Investment's Greenhouse Gas Reduction Fund. This funding was



Source: CDFA, HSP Incentives Program Program-Level Data of Executed and Funded Grant Projects

greater than the previous three rounds combined, and the one-off nature of the funding meant there were no provisions for additional staffing to deal with the increased funding. The solicitation window for the 2022 round was from November 1, 2021, to February 25, 2022, during which time CDFA received a total of 1,328 applications requesting more than \$90.5 million in funding.¹²

Funding Details

HSP provides maximum grants of \$100,000 with applications accepted and processed on a rolling, or first-come, first-served, basis within a four-month period or until the funds are exhausted. Applications go through an administrative review followed by a technical review, after which both successful and unsuccessful applicants are notified about the outcome of their application. The administrative review is conducted internally by CDFA to check the accuracy of each application while university experts and technical staff conduct the technical review to ensure the project will achieve the intended outcomes of improving soil health and reducing emissions. CDFA's service standard is to respond to applicants within 6 weeks of submission either with an award notification or feedback on the application.13

HSP requires applicants to apply the same practice to the same field for a period of three years. Applicants must demonstrate control of the land for the entire duration of the grant, and the practice must not have been implemented on that field previously. In other words, if an applicant already applies compost in their farming operations, this farmer cannot apply for composting as a practice on the same fields but can apply to fund cover crops, hedgerows, or other practices. Program eligibility also stipulates one application per unique tax identification number. The applicants must provide a RePlan report, which is a mapping tool, to identify farm location and boundaries, a workplan template, an HSP COMET-Planner report that includes estimated emissions reduction and a project budget.

¹¹ CDFA, "CDFA Press Release #21-145 - CDFA ANNOUNCES GRANT FUNDING AVAILABLE FOR HEALTHY SOILS PROGRAM."

¹² Bingham, "Healthy Soils Program Solicitation Overview 2021-22."

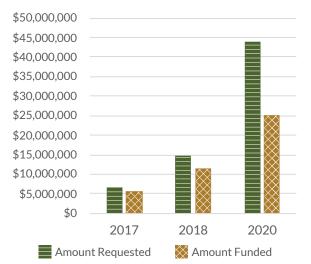
¹³ Bingham, Hessom, and Brady, "2021 HSP Incentives Program Application Assistance Workshop."



SCORING CRITERIA Criteria Score **Project Logistics** 10 **Project Design** 10 Project Work Plan 10 Project budget and GHG Emission reduction 20 **Estimate** Conservation Plan (optional) 10 Total 60 Minimum score of 40 must be obtained to be considered for funding

Source: 2021 HSP Incentives Program workshop

Total Amount Requested by farmers and Funded in Each Round (2017-2020)



Source: CalCAN, California HSP: A Progress Report

CDFA uses the scoring criteria on the left to determine funding for applications. Projects need to meet a minimum score of 40 to be eligible for funding. The criteria do not distinguish applicants based on farm size or other social factors such as gender, racial and/or ethnic background, creating a missed opportunity for CDFA to employ a more equitable and inclusive application process that could provide a level playing field for disadvantaged farmers.

It is important to highlight that the scoring criteria acts more as a checklist rather than a competitive process evaluating projects for funding based on merit. The application is considered for funding if it meets the score of 40, which is fairly easy to obtain for legitimate farming operations with a feasible project plan, as long as the farmer submits that application on time and without mistakes. The technical review process does not look holistically at what practices are being applied and how they will contribute to the overall goal to sequester carbon and reduce greenhouse gas emissions.

Demand for the program has grown significantly since 2017. Based on an analysis of CDFA data by the California Climate & Agriculture Network (CalCAN), 600 farmers applied for the program in 2020 with a total funding request of \$38 million. However, only \$25.52 million was awarded. Yo far this year, CDFA has awarded 870 applicants with \$61.29 million of

¹⁴ Shobe, Perry, and Merrill, "A Progress Report on the California Healthy Soils Program."

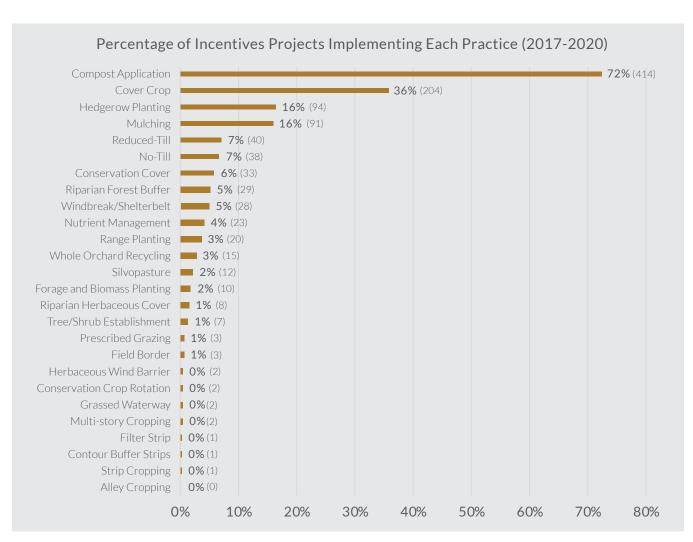
\$67.5 million available funding. 15 Throughout the submission window, CDFA's website provides a status update showing the amount of funding that has been requested at any given point. This can discourage applicants, especially those who require more time to meet eligibility requirements, from pursuing funding as the requested funds reach the total funding available.

Popular Practices

HSP includes a total of 27 eligible practices for croplands, orchards or vineyards, and grazing lands. Out of the 27 practices, however, composting continues to be the most popular practice by far,

with 72% of the projects across three rounds of HSP making use of it, followed by cover cropping at 36%. Hedgerow planting (16%) and mulching (16%) are the other two relatively popular practices among applicants. It is important to note that farmers and ranchers can apply for adopting multiple practices on their farm simultaneously, as long as the practices are not currently being implemented.

There are a couple of main reasons why composting continues to be popular. First, unlike other practices, composting allows for input substitution, where farmers can reduce their use of fertilizers by applying compost. With the high cost of fertilizer, it makes financial sense for farmers to choose



Source: CalCAN, California HSP: A Progress Report

¹⁵ CDFA, "CDFA - OEFI - Healthy Soils Incentives Program."

¹⁶ CalCAN, "Healthy Soils Progress Report Webinar."

requirements for compost are easier than other practices, and with the first-come, first-served application processing, it is faster to submit a compost application rather than a holistic plan with multiple practices. As compost is becoming increasingly available across California through Senate Bill 1383,17 there is an opportunity for CDFA to prioritize applications that include multiple practices. In the 2020 HSP round, a significant majority (61%) of grant recipients implemented only one practice while 18% implemented two. This was a shift from HSP rounds of 2017 and 2018, during which approximately 35% of recipients implemented one practice and 26% implemented two.¹⁸ The increase in single practice applications can be partially attributed to farmers trying to take advantage of the rolling application process by completing an easier application.

this practice, especially when it is subsidized by HSP. Second, the HSP application and verification

Technical Assistance Program

According to Assembly Bill 2377,19 CDFA must dedicate a minimum of 5% of overall HSP funding to technical assistance, of which at least 25% must be used to assist socially disadvantaged farmers. This bill effectively created CDFA's Technical Assistance

Program, with the aim of helping farmers and ranchers with the application process for Climate Smart Agriculture Programs. Only Resource Conservation Districts, the University of California system, and other non-profits are eligible for being contracted as Technical Assistance Providers through a request for proposal process. CDFA uses the program to prioritize assistance to socially disadvantaged farmers and ranchers as well as farms that are smaller than 500 acres.20 There were 31 TAPs contracted by CDFA for the 2021 HSP round.

TAPs are a critical resource for CDFA in meeting its target of priority funding for socially disadvantaged groups. TAPs are located across the state of California and specialize in providing services to farmers of color as well as small- to medium-scale producers. In the case of University of California Cooperative Extension services, provided through Agriculture and Natural Resources, TAPs have historically built strong relationships with farming communities in the regions they cover. TAPs often employ staff who can speak languages like Spanish and Punjabi and play a critical role in promoting CDFA's programs as well as providing assistance to producers at every stage of the HSP application process, including follow-ups and verification after the farmers have been approved for the grant.



¹⁷ SB-1383. 18 Shobe, Perry, and Merrill, "A Progress Report on the California Healthy Soils Program.

¹⁹ AB-2377

Equity

Focus on Equity

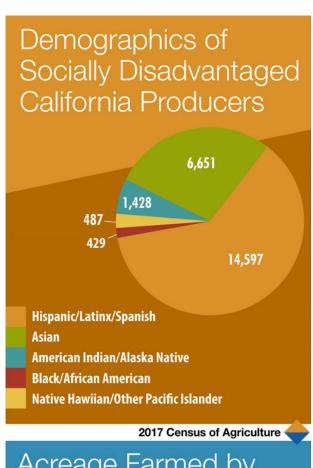
CDFA defines a socially disadvantaged farmer and rancher as someone "who is a member of a socially disadvantaged group," which refers to a group of people who have been subjected to racial, ethnic, or gender prejudice without regard to their individual qualities. CDFA lists the following categories: African Americans, Native American Indians, Alaskan Natives, Hispanics, Asian Americans, Native Hawaiians and Pacific Islanders.²¹

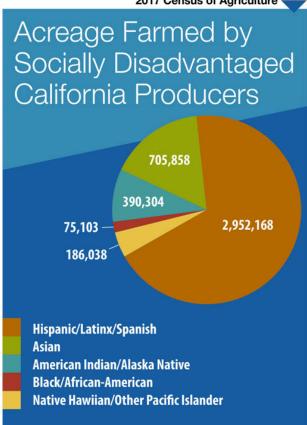
According to the 2017 state Census of Agriculture, farmers of color officially represent 19% of total farm operators in California. However, the actual numbers are likely larger due to language and other barriers farmers of color face in filling out census surveys. In addition, women farmers represented 37% of all farm operators in California.²² According to data available on CDFA's website, California is home to 14.6% of Hispanic/Latinx, 35.1% of Asian, 21.9% of Native Americans/Alaskan Natives, and 6.4% of mixed-race farmers in the country.²³

California passed the Farmer Equity Act in 2017 (AB 1348) which "would require the department to ensure the inclusion of socially disadvantaged farmers and ranchers, as defined, in the development, adoption, implementation, and enforcement of food and agriculture laws, regulations, and policies and programs."²⁴ The aim of the legislation is to ensure CDFA's programs and services include equity as a major objective. The bill identifies African Americans, Asian Americans, Alaskan Natives, Hispanics, Native Hawaiians, Pacific Islanders, as well as female farmers of color.

As a result of this bill, CDFA created the position of Farm Equity Advisor in 2018 to ensure internal programs and services include equity as a guiding principle. Following the passage of AB 1348 in 2017 and AB 2377 in 2018, CDFA set aside 25%

24 AB 1348.





Source: CDFA, 2020 Report to the California Legislature on the Farmer Equity Act

²¹ CDFA.
22 "2017 Census of Agriculture Data Now Available | CACASA."
23 CDFA, "Affairs, "Farms + Data."

of HSP funds for socially disadvantaged farmers and ranchers. So far, CDFA has been successful in meeting the equity targets set by the department for all the rounds of HSP funding, and even exceeded them by allocating 27% of funding to socially disadvantaged farmers in 2021.²⁵

CDFA's Initiatives

In 2020, CDFA published a report for the California Legislature highlighting challenges faced by socially disadvantaged farmers in accessing its programs and services as well as suggestions on how CDFA can address farmer equity issues.²⁶ The report identifies four major challenges facing farmers of color, women farmers, and other minority farming groups:

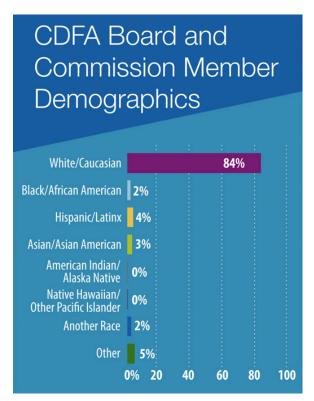
- Lack of secure long-term land tenure reduces farmers ability to undertake conservation practices, like those supported by the Healthy Soils Program.
- Language barriers exist among this group as
 English is not the first language for many of the
 farmers, which results in reduced accessibility to
 information about CDFA's programs, regulations,
 and other related services.
- Socially disadvantaged farmers often have no or severely limited access to industry groups, boards or commissions, which results in them not receiving information through industry meetings or newsletters.
- Lack of awareness about programs, resources, and other support services available through CDFA, which results in reduced accessibility to CDFA programs.

To address these challenges, the CDFA report includes the following recommendations relevant to HSP and other Climate Smart Agriculture Programs:

 Design grant programs with a focus on equity and include stakeholder feedback into the program design process.

25 Marshall-Chalmers, "Is a State Program to Foster Sustainable Farming Leaving Out Small-Scale Growers and Farmers of Color?" 26 CDFA, "2020 Report to the California Legislature on the Farmer Equity Act."

- Develop specific outreach and engagement strategies toward socially disadvantaged farmers and ranchers with a focus on providing knowledge about CDFA's programs and services in different languages.
- Include farmers of color and female farmers in CDFA's public outreach materials to highlight their contributions to California's agriculture sector.
- Collaborate with other agencies for better information sharing and leveraging different funding programs.
- Partner with external stakeholder groups, including UC Cooperative Extension advisors, small farm advisors and other industry groups that work with socially disadvantaged farmers.



Source: CDFA 2020 Report to Legislature

IIC Staff



with CDFA staff members involved with HSP at all levels, including the Farm Equity Advisor, staff were either unresponsive or appropriate introductions to relevant staff were not provided. Only two highlevel interviews were conducted with the program management without the opportunity to speak with staff who are responsible for HSP applications review.

CDFA's Strategic Plan 2019-22, which sets the priorities for the department, shows a lack of emphasis on climate smart agriculture or equity. Out of the five core goals in the strategic plan, only "Goal Three: Education and Engagement" has some relevance to equity, with the following strategy noted under its outreach and education objective: "Refine CDFA's language services program and provide education to the public regarding language services they may use in accessing CDFA programs or services."27

Equity-Related Issues

As highlighted by the CDFA report on equity, farmers of color and women farmers continue to face significant barriers in accessing government programs. HSP is no exception. While the 25% priority funding provides a separate funding stream for socially disadvantaged farmers and ranchers, it does not consider the size of the farm. Within this group of farmers of color, there are some who own significantly large farms and can be classified as corporate farms. In terms of adoption, CDFA faces a trade-off between funding a small number of farmers with large acres or funding a large number of farmers with small acres. While HSP does not consider farm size, this is an important factor to consider from an equity lens. There is no consensus on the definition of large farms, but a recent study by Esquivel et al. considers any farm larger than 500 acres to be a large operation, while farms smaller than 50 acres are categorized as small farms.28 As noted in the CDFA Equity Report, the land size for HSP applicants ranged from 1.25 acres to 31,000 acres, with an average farm size of approximately 1,300 acres.²⁹ This average is

highly skewed due to the presence of very large farms in the sample, as the median farm size of an HSP grantee is 80 acres.30 This data suggests that funding is disproportionately going to large farms.

Farm size and land tenure are two important factors when it comes to adoption of healthy soils practices. Farmers with unsecure land tenure, who often tend to be farmers of color and other underrepresented groups, are less likely to adopt these practices. Their focus is on maximizing their returns from limited acreage, and most healthy soils practices have a midto-long-term return on investment. Similarly, largescale farming operations face similar challenges with soil health practices due to production pressures to meet the demand from their corporate customers. Medium-scaled farmers, on the other hand, are well-positioned to take advantage of HSP as they are more invested in long-term soil health, which could be driven by land tenure as well as scale. This is potentially driven by their desire to service a niche market of customers who are environmentally conscious and value sustainable production practices by paying a premium.31

In addition to the challenges mentioned above, several other issues have been highlighted by previous reports from climate related policy activists and other researchers, as well as through the public comments posted on CDFA's website. Orchards and vineyards are overrepresented in HSP grants compared to their actual share in California's agriculture sector. This is potentially because of the relative ease in adopting the two most popular healthy soils practices, composting and cover cropping, in this type of production. In addition, large-scale farmers with more than 500 acres of land comprise only 9% of total farms in California but were awarded 23% of total HSP grants by number and 30% of total funding. More than 77% of HSP grants recipients own their land, which highlights significant barriers for farmers with unsecure land tenures.32

²⁷ CDFA, "CDFA Strategic Plan 2019 - 2022."
28 Esquivel et al., "The 'Sweet Spot' in the Middle: Why Do Mid-Scale Farms Adopt Diversification Practices at Higher Rates?"

²⁹ CDFA, "2020 Report to the California Legislature on the Farmer Equity Act."

³⁰ Shobe, Perry, and Merrill, "A Progress Report on the California Healthy Soils Program.'

³¹ Esquivel et al., "The 'Sweet Spot' in the Middle: Why Do Mid-Scale Farms Adopt Diversification Practices at Higher Rates?" 32 Shobe, Perry, and Merrill, "A Progress Report on the California Healthy Soils

Program."

	Number of families or producer groups receiving multiple awards	Percent of funded projects awarded to family or producer groups receiving multiple awards	Percent of total money awarded to families or producer groups receiving multiple awards	Number of individual awards exceeding \$75,000
2017	4	4%	7%	o%
2018	5	1%	8%	o%
2020	26	29%	34%	59%

Source: Kanter (2022), Farmer Equity in the Healthy Soils Program 2020

While farmers in California have strong motivations to adopt healthy soil practices, there are structural barriers that also prevent participation in HSP. Access to resources—technical expertise, labor, secure land tenure and equipment—for implementing healthy soil practices is a major barrier for farmers of color and other minority group farmers. Farmers require technical assistance in adopting new practices, which is often unavailable or inaccessible for smallscale farmers. In addition, lack of awareness about the healthy soil practices and their perceived costs compared to risks of undertaking a new practice also results in low adoption of such practices among socially disadvantaged farmers and ranchers.33

Other relevant stakeholders, including TAPs and policy advocates, have highlighted administrative issues that make the application process inequitable for farmers of color as well as small-scale farmers. These groups rely on TAPs to submit applications on their behalf due to lack of technical knowledge, computer savviness, and language related barriers. The first-come, first-served application process disadvantages these groups as they often require more time to complete the applications and are more likely to be rejected during administrative review due to minor mistakes. The paperwork can also be overly complicated and burdensome for socially disadvantaged farmers and ranchers, which results in fewer applications from these groups.34

In contrast, large farms often contain dedicated office staff and access to grant writers and other resources that allows them to complete the applications

efficiently to take advantage of the first-come, firstserved process. While HSP allows one application per unique tax identification number, Kanter (2022) has found that some large farms have been able to apply for and win multiple grants in previous HSP rounds. Analyzing the data from the 2020 round and grouping HSP award recipients by similar names, locations and amount requested, Kanter showed that up to \$7.5 million (34% of total HSP funding in 2020) was awarded to 26 farming families or producer groups that represented 4% of that year's total applicants.

The evidence suggests that large farms have become more efficient at requesting funding with each round. The learning curve has enabled some to be extremely effective with their applications and even discover loopholes in the application process that allow them to receive multiple awards for their farms under different family members' names and tax identification numbers. It is important to acknowledge that some multigenerational farming families legitimately have distinct farming operations, in which case means that they are not benefitting from this loophole. Most small farms that belong to socially disadvantaged groups, on the other hand, have a steep learning curve due to lack of resources and lack of understanding of minutia related to the application process.

Some requirements of HSP are also difficult to implement by diversified crop farms, which tend to be smaller operations operated mostly by farmers of color. CDFA requires the same practice to be applied to the same field for a three-year period. However, farmers with diversified operations require the flexibility to rotate crops based on water availability and weather.35

³³ Ory and Iles, "Improving Equity, Accessibility and Impact of the Healthy Soils Program in California."
34 CDFA, "2021 HSP Public Comments."

³⁵ Marshall-Chalmers, "Is a State Program to Foster Sustainable Farming..."

Research Findings

Based on interviews conducted with TAPs, farmers, Punjabi farming community representatives, and government—both CDFA and USDA—staff, the major findings are listed below:



Complex application process

Farmers and TAPs shared their frustration with the application process as it is overly complicated and difficult even for farmers who speak English and have a high level of education. Based on farmer and TAPs interviews, some Punjabi farmers were interested in applying for the program but gave up during the application process. The HSP RePlan tool, which uses spatial data to identify fields where healthy soil practices will be implemented, is a particular source of frustration among farmers and TAPs. It requires precise selection of farming area, and applications are often rejected if they mistakenly include things such as driveways, trees, sheds, etc.



2 Lack of awareness

Based on interviews with TAPs, a significant majority of Punjabi farmers were not aware about CDFA's HSP grant funding. This was particularly evident from the first couple of rounds of HSP applicants, but slowly an increasing number of farmers are showing interest in the program. Punjabi farmers tend to be risk averse and can be encouraged by looking at other Punjabi farmers in their community who have been successful in implementing healthy soil practices and getting HSP grants from CDFA. In addition, the Punjabi farmers interviewed were not aware of TAPs who could assist them with HSP applications. In the Fresno region, farmers were more aware of the USDA Natural Resources Conservation Service program that has similar goals as HSP. However, the payment rates under this program are half compared to HSP as it is supposed to be cost-shared with the farmers.



As identified by 2020 CDFA Equity Report, communication with socially disadvantaged farmers and community outreach continues to be an area of deficiency for CDFA. The Office of Environmental Farming and Innovation, the department responsible for administering HSP and other Climate Smart Agriculture grants, does not have "boots on the ground" across the counties in California. As a result, the office is often not aware of challenges faced by HSP applicants from socially disadvantageous communities. CDFA relies on TAPs for outreach to farmers of color and other historically marginalized groups. However, TAPs are currently oversubscribed and, in some instances, overwhelmed with helping small-scale and immigrant farmers with the application process. This does not provide them enough time for community outreach, farmer education on healthy soil benefits, and extension services.

In the Fresno region, USDA local staff has done a great job in building relationships with the Punjabi community. It has taken them about 20 years, but they have been able to establish trust with the community and focus on targeted outreach strategies, like promoting USDA programs on popular Punjabi radio programs. PAGG also revealed that the preferred method of communication with the Punjabi farmers has been through WhatsApp groups where farmers share information on programs and farm input prices and crowdsource technical advice and support.



Lack of technical support

Practices under HSP are new practices for most
Punjabi and other immigrant farmers. They are not
aware about the beneficial aspects of adopting these
practices and lack technical skills or knowledge for
successful implementation. While UC Cooperative
Extension is responsible for providing services to
farmers across California, the Punjabi farmers are
either not aware about these services or have the
perception that these services are not accessible.
Aside from soil management practices, the lack of

technical support or direct farmer education and training has also been an issue with organic farming in California.³⁶ According to TAPs and Punjabi farming groups, technical support and extension are key elements in the early stages of adopting these new practices. Without that, most Punjabi farmers are hesitant to undertake these practices. The technical support they receive also varies from county to county.

5 Rigid grant agreement rules

TAPs highlighted the rigid rules farmers must follow after being approved for funding. Farmers do not have the flexibility to change practices. However, CDFA is relatively flexible with the timing of practice implementation. Minor changes, nonetheless, do require approval from CDFA, which increases the paperwork burden for TAPs and farmers. Farmers are also required to take geo-tagged photos showing proof of practice implementation, which increases the workload for TAPs as most immigrant farmers do not know how to fulfill CDFA's verification requirements. Some TAPs also commented that CDFA staff is more concerned about minor administrative details on the applications for audit purposes rather than the overall goals of HSP.

6 Healthy soil practices are more expensive for small-scale farmers

Socially disadvantaged farmers and ranchers often have small farming operations that do not have the same economies of scale as large farms. It is more expensive for them on a per acre basis to implement healthy soil practices. For example, small farms need to rent equipment to spread compost and pay higher fixed transportation costs for getting less than a full truck load delivered to their farm. Large farms, on the other hand, own equipment and can order in bulk which reduces their input costs significantly. HSP does not make provisions for equipment rental or paying a higher amount for socially disadvantaged farmers and ranchers.

7 Lack of personalized and timely contact with CDFA staff

TAPs often require direction from CDFA to better assist their clients. While CDFA hosts office hours regularly to answer those questions, TAPs have shared their frustration with not having a focal point within CDFA to deal with questions in a timely manner. They have to send their inquiries to a generic mailbox, and it often takes days to get a response. TAPs would prefer to have a direct contact with relevant staff via email or phone so they can receive immediate guidance on applicant issues. Similarly, some farmers have also shown a desire for a dedicated HSP phone number where they can call in to get questions answered in real-time for their application or implementation related issues.

8 Scoring criteria not robust for first-come, first-served process

The current scoring criteria is not robust enough to prioritize socially disadvantaged farmers and ranchers. It is fairly easy to meet the minimum threshold for legitimate farms that have a work plan for implementing healthy soils practices, as long as they fill out the application forms correctly. Therefore, the applications are not rated on merit but rather on a first-come, first-served process. As a result, farmers who can submit their applicants during the early phase of solicitation have a better chance of getting HSP awards. This is disadvantageous for small-scale and immigrant farmers as they often require more time to complete the same application as the large farms.

9 Learnings from SWEEP

Compared to HSP, both farmers and TAPs were complimentary of CDFA's State Water Efficiency and Enhancement Program, which focuses on water efficiency. The verification process for SWEEP, as well as the application, is easier, and more farmers are able to take advantage of the funding. There are opportunities for CDFA to look at why SWEEP has a better reputation and adopt a similar approach to HSP.

³⁶ Driscoll and Ichikawa, "Growing Organic, State by State: A Review of State-Level Support for Organic Agriculture."



Policy Options

Criteria

To consider policy options and recommendations for CDFA, robust criteria needed to be established to allow for an objective analysis of policy recommendations. The main objective of HSP is to increase adoption of healthy soils practices for improving soil health, sequestering carbon, and reducing greenhouse gas emissions. Given the specific focus on equity and improved access to services, the overarching program goals are not listed as part of the criteria. There is a trade-off between estimated overall emissions reduction through HSP and ensuring equity in the way the program is administered. Similarly, meeting the 25% priority funding for socially disadvantaged farmers and ranchers is also not listed as part of the criteria since this is a regulatory requirement that must be met by CDFA.

Nonetheless, the following criteria will help guide the policy recommendations.

Equity: Equity should be a major goal for HSP. The program should be easily accessible for farmers of color, women farmers, and other socially disadvantaged farmers and ranchers. Access to the program should not be affected by farm size, land tenure, crop mix, language, or other technical barriers.

Increased adoption: With increased funding, HSP should aim to increase the adoption of heathy soil practices across California measured by increased number of acres benefitting from the program. Increased adoption also serves as a proxy for greenhouse gas emissions reductions with the assumption that more acres using healthy soil practices will result in increased carbon sequestration. There is a trade-off, however, between increased acres and equity. From an administrative standpoint, it is often easier to provide funding to a smaller number of large producers as opposed to a larger number of small producers.

Increase number of applicants: HSP should aim to increase the total number of applicants for the program, especially from socially disadvantaged farmers and ranchers. The program should benefit as many individual farmers as possible, which is tied to both equity as well as adoption. There is, however, a potential trade-off as increasing the number of applicants—especially from socially disadvantaged group—might result in reduced overall acres adopting healthy soils practices. Larger farmers benefit from economies of scale that allow them to extend the healthy soil practices to more acreage with the same amount of funding as opposed to smaller scale farmers.

Farmer-centric: HSP should be user-friendly and cater to the needs of farmers, especially socially disadvantaged farmers and ranchers. This includes accessibility to the application and technical assistance, ease of the application process, and flexibility in implementing healthy soil practices. In addition, gathering feedback from farmers about their needs and how the program can address them should be an important criterion.

Political and administrative feasibility: The policy recommendations should be within the scope and mandate of CDFA as well as be both politically and administratively feasible.

Policy Alternatives and Outcomes

Based on the findings of this report, there are evidence-based issues with the way HSP is currently being administered. Here are some potential policy options to address the equity issue and make the program more inclusive for farmers or color, women farmers, and other minority groups.

Option 1: Let present trends continue

The current application process favors farmers who have resources, understand the application process, and can submit their application as soon as the solicitation period starts. Proceeding with the program without making any equity-focused changes will continue to benefit well-established and large-scale farms and underrepresent socially disadvantaged farmers and ranchers. While CDFA has been able to

meet their target of minimum 25% priority funding for this group, that threshold likely underestimates the demand for the program among farmers of color due to various challenges highlighted in this report.

While this approach might lead to getting more acres adopting healthy soil practices, we have seen an increase in grant award amounts to large farms as well as an increase in farming families and producer groups exploiting application loopholes to submit, and get approved for, multiple awards within each HSP round. The program is increasing in popularity, and the first-come, first-served approach will further alienate socially disadvantaged farmers and ranchers.

Option 2: Make equity-focused administrative improvements to the next round of HSP based on public comments and feedback from stakeholders

TAPs, researchers, and policy advocates have identified several areas of improvements to HSP through public comments and policy briefs.³⁷ Some of the program improvements that can be made easily within CDFA's scope are:

- Conducting a merit-based application
 assessment that prioritizes socially disadvantaged
 farmers and ranchers through equity-based
 criteria in the scoring method. In addition,
 providing higher scores to applicants that adopt
 multiple practices can demonstrate a holistic
 approach to improving soil health.
- Changing the rolling application process
 to batch processing, where applications are
 processed and evaluated after the deadline. This
 will provide a level playing field to applicants
 from socially disadvantaged groups. To
 implement this recommendation, CDFA will need
 to invest more resources for application intake
 and processing at the end of the solicitation
 period. However, this approach will please the
 stakeholders as well as farmers.
- Allowing farmers with short-term land tenures to participate in the program without

³⁷ CDFA, "2021 HSP Public Comments"; Shobe, Perry, and Merrill, "A Progress Report on the California Healthy Soils Program"; Ory and Iles, "Improving Equity, Accessibility and Impact of the Healthy Soils Program in California."

the need to show control of land for a period of three years. Getting approval from landlords is a barrier for small-scale and immigrant farmers in applying for HSP, and this policy change will increase the farmers eligible for implementing healthy soil practices.

- Granting flexibility to farmers in practice implementation without the need for preapproval by CDFA if they are meeting the program objectives. This recommendation includes allowing practices to be implemented on different fields, especially for diversified farming operations.
- Giving TAPs enough time to conduct outreach
 before opening applications for future HSP
 rounds. TAPs are spending almost all their time
 helping farmers with the applications at the
 expense of conducting effective outreach. By
 signing TAP contracts six to eight weeks earlier
 than application solicitation, TAPs will be able
 to focus on promoting HSP among socially
 disadvantaged groups and educating them
 about potential benefits before they embark on
 providing much-needed technical support.
- Translating HSP materials into major second languages, such as Spanish, Chinese, and Punjabi, among others. This would enable a wider outreach of the program in immigrant farming communities and would meet the internal CDFA equity recommendations.
- Reducing reporting requirements and streamlining application process to make it user-friendly and easy for farmers to navigate and apply.

Option 3: Redesign HSP with stakeholder input and participation

As HSP supporters and administrators seek regular and consistent funding, CDFA could conduct statewide stakeholder consultation and engagement sessions to get feedback on previous HSP rounds. Potential stakeholders include UCCE, TAPs, Resource Conservation Districts, farmer-member NGOs, and, the most important stakeholder, farmers and

ranchers belonging to socially disadvantaged groups. CDFA is required by Assembly Bill 2377 to host an annual meeting with TAPs to get feedback on the previous rounds of HSP and identify areas for program improvements. CDFA can use this meeting as a launchpad for redesigning the program based on the feedback received from TAPs and also include the abovementioned stakeholders.

The findings from this analysis can help with the redesign of HSP that takes into consideration stakeholder feedback and balances it with CDFA's internal program and audit requirements. This approach can also help CDFA outline its program objectives (adoption of healthy soil practices, emissions reduction, equity, verification, compliance, etc.) and seek input from stakeholders about creative ways to achieve these objectives without necessarily burdening farmers with paperwork or bureaucratic processes. This approach does require significant internal changes and department champions advocating for a new and improved HSP. The Farm Equity Advisor can also play a role in ensuring the program design includes equity as one of the major goals of the new program.

Option 4: Conduct a participatory block grant pilot with delivery partners

HSP has been criticized for the barriers currently in place for farmers of color in accessing funding through the program. CDFA already partners with UCCE and Resource Conservation Districts to provide technical assistance and outreach to socially disadvantaged farmers and ranchers in California. CDFA can leverage this relationship and conduct a pilot project that provides a block grant to a partner organization, such as UCCE, that can administer it on CDFA's behalf. Working with a producer organization, such as the Punjabi American Growers Group, presents another option that allows CDFA to provide a block grant focused on the Punjabi farmers as a proof of concept.

CDFA can define the goals and parameters of the grants and focus on the outcomes rather than the application process itself. This grant can be used for

priority populations including immigrant farmers and other farmers of color. CDFA already has a precedent of conducting a pilot for the State Water Efficiency and Enhancement Program focused on the Southern Desert region and utilizes a block grant approach for the Specialty Crop Block Grant Program and the recently established Pollinator Habitat Program. This approach will relieve CDFA from the administrative burden of processing HSP applications and provide agency to the partner organizations in identifying areas and groups where funding is needed the most. CDFA will need to monitor and audit grant delivery but should allow organizations the flexibility in being innovative in addressing the unique needs of California's diverse farmers, cropping systems, climates, and soils, while also meeting the expected outcomes of the program. A potential funding mechanism for CDFA could be the submission of a Budget Change Proposal to the California Department of Finance to pilot this effort as a proof of concept.

The partner organizations will be responsible for farmer outreach, application processing, HSP implementation, and the monitoring progress. This approach has been adopted in Canada with Agriculture and Agri-Food Canada (AAFC)'s On-Farm Climate Action Fund. The 200 million CAD fund announced in 2021 focused on healthy soils practices, including nitrogen management, cover cropping, and rotational grazing. Through a competitive request for proposals process that prioritized Indigenous people and LGBTQ2 farming communities across Canada, AAFC selected 12 delivery partners across Canada for a total funding amount of C\$182.7 million.38 Delivery partners include non-profit organizations such as producer groups as well as for-profit organizations. A similar approach can be adopted by CDFA to ensure it conducts its due diligence to select appropriate delivery partners that can benefit socially disadvantaged farmers and ranchers in California.

POLICY DECISION MATRIX AND RECOMMENDATIONS

The '+' represents meeting the criterion and '-' represents not meeting the criterion.

The Prepresents meeting the effection and — represents not meeting the effection.							
ALTERNATIVES	Equity	Increase Adoption	Increase Applicants	Farmer-centric	Political Feasibility		
Let Present Trends Continue No intervention	-	+	-	-	+		
Minor Administrative Improvements Batch processing, translation, land tenure, etc.	+	_	+	+	+		
Program Redesign Redesigning HSP with stakeholder participation and feedback	+	-	+	+	-		
Participatory Block-Grant Community Organizations led funding program	+	-	+	+	+		
Equity in Strategic Plan Including equity as a core goal in CDFA's Strategic Plan	+	-	+	+	-		

38 AAFC, "Agricultural Climate Solutions - On-Farm Climate Action Fund."

Option 5: Make equity a core goal in CDFA's operational plan to ensure all programs and services take equity into account

The current strategic plan makes no mention of equity or Climate Smart Agriculture as a core goal for CDFA. To create a culture shift within CDFA, priority must be given to equity in the strategic plan, which drives the core government business at CDFA. Further, CDFA should adopt specific performance measures associated with equity to ensure various departments align their own business plans to include equity measures that are reported as key performance indicators. This approach will not only prioritize equity within the department, it will also enable the newly created position of Farm Equity Advisor to influence program design and policies at CDFA. With equity as part of the strategic plan, CDFA will be better able to implement the recommendations from the 2020 Report to California Legislature on the Farmer Equity Act. This pertains to designing programs with a focus on socially disadvantaged farmers and ranchers and other minority groups, undertaking outreach and communication in various languages, and engaging a diverse audience of farmers in relation to CDFA's program and services. Eventually, this will benefit not only HSP but also other programs at CDFA.

A strategy identified by multiple producers and partners to achieve equity is for CDFA to increase its in-house technical assistance capabilities.

Farmers, grant-seekers, and any other members of the public with interest in this program would benefit from reaching a knowledgeable professional with institutional knowledge of CDFA programs. Interviewees for this study noted that USDA programs were sometimes easier to access than CDFA programs due to the lack of CDFA TAPs.

Analyzing policy alternatives based on the identified criteria, it is apparent that most policy options include a trade-off between increasing equity and adopting healthy soil practices. The current trends without intervention will continue to exacerbate the equity issues faced by the program, and hence, that is not a recommended policy option. It will achieve increased

acres and require CDFA to make no changes. However, the equity issue is extremely important and cannot be ignored.

The program redesign and participatory grant making policy options are both equity focused but will likely not result in increased adoption of healthy soils practices as measured by acreage. The program redesign is not going to be politically and administratively feasible in the short term as changing government programs, especially a complete overhaul, takes years and often requires a major external push factor such as election campaign promises, major leadership/personnel change, or a natural disaster. In contrast, the participatory block grant is a feasible option for CDFA as there is a precedence of similar pilot programs under SWEEP as well as the Pollinator Habitat Program.

Making equity a core goal of CDFA's operational program will help with equity overall as well as have potential spillover effects on other CDFA programs. However, this option will not improve adoption in the short term and is likely not going to be politically and administratively feasible due to the nature of bureaucracy at CDFA. It will potentially lead to increases in the number of applicants for HSP in the medium term.

As a result of this criteria, this analysis presents policy recommendations on the following page.

The recommended policy option for the next round of HSP is that CDFA make equity-focused improvements to the HSP application process based on stakeholder feedback received through public comments and other policy analyses. This will show that CDFA is actively listening to the feedback it receives from the public and is continuously working to improve future rounds of HSP. The program is still in its early stages, and incorporating feedback in future rounds will not only help make the program more farmer-centric but also make CDFA Secretary Karen Ross and the department appear more sympathetic and responsive to the needs of socially disadvantaged farmers and ranchers. Outwardly, this will be a mutually beneficial situation for CDFA as well as the farmers.

It is also recommended that CDFA explore the option of a targeted participatory block grant pilot with delivery partners such as UC Cooperative Extension or the Punjabi American Growers Group. This can be undertaken as a proof of concept where the program targets Punjabi farmers with the aim of increasing adoption of healthy soil practices in the Punjabi community. This can be done in partnership with the USDA Natural Resource Conservation Service to leverage the inroads the agency has made in the Punjabi community. Section 570(c)(1) of AB 2377 requires CDFA to coordinate grant program guideline development and outreach with NRCS, which should make this option both politically and administratively feasible.³⁹ This piliot program could also serve as a model for engagement with other socially disadvantaged farmers and ranchers who wish to participate in HSP.



39 Irwin, AB-2377 Agriculture: Cannella Environmental Farming Act of 1995: technical assistance grant program.

Conclusion

California is seen as the world leader in climate change mitigation initiatives, and its Healthy Soils Program is an example of that. Healthy soil practices have the potential of improving surface moisture, sequestering carbon in the soil, and reducing greenhouse gas emissions. During these early years of HSP implementation, it is imperative for CDFA to establish an open feedback loop with key stakeholders for continuous improvement in each solicitation round. In doing so, CDFA must ensure the application process and access to HSP funds is equitable for socially disadvantaged farmers and ranchers.

There are several barriers faced by farmers of color, women farmers, and other socially disadvantaged groups in applying for HSP funds. These barriers have been well-documented by technical assistance providers, policy advocates, university researchers, and industry groups representing minority farmers. In the short term, CDFA can start addressing some of the issues by taking advice from stakeholders and making administrative changes to the Healthy Soils Program. These improvements will ensure socially disadvantaged farmers have the same funding opportunities as other well-established large farmers and will ultimately make HSP a stronger and more effective and equitable program.



Bibliography

"2017 Census of Agriculture Data Now Available | CACASA." Accessed August 4, 2022. https://cacasa.org/usda/6432/.

Agriculture and Agri-Food Canada. "Agricultural Climate Solutions – On-Farm Climate Action Fund," August 12, 2021. https://agriculture.canada.ca/en/agricultural-programs-and-services/agricultural-climate-solutions-farm-climate-action-fund-o.

Aguiar-Curry, Cecilia. AB-1348 Farmer Equity Act of 2017., Pub. L. No. AB 1348 (2017). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1348.

Bingham, Nina. "Healthy Soils Program Solicitation Overview 2021-22." April 14, 2022.

Bingham, Nina, Elizabeth Hessom, and Dina Brady. "2021 HSP Incentives Program Application Assistance Workshop." n.d. https://www.cdfa.ca.gov/oefi/healthysoils/docs/2021_HSP_Incentives_Workshop_Agenda.pdf.

CalCAN. "Healthy Soils Progress Report Webinar." n.d. https://calCAN-Healthy-Soils-Program-Progress-Report-Webinar-12.1.20-Web.pdf.

CDFA. "2020 Report to the California Legislature on the Farmer Equity Act," 2020. https://www.cdfa.ca.gov/farmerresources/pdfs/2020FarmerEquityReport.pdf.

———. "2021 HSP Public Comments," 2021. https://www.cdfa.ca.gov/oefi/healthysoils/docs/PublicComments_Sep9-23.pdf.

———. "California Agricultural Production Statistics." Accessed May 6, 2022. https://www.cdfa.ca.gov/Statistics/.

———. "CDFA - OEFI - Healthy Soils Incentives Program." Accessed February 16, 2022. https://www.cdfa.ca.gov/oefi/healthysoils/incentivesprogram.html.

———. "CDFA Press Release #21-145 - CDFA ANNOUNCES GRANT FUNDING AVAILABLE FOR HEALTHY SOILS PROGRAM." Accessed April 29, 2022. https://www.cdfa.ca.gov/egov/press_releases/Press_Release.asp?PRnum=21-145.

———. "CDFA Strategic Plan 2019 - 2022," 2019. https://www.cdfa.ca.gov/exec/public_affairs/pdf/CDFA_StrategicPlan2019-22.pdf.

———. "Climate Smart Agriculture Technical Assistance Grants." March 4, 2021. https://www.cdfa.ca.gov/oefi/climate/docs/CSA_TA_application-workshop-March2021.pdf.

———. "Farms + Data: California's Farms Are Smaller than the US Average, but They're Big on Diversity – and Productivity." CDFA's Planting Seeds Blog (blog), June 15, 2017. https://plantingseedsblog.cdfa.ca.gov/wordpress/?p=10952.

"Didar Singh Bains – Pioneering Punjabis Digital Archive." Accessed May 7, 2022. https://pioneeringpunjabis.ucdavis.edu/people/farmers/didar-singh-bains/.

Driscoll, Laura, and Nina Ichikawa. "Growing Organic, State by State: A Review of State-Level Support for Organic Agriculture." Berkeley Food Institute, 2017. https://food.berkeley.edu/wp-content/uploads/2017/10/BFI_Organics_Report_2017_WEB.pdf.

Esquivel, Kenzo Emiliano, Liz Carlisle, Alison Ke, Elissa M. Olimpi, Patrick Baur, Joanna Ory, Hannah Waterhouse, et al. "The 'Sweet Spot' in the Middle: Why Do Mid-Scale Farms Adopt Diversification Practices at Higher Rates?" *Frontiers in Sustainable Food Systems* 5, 2021. https://www.frontiersin.org/articles/10.3389/fsufs.2021.734088/full.

Irwin, Jacqui. AB-2377 Agriculture: Cannella Environmental Farming Act of 1995: technical assistance grant program., Pub. L. No. AB 2377 (2018). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB2377.

La Brack, Bruce Wilfred. "The Sikhs of Northern California: A Socio-Historical Study." Social Science - Dissertations, 1980. 120.

Marshall-Chalmers, Anne. "Is a State Program to Foster Sustainable Farming Leaving Out Small-Scale Growers and Farmers of Color?" *Inside Climate News*, January 4, 2022. https://insideclimatenews.org/news/04012022/is-a-state-program-to-foster-sustainable-farming-leaving-out-small-scale-growers-and-farmers-of-color/.

Ory, Joanna, Timothy Bowles, and Alastair Iles. "Connecting Soil Health and Water in California." Berkeley Food Institute, 2022. https://food.berkeley.edu/wp-content/uploads/2022/05/BFI_Policy_SoilHealth_.pdf.

Ory, Joanna, and Alastair Iles. "Improving Equity, Accessibility and Impact of the Healthy Soils Program in California." Upcoming Berkeley Food Institute Report, 2022.

SB-1383 Short-lived climate pollutants: methane emissions: dairy and livestock: organic waste: landfills., Pub. L. No. SB-1383 (2016). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383.

Sewell, Summer. "'This Has to End Peacefully': California's Punjabi Farmers Rally behind India Protests." *The Guardian*, February 8, 2021. https://www.theguardian.com/us-news/2021/feb/08/california-indian-farmers-protest-sikh-punjab-yuba-city.

Shobe, Brian, Grace Perry, and Jeanne Merrill. "A Progress Report on the California Healthy Soils Program," December 2020. https://calclimateag.org/wp-content/uploads/2020/11/CA-HSP-Progress-Report-CalCAN_FinalWeb.pdf.

Sibia, Tejinder Singh. "Sikh Farmers in California," 1999.

USDA. "Drought Impacts on California Crops." California Drought Fact Sheet Series, 2016. https://caclimatehub.ucdavis.edu/wp-content/uploads/sites/320/2016/03/factsheet3_crops.pdf.

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