

Land Access and Land Tenure

for Limited Resource Farmers



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Assessment of Conditions and Opportunities in Sonoma County

June 2023

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Assessment of Conditions and Opportunities in Sonoma County

June 2023

Produced by:



**AG +
OPEN
SPACE**
SONOMA COUNTY

Sonoma County Agricultural Preservation and Open Space District
sonomaopenspace.org



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Foreword

Ag + Open Space's mission is to permanently protect the diverse agricultural, natural resource, and scenic open space lands of Sonoma County for future generations. With the adoption of the Vital Lands Initiative in 2021, Ag + Open Space committed to creating a balanced portfolio of protected lands that represents the diverse types of agriculture in Sonoma County, and to supporting access to land for farmers and ranchers. Limited resource farmers are an essential part of our Sonoma County agricultural system, and understanding how to support their success is crucial to achieving our commitments.

With that in mind, we look forward to incorporating the relevant findings and recommendations in this study into our own programming, and to sharing them with other interested individuals and organizations across Sonoma County. One of our first steps will be to identify which recommendations Ag + Open Space is well-positioned to implement in the coming years. We will also identify those recommendations for which we can play a supporting role, and will reach out to potential partners to support them in taking action. There may also be recommendations that Ag + Open Space is not best suited to advance. In these cases, we will aim to share this study and its recommendations with those who can best take a leading role, in some cases working to convene organizations and partners around specific recommendations or general concepts.

This study will also provide critical insight for work already underway at Ag + Open Space. We are currently developing a Farmland for All program, which focuses specifically on agricultural land access, and the content of this study will help us ensure that this program makes a meaningful impact on land access for limited resource farmers. We are also continually improving and updating programming across our organization, and the information in this study will inform how we enhance existing programs such as agricultural easements and our Matching Grant Program.

We are deeply grateful to all those who shared their time and expertise with the study team. Learning from limited resource farmers about their priorities, needs, and interests around land access has been a humbling and inspiring experience. We hope that this study is simply the beginning of an ongoing open dialogue with these farmers and ranchers, without whom creating a more diverse, resilient, and community-responsive local food system would not be possible.

– Ag + Open Space



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CHAPTER 1

Introduction

The *Land Access and Land Tenure for Limited Resource Farmers: Assessment of Conditions and Opportunities in Sonoma County* (“Study” or “project”) was produced for the [Sonoma County Agricultural Preservation and Open Space District](#) (“Ag + Open Space”), with input from diverse Sonoma County agricultural stakeholders, and in partnership with the [University of California Cooperative Extension Sonoma Office](#) (UCCE Sonoma) and nonprofit organization Sustainable Agriculture Education (SAGE).

The purpose of the Study is 1) to inform Ag + Open Space, current and future partners, and allied organizations in Sonoma County about the needs of limited resource farmers (LRFs), and 2) to make recommendations for actions that Ag + Open Space and others can take to support equitable land access, secure land tenure, and associated farm business viability for limited resource farmers in the County. Throughout the report, the term “partners” is used to mean current and future allied organizations. As described in the sidebar on the next page, this Study builds on significant initiatives already undertaken by Ag + Open Space and partners. In addition, this Study takes place in the context of current regional initiatives, including a Farmworker Housing Study being conducted by ABAG, a Priority Conservation Area Program Refresh being conducted by MTC, and development of a Framework for a Regional Agricultural Plan, led by Santa Clara County Planning Department in partnership with SAGE and other partners.

About the Study Partners

Ag + Open Space is a special assessment district established in 1990 by Sonoma County voters, who then extended the district’s funding mechanism in 2006. The mission of Ag + Open Space is to permanently protect the diverse agricultural, natural resource, and scenic open space lands of Sonoma County for future generations. Both the 1989 Sonoma County General Plan and the updated Sonoma County General Plan 2020 (adopted in 2008) provide direction for Ag + Open Space in the Agricultural Resources Element, the Open Space and Resource Conservation Element, the Land Use Element, and the Water Resources Element. Provisions in the General Plan that guide Ag + Open Space work include the direction to protect land currently in and potentially suitable for productive agriculture. The sidebar describes Ag + Open Space initiatives specifically relevant to this Study.

University of California Cooperative Extension (UCCE) Sonoma Office is an agriculture leader in the County, working to preserve agriculture, helping communities shape wise public policy, and strengthening community development and leadership in the County’s youth and adults. Started in 1914, Cooperative Extension helps farmers, homemakers, and youth use the latest university research to improve their lives. UCCE advisors are housed in County Cooperative Extension offices throughout California. These advisors extend knowledge and provide county research in selected Cooperative Education program areas. Specialists housed on university campuses conduct research and work with advisors in the counties to provide information for dissemination.

The UCCE Sonoma Office hosts advisors for over a dozen programs, which directly support the needs of all farmers and ranchers in the

County. Programs specifically relevant for limited resource farmers include: [Climate-Smart Agriculture](#); [New to Sonoma County Agriculture?](#); [Specialty Crops](#); and [Ag Ombuds Fact Sheets](#). Both the Ag Ombudsperson and the Specialty Crops Advisor were part of the team that developed this Study.

Sustainable Agriculture Education (SAGE), an entrepreneurial nonprofit organization, revitalizes agricultural places near cities and fosters vital food systems that connect urban and rural communities. Founded in 2001, SAGE works to support and diversify the sustainable farming population, connect diverse urban communities with the people and places that grow their food, and help the next generation pursue careers in resilient food and farming systems. SAGE

promotes regenerative, multibenefit agriculture as a strategy for conserving the natural resources critical for environmental sustainability, long-term farming viability, and production of healthy food. SAGE aims to make multifunctional, urban-edge agriculture, and robust regional food systems key elements of resilience planning and an equitable stewardship economy across California and beyond. Over its 20-year history, SAGE has effectively advanced local-serving, sustainable agriculture through pioneering and replicable place-based projects and systems-based tools, frameworks, and assessments.

This Study draws from the approach and assessment tools used in the [SAGE + California FarmLink Coachella Valley Study](#) (2021).

Study Objectives and Format

In undertaking the Study, Ag + Open Space outlined four objectives:

1. Assess existing conditions for land access and farm business viability for limited resource farmers in Sonoma County.
2. Determine which of the models described in the SAGE + California FarmLink Study are most relevant for Sonoma County. Identify and describe any additional relevant models for Sonoma County.
3. Create an updated property-scale assessment framework that can be used in the future to help determine properties' suitability to support land access for limited resource farmers.
4. Produce recommendations that are actionable, feasible, and have broad support.

The Study contains seven chapters: 1) Introduction; 2) Overview of Limited Resource Farmers in Sonoma County; 3) Favorable Conditions for Limited Resource Farmers at a County/Area Scale; 4) Favorability of Conditions for Limited Resource Farmers in Sonoma County; 5) Models for Land Access and Land Tenure; 6) Property Assessment Framework for Models Serving Limited Resource Farmers; and 7) Conclusions and Recommendations. The Study aims to tell a story about the circumstances, needs, challenges and opportunities of Sonoma County's limited resource farmers and to make recommendations for actions that partners can take to strengthen land access and tenure for this valued sector of the County's agricultural community.

Related

Ag + Open Space Initiatives

The 2021 Vital Lands Initiative, a long-range, comprehensive plan to prioritize the land conservation activities of Ag + Open Space, includes specific goals and objectives relevant for this Study. The agriculture goal “Protect lands that support diverse, sustainable, and productive agriculture” includes, as one of several objectives, “Support access to land for farmers and ranchers.”

As part of its implementation of the Vital Lands Initiative, Ag + Open Space is developing a Farmland For All toolkit and resource guide. This toolkit will provide Ag + Open Space with tools to advance their agricultural land conservation work, will support an additional focus on small agricultural properties, and will enhance equitable agricultural land access for farmers, ranchers, and other agricultural operators. Tools will include an affirmative agricultural covenant template to require agricultural production on certain properties and a pilot of a “Buy-Protect-Sell” strategy. In the future, Ag + Open Space will also explore outreach to its easement landowners about the possibility of leasing appropriate lands to agricultural producers. Actions to enhance equitable land access will include consultation with diverse communities, especially those facing inequitable barriers to land access; outreach to these communities to share information on program opportunities; and development of partnerships to provide support for applicants and selected land buyers and to help address barriers.

The Ag + Open Space Fee Lands Strategy Update, 2021, includes a description of Ag + Open Space’s current land management practices on their fee-owned lands. Several of these properties are currently being grazed. The Strategy Update also includes a strategy for conveying all Ag + Open Space fee lands to new owners by 2031. Several of these properties have the potential to be suitable for agricultural production, and Ag + Open Space is seeking ways to transfer these properties in a manner that will maintain their agricultural and other conservation values. Ag + Open Space plans to consider properties. potential contribution to agricultural land access in its transfer of these properties.

UCCE and Other Reports

The [*Sonoma County Lands for Food Production*](#) study was conducted by UCCE Sonoma and the final report was published in 2015. The purpose of the study was to identify and evaluate properties owned by Sonoma County agencies for their suitability and potential for agricultural production. In all, 18 properties were evaluated, with methodology and data collection including personal interviews, GIS data, soils data, planning and zoning documents, and site reconnaissance, along with an evaluation of each property’s physical features, existing infrastructure, and specific planning, physical, or biological constraints. Most of the properties assessed were found to not be suitable for grazing nor farming, due to factors such as a lack of water access or the existence of biotic resources that could be harmed by agricultural activities.

The study recommended that, in order to be suitable for farming or ranching, properties should be equipped with a water source, power source, chain link fencing, be a minimum of 20 acres for farming or 100 acres for grazing, and not contain resources important to the County’s conservation goals that would be harmed by agricultural production. Conservation goals necessitated the exclusion of wetlands and locations with populations of California tiger salamanders, young oak trees, or dense tree cover. This study found that, out of the 18 properties assessed, only three had the *potential* to be suitable for farming and even then, immediate use would not be possible. It determined that around a third of the properties had the potential for grazing, provided requisite infrastructure investments were made. The lack of suitable properties was attributed to the fact that most properties with the desired characteristics were already being used for farming or ranching. The study recommended that the County replicate this evaluation framework when acquiring future properties.

[*A Portrait of Sonoma County: 2021 Update*](#) is part of the Regional Report Series produced by MEASUREOFAMERICA, a program of the Social Science Research Council. The 2021 Update builds on the *Portrait of Sonoma County: 2014*, which helped shift the community's understanding of what determines well-being and how conditions of well-being vary across Sonoma County neighborhoods.

The purpose of the report was to identify which inequities residents face and to create an Agenda for Action to help the County's most vulnerable populations. Key findings include significant inequity based on neighborhood and race, and data that show Latinx and Black residents having the lowest HDIs (Human Development Index) in the County: 4.93 and 3.99 respectively, compared to an average county-wide HDI of 6.19. The maximum possible HDI score is 10. Although the quality of life in Sonoma County has overall improved since the previous Portrait in 2014, many racial minorities have not benefited equally from these positive changes. Among other

factors, the increasing price of homes and the increasing frequency of fires have placed significant strain on many Sonoma County residents.

Findings regarding agriculture show that most of the County's lowest-wage workers are employed in the agricultural industry, specifically in wine-grape vineyards. Many of these agricultural workers experience food insecurity, poverty, and health issues, and 95% are Latinx. Among this population, there is a great proportion of Indigenous farmworkers who speak neither Spanish nor English, and face an even higher risk of work-related hazards. They have little access to resources and are likely to continue working in threatened areas during fires, even under evacuation orders, for multiple reasons, including language barriers and lack of access to other employment opportunities. Lack of hazard pay when there is a fire (or other environmental emergency) contributes to the pressures to keep working despite severe risks and unhealthy conditions, including hazardous air quality.

Study Team

Thank you to all of the people who guided, supported and shaped this Study. Mary Chambers, Agricultural Specialist, provided management and oversight on behalf of Ag + Open Space, with support from Amy Ricard, Community Resources Program Manager. On behalf of UCCE, Kerry McGrath, Agricultural Ombudsperson, led the farmer engagement element of the study, with support from Ellie Andrews, Specialty Crops Advisor. The SAGE consultant team was led by Sibella Kraus with support from Bella Mayorga and Juana Cruz Sampredo. Independent consultant Kendra Johnson led research and writing for the Models Chapter, and, along with independent consultants Poppy Davis and Kathryn Lyddan, provided expert input for the Recommendations Chapter and the Study as a whole. Thanks also to Laura Hobbs, Laura Hobbs Design.

The Advisory Group members who advised and helped guide the Study are: Layla Aguilar, FarmDog Agricultural Services; Irene de Barraicua, Lideres Campesinas; Leonard Diggs, Pie Ranch; Aaron Gilliam, Sonoma Mountain Institute; Will Holloway, Longer Table Farm, FEED Sonoma; Kristyn Leach, Namu Farm; David Mancera, Kitchen Table Advisors; Connor Murphy, Santa Rosa Junior College Shone Farm; Dorian Payan, Sustainable Economies Law Center; Liya Schwartz, California FarmLink; and Evan Wiig, Community Alliance with Family Farmers.

CHAPTER 2

Overview of Limited Resource Farmers in Sonoma County

This chapter begins by defining beginning and limited resource farmers. Four subsections then provide an overview of such farmers in Sonoma County, drawn from several sources. The SAGE team conducted an analysis of the demographics of limited resource farmers using the Ag Census. The UCCE team conducted a survey of limited resource farmers in Sonoma County and also organized a series of interviews. Partners worked together to convene an Advisory Group which provided input on their direct observations of limited resource farmers in Sonoma County. Each subsection includes a summary of findings and descriptions of the various research methodologies.

Limited Resource Farmers – USDA Definitions

Throughout this report, the term “limited resource farmer” (LRF) refers to farmers who have limited access to the funds and other forms of capital needed to develop a financially sustainable farming operation. “Limited resources” are defined as a combination of limited cash savings, equity, and ability to access credit, as well as limited social capital, including a social network—family, friends and community—that is not able to make substantial financial contributions or create advantageous social connections such as job opportunities, market opportunities, or referrals to advisors or mentors. It is important to note that farmers may have limited resources for a variety of reasons, including deliberate discrimination, lack of generational wealth, and historical circumstances.

Many limited resource farmers would also be included in the USDA definitions of limited resources, beginning, and socially disadvantaged farmers. These definitions are used to facilitate priority access to important USDA programs including credit and grants for conservation practices.

The USDA defines a limited resource farmer or rancher as having “direct or indirect gross farm sales not more than the current indexed value in each of the previous two years; and who has a total household income at or below the national poverty level for a family of four, or less than 50 percent of county median household income in each of the previous two years.”¹

The USDA defines a beginning farmer as someone who has “operated a farm or ranch for 10 years or less either as a sole operator or with others who have operated a farm or ranch for 10 years or less.” This definition also encompasses producers who may have more than ten years of experience farming, but not as farm owners.

The USDA defines a socially disadvantaged farmer as “a farmer or rancher who is a member of one or more of the following groups whose members have been subjected to racial or ethnic prejudice because of their identity as members of a group without regard to their individual qualities; ...this includes ethnic groups, refugees, and immigrants.” The USDA definition also sometimes includes women

farmers or ranchers. It does not yet include LGBTQIA+ and alter-abled people, an omission in need of correction. A socially disadvantaged farmer or a beginning farmer is likely to be constrained both by a lack of their own capital to invest and by lack of access to supportive credit to help them get started, meaning that these groups have a great deal of overlap with limited resource farmers.

These factors and the other limitations faced by LRFs are likely to keep the size of their operations small in terms of acreage and gross revenue. With the right business plans and conditions, a farmer can earn a modest living on small acres; and with supportive financial and technical assistance a small-acreage farmer can grow their operation to a sustainable scale. Although most limited resource farmers start out at a small scale, this Study does not use the term “small” to define them.

Demographics of LRF in Sonoma County

This Study assesses the demographics of limited resource farmers in Sonoma County using data from the Ag Census and *A Portrait of Sonoma: 2021 Update*.

The Ag Census is produced every five years by the USDA National Agricultural Statistics Service (NASS). Data from the Ag Census provides an important picture of agricultural activity over a number of parameters and its changes over five-year periods. However, Ag Census data includes approximations for some parameters and defines some terms in ways that do not fully line up with how those terms are used in general discussions of agriculture. One example of this is the definition (dating to 1974) of a farm as any place that has or could have \$1,000 or more in agricultural sales. The low amount of income or potential income required to be categorized as a farmer, combined with the definition of a beginning farmer as someone with up to ten years of experience operating their own farm, can mean that the Ag Census reports a great deal more beginning farmers in a given area than are perceived to be present by local farmers and other local experts familiar with the ag community.

Ag Census Data for Sonoma County

The table on pages 14 and 15 summarizes the demographic data of Sonoma County farmers as measured by the 2017 Ag Census. Among the ten Bay Area counties (including Santa Cruz), in 2017, Sonoma County had the highest number of farms (3,594) and the highest number of producers (estimated 6,405). Sonoma County also had the highest number of beginning farmers of any county: 2,009, or 31% of all Sonoma County producers. This high number of beginning farmers in Sonoma County does not align with the direct experience of agricultural service providers in the County. The possible reason for this disconnect is that this population of 2,009 beginning farmers likely includes many of the farmers reported with income of \$1,000 or less (631) or an income of between \$1,000 and \$2,500 (226).

Of Sonoma County’s producers, 96%, or 6,150, identified as white. A similarly high proportion

can be seen across all the other Bay Area counties, where more than 85% of producers identified as white. Sonoma County had the highest number of Latinx producers: 509. The other nine Bay Area counties each had between 11-350 Hispanic producers. However, Sonoma County was the third lowest in terms of percentage, with only 7% of farm owners being of Hispanic, Latinx, or Spanish origin. Note that the percentages of white and Hispanic producers add up to a total of more than 100% due to the Ag Census’ definition of race and ethnicity (“Hispanics may be of any race, so also are included in applicable race categories”). A little fewer than 2% each of farmers in Sonoma County identified as American Indian/Alaska Native, Asian, Black or African American, Native Hawaiian/Pacific Islander, or more than one race.

Sonoma County also had the highest number of veteran farm owners (538, 15%), compared with the other Bay Area counties, which had between

0-292 veteran farm owners. It also had the highest number of female producers (2,487); however, at 38%, this was a little below the average percentage of women producers among all Bay Area Counties (39%). Around half of all Sonoma County farms hired farm labor in 2017, which was around the average for the Bay Area.

In terms of age ranges, in 2017, 54% of Sonoma County producers were between the ages of 35-64, and another 40% were in the 65 and above age range.

Data on Sonoma County Farmworkers

The scope of this Study is contained to research about limited resource farmers who are farming. A future study might investigate the category of aspiring farmers. Farmworkers are one of the groups of people who might be in the category of aspiring farm operators; in fact, anecdotally, new farm business owners do come from this group.

Therefore, below is a brief summary of the demographics of farmworkers in Sonoma County, using data from A Portrait of Sonoma County: 2021 Update.²

In 2021, there were 14,379 workers in Sonoma County overall,³ with 11,070 (77%) of them working in vineyards.⁴ Sonoma County's farmworkers are predominantly immigrants from Latin America (90%), and 95% identified as Latinx. A majority of all farmworkers are undocumented (57%). Sonoma County farmworkers are also overwhelmingly male (91%). A large portion of the farmworker population is comprised of Indigenous individuals from Mexico, although no definitive demographic information has been compiled. Indigenous individuals have established community organizations such as Movimiento Cultural de la Unión Indígena.

Many farmworkers face challenges including low wages, food insecurity, lack of health insurance, language and cultural barriers, and disproportionate impact from natural disasters, especially wildfires.



Photo Credit: Kelsey Joy

UCCE Survey of Farmers in Sonoma County

UCCE created a needs assessment survey in order to collect information about the goals, barriers, and needs of farmers and ranchers. The goal of the survey was to determine the barriers to increasing the economic viability of small-scale livestock and specialty crop production in Sonoma County. In Sonoma County, specialty crops include tree crops, row crops, mixed vegetables, floriculture, and specialty grains (the latter not technically classified as a specialty crop in California).

The survey was written by Stephanie Larson (Livestock and Range Management Advisor), Kerry McGrath (Agriculture Ombuds), and Ellie Andrews (Specialty Crops Advisor). It was conducted in Qualtrics from October 25, 2022 to February 14, 2023 and consisted of three sections: demographics, specialty crop questions, and livestock questions. It was offered in both Spanish and English. The survey was electronically distributed to the Sonoma County's Certified Producer Certificate list, Registered Organic Producer list, and the Producer lists in UCCE Sonoma's email platform. Kerry McGrath also reached out directly to producers who identified as limited resource farmers, communicated with various farm nonprofits to solicit responses, and attended in-person farmer gatherings to encourage survey responses. The survey received 95 responses.⁵

One limitation of this data is that there were only eight survey respondents whose estimated average annual gross farm-related income was between \$25,000-\$100,000+, and who indicated that their current land access is via renting/leasing or "other." So, while this survey provided helpful information about the needs of the Sonoma County farming and ranching community, it seems that the number of respondents for whom agricultural production forms a significant part of their livelihood and who may also be seeking land was relatively small. For this Study, a fuller understanding of this population was developed through interviews and discussions with an Advisory Group (see below), but more research remains to be done.

Complete results of the survey are in Appendix A. Highlights from the survey data include:

- 53% of respondents grow specialty crops,⁶ 29% raise livestock only, and 18% produce both specialty crops and livestock.
- The majority of respondents are currently growing on 0-20 acres: 65% of the specialty crop respondents grow on 0-5 acres, 13% on 6-10 acres, 11% on 11-20 acres, 5% on 21-50 acres, 2% on 51-100 acres, and 4% on 100+ acres. Most respondents stated that they would like to be growing on land in the 0-20 acre range in the future as well.
- 6% of respondents were 16-29 years old, 34% were 30-49 years old, 41% were 50-69 years old, and 19% were 70+ years old.
- Veterans comprised 6% of the respondents.
- 60% of the respondents identified themselves as female, 38% as male, 0% as gender nonconforming/variant, 0% as transgender, and 2% preferred not to say.
- 87% of respondents identified as white.
- English was the preferred language for 97% of respondents.
- The USA was the country of origin for 95% of respondents.
- Off-farm income was reported for 71% of respondents, which included sources such as savings, retirement, income from separate jobs, rental properties, and private investments. Additionally, 37% of respondents identified that other types of on-farm income, in addition to direct crop sales, supported their business.
- For annual gross farm-related income, 29% of respondents reported below \$5,000, 11% reported between \$5,000 and \$15,000, 11% reported \$15,000-\$25,000, 12% reported \$25,000-\$50,000, 7% reported \$50,000-\$75,000, 7%

reported \$75,000-\$100,000, and 13% reported \$100,000+.

- For their target annual gross farm-related income, the highest percentage of respondents (28%) stated \$100,000+.
- Considering land ownership, 57% of specialty crop grower respondents who answered questions on land access own their own land, 26% rent or lease land from a private landowner, and 17% responded “other” which included explanations such as farming on family-owned land and being a farmworker.
- Of those who own their own land, 20 respondents (62%) stated their annual gross farm-related income as between \$0 and \$25,000 per year, and 12 (38%) stated this income as \$25,001-\$100,00+.
- Of those whose land access was described as “rent/lease” or “other,” 15 respondents (65%) stated their annual gross farm-related income as between \$0 and \$25,000 per year, and 8 (35%) stated this income as \$25,001-\$100,00+.
- Primary sales outlets included wholesale (18%), farmers markets (15%), farm stands (15%), restaurants (15%), CSAs (7%), groceries (6%), FEED Sonoma (5%), and “other” (19%). The “other” category included outlets such as online, special orders (floral arrangements), and wineries.

Barriers and Needs

The UCCE survey investigated the key barriers faced by small-scale livestock and specialty crop production in Sonoma County. Barriers centered on financial capacity and the need for capital to support infrastructure, labor, and land access. Related needs include technical assistance with business planning, record keeping, and grant applications, mentorship by experienced grazers/growers, and assistance with in-field challenges.

For specialty crop respondents, common needs included labor, land access, water, markets, infrastructure, equipment, business planning, mentorship, permitting, regulatory compliance, and insurance. In particular, specialty crop

growers expressed the need for more land access and reliable labor. Many respondents would like to expand acreage and pay higher wages to support experienced labor but lack financial capacity to do so. In-field challenges included pest/disease/weed management, irrigation management and water quality, and finding affordable compost. Specialty crop growers also need more assistance when applying for grant funding and organic certification. If needs were met, growers reported they would increase overall production capacity, crop diversity, tree crop acreage, livestock integration, agritourism, and compost applications. Growers also stated that they would hire more employees, grow their farm team, partner with other growers, and offer on-farm educational opportunities.

For livestock grazers, major barriers and needs included infrastructure, capital, markets, business planning, and record keeping. Grazers indicated the need for affordable land access, labor, housing for workers, fencing, predator control, transportation, on-site processing, and better understanding of state grants and loans. Respondents identified the need for agricultural assistance and more mentorship, training and education. Many barriers revolved around the high cost of resources including fencing, land, labor, feed, and wool production. Several grazers noted the need to increase consumer and landowner knowledge of the benefits of grazing for vegetation management and fire mitigation and the need for more funding to support sustainable management practices.

Interviews of Limited Resource Farmers in Sonoma County

UCCE Sonoma and Ag + Open Space reached out to various farmer organizations that work with limited resource farmers in the County, as well as to the Study's Advisory Group (see below) for recommendations on who to interview. These interviews focused on farmers who did not take the UCCE survey and did not currently own land. UCCE Sonoma and Ag + Open Space reached out to over 30 farmers, requesting 1-1.5 hour interviews. A total of 21 individuals were interviewed (six translated from Spanish); additionally, one advisor from American Farmland Trust was interviewed. Interviewees included four farmworkers interested in and/or currently working towards farm business ownership. Three interviewees filled out questions around land access via email and two were interviewed at a local farmers market. Highlights from the interviews are below.

Information about land currently farmed

- **Acreage:** Most interviewees are currently farming 1-40 acres. Some farmers use a number of different properties or fields in various locations for different crops and water access options.
- **Infrastructure:** Greenhouses, hoop houses, barns, and cold storage are the most common existing infrastructure.
- **Land access:** Most interviewed farmers lease land, mainly because of lack of funds to buy land. The most common lease term is year-to-year; the most common landlords include

parents, family, and people they know or have worked for.

- **Water access:** Wells are the most common water access, with supplemental surface water on some properties including ponds, springs, and creeks.

Hopes for future land access

- Interviewees expressed that housing is the most important feature for a property, and that lack of affordable, on-property housing is also one of the biggest barriers to success.
- Water access was also identified by a large number of interviewees as a critical feature.
- Other priorities included the potential for farmworker housing, having neighbors who respect agricultural activities and whose practices aren't harmful (for example, via pesticide drift), and having natural areas on the property to manage or forage in as a connection to Indigenous food traditions.
- Among the farmworkers interviewed, a top priority was the ability to site additional business(es) on the property, such as a restaurant or food stand.
- Many interviewees mentioned an ideal property size of 5-10 acres. A few interviewees desired much larger properties of 50-100 acres or more.
- Most interviewees were open to the idea of collective or cooperative ag land management (for example via joint ownership of a property with other farmers or via an Ag Park), but they were also wary of potential challenges, including friction with other co-managers, lack of



dedicated management, and challenges with water access and allocation.

- Of the farmworkers interviewed, all four were strongly interested in cooperative land access and management, in particular owning land jointly with immediate and extended family in order to facilitate collaboration and crop rotation, among other goals.
- The ability to earn equity on a property or in some way gain value through improvements made to the property was identified as a priority by several interviewees. One way to achieve this is through land ownership, but there are also other ways to allow equity-building.
- Among those interviewees who expressed a preference for type of land access, most of them (8) expressed that they would prefer to own land, in order to build equity, have full decision-making control, and have a sense of ownership.
- Some interviewees (5) expressed that they would prefer to lease land, due to the more predictable expenses and support from a landlord with maintenance of infrastructure. Several of those who expressed a preference for leasing also expressed an interest in lease-to-own (3).
- Some interviewees (8, including the 4 farmworker interviewees) expressed a preference for collective or joint land management, whether via lease or ownership.

Detailed examples

Six farmers interviewed provided additional information about their current and desired land tenure and related finances. A summary of their responses is below:

- Current land size: ranges from 0.25 acres to 16 acres between two locations
- Current payment yr/acre: \$1,200/ac/yr (two respondents)
- Amenities within current lease: one farmer has on-site housing ("possible because of outside, non-farming income").
- Desired amenities: all respondents desired an on-site home.
- Mortgage amount qualified for: \$250,000; \$400,000; \$500,000-\$700,000 (three respondents)
- Savings: ~ \$100,000 (two respondents)
- Desired lease/mortgage payment: long term lease of 20-50 years (two respondents). Ideal monthly payments ranged from \$500-1,500/ac/yr (two respondents) to around \$2,500 (three respondents).
- Desired size: the desired acreage for most respondents ranged from 2-10 acres. One respondent needs 50-100 acres for grains, with an additional 3+ acres for a home.
- Half of the respondents mentioned they were interested in some form of joint ownership and/or management such as an Ag Park or joint purchase.
- Two out of the six respondents specifically mentioned affordability as a challenge. One of the two wanted to move to another county while the other hoped Ag + Open Space might offer land with a low mortgage payment.



Project Advisory Group

During late 2022 and early 2023, Ag + Open Space, UCCE Sonoma, and SAGE partnered to convene an Advisory Group to provide expert input on the topics being investigated by the Study, including the demographics of limited resource farmers in Sonoma County, barriers to success, needs and desires for land access and land tenure, and appropriate models to support land access and tenure. The Advisory Group also provided input on the structure and approach of the Study, including the engagement plan and potential interviewees. The Advisory Group also engaged in open-ended conversations considering the broader potential for land access-related programming in Sonoma County and Ag + Open Space's goals for such programming. Advisory Group participants included farmers, representatives of farmer support organizations, and farmworker advocates. Below is a summary of input from the Advisory Group.

The Advisory Group (AG) discussed a variety of factors as criteria for categorizing LRFs, and suggested that Ag + Open Space land access support programs initially focus on certain segments of the LRF population.

- By level of experience: the AG discussed different experience levels of farmers in Sonoma County: aspiring; beginning (0-2 years); intermediate (3-10 yrs); established (more than 10 years). The AG recommends targeting farmers **with intermediate (3-10 yrs) years of experience**.
- By resources: none; limited; sufficient. The AG recommends **targeting farmers with limited resources**.
- By needs: technical; financial; land access. The AG recommends targeting farmers with **financial and land access needs**.
- By ambition: The AG recommends targeting farmers with the ambition and intent **of striving to make farming a significant part of their livelihood** in the long term, even if they aren't currently able to do so.
- By potential for success: The AG contends that support programs **create the most change by supporting farmers who have the potential for long-term success**, and can (now or in the future) support more farm employees and mentor new farmers, vs. serving a higher quantity of aspiring and new farmers with undetermined potential.

County-wide land access needs, as suggested by Advisory Group:

- One incubator and/or one Ag Park
- 30-40 properties via buy-protect-sell
- 30-40 properties via buy-protect-improve-lease-hold

Target population estimate, according to Advisory Group: 20-50 land- and loan-ready farmers. While "land- and loan-ready" was a term used in discussion with the Advisory Group, it might be more accurate to say "loan-ready." A good definition for "loan-ready" can be found in the CA FarmLink loan eligibility requirements: (i) current management role in a California-based farm or ranch; (ii) two or more years of farming experience (earning farm income as an owner or employee); [.....] (iv) active marketing or sales channels; and (v) appropriate registrations and certifications for the business.

Conclusion

The findings from the UCCE survey and the data from the Ag Census provide basic demographic information about limited resource farmers in Sonoma County, such as the predominance of white farmers and diversified production systems. Combined with the farmer interviews and the input from the Advisory Group, the project team’s investigation demonstrates the range of experience, assets, and aspirations of limited resource farmers. In addition, the research highlights some of the challenges facing Sonoma’s limited resource farmers, most notably the need for: affordable, good-quality farmland with reliable water supply and on-site, affordable housing; financial capital to support infrastructure, labor, and land access; and technical assistance for both in-field support and farm business planning and record keeping.

While the research provides insight into the conditions and needs of various kinds of small-scale and limited resource farmers in the County, it is beyond the scope of this Study to identify the demographics of farmers who aspire to farm in Sonoma, or who might aspire to do so if there were sufficient financial and technical support.

Chapter 5 discusses five key models that can help address these challenges, with a focus on land tenure. Chapter 7 presents recommendations for more broadly addressing challenges and barriers.



Table 2.1 Ag Census 2017, Data for Bay Area Counties (Alameda, Contra Costa, Marin, Napa, Santa Clara, Sonoma)

County		Alameda	Contra Costa	Marin	Napa	Santa Clara	Sonoma	Bay Area Total	Average
Farm Information	Number of farms	446	459	343	1,866	890	3,594	4,694	1,064
	Land in Farms (acres)	183,282	155,572	140,075	255,778	288,084	567,284	955,939	203,968
	Average size of farm (acres)	411	339	408	137	324	158	762	173
Total (\$)	Market value of products sold (in millions)	46.20	83.20	95.30	573.00	310.00	919.00	1,294.60	380.12
Per Farm Average (\$)	Market value of products sold	103,507	181,326	277,964	307,198	348,524	255,719	994,622	393,017
	"Government payments	7,193	17,961	15,825	23,112	16,201	17,590	39,237	10,581
	Farm-related income	162,839	49,161	32,811	87,690	57,649	45,049	221,300	65,923
	Total farm production expenses	109,666	180,439	234,526	274,871	306,709	242,233	948,622	355,606
	Net cash farm income	38,471	15,799	56,419	50,257	54,640	24,924	94,741	62,219
Farms by Value of Sales	Less than \$2,500	190	173	71	210	298	857	1,228	275
	\$2,500 to \$4,999	18	43	38	118	94	229	307	73
	\$5,000 to \$9,999	59	47	25	177	131	439	571	125
	\$10,000 to \$24,999	61	63	37	261	115	537	654	150
	\$25,000 to \$49,999	34	41	46	273	61	358	449	100
	\$50,000 to \$99,999	36	31	33	271	67	334	390	90
	\$100,000 or more	48	61	93	556	124	849	1,104	252
Farms by Size	1 to 9 acres	179	218	81	843	422	1,577	1,917	439
	10 to 49 acres	100	129	73	555	273	1,071	1,455	336
	50 to 179 acres	65	46	61	256	79	497	684	153
	180 to 499 acres	53	27	48	103	41	251	325	69
Sales by Type (%)	Crops	77%	77%	12%	98%	95%	67%	79%	79%
	Livestock, poultry, products	23%	23%	88%	2%	5%	33%	21%	21%
	Producer Demographics (a)								
Sex	Male	458	454	367	2,316	969	3,918	5,096	1,156
	Female	362	337	246	1,400	536	2,487	3,269	730
	Total producers **	820	791	613	3,716	1,505	6,405	8,365	1,885
Age	<35	63	43	40	256	89	326	456	108
	35 – 64	452	424	344	2,025	838	3,474	4,557	1,036
	65 and older	305	324	229	1,435	578	2,605	3,352	742
Race (% of total producers)	American Indian/Alaska Native	0.5%	0.8%	0.0%	0.1%	1.1%	0.7%	0.5%	0.5%
	Asian	3.5%	4.9%	0.0%	3.0%	12.0%	2.0%	6%	7.5%
	Black or African American	1.8%	0.4%	0.0%	0.2%	0.2%	0.1%	0.3%	0.3%
	Native Hawaiian/Pacific Islander	0.0%	2.9%	0.7%	0.1%	0.3%	0.1%	0.4%	0.4%
	White	92.9%	89.9%	99.3%	96.1%	85.2%	96.0%	94.2%	94.2%
	More than one race	1.2%	1.1%	0.0%	0.6%	1.1%	1.0%	0.9%	0.9%
Other (% of total producers)	Hispanic, Latino, Spanish origin	11%	11%	3%	9%	12%	8%	9%	9%
	With military service	9%	8%	6%	8%	6%	8%	8%	8%
	New and beginning farmers	26%	33%	28%	31%	27%	31%	30%	30%
Percent of farms that:	Have internet access	85	85	87	85	86	88	341	85
	Farm organically	2	2	18	5	3	9	24	8
	Sell directly to consumers	16	13	20	12	13	13	47	14
	Hire farm labor	27	35	58	52	40	48	217	54
	Are family farms	92	92	85	87	91	93	384	95

** indicates a calculation added to the standard census table

Table 2.1 Ag Census 2017, Data for Bay Area Counties (Santa Cruz, San Francisco, San Mateo, Solano, Sonoma)

County		Santa Cruz	San Francisco	San Mateo	Solano	Sonoma	Bay Area Total	Average
Farm Information	Number of farms	625	10	241	849	3,594	4,694	1,064
	Land in Farms (acres)	63,900	90	45,972	342,593	567,284	955,939	203,968
	Average size of farm (acres)	102	9	191	404	158	762	173
Total (\$)	Market value of products sold (in millions)	606.00	0.60	79.00	296.00	919.00	1,294.60	380.12
Per Farm Average (\$)	Market value of products sold	970,464	60,004	329,562	349,337	255,719	994,622	393,017
	Government payments	3,085	0	(DW) *	21,647	17,590	39,237	10,581
	Farm-related income	42,392	(DW) *	119,622	56,629	45,049	221,300	65,923
	Total farm production expenses	829,410	45,335	330,959	330,095	242,233	948,622	355,606
	Net cash farm income	154,136	(DW) *	27,890	41,927	24,924	94,741	62,219
Farms by Value of Sales	Less than \$2,500	149	2	78	291	857	1,228	275
	\$2,500 to \$4,999	59	3	15	60	229	307	73
	\$5,000 to \$9,999	53	2	39	91	439	571	125
	\$10,000 to \$24,999	94	0	28	89	537	654	150
	\$25,000 to \$49,999	53	0	14	77	358	449	100
	\$50,000 to \$99,999	61	0	10	46	334	390	90
	\$100,000 or more	156	3	57	195	849	1,104	252
Farms by Size	1 to 9 acres	279	8	85	247	1,577	1,917	439
	10 to 49 acres	224	2	75	307	1,071	1,455	336
	50 to 179 acres	79	0	45	142	497	684	153
	180 to 499 acres	20	0	19	55	251	325	69
Sales by Type (%)	Crops	99%	(DW) *	98%	84%	67%	79%	79%
	Livestock, poultry, products	1%	(DW) *	2%	16%	33%	21%	21%
	Producer Demographics (a)							
Sex	Male	682	8	279	891	3,918	5,096	1,156
	Female	379	3	170	609	2,487	3,269	730
	Total producers **	1,061	11	449	1,500	6,405	8,365	1,885
Age	<35	82	2	30	98	326	456	108
	35 – 64	622	6	260	817	3,474	4,557	1,036
	65 and older	357	3	159	585	2,605	3,352	742
Race (% of total producers)	American Indian/Alaska Native	0.0%	0.0%	0.2%	1.2%	0.7%	0.5%	0.5%
	Asian	5.1%	0.0%	28.7%	1.9%	2.0%	6%	7.5%
	Black or African American	0.8%	0.0%	0.7%	0.6%	0.1%	0.3%	0.3%
	Native Hawaiian/Pacific Islander	2.5%	0.0%	0.0%	0.2%	0.1%	0.4%	0.4%
	White	91.2%	100.0%	92.7%	94.5%	96.0%	94.2%	94.2%
	More than one race	0.4%	0.0%	0.0%	1.5%	1.0%	0.9%	0.9%
Other (% of total producers)	Hispanic, Latino, Spanish origin	15%	0%	6%	11%	8%	9%	9%
	With military service	7%	0%	6%	12%	8%	8%	8%
	New and beginning farmers	38%	36%	32%	25%	31%	30%	30%
Percent of farms that:	Have internet access	85	80	88	85	88	341	85
	Farm organically	18	0	8	7	9	24	8
	Sell directly to consumers	22	0	20	14	13	47	14
	Hire farm labor	51	70	57	42	48	217	54
	Are family farms	93	100	93	98	93	384	95

* Withheld to avoid disclosing data for individual operations

CHAPTER 3

Favorable Conditions for Limited Resource Farmers at the Area Scale

Various favorable conditions within an agricultural county or farming area can substantially increase the likelihood of the viability and business success of limited resource farmers. This chapter presents an assessment rubric which describes these various conditions. In the following chapter, this assessment of county- or area-scale conditions is applied to Sonoma County.

Farmers are rarely fully independent. Their success depends on the people and resources around them—including social capital and community assets, such as technical assistance, service and input providers, associations, and many types of infrastructure, and natural capital, such as good soils, water, climate, and biodiversity—every bit as much as it depends on the skills and practices of the farmer. This is particularly true for limited resource farmers, who by definition are not able to fund all the things they need; more resources and services readily available and affordable increase their chances of success.

This Study looks at both community assets and natural capital as attributes of an agricultural area. This report uses the term “area” because it is relevant for a general overview of conditions. It can pertain to a county, as is the case with this study of Sonoma County, or it can correspond with a place renowned for its agriculture (e.g. Capay Valley, Coachella Valley). In other instances, “area” might refer to an agricultural region (e.g. Sacramento Valley, San Joaquin Valley).

Natural capital and most community assets are characteristics that are intrinsic to an area. Some elements of these assets also apply at the property scale (as discussed in Chapter 6). Another factor attributable to an area is its relative positioning within a broader geography. For example, for limited resource farmers, it can be advantageous to be close to cities and metropolitan areas, which can facilitate access to a range of market outlets and also to opportunities for a second job (or jobs for other family members).

Specific Favorable Conditions at the Agricultural Area Scale

Few agricultural areas are 100 percent ideal, and farmers can be successful in less than optimal conditions. However, agricultural areas that provide more community assets and resources and have better natural capital are certainly preferable. To facilitate a formalized analysis of agricultural areas, the Study team has developed a rubric that presents key factors in terms of conditions favorable for the success of limited resource farmers.

These factors are organized in five context categories: Agricultural Industry; Policy and Politics; Land Use Conditions; Environmental Conditions; and Socioeconomic Conditions. These categories, and (for the most part) the factors within the categories, are presented in descending order of importance to limited resource farmer success. For example, agricultural industry conditions in an area are the most

critical and so are presented first, while socioeconomic conditions, while still important, are presented last as they are less critical. The narrative sections below describe what makes conditions favorable for the success of limited resource farmers within each category. The summary table (Table 3.1) at the end of this chapter serves as a template and tool for analyzing conditions in a particular agricultural area.

Agricultural Industry

Access to processing and distribution infrastructure and to a range of market outlets is a key factor for success, particularly for limited resource farmers. For fresh produce in California, necessary processing infrastructure includes, at a minimum, packing and cooling facilities. Market accessibility includes access to wholesale markets—via shippers or farmer delivery—and/or direct market opportunities such as farmers markets, restaurants, specialty grocers, and/or a customer base to support a CSA.

The local availability of relevant, accessible training and technical and financial assistance is also key. Examples include: UC Extension agents with an interest in and capacity to serve limited resource farmers; community college agricultural programs; stable and well-funded nonprofits with well-qualified farm advisors on staff; private crop advisers with knowledge of organic and Integrated Pest Management (IPM) practices; specialized agricultural lenders with farm business advisors; and/or a Small Business Development Center with farm-specific business training resources. It is essential that all service providers be bilingual in English and Spanish (and/or in other languages as appropriate).

Beyond these essential technical assistance resources, other important industry services include: equipment supply and maintenance providers, other input suppliers (seed and fertilizer etc.), and knowledgeable industry professionals (e.g. pest control advisors, insurance agents, accountants, and attorneys).

Areas that have a diversity of high-value specialty crops and production methods (e.g. conventional, transitional, IPM, organic) and areas with a high level of organic and specialty crop production generally offer a commensurate range of service providers, input suppliers, peers, mentors, and

market outlets. In turn, this diversity of resources provides limited resource farmers with increased learning opportunities, market options, and specialty crop niches. Areas where most farmers are focused on fewer crops and on commodity production can also be viable for limited resource farmers, provided they are, or are interested in, growing the same crops and there is relevant technical assistance available for their crop types.

Other agricultural industry context conditions which tend to be more favorable for limited resource farmers' success include:

- Presence of a mix of small- and medium-sized farms. Presence of a significant number of small- to medium-sized farms (acreage and revenue) can foster sharing of knowledge and other resources among neighbors and peers, and correlates with increased access to service providers with experience in serving this segment of the farming community.
- Higher income per acre. This corresponds to high value production which is necessary for a farmer on small acreage.
- Low conversion rate of ag lands. A low conversion rate of ag land to other land uses (such as residential or industrial) suggests that the land is safe from development pressures. A high conversion rate usually corresponds to inflated land prices and short-term leases, neither conducive for establishing land tenure.
- Stability in the number of farms. Rapidly decreasing numbers of farms may indicate consolidation in the industry, urban development pressure, a lack of water, or other challenging conditions.
- Areas with a more robust agricultural economy. Such areas usually have significant services for all farmers including: market infrastructure (e.g. processors, food hubs, etc.), equipment sales and maintenance, input suppliers, and business

resources with ag knowledge (insurance, real estate, legal, accounting).

- Broadband. Access to broadband internet is essential for many aspects of farm operations, especially marketing.
- Agricultural place-based designations or branding. Areas which have unique landscape attributes, are promoted as the provenance of specific crops, and/or are renowned for providing visitor experiences. Such branding can be beneficial to farmers within the area; especially to limited resource farmers, who can use it to help promote their farm's brand or reputation.
- Availability of farm labor. This is an advantage, since limited resource farmers frequently hire some additional labor. In addition, areas with available farm labor are more likely to have programs supporting farmworkers transitioning to farm owners, which can provide this category of limited resource farmers with relevant education and technical assistance.

Policy and Politics

In an area with an abundance of farms and where farming is important to the local economy, farmers are more likely to have political power and favorable local policy conditions. However, there is great variation in how this impacts LRFs specifically, since an area dominated by large farms may have agricultural policy that is favorable to large farms but may create conditions that are not hospitable for small farms.

Ag-Friendly Policies

Area- or county-scale policy mechanisms that are supportive of agriculture in general include: urban growth boundaries, a general plan supportive of agriculture, right-to-farm ordinances, allowances for employee housing on agricultural lands, and the existence of a special assessment district that supports conservation of agriculture. Policies favorable for limited resource farmers and smaller farms in particular include: policies that facilitate direct-market sales, agri-tourism and on-farm sales; school/institutional policies favoring farm-to-school and farm-to institution

procurement; and policies which provide incentives for farmers to adopt climate-smart agriculture practices.

Water Policy

Water policy and how water is allocated can have a major impact on all farms. Impact on limited resource farmers can be especially consequential, as they are more likely to lack water supply alternatives. A supportive water policy environment that recognizes the needs and value of small and diversified farms can significantly benefit limited resource farmers. For example, irrigation districts or groundwater management districts that have many members who influence decision-making is preferable to districts with a limited number of dominant members.

Zoning Policies

Zoning that allows for smaller agricultural parcels can help farmers who want to start small farms, though can be problematic when land is priced at homesite values.

Other policies that incentivize or facilitate investment in farming can also create more favorable conditions. Federally-designated Opportunity Zones, for example, are an economic development tool that provides tax benefits to investors who support economic growth and job creation initiatives in low-income communities.⁷ While use of this tool for investments in farmland located in Opportunity Zones can make farmland leases more affordable for limited resource farmers, it can also preclude their options for land purchase.

Land Use Conditions

Farmland Availability - Supply and Price

One key factor that supports land access and tenure for limited resource farmers is the sufficient availability of affordably-priced farmland for both lease and purchase. However, in general, the price of farmland reflects its advantageous or adverse conditions, meaning that low-cost land is more likely to be problematic for farming. Usually it is not possible for a limited resource farmer (precisely due to limited resources) to overcome the challenges of poor soil, a disadvantageous

micro-climate, or a lack of water, as these conditions erode yields and profitability and prevent a farm from attaining financial viability. This is especially true of farmers with short-term leases, where investments in longer-term improvements do not make financial sense.

Housing Availability and Affordability

Another key factor is the availability of housing. LRFs benefit from situations where a range of affordable housing options exist relatively near to agricultural land, and/or zoning policies are in place which permit modular homes or trailers on farmland.

Land Trusts Supportive of Agriculture and LRFs

The presence of one or more land trusts with a strong agricultural focus can also be beneficial, particularly if these organizations take action to purchase easements over farmland or purchase properties and lease them to farmers. Ideally, such land trusts also include land access for limited resource farmers as part of their mission and/or program priorities.

Environmental Context

Water Availability

One of the most critical factors for farm viability generally, and for limited resource farmers specifically, is the availability, affordability, and reliability of water. Closely connected to but not synonymous with water policy (described above), water availability is a feature of both environmental and land use conditions. Water can be supplied through surface or groundwater, ideally both. Surface water rights vary greatly but, generally speaking, the least expensive water supply is surface water provided through an irrigation district. Preferably, the irrigation district serves multiple farms including small farms and has a history of equitable allocations within water rights-holder categories. Depending on the area, farmers might also rely on wells, either exclusively or to mitigate the vagaries of surface water supply. In areas with variable or dropping ground water levels, wells may need to be deepened or

redrilled, an expensive proposition that might be out of reach for limited resource farmers.

Other Environmental Factors

Overall, the geography, climate, and environmental conditions of an area provide both opportunities and constraints for farmers. California has a wide range of agricultural growing regions collectively supporting the production of hundreds of different crops. The seasonal temperatures, rainfall, and soils of an area need to be appropriate for the intended production system. Ideally, the area should support habitat for a range of pollinators and beneficial insects and should have limited pressure from highly invasive flora and fauna.

Socioeconomic Context

The socioeconomic features of a given agricultural area contribute to farming viability. Most farmers, and beginning farmers in particular, need access to off-farm jobs, childcare, healthcare, affordable housing (as mentioned above), and to the amenities of community that make for a good quality of life. In general, favorable demographics for limited resource farmers are a diverse population, inclusive of their own race or ethnicity, and a wide range of income levels.

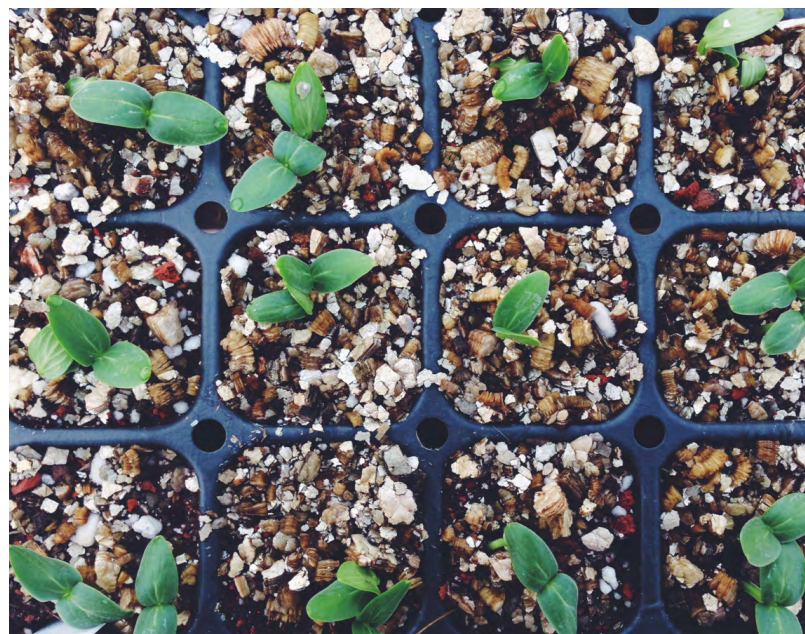


Table 3.1 Area Scale: Favorable Conditions for Limited Resource Farmers

The table below presents the area-scale conditions favorable for limited-resource farmers' success, organized in five context categories (Agricultural Industry, Policy and Politics, Land Use Conditions, Environmental Conditions, and Socioeconomic Conditions) and with categories and factors within them generally presented with the most important ones first. This rubric format is optimized for assessment of a specific area such as Sonoma County. The following page lists sources for conducting an assessment for any given area or county.

Key:  Favorable conditions


























FACTOR	FAVORABLE CONDITIONS	SCORE
Ag Industry Context		
Markets & processing/distribution infrastructure	Access to cold-storage, shipper-packers, common docks, food hubs, major wholesalers' pick-up routes, farmers' markets, CSA customer base	
Training & technical assistance providers	Access to multiple TA providers who are bilingual, know organic and IMP practices, and are interested in limited resource farmer success: e.g. UC Extension agents; NGO and private farm advisors; specialized agricultural lenders and farm business advisors	
Diverse crops/livestock & production methods	High diversity of crops (& livestock) and production methods (conventional, transitional, IPM, organic, etc.) increase opportunities for selling into niche, high value markets	
Mix of small and medium-sized farms (acres & \$)	Predominance of small-medium sized farms fosters sharing of knowledge and other resources, and correlates with accessibility of service providers and input suppliers	
Rate of conversion of ag acreage	Low conversion rate to other land uses suggests that the land is safe from development pressures. A high conversion rate usually corresponds to inflated land prices and short term leases	
Percentage of economy in ag	Significant agricultural economic activity usually correlates with more resources for farmers e.g. equipment sales and maintenance, input suppliers, TA providers and business resources	
Trends in organic & specialty crop production	Significant or increasing organic production, specialty crop production and direct marketing indicate likely access to resources, markets, peers & mentors	
Broadband availability	Access to broadband is essential for many aspects of farm operations, especially marketing	
Trend in number of farms	Relative stability over time indicates a healthy farm environment, while downward trends may be evidence negative pressures	
Average farm income per acre	Higher income per acre corresponds to high value production which is necessary for a farmer on small acres	
Agricultural place-based branding	Ag place-based branding strengthens marketplace recognition, attracts visitors and increases income per acre (but also increases price per acre)	
Availability of farm labor	Availability of farm labor is often advantageous for some LRF, and often correlates with programs supporting farm workers transitioning to farm owners	

Table 3.1 Area Scale: Favorable Conditions for Limited Resource Farmers (cont'd)Key:  Favorable conditions

FACTOR	FAVORABLE CONDITIONS	SCORE
Policy & Political Context		
Ag-friendly policies	Policies such as: urban growth boundaries; right-to-farm ordinances; on-farm housing for farm worker options; agri-tourism incentives; local food purchasing preferences; multi-member irrigation districts; and open space districts that emphasize agriculture	
Ag Zoning	Regulations including minimum parcel size appropriate to typical size of viable ag operations	
Opportunity Zone designations	Federal designations based on census tract data that attract certain kinds of investments	
Land Use Conditions Context		
Water availability—supply & price	Availability of surface water (river or canal) with a well-run irrigation district, reliable supply and senior water rights; and/or ground water supply from an aquifer that is not overdrawn, both at affordable rates for ag	
Farmland availability—supply & price	Range of choices (buyers market), priced to reflect ag production value	
Housing availability—supply & price	Range of affordable options within an hour's drive; and/or zoning policies which permit the placement of modular homes or trailers on farmland	
Land trust with ag interests	Land trust or ag land trust with interests in providing easements for farmland at a range of scales in various locations	
Environmental Context		
Climate	Seasonal temperatures and rainfall appropriate for a range of production system and methods	
Soils	Good soils appropriate for the intended production system and/or support model	
Biodiversity	Habitat for a range of pollinators and beneficial insects; no or limited pressure from invasive flora and fauna	
Long Term Sustainability	Projections based on scientific research on long term future changes to environmental conditions relevant to ag	
Socioeconomic Context		
Diversity of income levels	Diverse income levels provide opportunities for markets and off-farm jobs	
Demographic diversity	Diverse population, inclusive of demographics of potential LRFs, correlates with economic and social opportunities	

Selected Sources for Assessing Area Scale Conditions

FACTOR	FAVORABLE CONDITIONS
Ag Industry Content	
Markets & processing/distribution infrastructure	County Agriculture Commissioners' Offices
Training & technical assistance providers	County UC Cooperative Extension Small Farm Advisors
	County Resource Conservation District
	County UC Cooperative Extension Small Farm Advisors
	National Center for Appropriate Technology (NCAT) Western Regional Office. Home. 2021. https://www.ncat.org/california/
	California FarmLink. Home. 2016, http://cafarmlink.org .
	Kitchen Table Advisors. Home. 2021, https://www.kitchentableadvisors.org/
	California Ag Solutions. Home. 2021, https://www.calagsolutions.com/ .
	United States Department of Agriculture. Farm Service Agency Home Page. 2021, https://www.fsa.usda.gov/ .
Diverse crops/livestock & production methods	California Department of Food and Agriculture. California Agriculture Production Statistics. 2021, https://www.cdffa.ca.gov/Statistics/ .
Mix of small and medium-sized farms (acres & \$)	National Agricultural Statistics Service. "Census by State - California." USDA/NASS, 2019, https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Census_by_State/California/ .
Rate of conversion of ag acreage	California Department of Conservation and California Department of Conservation. "Documenting Changes in Agricultural Land Use Since 1984." Farmland Mapping & Monitoring Program, 2019, http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx .
Percentage of economy in ag	California Department of Food and Agriculture. California Agriculture Production Statistics. 2021, https://www.cdffa.ca.gov/Statistics/ .
	U.S. Bureau of Economic Analysis (BEA). "GDP by County, Metro, and Other Areas." BEA Data, 2019, https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas .
Trends in organic & specialty crop production	California Department of Food and Agriculture. California Agriculture Production Statistics. 2021, https://www.cdffa.ca.gov/Statistics/ .
	California Department of Food and Agriculture. "California Agricultural Organic Report 2019-2020." CA State Organic Program, 2020, https://www.cdffa.ca.gov/Statistics/PDFs/2020_Organics_Publication.pdf .
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Average farm income per acre	National Agricultural Statistics Service. "Census by State - California." USDA/NASS, 2019, https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Census_by_State/California/ .
Agricultural place-based branding	University of California Department of Agriculture and Natural Resources. "Visit a Farm or Ranch." California Agricultural Tourism Directory, 2021, http://calagtour.org/ .
	Visit California. "Amazing Agritourism Experiences." Where To Explore and Taste the Best of California Farms, 2014, https://www.visitcalifornia.com/experience/amazing-agritourism-experiences/ .
Availability of farm labor	Job posting sites (e.g. Indeed with location-specific searches to show demand)
	California Farm Labor Contractor Association. Home. 2021, https://calflca.org/ .
Policy & Political Context	
Ag Friendly Policies	County Planning Departments, County Agriculture Commissioner Office
Ag Zoning	Jurisdictions' general plan or specific plan (depending on area's scale)
Opportunity Zone designations	U.S. Department of Housing and Urban Development. Opportunity Zones. https://opportunity-zones.hud.gov/resources/map .
	U.S. Department of Treasury. Qualified Opportunity Zones. 29 July 2020, https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=c28056bb1d374d35936224b20f951b4a .

CHAPTER 4

Favorability of Conditions for Limited Resource Farmers in Sonoma County

This chapter uses the assessment rubric presented in Chapter 4 to analyze various conditions in Sonoma County which--along with appropriate models--help determine viability and success for limited resource farmers. Following a general overview of Sonoma County agriculture, this chapter describes existing conditions for factors in each of the following categories: Agricultural Industry, Policy and Politics, Land Use Conditions, Environmental Conditions, and Socioeconomic Conditions. The chapter concludes with this assessment presented as a summary table scoring Sonoma County on criteria for the various conditions.

Overview of Sonoma County Agriculture

Sonoma County, one of the nine Bay Area counties, is situated in the North Bay region, adjacent to Marin and Napa Counties and north of the San Francisco Peninsula. It is located on the ancestral lands of the Coast Miwok, Pomo and Wappo peoples. The County includes over 30 small towns and nine cities: Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Rohnert Park, Cotati, Petaluma, and Sonoma. It is bisected north to south by Highway 101 with metropolitan areas concentrated along this highway in the southeastern region of the County.

With varied topography, a range of microclimates, and an extensive coastline, Sonoma County supports a wide diversity of habitats and land uses across its fertile valleys, plains, mountains, redwood forests, wetlands, and coast. The County's almost 600,000 acres of working lands occupy many of these areas, contributing in myriad ways to the scenic, ecological, cultural, and economic values of the County. Historically a patchwork of small, diversified farms, orchards, vineyards, dairies, and rangelands, Sonoma County works to retain this heritage of agricultural diversity, even as wine production and related tourism become more central to its reputation and economy.



Analysis of Existing Conditions

This section describes and evaluates existing conditions in Sonoma County, in terms of impact on limited resource farmers, and notes particularly positive and negative characteristics.

Agricultural Industry Context

Markets & Processing/Distribution Infrastructure

Overall, markets and distribution infrastructure in Sonoma County are well-established and inclusive of the small- and medium-size diversified farming operations most typical of limited resource farmers. Across the County, there are 18 Certified Farmers Markets (three in the City of Sonoma, three in Petaluma, and five in Santa Rosa).⁸ Additionally, there are nine Certified Farmers Markets in the nearby county of Marin and 16 in San Francisco where many of Sonoma's 126 certified producers may also sell.⁹ Many farms are supported by direct sales through Community Supported Agriculture and online stores.¹⁰ These farms also appeal to consumers and draw agritourists with seasonal farmstands. On the distribution side, FEED Cooperative, a farmer- and employee-owned fresh produce cooperative with a large membership, distributes wholesale produce to restaurants, businesses, and home consumers in the North Bay.¹¹

Sonoma County is also renowned for locally-made, value-added food products, including olive oils, vinegars, jams, condiments, ciders, and cheeses. These often-iconic products are available for shipping as well as purchase in local stores, restaurants, and on producing farms. The Sonoma Farm Trails¹² and the Cheese Trail¹³ guide locals and visitors right to the farm gate. The Cottage Food Law¹⁴ allows the production of some value-added products in home kitchens. However, farmers report that the County lacks sufficient facilities for making customized, value-added products.

Technical and Training Assistance

With a large proportion of new and beginning farmers in Sonoma County and a high percentage of family-owned farms (Ag Census research, Chapter 2), several technical and

training assistance providers offer support for limited resource farmers. These organizations include, but are not limited to, the [Sonoma County Cooperative Extension](#) (UCCE Sonoma), [Sonoma Resource Conservation District](#) (RCD), [Gold Ridge RCD](#), [California Farmlink](#), and [Kitchen Table Advisors](#). Resources available to limited resource farmers in the County include financial and technical assistance with water conservation, erosion prevention, and nutrient management (Sonoma and Gold Ridge RCDs), as well as bilingual, decision-making guides for new farmers and ranchers on leasing land, value-added products, and specialty crop production (UCCE Sonoma). Additionally, California Farmlink and Kitchen Table Advisors specifically focus on farmers of color, beginning farmers, English Language Learners, and other communities underrepresented in the food system, as the audience for their bilingual resources and individualized advising on farm business strategy, financial stability, and land access.

Diversity in Crops/Livestock and Production Methods

In general, the highest grossing agricultural crops in 2021 for the County were winegrapes (\$540 million), milk (\$124 million), ornamentals (\$25 million), and livestock and poultry products (\$25 million).¹⁵ In addition to a multitude of grape varieties and dairy products, Sonoma County farmers also produce many kinds of vegetables, as well as berries, peaches, prunes, hops, apples, melons, olives, oats, hay, eggs, and a range of field crops and nursery products. Such diversity increases opportunities for knowledge-sharing and selling into niche, high-value markets.

Trends in Organic & Specialty Crop Production

Relative to other Bay Area counties, organic production is high in Sonoma County with gross sales topping \$208 million, and 412 organic producers in 2020.¹⁶ The top three organic land

uses in the County are milk production, pasture, and rangeland. Specialty crop production in the County is significant across production of vegetables, fruits and nuts, and nursery products. From 2020 to 2021, the total gross value of vegetables produced in Sonoma County increased by 30% to \$7,580,600.¹⁷ This production included cruciferous vegetables, squash, melons, mushrooms, potatoes, peppers, tomatoes, sprouts, and leafy greens. In the same time period, the gross value of fruit and nut crops produced in the County increased by 52.9%, the largest increase of all specialty crops, for a total gross value of \$544,638,700. This figure reflects the production of apples (fresh and processed), wine grapes, stone fruits, pears, kiwis, treenuts, strawberries, and figs. Similarly, the total gross value of nursery products, including ornamentals, bedding plants, Christmas trees, cut flowers, and miscellaneous products (e.g., grapevines, deciduous fruit and nut trees, bulbs, tree seedlings, house plants, orchids, cacti, herbaceous perennials, dried flowers, turf, and wreaths) increased by about 30% to \$60,369,700 in 2021.

Significant and/or increasing organic production and specialty crop production increase access to resources, markets, peers, and mentors for limited resource farmers.

Farm Size

Small- to medium-size farms are prevalent in Sonoma County. Acreage of the total 3,594 farms is as follows: 44% are 9 acres or less, 30% are 10-49 acres, and 14% are 50-179 acres (Ag Census research, Chapter 2). While it is possible that the number of small farms is over-represented in the Ag Census (see Chapter 2), large numbers of small- to medium-sized farms can support opportunities for land access, assuming affordability. Prevalence of smaller farms also correlates with diversity of input suppliers and market outlets, and with access to service providers experienced in serving this segment of the farming community.

Farm Income

In 2017, about 25% of all Sonoma County farms grossed less than \$2,500 in sales and only

25% reported more than \$100,000 in sales (Ag Census research, Chapter 2.) That same year, the average net cash farm income across all Sonoma County farms was approximately \$25,000, about 50% of the average net cash farm income (\$51,607) for all Bay Area county farms. Higher income per acre corresponds to high value production, which is necessary for a farmer on small acres.

Rate of Ag Land Conversion

In Sonoma County, from 2012 to 2018, agricultural and grazing lands were converted from farmland to another use at an average rate of 3,088 acres per two year period (0.0054% per two years). The rate of conversion almost doubled from the 2012-2014 period to the 2014-2016 period, and then decreased again for the 2016-18 period.¹⁸ Compared to the other nine Bay Area counties, Sonoma County has the second lowest rate of conversion, with Marin County having the lowest rate. A low conversion rate to other land uses suggests that the land is safe from development pressures, while a high conversion rate usually corresponds to greater development pressures, leading to inflated land prices and short-term leases.

However, in addition to conversion, agricultural properties in Sonoma County face the risk of being sold as rural estate home properties instead of ag production properties. Properties that would otherwise have significant potential for agricultural production may be purchased by non-farmer or -rancher owners, and the ag use on these properties is therefore lost. These non-farmer or -rancher owners are often wealthy individuals or real estate speculators, and this change in use of properties is one reason for high land prices in Sonoma. (See Recommendations, Chapter 7, for suggested further research on this topic.)

Trend in Number of Farms

In 2017, the number of farms in Sonoma County was 3,594, a net increase of 15 from 2012.¹⁹ Despite this slight increase in the number of farms, anecdotally, the ongoing loss

of productive small- to medium-scale farms is a major concern in Sonoma County. (See Recommendations, Chapter 7, for suggested further research on this topic.)

Percentage of Economy from Agriculture

Over 20% of Sonoma County's GDP, or \$8 billion, comes from agriculture and value-added ag products.²⁰ The primary crops in terms of economic value are wine grapes, milk, poultry, cattle, nursery products, and vegetables. Agritourism is also a major economic contributor, boosted by County efforts to "promote a healthy and competitive agricultural industry whose products are recognized as being produced in Sonoma County."²¹ Over 50% of the gross agricultural crop value and a large portion of its related tourism income (around \$2 billion for 2017²²) is generated by the wine industry.



Broadband Availability

Capacity for online presence and marketing of Sonoma County agricultural products and experiences is supported by a high percentage of farming households with broadband access (88%).²³

Place-Based Branding

Widely renowned for its historic vineyards, mountain views, and extensive natural beauty, Sonoma County draws visitors from across California and beyond. The California Agricultural Tourism Directory lists 45 agricultural tourism operations in the region, with a range of specialty products and experiences including winery tours, pumpkin patches, dairies, native plant gardens, special events venues, farmstays, and avian sanctuaries.²⁴ Additional attractions include historic wineries, small towns with distinctive architecture, and agricultural festivals such as the Olive Odyssey Festival, Gravenstein Apple Fair, Sonoma County Fair, and fall harvest events. These various activities build on each other to strengthen agritourism interest in Sonoma County.²⁵ Organizations including Sonoma County Farm Trails and the California Cheese Trail highlight these attractions further through guides and maps of local agricultural producers, seasonal multi-farm visits, online sales, and more.

Farm Labor Pool

Consistent with the average for other Bay Area counties, about half of the farms in Sonoma County hire farm labor.²⁶ In 2021, there were 14,379 workers in Sonoma County overall, with 11,070 (77%) of them working in vineyards.²⁷ In California, several organizations offer support and resources for growers contracting farm labor, including education and training by the [California Farm Labor Contract Association](#), bilingual resources on the Sonoma County website, and guides for state labor contract regulations tailored for small farm operations published by California Farmlink.²⁸

Reflecting findings from Chapter 2, while labor is relatively available, it is also relatively unaffordable for limited resource farmers. (See Recommendations, Chapter 7, for suggested further research on this topic.)

Policy and Political Context

Ag-Friendly Policies

Sonoma County has a number of policies which are favorable to agriculture. These include: urban growth boundaries; right-to-farm ordinances; allowances for employee housing on agricultural lands; agritourism incentives; and an open space district that emphasizes conservation of agriculture. The Sonoma County Office of Equity was created in 2020 to recognize and celebrate the County's powerful role in unseating racial inequity in local communities, intentions that can help uplift farmers and farmworkers of color. However, more can be done to develop policies that address the barriers faced by limited resource farmers. The recommendations in Chapter 7 include suggested additional policies that could be beneficial for limited resource farmers.

Water Policy

Since 2015, California has instituted regulations governing groundwater. These are leading to more sustainable use of groundwater, a positive long-term trend, but also introduce new and additional reporting requirements that can be complex and costly. Small-scale farming operations and limited resource farmers have generally been left out of the consultation process for the development of local groundwater policy. In some areas, aquifers are under complex adjudication systems and no new wells may be dug. In other areas, wells can still be dug but new regulations are likely forthcoming, and digging and equipping new wells is a significant capital expense.

As required by the State of California's Sustainable Groundwater Management Act, three new Groundwater Sustainability Agencies (GSAs), all public agencies, were created to manage groundwater in Sonoma County.²⁹ The 20-year Groundwater Sustainability Plans for the Sonoma Valley GSA, the Petaluma Valley GSA, and the Santa Rosa Plain GSA, were all approved by the California Department of Water Resources in early 2023. These plans and associated ordinances include provisions for registering groundwater use facilities, establishing a method

for calculating groundwater use, and authorizing the adoption of a groundwater sustainability fee. A contribution from the County of Sonoma has reduced the fee for non-municipal (e.g. agricultural) groundwater users to \$40 per acre-foot of groundwater pumped annually for fiscal year 2022-23.

(See Recommendations, Chapter 7, for suggested further research on this topic.)

Agriculture Zoning

The General Plan for Sonoma County defines two elements relevant to agriculture in the region. One of these is the Agricultural Resources Element, which states specific goals including protections for existing agricultural resources and economic and housing stability for agricultural workers.³⁰ The second is the Land Use Element, which defines three agricultural land uses: Land Intensive Agriculture, Land Extensive Agriculture, and Diverse Agriculture. This element defines the allowed activities and the minimum size of parcels in each zoning type (minimum of 20 acres, 60 acres, and 10 acres respectively), with the aim of creating parcels that could support an economically viable operation. Zoning designation is based on factors such as soil type, infrastructure, access to farming resources, and impact on surrounding natural resources.³¹ The recommendations in Chapter 7 include suggested additional approaches to zoning that could be beneficial for limited resource farmers.

Opportunity Zone Designations

Three Opportunity Zones, areas with federal tax incentives for investments that support economic growth and job creation, are designated in the County. Two are located southwest and northeast of urban Santa Rosa and one is in the rural area outside the City of Sonoma.³²

Land Use Conditions

Farmland Availability – Supply and Price

Online listings in November 2022 advertised approximately 2,000 acres of farmland for sale valued at a combined \$25 million with an estimated average purchase price ranging from

\$4.7 million to over \$7.5 million.³³ Many of these web listings were for large, multi-million-dollar winery estates, which are not suitable for limited resource farmers in terms of price, scale, or crop type.³⁴ Though land prices reflect the high value production of crops and livestock, particularly of grapes, the high cost of farmland and lack of small acreage parcels pose a significant land access challenge for limited resource farmers.

The per-acre value for agricultural land in Sonoma County ranges from \$70,000-\$215,000 for planted vineyard land, to \$25,000-\$45,000 for crop land, to \$7,000-\$14,500 for pasture land.

Housing Availability and Affordability

For farmers and farmworkers, commuting is relatively feasible given the small size of Sonoma County and proximity of agricultural lands to urban areas. However, the local workforce is challenged by increasing rent prices and more competition for available units driving prices even higher. Of over 73,000 rental units, only 3% were available, and the median rent in the county was \$1,743/month, including utilities, based on a five-year estimate from 2009-2020.³⁵ Though the County General Plan permits employee housing on agricultural lands,³⁶ it is unclear to what extent on-site housing is available.

Land Trusts Supportive of Agriculture and LRFs

Three land trusts that are members of the Land Trust Alliance (LTA) operate across Sonoma County: the Sonoma Land Trust, the Golden State Conservancy, and the Bodega Land Trust. All three of these LTA member land trusts are supportive of conservation easements for agriculture.³⁷ Sonoma County Ag + Open Space, a Special District of Sonoma County, also purchases easements over agricultural lands. The California Council of Land Trusts recognizes ten additional land trusts operating in Sonoma County: California Rangeland Trust, Center for Natural Lands Management, Redwood Coast Land Conservancy, Rocky Mountain Elk Foundation, Save the Redwoods League, The Nature Conservancy, The Trust for Public

Land, Wilderness Land Trust, Western Rivers Conservancy, and Wildlife Heritage Foundation.

The recommendations in Chapter 7 include suggested additional policies and activities that land trusts serving Sonoma County, in particular Ag + Open Space, could take to address the needs of limited resource farmers.

Environmental Context

Water Supply

Preliminary research indicates that the water supply is increasingly limited and stressed. However, given the extensive and varied geography of Sonoma County, with water supply being location-specific, more thorough research is beyond the scope of this Study.

Climate

Over the course of the year, temperatures in Sonoma County typically vary from 38°F to 84°F and are rarely below 29°F or above 94°F. The mean annual precipitation is 37 inches with most precipitation occurring between November and March and less than two inches per month occurring between April through October. Microclimates in Sonoma County vary across the Pacific coast, mountain ranges, wetlands, and valleys creating climatic conditions for the diverse production system evidenced by the County crop report.³⁸ Coupled with the long growing season, many opportunities for diverse and niche production exist for limited resource farmers.

Soils

In general, the nearly 600,000 acres of agricultural and grazing land in Sonoma County provide many opportunities for growing crops and raising livestock. In Sonoma County, 29,846 acres of land (3% of the county's land area) are classified as Prime Farmland, 17,476 acres are classified as Farmland of Statewide Importance, 34,027 acres are classified as Farmland of Local Importance, and 415,176 acres (40% of the county's land area) are classified as Suitable Grazing Land.³⁹

Biodiversity

Sonoma County is home to significant biodiversity, supported by the range of habitats created by the cool Mediterranean climate, mountain ranges, 3,327 miles of rivers and streams, and over 122,000 acres of protected lands.⁴⁰ This biodiversity, including 2,210 native plant species and 20 endemic species,⁴¹ supports ecosystem services beneficial to agriculture such as pollination, improved soil health, and capacity for natural pest control. Critical pollination services are supported by dedicated community groups such as the [Sonoma County Beekeepers Association](#), which works to create pollinator habitat and support regional bee populations, and by pollinator farms such as [Bees N Blooms](#) and [Lavender and Bee Farm](#), which combine flower production and agritourism with ecological conservation.

Longer Term Sustainability

Climate change-related challenges to Sonoma County most pertinent to agriculture include increased fire risk, and shifts to warmer and drier climates requiring crop adaptations and/or additional irrigation to maintain the same crop or grazing intensity in a given location.⁴² In Sonoma County, 548,739 acres of land are in high or very high fire hazard severity zones,⁴³ posing a significant risk to limited resource farmers located in those areas, who may not have the capital to recover financially from fire-associated damage. In general, risk management is a challenge for farmers (and others in the community), who have limited resources.

Socioeconomic Context

Diversity of Income Levels

Sonoma County earnings exceed national and state averages. The median household income in the County is \$86,173 with the majority of households falling in the \$75,000-\$100,000 bracket. Only 11.6% of households fall below the federal poverty rate, leaving a small proportion of households earning between the poverty rate and the income bracket of \$75,000-\$100,000.⁴⁴ On one hand, the relatively high median income provides market opportunities for limited resource farmers. On the other hand, non-white racial and

ethnic groups report much lower earnings and are more likely to be employed in agriculture or service industry jobs, making them vulnerable to disruptions, such as those caused by wildfires or a pandemic.⁴⁵ In addition, such service industry jobs are, generally speaking, relatively low paid and offer fewer opportunities for advancement.

Cost of living, a factor which measures how far income will go, is calculated based on the comparative costs of goods, services, and housing in the area. According to Best Places,⁴⁶ an independent website that compares costs of living based on government data, the cost of living score in Sonoma County is 151.8. In comparison, the cost of living score for California is 149.9, and for the Bay Area the average is 197.2. Sonoma County's cost of living is lower than San Francisco and San Mateo counties, but higher than Solano and Contra Costa counties.

Demographic Diversity

Sonoma County as a whole is predominantly white (61.5%) with a large Latinx community (28.4%). The vast majority of farm owners in Sonoma County identify as white (6,150 farmers, or 96%), with Hispanic or Latinx farmers making up the next largest demographic (509 farmers, 8%). A little fewer than 2% each of farmers in Sonoma County identified as American Indian/Alaska Native, Asian, Black or African American, Native Hawaiian/Pacific Islander, or more than one race.⁴⁷

Interestingly, the 2017 Ag Census also identified a large population of veteran farmers (538 farmers post-military service) and over 2,000 new and beginning farmers in the County, suggesting diversity among lived experiences if not racial background within the farming community. Given the demographics of the County, opportunities exist for beginning and limited resource farmers, who are Spanish-speaking and/or military veterans, to find social support among groups with shared identities. However, achievement of greater diversity among farmers is interdependent on other factors that impact farm business viability overall; with access to wealth as a major factor.

Table 4.1 Sonoma County: Favorability of Conditions for Limited Resource Farmers

The table summarizes the research from this chapter for Sonoma County conditions that are favorable for limited resource farmer success, using the rubric presented in Table 3.1.

Key:  Excellent  Good  Neutral  Poor  Bad


























FACTOR		SCORE
Ag Industry Context		
Markets & processing/distribution infrastructure	Access to cold-storage, shipper-packers, common docks, food hubs, major wholesalers' pick-up routes, farmers' markets, CSA customer base	
Training & technical assistance providers	Access to multiple TA providers who are bilingual, know organic and IPM practices, and are interested in limited resource farmer success: e.g. UC Extension agents; NGO and private farm advisors; specialized agricultural lenders and farm business advisors	
Diverse crops/livestock & production methods	High diversity of crops (& livestock) and production methods (conventional, transitional, IPM, organic, etc.) increase opportunities for selling into niche, high value markets	
Trends in organic & specialty crop production	Significant or increasing organic production, specialty crop production and direct marketing increase access to resources, markets, peers and mentors	
Mix of small and medium-sized farms (acres & \$)	Predominance of small to medium sized farms fosters sharing of knowledge and other resources, and correlates with accessibility of service providers and input suppliers.	
Average farm income per acre	Higher income per acre corresponds to high value production which is necessary for a farmer on small acres	
Rate of conversion of ag acreage	Low conversion rate to other land uses suggests that the land is safe from development pressures. A high conversion rate usually corresponds to inflated land prices and short term leases	
Trend in number of farms	Relative stability over time.	
Percentage of economy in ag	Significant agricultural economy usually correlates with significant resources (e.g. equipment sales and maintenance, input suppliers, TA providers and business resources	
Broadband availability	Access to broadband is essential for many aspects of farm operations; especially for marketing.	
Agricultural place-based branding	Ag place-based branding strengthens marketplace recognition, attracts visitors and increases income per acre (but also increases price per acre.)	
Farm labor pool	Availability of farm labor is an advantage for some LRF, and often correlates with programs supporting farm workers transitioning to farm owners which can provide some useful resources.	

Table 4.1 Sonoma County: Favorability of Conditions for Limited Resource Farmers (cont'd)

Key:  Excellent  Good  Neutral  Poor  Bad

FACTOR		SCORE
Policy & Political		
Ag-friendly policies	Policies such as: urban growth boundaries; right-to-farm ordinances; on-farm housing for farm worker options; agri-tourism incentives; local food purchasing preferences; multi-member irrigation districts; and open space districts that emphasize agriculture.	
Water Policy	Supportive water policy environment that recognizes the needs and value of small and diversified farms.	
Ag Zoning	Favorable ag zoning includes minimum parcel size appropriate to typical size of viable ag operations	
Opportunity Zone designations	Federal designations based on census tract data that attract certain kinds of investments can be beneficial	
Land Use Conditions		
Farmland availability—supply & price	Range of choices (buyers market), priced to reflect ag production value	
Housing Availability—supply & price	Range of affordable options within an hour's drive; and/or zoning policies which permit the placement of modular homes or trailers on farmland.	
Land trust with ag interests	Land trust or ag land trust with interests in providing easements for farmland at a range of scales in various locations	
Environmental Conditions		
Water availability—supply & price	Availability of surface water (river or canal) with a well-run irrigation district, reliable supply and senior water rights; and/or ground water supply from an aquifer that is not overdrawn. Both at affordable rates for ag.	
Climate	Seasonal temperatures and rainfall appropriate for a range of production system and methods	
Soils	Good soils appropriate for the intended production system and/or LRF support model	
Biodiversity	Habitat for a range of pollinators and beneficial insects; no or limited pressure from invasive flora and fauna	
Longer term sustainability	Projections based on scientific research on long term future changes to environmental conditions relevant to ag	
Socioeconomic Context		
Diversity of income levels	Diverse income levels provide opportunities for markets and off-farm jobs	
Demographic diversity	Diverse population, inclusive of demographics of potential LRFs, correlates with economic and social opportunities	

CHAPTER 5

Models for Land Access and Land Tenure

As described in the previous chapter, limited resource farmers (LRFs) in Sonoma County face numerous challenges. One challenge, however, is paramount: affordable, secure land access and land tenure (referred to collectively as “tenure” throughout this chapter) are consistently out of reach of limited resource farmers. This hinders farmers’ ability to establish, invest in, and make viable livelihoods out of agricultural businesses. Lack of secure land tenure often limits these farmers’ ability to use—and benefit from incentives that support—climate-smart agricultural practices. Many climate-smart practices, including those that increase soil health and support biodiversity, require multi-year investments on the same piece of land in order to yield the ecological returns (plant and animal health, water infiltration and retention) and the economic returns (reduced input costs, marketplace recognition, premium prices) to make the investments worthwhile.

Context

This chapter presents five innovative model approaches to improving affordable, secure land tenure for limited resource farmers. Preceding the description of each model is a general overview of the types of entities that use the models and an overview of the types of strategies such entities use to improve land access. These models are:

1. Enhanced Agricultural Conservation Easements
2. Buy-Protect-Sell
3. Incubators and other “stepping stone” lease models
4. Agricultural Parks (Ag Parks) and other congregant lease models
5. Community Land Trusts and other equity-building lease models

These five models are most commonly used by the following types of entities:

- Landowners: Public agencies (of many types), nonprofit land trusts, and private entities.
- Social impact investors: Individual, publicly-held and nonprofit investment entities that can provide loans, help reduce interest rates, and assist with down payments.
- Conservation land trusts and public conservation agencies: Nonprofit or public entities that can purchase, accept, and hold agricultural easements when the conservation values meet their criteria. (Public land conservation districts and nonprofit land trusts are collectively referred to in this Study as “land trusts”.)
- Community land trusts (CLT): Nonprofit organizations that own land and convey long-term leases for the purpose of stabilizing affordable housing or, in this case, farm tenure for underserved communities. Qualifying individuals (in this case LRFs) can own homes/improvements on leased land and realize limited equity upon exiting.
- Farmer training and support organizations: Nonprofit organizations that provide farmers

with training, technical assistance, business incubation, shared infrastructure, and short-term, sometimes below-market-value leases; these organizations may provide important land management, coordination, and technical assistance for several of the models listed above.

There are several basic strategies the above entities may use, often in conjunction with each other, to improve affordable, secure land tenure for limited resource farmers. These include:

- **Acquisition** of farmland
 - Strategic acquisition for perpetual ownership in public interest/for charitable purpose
 - Interim acquisition (by public, private, or nonprofit entity) with intent to sell to farmer
 - Tenants-in-common ownership with farmer partner
- **Conservation and stewardship** of farmland
 - Protection via enhanced ag conservation easement (incorporating or referencing affirmative or mandatory ag use requirement and/or Option to Purchase at Agricultural Value)
 - Long-term land holding and management
 - Ecological improvements (habitat/biodiversity, soil carbon, water quality, etc.)
 - Infrastructure improvements (post-harvest packing and cooling facilities, fencing, wells/irrigation, energy, etc.)
 - Provision of housing on the property
- **Conveyance**, via sale or lease, of farmland to limited resource farmers
 - Short-term lease with support (e.g. farm incubator)
 - Medium-term lease with support
 - Long-term, equity-building lease
 - Sale to farmer (usually after acquiring and conserving with easement; often called Buy-Protect-Sell)
 - Cultural Conservation Easement (generally conveys permanent access/use rights to a local Indigenous community)
- Return in fee to Indigenous or other dispossessed LRF community
- **Creative financing**
 - Down payment assistance
 - Interest rate reduction assistance
 - 5-10-year Lease-Option (lease with an option to buy)
 - Public and crowd-sourced charitable fundraising
 - Public and foundation grants for conservation acquisitions and easements, habitat improvements, affordable/farmworker housing, business development, etc.
- **Linking**
 - Gathering and maintaining directory of suitable land opportunities for LRFs
 - Gathering and maintaining directory of qualifying farmers who are seeking land
 - Facilitating introductions and negotiations between landowners, farmers, land trusts, investors, etc.
 - Real estate and lease assistance
- **Tenure, succession and other technical assistance**
 - Real estate and lease assistance
 - Landowner education and succession planning support



Descriptions and Examples

The models discussed in this chapter may involve multiple aforementioned entities and strategies. Like apples to oranges, they may not be directly comparable to each other: some have exclusive requirements; others can be combined. The models highlighted in this Study were chosen because they have demonstrated potential to provide limited resource farmers with the land tenure needed to build healthy, viable farms and livelihoods.

Each model is presented through a brief description, some important variations, pros and cons, types of farmers served, entities most likely to use the model, and specific project examples of the model in action. Table 3. provides an overview of the models.

Model 1. Enhanced Easements

Easement enhancement tools can help to ensure continued agricultural use of a property, require a property be sold to a qualified agricultural producer, and/or limit the resale price of a property with the aim of maintaining affordability for ag producers. Two notable easement enhancement tools—*Affirmative or Mandatory Ag Use* covenants, and *Option to Purchase at Agricultural Value* (OPAV)—are described below, each followed by its own variations, pros and cons.

Easement enhancement tools build on conservation easements, which are the primary tool used by Ag + Open Space and other local and regional land trusts to protect land.⁴⁸ (Providing an overview of IRS rules and more background on easements is beyond the scope of this Study.) By encumbering a parcel with a standard permanent easement—extinguishing certain development rights and compensating the landowner for the decrease in land value—a land trust ensures that lands will not be subdivided or developed, and thus are available for agricultural use (frequently while also protecting other conservation values). Of concern, however, is that due to the demand for rural estates, even protected (easement-encumbered) farms will slip out of productivity and out of reach of bona fide farmers. There are mounting examples of protected agricultural properties selling for a great deal more per acre than agricultural production revenues can support. Once values are up, they are unlikely to ever return within reach of a farmer earning their primary income from farming, especially production of food crops (see sidebar on Agricultural Values in Sonoma County).

Affirmative covenants can help ensure continued ag production, and OPAVs can help ensure land affordability from one generation of farmers to the next.

Model 1A. Enhanced Easements: Affirmative or Mandatory Agricultural Use

Affirmative or Mandatory Ag Use covenants move beyond the prohibitory language typical of conservation easements (e.g. prohibition on subdivision and development) and actively require continued agricultural land use. Affirmative language is used regularly by a number of land trusts and conservation agencies in the Northeast.⁴⁹ Here in California, a mandatory ag use requirement is the standard of practice used by Marin Agricultural Land Trust and has caught the attention of other land trusts as well.

Affirmative agricultural easements must at minimum establish an agricultural use requirement, define what qualifies as “agricultural use,” and outline the process for remedy and enforcement in the event a landowner fails to comply. There are substantial variations in the way affirmative covenants are defined and worded, whether they are part of a broader easement or a separate document, and how they are enforced. The variations described in this section are not comprehensive.

Variations

- Names for these covenants vary. Some call them affirmative covenants, others mandatory agricultural use requirements. One such requirement in Sonoma County is that the covenant be held separately from (but referenced by) the conservation easement, as an Agricultural Conservation Servitude.
- Definitions of agriculture may be broadly defined to align with state or county definitions of agriculture. They may express intent to foster local food/fiber production, and/or they may exclude or prohibit uses which harm the agricultural resources of the property. Some easements prohibit certain types of agriculture regarded as likely to cause environmental and/or social harm, e.g. turf, confined livestock feeding, equestrian facilities, cannabis, large-scale intensive indoor agriculture facilities, etc. Activities and related facilities, such as value-added production, agri-tourism, large-scale gatherings, and educational programming, are also governed by local zoning and/or by easement terms.
- It is common (and often advisable) to specify agricultural use broadly in the permanent easement body, while referencing a more specific, amendable Agricultural Management Plan (AMP) to be held separately. The AMP, which may be amended by mutual agreement between easement Grantor and Grantee, allows for best practices (some may require organic certification, for example) to evolve, and for the Parties to adapt when viable agricultural uses change due to climate or other unforeseen factors.
- Enforcement varies greatly. Some easement holders, like [Marin Agricultural Land Trust](#), reserve the right to step in and lease the land to a third party to fulfill the affirmative production requirement. Others consider failure to farm a breach of the easement and hold the owner liable for lost production.
- Some more proactive easement holders, such as [Equity Trust](#), go so far as to require that the landowner live on the property and demonstrate a minimum agricultural gross income over a span of years.

Pros and Cons

Pros: By ensuring continued agricultural land use, affirmative covenants uphold community expectations and goals for local food and fiber production. Affirmative language does tend to add easement value, improving land affordability to some extent.

Cons: Model entails significant up-front legal work, is complex for public and funding communities to comprehend, and has not been shown to significantly improve affordability for LRFs. There are concerns about compliance by property owner and/or enforceability of easement in the event agricultural (climate and economic) viability is threatened in the future. Although there is still limited precedent in California, a well drafted easement will tie the mandatory agricultural production requirement to the agricultural productivity of the land, which is likely to change over time. A good example is the Marin Agricultural Land Trust's Drought Resilience & Water Security (DRAWS) initiative, which funds water infrastructure and storage.⁵⁰

Model 1B. Enhanced Easements: Option to Purchase at Agricultural Value (OPAV)

The Option to Purchase at Agricultural Value (OPAV) aims to ensure that lands remain affordable to working farmers. The OPAV allows an easement holder, upon transfer of the land by the owner/grantor, to verify that the purchaser meets certain qualifications, and that the purchase price doesn't exceed agricultural value (see sidebar). In the event the Option is triggered (e.g. by intent to sell to a non-qualifying farmer, or by a purchase agreement exceeding ag value), the land trust may step in and purchase the property at its restricted value, for later affordable resale to a qualified farmer.

Pros and Cons

Pros: OPAVs are the best tool known to improve affordability of ownership, by farmers, of protected lands. Increased affordability can, with careful consideration and execution, improve equitability of land access and tenure for underserved farmer-buyers. An added benefit of OPAVs is that they can provide a valuable enforcement mechanism for the land trust, by specifying that certain breeches of easement requirements (e.g. requirement that the property remain in production and be sold to a qualifying farmer) trigger the Option.

Cons: Significant up-front legal work, complex for public and funding communities to comprehend. Not all OPAV programs have significantly improved access to new-entry and underserved farmers (compared to established, later-career farmers). Costly to purchase easements (a pro for affordability to the farmer). Funds/financing must be readily available to exercise OPAV. Land trusts exercising OPAV hold responsibility for transferring land to a new qualified farmer. Farmer-buyers must be made aware of the limits to equity under the OPAV and cannot count on land value gains for retirement savings. There is a need to further explore feasibility and potential risks of OPAV in California, as there is minimal precedent here at this time.

Types of farmers served

Farmers with sufficient agricultural production and business experience to make a long-term commitment to building a viable business on a specific parcel of land. Farmers who are able to afford to purchase a property at its agricultural value, as defined for that specific property.

Types of entities likely to use model

Conservation land trusts and public agencies

What is 'Agricultural Value'?

Agricultural value may be determined using a combination of standard appraisal approaches (income/capitalization approach, average per-acre land values plus replacement value of improvements, or comparable sales), or it may be limited further with an indexed formula or cap on overall appreciation.

In Sonoma County with world renown vineyard appellations, the price of vineyard land can create exceptionally high agricultural land values, and these land uses out-compete local food and fiber producers. This can raise farmland prices to near development prices, posing a challenge for land trusts to find any easement value—and further limiting food and fiber producers' ability to afford land.

Once values are up, they are unlikely to ever return within reach of a farmer earning their primary income from production of food crops with significantly lower revenues per acre. In Sonoma County, which is a major production area for high-value vineyards, the agricultural value of vineyard properties is determined by factors such as variable grape prices and appellation value and can also be inflated by related potential on-farm revenues (e.g. tasting rooms, etc.). The agricultural value of food-producing land, as determined by the more constrained prices of food and more limited on-farm revenue options, is almost always substantially lower than vineyard land.

Land trusts must carefully consider which agricultural values they intend to conserve, and what types of agricultural, cultural, and economic benefits they are chartered to protect. If the desired easement benefits are at odds with highest-value commodity agriculture, land trusts may consider easement language restricting production of these high value crops to favor food production. This would be analogous to habitat easements prohibiting perennial crop production in order to protect meadow-dependent Swainson's hawks. (Chapter 7 includes recommendations for policies and further research and policies that might improve farmland affordability for food producers.)

Model 1. Enhanced Easement examples

Equity Trust - [Good Humus Produce, Capay, CA.](#)

This 20-acre, 40-year-old farm north of Sacramento was protected in 2017 by a unique agricultural conservation easement that includes both an affirmative agricultural production requirement and an OPAV. The property, already at its zoning minimum with a house on it, had little if any traditional easement value. This innovative whole farm easement, however, drafted in collaboration with the owners and held by Equity Trust, was valued at more than half the value of the property. It ensures that the land will remain occupied by its owner, and specifies that the owner must earn at least half of their gross household income from agriculture.

The land may transfer to a farming heir or to a qualified purchaser (a farmer with ag experience). The resale value is heavily limited via the OPAV. If the owner ever attempts to sell the land at a price beyond its agricultural value, the OPAV would be triggered, and Equity Trust could purchase the property for later transfer to a qualified farmer. The funds to purchase the easement were raised by the farm's customers and local community, helping the family pass their farm to the next generation: the owners' daughters have since taken over the business and continue to farm.

Vermont Land Trust (VLT) - [Old Road Farm, Granville, VT.](#)

Farmers Gabby Tuite and Henry Webb found a farm that could support their vegetable business plan and then engaged the Vermont Land Trust. They leased the farm while VLT worked with the landowner to place a conservation easement on the 24 acres; they were then able to purchase the farm at its reduced value. VLT regularly applies the OPAV to its ag conservation easements—in partnership with Vermont's Housing and Conservation Board—to keep conserved lands affordable to working farmers. The Option requires that VLT be notified when the property is under contract to be sold. It gives VLT and/or other easement co-holders the opportunity to purchase the conserved property for its agricultural value and resell it in order to keep it in

active production. The OPAV can only be exercised when the farm is under sales contract to a buyer who is not a commercial farmer or family member. In most situations, VLT must waive its OPAV before a sale can occur. The OPAV is perpetual and applies to all future owners of the conserved property. See also "[Example of a Sale of a Farm Restricted by an Option to Purchase at Agricultural Value.](#)"

[Peconic Land Trust](#) and [Town of Southampton](#) - [Danilevsky Farm, Water Mill, NY.](#)

Peconic Land Trust purchased two farm parcels (about 14 and 19 acres, respectively) from the Danilevsky Trust in 2014. Simultaneously, it sold the farms' development rights to Southampton Town, in the form of conservation easements and accompanying [Affirmative & Affordable Farming Covenants and Resale Restrictions](#). The easements and these overlay covenants require that 80% of the farmland be used for the production of food, and that future sales of the property be restricted to qualified farmers at strictly agricultural value. Both parcels were later re-sold to working farmers at their affordable value, subject to these enhanced easements. Anecdotally, this transaction was the first time that a municipality in New York State incorporated similar restrictions in its purchase of development rights, a milestone for Southampton Town.



Model 2. Buy-Protect-Sell

This approach involves a number of the strategies described above. It is favored as a way that land trusts and other public-benefit entities can buy land of community or ecological importance, protect that land with a conservation easement, and sell the land—either immediately or after an option period—to a buyer who meets their criteria.

Variations

- Entity may buy and hold land for an improvement period, taking time to invest in the infrastructure necessary for an economically viable agricultural operation.
- Entity may provide farming tenant a Lease/Purchase Option of a known number of years (usually 5-10), and known purchase price, to prepare their business and financing for purchase at the end of the Option period.
- Sale can be made to an individual, but can also be made to another agency (e.g. public Ag Park), nonprofit (e.g. incubator or community land trust), or group of tenants-in-common.
- Entity may sell only a partial interest in the property and hold onto partial interest as tenants-in-common with a qualifying farmer.

Pros and Cons

Pros: This model allows land trusts or other entities to take important farmland off the real estate market, with the intent of holding and re-selling to a desirable buyer. It also allows time for easement protection and infrastructure improvements, if the land trust or other actor is able to carry out such improvements and they are needed and feasible. In the time during which land is held

by the interim buyer (generally land trust), the land trust has the opportunity to find a qualified farmer to be the long-term landowner and time for qualified buyers to do their own due diligence. A Lease with Purchase Option can allow time for the farmer to learn about the land and prepare for financing before making their purchase.

Cons: This model requires significant up-front capital. Land purchase, even of properties encumbered by easements, still tends to be too expensive for limited resource farmers. It may not be possible to find farmer-buyers able to afford even a reduced purchase price.

Types of farmers served

Farmers with production and business experience. Usually farmers who are known to their community, because goodwill can help them raise the funds to purchase the property. This model can work well for tenant farmers aiming to purchase the land they already know from an extended period of farming there.

Types of entities likely to use model

Conservation land trusts, public agencies, specialized social impact investors.



Model 2. Buy-Protect-Sell examples

Sonoma County Ag + Open Space - [Tierra Vegetables](#), Santa Rosa, CA.

In 1998, Ag + Open Space purchased this agricultural property right on the Hwy 101 corridor. The agency began leasing it to Tierra Vegetables, a vegetable farm and CSA founded in 2002, by sister and brother Lee and Wayne James, and Wayne's wife Evie. Tierra Vegetables, a long-time vendor at the acclaimed Ferry Plaza Farmers Market in San Francisco, feeds hundreds of local CSA members and supplies multiple high-end restaurants with unique, quality produce, while also operating a local farmstand. The farm has developed a value-added operation in a nearby commercial kitchen and employs a small handful of workers year-round. Wayne and Lee raised hundreds of thousands of dollars to move a historic barn to the property, with the intention of someday purchasing the land. They are currently negotiating a conservation easement and affirmative agricultural covenant with Ag + Open Space and hope to purchase the protected land in the near future.

Dirt Capital Partners and Land Trust of Santa Cruz County - [Rancho Corralitos](#), Watsonville, CA.

In this highly innovative land deal, private investment group Dirt Capital Partners has partnered with Kitchen Table Advisors and the People's Land Fund to organize farmers, raise funds, negotiate a land deal, and purchase a 170-acre farm near Watsonville, with an agreement underway to protect the land with an agricultural conservation easement, and the intent to sell the land to an LLC of working farmers in three to five years. The future buyers are Latinx immigrants, mostly former farmworkers who have undergone ALBA's farmer training and incubation programs. This ownership structure, its operating agreement, and its governance process will need to be built carefully and with full engagement by the group of farmer-buyers.

Peninsula Open Space Trust (POST) - [Blue House Farm](#), San Gregorio, CA.

Peninsula Open Space Trust's "Farmland Futures Initiative" has the goal of tripling the number of protected farms and acres on the San Mateo coast over the next decade, while providing important lease and purchase opportunities to outstanding agricultural land stewards in the region. After an extensive proposal process, POST agreed to lease 74 acres to Ryan Casey of Blue House Farm, known for their outstanding heirloom tomatoes and other vegetables, and has granted them an Option to purchase the property in the future. "Ryan shares our vision for the property," says POST's stewardship director, "to keep the rich soils productive and robust natural values protected."

American Farmland Trust (AFT)

American Farmland Trust (AFT) is engaged in several Buy-Protect-Sell initiatives to facilitate farmland access opportunities by making land more affordable for emerging and next-generation farmers. The article [How AFT's Buy-Protect-Sell Strategy Helps a New Generation Gain Access to Farmland](#) describes how AFT has partnered with Minnesota nonprofit Renewing the Countryside to do this: AFT plans to purchase Singing Hills Farm, protect it with a conservation easement, and then sell the land to a neighboring farm family, the Lors, who have been struggling with land insecurity.

Model 3. Incubators and other “stepping stone” lease models

A farm incubator is a land-based, multi-grower project that provides infrastructure and support to aspiring, beginning, and limited resource farmers. Like traditional business incubators, farm incubator projects take a cohort-based approach to helping limited resource, new, and beginning farm entrepreneurs establish their own successful businesses by providing specific resources and services that are difficult for startup entrepreneurs to access on their own. The types of resources and services offered by farm incubator projects vary depending on target audience, geography, demographics, funding, and other factors. Resources typically include introductory programs (including classes or apprenticeships), technical assistance/training once farmers are in charge of a plot of land, shared production and/or post-harvest infrastructure, shared marketing, business advising, lessee coordination, and more. Many farm incubators serve as a stepping stone for graduates of a training program to get experience farming independently, before moving off to seek a lease or purchase of their own. Land-based training and incubator leases typically range from one to five years, and usually include considerable technical assistance and access to subsidized equipment.

Variations:

- Introductory, non-land-based training programs are typically part-time and last from a few months to a year and may or may not include access to a small trial plot.
- Some public-benefit farm lease programs are not considered incubators, yet provide “stepping stones” of favorable lease terms, shared infrastructure or equipment, site management, and technical support, similar to an incubator.

Pros and Cons

Pros: Aspiring, beginning, limited resource and underserved farmers can “get their feet wet” and test their business plans with some support and infrastructure already provided. This can be a relatively safe and informative environment for a new-entry farmer to test a business plan and area conditions. It provides an opportunity to level the field, at least temporarily, for farmer populations which have faced systemic discrimination.

Cons: It is costly to run an incubator program, which relies on constant fundraising, staffing, etc. Therefore it can be difficult to find lasting non-profit organizations to manage them. Incubators are not long-term land solutions; they are designed to provide a temporary leg up to incoming farmers. Farmers graduating from incubator programs still face the aforementioned barriers to secure tenure.

Types of farmers served

Aspiring, new-entry, and extremely limited resource farmers.

Types of entities likely to use model

Nonprofit farmer training and support organizations.



Model 3. Incubators and similar project examples

Agriculture and Land Based Training

Association (ALBA) Incubator, Salinas, CA.

An introductory Farmer Education Course offers participants on-farm education on organic farming practices and farm business management. The one-year, 250-hour course uses both classroom and field training to prepare participants for launching and operating an organic vegetable and strawberry farm. Graduates of ALBA's various farmer education courses may enter ALBA's Organic Farm Incubator and launch their own farm on ALBA's land. ALBA leases over 80 acres of farmland per year to up to 40 start-up organic farms, of which 10-15 are newly launched. Land and equipment are leased to these farmers at subsidized rates, set at 20% of market rate in the first year, rising to 80% in the fourth and final year. Starting on 1/2 acre, farms expand up to five acres over four years before they transition from ALBA to continue farming independently. Technical assistance from staff and partners—on production, management and compliance issues—is provided at no charge to participating farmers, with the goal of preparing new farmers to establish themselves in a competitive, volatile business environment.

California Farm Academy Farm Business

Incubator, Center for Land-Based Learning, Woodland, CA.

This farm training and incubator program provides access to land, infrastructure, and ongoing training for beginning farmers. Trainees can take courses and simultaneously or sequentially initiate their own farm enterprises on plots of land from 1/4 acre up to a few acres, where they experiment with production techniques, develop markets, and refine their business plans with support from staff and community mentors. The Center is collaborating with researchers and its own trainees to learn about and implement climate-smart, regenerative land management practices. Some of the three Yolo/Solano County incubator sites provide greenhouse and cooler space for lease. The primary training site is on a historic ranch recently purchased by Yocha Dehe Wintun Nation, with a 25-year lease to the Center for Land-Based Learning.

Groundswell, Ecovillage near Ithaca, NY.

This unique farm incubator program is designed to provide a leg up to small-scale, underserved, and/or beginning producers. It provides incoming farmers with 1/4 acre fenced plots, some small equipment and facilities, and training and guidance for a modest fee. Priority is given to people of color, immigrants, refugees, and women, transgender, and non-binary people. A small staff manages the property, training program, and the fundraising needed to pay expenses including salaries, utilities, and equipment. The land is leased from Ecovillage Ithaca.

Model 4. Ag Parks and other congregant lease models

An agricultural park (Ag Park) is an area, almost always on public or protected land, that is designated for agricultural activities for a number of farming operations, and related cultural, educational, and conservation activities. The typical urban-edge or peri-urban location points to common core goals: a) support for continuation of place-based agriculture in an area once under threat of conversion to development or industrial agriculture; b) emphasis on inter-connecting conservation of agricultural, natural, and cultural resources; and c) the importance and promotion of marketing and educational linkages with nearby urban areas. Starting from this mission, agricultural parks have evolved in different ways in Europe and the United States. In Europe, dozens of peri-urban Ag Parks have existed for decades. Within a range of scales and regulatory contexts, these Ag Parks provide spaces protected from urbanization and dedicated to farming, conservation, curation of cultural features, and public education and recreation. In the limited examples of Ag Parks in the United States, the model has supported strengthening traditional agriculture, as in the Hawaii case described below, and, as in the Sunol example below, the revitalization of urban-edge agriculture in areas with both unmet demand for land access among beginning farmers and also high demand for locally and sustainably produced farm products.

Ag Park leases are typically longer-term or shorter-term evergreen (automatically renewing) leases, in order to encourage long-term land stewardship. The Ag Park is usually responsible for construction and maintenance of buildings, wells, and other long-term site improvements. With medium- and longer-term leases, a tenant may be responsible for their own small or short-term improvements; they can sometimes negotiate to pay for an approved improvement, adding a buyback clause to the lease ensuring that the Ag Park will pay for a portion of improvements if and when the tenant exits. In contrast with farm incubators, which must fundraise to offer management and support services, most Ag Parks are set up to cover their cost of operations with lease income.

Variations:

- Ag lease programs on public parks, such as the renovation of historic farmsteads in Cuyahoga Valley National Park, and California State Park concessions.
- Ag lease programs on land trust-owned lands, to groups of farmers. Supportive lease programs are being developed by nonprofit and public landholders as a means to retain good land stewards and provide important community benefits, beyond the benefits offered by more typical, established ag tenants. See Watsonville Slough Farm example below.

Pros and Cons

Pros: Shared infrastructure, marketing, business, and production support can all make a big difference to even highly experienced small growers. Peri-urban Ag Parks provide market access benefits, as well as housing options and accessibility

for farmers and workers alike. Ag Parks often offer important cultural and educational benefits to the public as well.

Cons: In instances where space is limited, leasing farmers' activities and practices can have substantial impact on each other. Left unmediated, disputes can arise. Demand for limited space can make the selection process competitive and sometimes political.

Types of farmers served

Varies. Farmers rooted in a nearby urban community and reflective of its cultures. Experienced farmers with strong public/educational orientation. Newer-entry farmers with some training and/or experience.

Types of entities likely to use model

National, state and regional parks, cities/municipalities, open space districts, nonprofit land trusts.

Model 4. Ag Parks and other congregant lease model examples

Hawaii Ag Park Program, HI

Hawaii's Agricultural Park Program makes land available to small-scale farmers at reasonable cost with long-term tenure. Currently, the Hawaii Department of Agriculture, through its Agricultural Resource Management Division, operates ten agricultural parks: four on Hawaii Island, four on Oahu, and one each on Kauai and Molokai. In addition, there is one agricultural park on Maui in Kula, but it is managed by the County of Maui. All of the State's lots are presently under lease. The lessees are engaged in diversified agricultural crops or aquaculture and are small farming enterprises (under 20 acres). Lease terms can range from 15 to 45 years.

Sunol Water Temple Ag Park, CA

The 20-acre Sunol Water Temple Ag Park is a collaborative farm that provides land access and technical assistance for culturally diverse beginning farmers, as well as public education and natural resources stewardship. SAGE created the Ag Park in 2006 through a historic partnership with the San Francisco Public Utilities Commission (SFPUC) on part of the SFPUC's watershed lands. This thriving urban-edge farm is home to multiple small-scale organic farming enterprises; an annual field trip destination for thousands of school children, mainly from low-income communities; and a venue for community events, work days, and volunteer and internship opportunities. In 2017, SAGE transitioned management of the Ag Park to the Alameda County Resource Conservation District, a long-term project partner.

Countryside Initiative at Cuyahoga Valley National Park, OH

The National Park Service has long worked to preserve wilderness areas, and to some degree historic sites, but rarely working agriculture, in contrast to Europe, where extensive areas of public lands and infrastructure are leased for farming and grazing. Dozens of old farms throughout Ohio's Cuyahoga Valley were abandoned, in fact, when it became a national park. But recognizing the widespread ag use of park lands in Europe, the Cuyahoga Valley

National Park (CVNP) partnered formally with a nonprofit called Countryside, which now helps CVNP manage a farming program on park lands. Countryside helps select farm and field sites to be rehabilitated, recruiting potential farmers, providing agricultural expertise to both the park and farmers, and finding the resources needed to help both parties succeed. As part of bringing these old farmsteads back to life, CVNP administers the leases and provides fiscal management. A farmer is competitively awarded a long-term lease (up to 60 years) of a proposed site only after articulating a plan to sustainably manage and farm that site through the lease term. The participation and stewardship of these outstanding farmers—who must also be willing to interact positively with CVNP visitors—are key to the success of this program. To date, there are over a dozen restored farm properties in the program. The farms and Countryside bring over 100,000 people into CVNP each year and have an economic impact of over a million dollars per year.

Parc Agrari del Baix Llobregat (Barcelona, Spain)

This Ag Park is located in the floodplains of the delta and lower valley of the river Llobregat in a central position within the metropolitan area of Barcelona. Encompassing nearly 9,000 acres of farmland and conservation land, it functions as both a foodshed and green lung for the city and also a public education resource with specific programs to promote and preserve its productive values. The Ag Park is protected by a specific planning instrument and managed by the Barcelona Provincial Council. It includes common marketing and processing facilities and services. Some farmers own their land.

[Land Trust of Santa Cruz County - Watsonville Slough Farm](#)

The Land Trust acquired this 500-acre farm in 2010 with the support of multiple partner organizations and state funding sources. The Land Trust's shared goals for this rich and varied property are to preserve agricultural land, restore coastal ecosystems, and connect people with sustainable agriculture and nature.

Responding to community interest in more publicly accessible natural areas and access to fresh fruits and vegetables, the Land Trust launched an organic farm lease program along with a long-term habitat stewardship plan. About 240 acres of the farm host diverse certified organic farms, with the remainder preserved for wildlife habitat. The Land Trust has restored over 50 acres of wetlands and coastal prairie grasslands, upgraded wells and irrigation systems to save water

and electricity, and adopted soil conservation practices like cover crops and sediment basins. The preserve area of the property includes over 40 acres of open water, part of the Watsonville Slough System.

The farm requires significant management to coordinate and meet the needs of the farm's five (mostly Latinx) producer lessees. For example, farm operations are rotated each year to manage for soil quality, disease prevention, and organic certification. Fencing and irrigation infrastructure are managed, along with other issues that arise, in concert with the lessees. Leases are conveyed at close to market rate, and are not long-term. Lease income from the farm operations easily covers the staffing costs of managing the property, and the remainder is applied to ecosystem management and long-term land stewardship.

Sunol Ag Park

Photo Credit: Steven Joseph



Models 5. Community Land Trusts and other equity-building lease models

Community land trusts (CLTs) are nonprofit organizations designed to ensure community stewardship of land. Whereas conservation land trusts focus on protecting land from development, community land trusts have historically focused on affordable housing. A CLT purchases land, and qualifying individuals can purchase (or even build) homes on that land, subject to a 99-year transferable lease. This U.S. model originated in rural Georgia in 1969 with the creation of New Communities, Inc., a 5,000-acre tract of farmland and forests that comprised the largest single tract of Black-owned land in the country.

There is growing interest in using the CLT model for community ownership and long-term lease conveyance of agricultural land. With selected farm owners, as with qualifying homeowners, the CLT enters into a long-term, renewable, and transferable land lease. The maximum lease length varies by state, from 51 years in California to 99 years in other states, as do the terms under which the farmer may transfer the lease. Leaseholders may build or improve homes, barns and other farm infrastructure (including natural infrastructure such as soil fertility), own those improvements subject to lease terms, and realize the lifestyle and financial benefits of long-term tenure. When the leaseholder exits, they can recoup their investments, for example via a buy-back clause, within a cap on gains set by the CLT.⁵¹ This type of lease is called an equity-building lease, and while it does not accrue the degree of equity a private farm owner would accrue, it does allow a leaseholder to recoup investments while maintaining affordability for future generations. Initial and subsequent leaseholders must meet qualifications set by the CLT's governing board. In the case of an agricultural CLT, this often includes farming experience and a business plan that demonstrates intent to earn a livelihood from agriculture.

Variations:

- Conservation Land Trusts use CLT tools. Agricultural conservation land trusts are considering the opportunity and responsibility of holding land for long-term, equity-building leases to farmers.
- Conservation and Community Land Trusts hybridize. Agrarian Land Trust, a national 501(c)3 nonprofit conservation land trust, was founded last decade as a national umbrella organization to support multiple regional, community-governed Agrarian Commons—501(c)2 nonprofits modeled after community land trusts to form clusters of 4-12 farms each—around the US.
- Relevant to both variations above, Equity Trust, Inc. offers a Model Agricultural Ground Lease for all types of landowners who wish to convey a high level of security and equity to outstanding farmers.

Pros and Cons

Pros: The model allows communities to invest up-front in the protection of farms they consider to be community assets and to ensure access to these farms by bona fide farmers who serve those communities. For farmers, it offers many

of the benefits of farm ownership, without the heavy burden of a mortgage. Farmers are able to build equity and to invest in the long-term futures of their businesses and families. Leaseholders providing documented public/community benefits may enjoy below-market lease rates.

Cons: Equity is limited in order to maintain affordability to future leaseholders. Incentives to maintain homes and other structures may not be as strong as when accompanied by the underlying land. Leasing farmers must negotiate lease issues with a landlord run by a community board of directors. Most CLT boards are volunteers, and can face challenges remaining staffed and solvent.

Types of farmers served

Experienced farmers who intend to invest in their land/businesses long-term. Farmers who cannot afford or do not wish to privately own land and who value community ownership and stewardship.

Types of entities likely to use/need model

Community Land Trusts and similar entities

Model 5. Community Land Trusts and other long-term/equity-building lease model examples

New Communities, Inc.

Since its founding in 1969, grassroots organization New Communities has worked to empower African American families in Southwest Georgia. It is also an example of land justice and injustice. This 501(c)4 nonprofit, based in Albany, GA, was born out of a need to help families who were threatened with eviction due to their involvement in the civil rights movement. Modeled in part after the Israeli kibbutz and moshav collectives, New Communities is widely recognized as the original model for community land trusts in the US. (Its founders, Charles and Shirley Sherrod, Robert Swann and others would go on to advise and support multiple community land and housing trusts throughout the US). New Communities' original 5,000 acres of land, home to multiple farms (including the innovator of a regionally-important muscadine grape industry), was lost in the aftermath of the drought and farm debt crisis of the early 1980's. The farm was foreclosed upon after being denied access to federal emergency loan programs, an act which was later ruled discriminatory in the historic lawsuit, *Pigford vs. Glickman*. (Discriminatory lending practices are a primary cause of Black land loss: In 1910, black farmers owned more than 15 million acres of land. In 2017, that number was down to 4 million acres, according to the agricultural census). New Communities used its multi-million dollar settlement to purchase a 1,600 acre farm, formerly a large slaveholding plantation, called Resora, where it now leads discussions around race equality and economic disparities and provides opportunities for LRFs, "empowering the community through agribusiness and economic development."

Berkshire Community Land Trust and Indian Line Farm

Indian Line Farm was the first Community Supported Agriculture farm in North America. To make it affordable to the current generation of farmers and preserve it for future generations, the [Community Land Trust in the Southern Berkshires](#) and the Schumacher Center for a New Economics collaborated with the Berkshire Highlands Program of The Nature Conservancy and farmers Elizabeth Keen and Alexander Thorp. The goal was to maintain a working organic farm, protect the adjacent

sensitive wetlands, and provide small-scale farmers with affordable access to land. Working with the Schumacher Center to draft the innovative legal documents, The Nature Conservancy acquired conservation easements on the property to permanently limit future development, while the Community Land Trust acquired the title to the land and is leasing it to Elizabeth and Alexander on a 98-year basis. The farmers themselves have purchased the house, barn, and other buildings, and are gaining equity through improvements made to the farm during their tenure, including improvements to the soil. The Community Land Trust retains an option to purchase the buildings and improvements back, and to resell them at their replacement cost to another farmer.

Central Virginia Agrarian Commons

Agrarian Trust is collaborating with the Southwest Virginia Agrarian Commons to purchase the 3.5-acre Lick Run Farm in urban Roanoke, Virginia. Cameron Terry, a Black farmer, has been producing food for the Roanoke community on borrowed and leased urban yards as Garden Variety Harvests since 2017. Once acquired, the farm and additional infrastructure will be conveyed to Garden Variety Harvests under a 99-year lease. With this security, Cam and his team can continue to produce chemical-free vegetables, flowers, and fruits for the food-insecure local community using regenerative methods, while earning equity in their improvements on the land. Agrarian Trust will transfer the land and infrastructure to the Southwest Virginia Agrarian Commons, where further improvements and lease administration will be handled by the local Commons Board. Agrarian Commons boards are designed to include leasing farmer representation, along with local community members and Agrarian Trust staff. This model is undergoing some restructuring, since the implementation of new IRS rules around parent entities of a 501(c)2. It is partly for this reason that Agrarian Trust (the parent 501(c)3 nonprofit of the 501(c)2 Agrarian Commons) has not, to date, transferred land acquired to any of its subsidiary (c)2 Agrarian Commons. See [Criteria for starting an Agrarian Commons under Agrarian Trust](#).

Other Models

This section provides a brief overview of other models, in addition to the five types described in detail above, that could have relevance to supporting land tenure needs of limited resource farmers in Sonoma County.

Supportive Leases

Public and nonprofit ag land leases, especially accompanied by infrastructure investment, site coordination/management, technical support, maximum reasonable lease terms, and mechanisms for equity-building, can be mixed-and-matched with several models described above. Many land trusts, agencies, and other landholders already provide secure and affordable ag leases. Taking an extra step to offer supportive leases to exemplary farmers may be a viable option for some of these entities. See examples such as Watsonville Slough Farm and Countryside's long-term leases in Cuyahoga Valley under "Ag Parks & Other Congregant Lease Models," above, and the farm lease at Prairie Crossing under "Agrihoods and Conservation Developments" below.

Land Return Models

Public- and nonprofit-sector efforts to address land inequity must first recognize the ancestral and present-day Indigenous peoples whose ties to the land have been broken or compromised by colonization and settlerdom. In Sonoma County these include the Pomo, Miwok and Wappo Peoples.⁵² Learning, acknowledgment, and healing are necessary first steps toward land equity. Public and nonprofit entities working toward land equity should also take steps to facilitate the return of land, or [Land-Back](#), to Indigenous communities from whom it was stolen, and to other communities (Black, Asian-American and other) who have been removed from or cheated out of their land. California lands can be returned in a number of ways:

- To federally recognized indigenous tribes: California's few federally recognized indigenous tribes may be in a position to receive land back in the form of donations, via fundraising partnerships, or in other negotiations. Lands may be acquired in-fee by a separate entity held by the tribe or, via a lengthy and complex process, by the tribal sovereign government, in trust. (For example, in 2015 the Trust for Public Land, with the County of Sonoma, helped raise the funds to rematriate nearly 700 acres of ancestral land on the Sonoma Coast to the Kashia Band of Pomo Indians of the Stewarts Point Rancheria, subject to a conservation easement.)
- To unrecognized tribal nonprofits. Dozens of California indigenous groups are not federally recognized but can trace their ancestry to a particular place. Some of them have formed nonprofits and/or nonprofit land trusts, in order to advocate for their rights and restore indigenous knowledge, practices and connection with their ancestral lands. In the Bay Area, for example, Sogorea Te' Land Trust collects a voluntary Shuumi land tax from non-indigenous property owners as a small act of reparations and to fund re-acquisition of land. The [Amah Mutsun Land Trust](#) has entered into multiple land-use arrangements, such as cultural easements, that guarantee the Amah Mutsun and their Indigenous relatives access to ancestral lands for food gathering, active stewardship, ceremonial and other land connections.
- Direct to individuals descended from dispossessed communities. While public and nonprofit entities cannot make private land gifts to individuals (even individuals of a charitable class), individuals may—and sometimes do—make reparative land gifts. Examples could include: return of land or other stolen property to Japanese American families incarcerated during World War II; a gift of land to a Latinx or other immigrant farm employee that recognizes the worker's connection to the land and success of

the farm; a direct gift of land to a person indigenous to that land; or a donation or land gift supporting a Black farmer(s).⁵³

- Cultural access/stewardship easements. Similar to mineral or timber rights, cultural access easements are gaining attention as a way to convey permanent land access rights to Indigenous communities (See Amah Mutsun example above).

Community Gardens

Community Gardens on public lands typically emphasize community building and food production for health and subsistence, in contrast to commercial urban farm businesses. In Sonoma County, where affordable housing, land access, and thereby access to affordable fresh produce are limited, community gardening could be further supported as an important public health and community vitality strategy, along with parallel efforts to shore up commercial urban and peri-urban farms. Bayer Farms in Santa Rosa, a city/county/nonprofit partnership, is an example of both community-managed gardens and individual plots.

Agrihoods,⁵⁴ Conservation developments,⁵⁵ and other farm-centered planned communities and housing developments

There are growing numbers of “agrihoods” around the US. They attract homebuyers looking for healthier living with more connection to nature than a typical suburban development. They may or may not sustain the livelihoods of working farmers or ranchers, produce significant local food, or have a positive impact on the local farm economy; in fact, many are criticized for greenwashing by promoting a bucolic feel that draws interest from homebuyers, but does not provide affordable housing or lasting benefit to working farmers. Those planned communities that work in partnership with farmers to develop a viable farm acreage, infrastructure, and lease terms may benefit from the win-win of a commercially viable farm to which the development’s residents have access, while bringing a concentration of local business to the farmer. The following examples may or may not have these positive outcomes: [Live Oak Farm](#), Petaluma, CA; [The Cannery](#), Davis, CA; [Prairie Crossing](#), Grayslake, IL; [Serenbe](#), GA; [Lower Lagoon Valley](#), Vacaville, CA (in development).

International Models

Challenges in land tenure, stewardship, succession, affordability, and equity are not limited to North America. Organizations and movements for land justice, land reform, and farmland conservation and stewardship can be found across the globe. Some include private-public partnerships to hold and lease out land; others call upon landowners to yield the use of their land, formally or informally, to worker and squatter movements. The Mexican land reform movement of the 1920s granted community-governed ejidos for rural farming communities, but in the 1990s they began to be dismantled and privatized. Ag Parks are abundant in Europe, and Community Land Trusts in Puerto Rico have set important precedent for consideration in Brazil and elsewhere in Latin America. See Appendix B for these and other exemplary international initiatives that are improving affordable, secure land tenure.

Table 5.1 Models to Improve/Facilitate Land Access/Tenure for Limited Resource Farmers

MODEL	ENHANCED EASEMENTS	BUY-PROTECT-SELL	FARM INCUBATOR	AGRICULTURAL PARK	COMMUNITY LAND TRUST
ENTITY	Land trusts, public agencies	Land trusts, public agencies, specialized social impact investors	Nonprofit farmer training and support organizations	Public agencies and nonprofits	Nonprofit community land trusts (CLTs) and occasionally conservation/ ag land trusts
APPROACH	Protect land with enhanced agricultural easement improving likelihood land will remain farmed and affordable to next generation	Buy, protect with easement, and sell land to farmer or mission-aligned organization	Hold or lease larger parcel, divide for incubator access by new-entry farmers, with shared infrastructure and significant TA/ support	Provide shared infrastructure and supportive lease terms to a group of farmers; and facilitate related cultural, educational and conservation activities	Hold land, convey career-length or lifetime (equity-building) lease to farmer
VARIATIONS	‘Affirmative’ or ‘Mandatory Ag Use’ covenants require continued agricultural land use	Entity may buy and hold land for an ‘improvement’ period, taking time to invest in the infrastructure	Introductory, non-land-based training programs are typically part-time and last from a few months to a year and may or may not include access to a small trial plot	Ag lease programs on public parks, from national to state and regional parks	Conservation land trusts may consider holding land for long-term, equity-building leases to farmers
	‘Option to Purchase at Agricultural Value’ (or OPAV) allows land trust/ agency to keep land at price affordable to farmers	Entity may buy and hold land for a lease period, offering farming tenant a purchase option	Other farm leasing programs, not considered incubators, may offer ‘stepping-stone’ lease terms such as shared infrastructure/ equipment, site management and TA	Establishment of shared infrastructure can include irrigation systems, post-harvest facilities, and farm stand/ marketing facilities	Conservation LT hybridizes with Community LT to conserve farmland and affordable housing
	May limit residential development by allowable sq ft and specific building envelope. May exclude specific types of agriculture regarded as not providing desirable public benefits	Sale can be made to an individual, but can also be made to another agency (e.g. public AgPark), nonprofit (e.g. incubator or community land trust), or group of tenants-in-common			
	Easement may refer to separate, amendable ‘Agricultural Management Plan’ (AMP)	Land Trust may choose to sell a partial interest in the property, and hold onto partial interest as Tenants-In-Common with a qualifying farmer			
	Various enforcement mechanisms for affirmative production requirement, qualified buyer requirement, sale price, etc				

Table 5.1 Models to Improve/Facilitate Land Access/Tenure for Limited Resource Farmers (cont'd)

MODEL	ENHANCED EASEMENTS	BUY-PROTECT-SELL	FARM INCUBATOR	AGRICULTURAL PARK	COMMUNITY LAND TRUST
VARIATIONS (CONT'D)	Some enhanced easements have residential and income requirements				
APPLICABLE TO TYPES OF LRFs	Individual farmers with sufficient experience and capital/credit to make a long-term commitment to building a viable business on a specific parcel of land	Farmers with production and business experience; tenant farmers aiming to purchase the land they already know from an extended period of farming there	Aspiring, new-entry, and extremely limited-resource farmers	Farmers rooted in a nearby urban community and reflective of its cultures. Experienced to semi-experienced farmers with strong public/educational orientation	Experienced farmers intending to invest in their land/businesses long-term, who cannot afford or do not wish to own land, and who value community ownership and stewardship
LRF TENURE & EQUITY	Ownership	Ownership or long-term tenure	1-3 years, often with support for finding property to establish an ongoing farm business	Evergreen 1-5 year lease, to 25 year lease	Long-term, equity-building tenure
LRF TRAINING & SUPPORT	N/A	Could include support during option period to assess business plan and line up financing	Extensive training and support is integral to the program	Varies, e.g. host site for trainings, cooperative branding and marketing	Expectation of volunteer and fundraising engagement by invested community - for stewardship improvements, infrastructure, education/ event spaces, etc.



CHAPTER 6

Property Assessment Framework for Models Serving Limited Resource Farmers

The earlier chapters (2, 3, and 4) provide an analysis of the needs of limited resource farmers, a description of conditions generally favorable for limited resource farmers at the area scale, and an analysis of the favorability of conditions in Sonoma County overall. As noted, many of these conditions are favorable, for example the availability of market outlets and technical assistance. Those area-scale conditions which are problematic for land tenure, as well as for farm business viability, need area-scale solutions that address problems such as availability of affordable labor (and related low farm income), high land prices, and uncertain water supply.

Chapter 5 provides an overview of five models that can support successful land access and tenure for limited resource farmers. It also describes the various types of entities that most commonly use these models and the suite of strategies that they employ. Addressing the land tenure gap at the property scale, Chapter 6 provides a framework for these entities to use in assessing properties in terms of their suitability for one or more of the five models.

Favorable, Property-Scale Conditions for Models Supporting LRFs

All farmers want the conditions on the land they farm to be as favorable as possible for their particular type of operation. However, for limited resource farmers who don't have extra capital to invest in improving land themselves, it is particularly important to start out on a piece of land that has the infrastructure, access and tenure terms, and technical and financial assistance services that allow them to start or continue farming and generate income as soon as possible. Supportive land access and tenure models allow limited resource farmers to start building equity, either through their purchase of the land or through their investments in other fungible assets, which can be facilitated when relatively low lease costs free up resources.

As described in Chapter 5, several models offer land tenure opportunities and support services for limited resource farmers. Three of these models, Enhanced Easements, Buy-Protect-Sell, and Community Land Trust (CLT), are appropriate for providing land tenure and ownership for a single farmer or farming operation. The other two models, Farm Incubator and Agricultural Park, are appropriate for supporting multiple farmers. These models provide short- to longer-term land tenure, as well as support services, in the case of the Incubators and Ag Parks, and equity-building opportunities in the case of Ag Parks and CLTs.

As context for the Property Assessment Framework described below, it is important to note that several determinants of a model's suitability for a particular property are actually extrinsic to the property itself. Implementation of both the Enhanced Easements and Buy-Protect-Sell models requires that the property is within the operating area of a land trust or local government with a focus on agriculture.

The acreage and specific location would also have to be of interest to that land trust. The Farm Incubator, Agricultural Park, and Community Land Trust models, meanwhile, require a potential managing entity with the resources and experience appropriate for providing short- to longer-term land tenure and support services for multiple farmers, as well as lease/sales terms, infrastructure, and zoning appropriate for the intended model.

Property Assessment Framework

The Property Assessment Framework combines factors from Ag + Open Space's preliminary work on the Farmland for All toolkit, as well as from the property-scale assessment methodology developed for SAGE's [Coachella Land Access Study](#). As a property-scale suitability analysis, the Property Assessment Framework presents the relationship of the five models (Enhanced Easements, Buy-Protect-Sell, Incubators, Ag Parks, and Community Land Trusts) to various property-scale conditions. These include: acreage, location, land and lease pricing, infrastructure, and agronomic conditions. Each of these conditions is described below, both in general and in terms of their importance to the five models.

Acreage

As described in Chapter 2, the majority of limited resource farmers want land that is between five and 25 acres. Therefore, for the Enhanced Easement and Buy-Protect-Sell models, the preferred property size is 40 acres or less. For the Farm Incubator and Agricultural Park models, property size can range from 20-100 acres; for the Community Land Trust model, the property size can range from five to 80 acres. Types of cropping systems and number of farmers being served, in the case of the Incubator and Ag Park models, are the main variables.

General Location Factors

A number of factors determine the suitability of properties in terms of location. Common desirable attributes are: relative proximity (40 miles or less) to a range of markets and services; close proximity to other agricultural properties; and adjacent neighbor land uses compatible with small-scale farming and intended production system(s). For farmers who are part of a Farm Incubator or Ag Park, and who are therefore just starting to farm or rely on urban ties, close proximity to an urban center, especially for housing, is important. Other factors that can impact the suitability of a property include: location within an ag preserve or land trust strategic area; potential for the property to contribute to community fire resilience; and potential for the ag production on

property to provide significant community/social/educational benefits.

Zoning and other Designations

All properties require that the agriculture zoning and city or county General Plan designations be suitable for the intended production system and/or support model and allow for any additional provisions (e.g. housing, infrastructure). In addition, if the property is to be used for a Farm Incubator, which generally requires full utilities (potable water, sewer, and power), it would need to be located in an Urban Services Area (USA) which either has such utilities or allows them to be established. Location within a federally designated Opportunity Zone can provide tax incentives to a property developer. Location within a County-designated Agricultural Preserve or special land use overlay area can provide additional incentives. In addition, some ag zoning regulations include a Right to Farm ordinance, which provides farmers some protection from neighbors' nuisance complaints.

Land and Lease Pricing

The purchase price should reflect the land's income-generating value, either to farm or to lease to a farmer. In areas that are converting to higher-value permanent crops (e.g. wine grapes in Sonoma County), land values often reflect the higher earning potential of the permanent crops

rather than the lower-earning potential of food crops. Since almost all LRFs grow food crops, they need land and lease pricing that reflect ag value for food production and that are supportive (usually below market rate) for starting a farm business. Entities employing models supportive of LRFs should also consider terms for relatively long leases, that provide time needed to secure financing, and/or that facilitate potential equity acquisition over time.

In addition, in many places there are significant variations in soil quality or micro-climate; two adjacent parcels may have quite different productive values, which is usually reflected in price. If land prices greatly exceed income-generating potential, the area is likely under pressure for conversion away from agriculture to some other use.

Agronomic Conditions

Key considerations for favorable agronomic conditions at the property scale are: 1) soils, which ideally would be designated as prime farmland, and 2) affordable, good quality water, which ideally would entail water rights for sufficient surface water and/or a reliable supply of groundwater. Recent farming practices are another consideration, with land that has been certified organic or farmed using organic practices being the most desirable and degraded soil being the least desirable. Microclimates associated with particular properties are another factor to consider, relative to the intended types of crops. Adjoining land uses, such as more or less farm-friendly neighbors, pressure from invasive fauna and/or presence of beneficial insect habitat, can also have positive or negative impacts. In general, the tolerance for less-than-ideal land is greater if the intended model requires the land to be held by an entity with financial capacity to make improvements, than if the intent is to transfer land tenure to a farmer with limited resources for improving the land.

Infrastructure

The most basic infrastructure for a property to be farmed successfully is a reliable, sufficient supply of ground and/or irrigation surface water. Ideally, the property has multiple backup options for water access and pumps and pipes in good condition. Back-up for water storage is a plus.

A farmer also needs convenient access to the appropriate infrastructure for post-harvest handling. For fresh produce, post-harvest handling requires immediate washing, packing, and cooling. If the infrastructure is not on the farm and controlled by the farmer, it needs to be very close to the farm, and the farmer needs to be able to negotiate immediate access. For both water supply and post-harvest handling, electrical hookups are highly preferable. Other desirable infrastructure includes a driveway and parking areas in good condition, barns and sheds for equipment and inputs, and greenhouses for early-season starts or specialty production. Fencing is a plus, especially for livestock/grazing, for the exclusion of deer and other browsers, and/or for safety of/from the public. As noted elsewhere, on-site housing (with appropriate septic or sewer system) is also highly desirable.



Table 6.1 Property Assessment Framework: Preferred Conditions per Model

	ENHANCED EASEMENTS	BUY-PROTECT-SELL	FARM INCUBATOR	AGRICULTURAL PARK	COMMUNITY LAND TRUST
ACREAGE	Range of scales for various cropping systems; usually smaller parcels (40 acres or less, with 10-25 acres best)	Range of scales for various cropping systems; usually smaller parcels (40 acres or less, with 10-25 acres best)	20-100+ acres to support multiple 'training' plots and/or multiple farm businesses and (shared) infrastructure	40-100+ acres to support multiple farm businesses and (shared) infrastructure	Range of scales, depending partly on region and crop(s). Usually small- to mid-size parcels (5 - 80 acres)
LOCATION	Access to markets and services: <40 min drive from large population center	Access to markets and services: <40 min drive from large population center	Closer proximity to urban center desirable	Closer proximity to urban center desirable	Access to markets and services: <40 min drive from large population center
	Close proximity to other ag properties, preferable				
	Aligns with County or City General Plan				
	Adjacent neighbor land uses compatible with small-scale farming and intended production system(s)				
	Property is appropriately zoned (designated as LIA, LEA, DA, RRD, or AR)				
	Ag use of the property could contribute to community fire resilience				
	Location within an ag preserve or land trust strategic area				
	Ag production on property could provide significant community/social/educational benefits				
LAND & LEASE PRICING	Easement - especially OPAV - reduces market value of land, making it more affordable to farmers.	Reduced purchase price, via an easement, improves affordability; facilitates match with qualified farmer; allows time for farmer to secure financing	Lease terms supportive (usually below market rate) for starting a farm business	Lease terms reflect ag value for food production; may include opportunities to earn equity	Lease terms reflect ag value for food production; generally include opportunities to earn equity
AGRONOMIC CONDITIONS	Soils are good for agriculture: no toxic contamination; not highly erodible; not highly degraded (compacted or very low in organic matter)				
	Topography: flat or with minor hills;				
	No unique, rare, or sensitive habitat types currently present on the property; or, if present, will not hinder agricultural productivity				
	Land already certified as organic and/or in compliance with other third-party/verified practices; or at least that has been farmed using organic practices.				
	No permanent crop plantings (exceptions - desired orchard, berries, hedgerows etc)				
	Seasonal temperature and rainfall appropriate for the intended production (Agronomic Conditions)				
INFRA-STRUCTURE	Housing: residence present or allowed on property, or nearby affordable housing available; housing on site for farm employee(s) a plus	Housing: residence present or allowed on property, or nearby affordable housing available; housing on site for farm employee(s) a plus	N/A	N/A	Housing: residence present or allowed on property, or nearby affordable housing available; housing on site for farm employee(s) a plus
	Irrigation water access				
	Water connection or well with sufficient flow rate; ideally multiple backup options for water access; pumps and pipes in good condition; back-up for water storage a plus				
	Utilities: sewer or septic, electricity				
	Driveway, parking for employees, customers, visitors, etc				
	Fencing a plus for livestock/grazing, for exclusion of deer and other browsers, and/or for safety of/from public (somewhat location dependent)				

CHAPTER 7

Conclusions and Recommendations

This Study, *Land Access and Land Tenure for Limited Resource Farmers: Assessment of Conditions and Opportunities in Sonoma County*, aims to inform Ag + Open Space and Sonoma County partners about the needs of limited resource farmers, and to recommend actions that Ag + Open Space and County partners can take to support equitable, affordable land tenure and associated farm business viability for beginning and limited resource farmers in the County. Most of these recommendations are directly actionable by existing Sonoma County organizations. Others are dependent on emerging statewide initiatives or policy changes, or require partnership with organizations that have specific expertise around support for limited resource farmers. This chapter first summarizes conclusions and findings from the Study and then outlines actionable and feasible recommendations.

Conclusions

The preceding chapters of the Study provide an overview of the County's limited resource farmers in terms of their demographics, land tenure needs, and farm business viability barriers (Chapter 2); area- or county-scale conditions that impact farm business viability and land tenure (Chapter 3); these conditions in Sonoma County specifically (Chapter 4); key models for addressing these needs and barriers (Chapter 5); and characteristics of properties best suited for providing improved land tenure opportunities and farm business viability (Chapter 6). High-level findings and conclusions from this research are outlined below.

Limited Resource Farmers and Their Needs

- Based on Ag Census data, Sonoma County has the highest number (2,009) of beginning farmers (an Ag Census term meaning farmers with up to 10 years of farm management experience; many LRFs are also beginning farmers) in the Bay Area. This high number does not fully align with on-the-ground experience of agricultural service providers. Therefore, the project team assumes that there are evidently hundreds of small-scale farmers—many of whom already own land—who do not aspire to make farming a significant part of their livelihood.
- Affordable land access and tenure are consistently out of reach for limited resource farmers. Land with sufficient, affordable water and good quality soils is critical to farmers' success, but there is very little land with these assets on the market at a price point that is affordable for LRFs.
- Insecure land tenure can limit farmers' ability to use—and benefit from incentives that support—climate-smart agricultural practices, since many such practices require multi-year investments on the same piece of land in order to get ecological and economic returns.
- Lack of affordable housing, for both farmers and farm employees, is another major barrier for LRFs. On-property housing is strongly desired by many farmers but often not available; affordable off-farm housing is also often hard to find.
- Another key barrier is insufficient supply of affordable labor; conversely, farmers cannot pay competitive wages and still remain profitable.

- Additional challenges facing small-scale livestock and specialty crop producers (a category that largely overlaps with LRFs) center on financial capacity and the need for capital to support infrastructure, labor, and land access. Other needs include assistance applying for grants, mentorship by experienced grazers/growers, technical assistance with in-field challenges, and assistance with business planning and record keeping.
- Most LRFs would prefer to own land; however, there is also interest in career-length leases, especially where a landlord provides infrastructure improvements and opportunities exist to earn equity. The most common scale of property desired, for long-term lease or ownership, is 5-25 acres, with 10-15 acres being the most desirable. LRFs in Sonoma County also express some interest in congregant lease models and collective land management, whether via lease or ownership.
- For LRFs, an integral part of establishing long term financial sustainability is building equity in real assets, such as a stake in a farm business, an equity-building lease, land improvements or other farm assets, land ownership, and/or home-ownership.
- Addressing the land access and land tenure needs of LRFs with intermediate to advanced experience should be a priority. Their success is the best way to create a pathway, network of mentorship, and encouragement for less experienced, early-stage farmers. More broadly, many experienced LRFs are informed about and supportive of policy changes, and appreciate that their own farm business viability is interconnected with the existence of a thriving small- to medium-scale, diversified farming sector.

Models Serving Land Tenure Needs

Five key models are presented in this Study, each with variations and each representing a range of strategies, that have *demonstrated* potential to provide limited resource farmers with the land access and tenure needed to build healthy, viable farms and livelihoods. The models are: Enhanced Easements; Buy-Protect-Sell; Farm Incubator; Ag

Park; and Community Land Trust (CLT). While the Study shows that most LRFs *prefer* to own land, land ownership may not be affordable, or may tie up too much capital for a farmer to operate a viable business. It is exceedingly difficult for most LRFs to qualify for and make payments on the high mortgages found in Sonoma County. While the Ag Park, Incubator, and additional Supportive Lease models do not provide for land ownership as preferred by farmers, they are valuable as stepping stones or alternatives to direct farm ownership. The development or expansion of any of the models presented—in different areas of Sonoma County and undertaken by various actors—can help address local farmers' needs and provide additional benefits to the County as a whole.

Conditions Impacting Farm Business Viability and Land Tenure

In Sonoma County, many farm business viability and land tenure factors are favorable for limited resource farmers. These positive factors include: the agricultural industry context (e.g. excellent technical assistance resources, marketing options, diversity of cropping systems, robust organic production, preponderance of small- to medium-size farms, significant place-based branding) and environmental factors (e.g. favorable climate and many micro-climates, range of good soils, significant biodiversity). On the other hand, there are a number of factors which negatively impact farm business viability and land tenure for limited resource farmers. These include: limited affordable farmland; limited availability of affordable housing; concerns about reliable water supply; and limited availability of farm labor.

Property Availability

The general characteristics of properties best suited for providing affordable land access and tenure and farm business viability opportunities for LRFs directly reflect the needs described above: land that is affordable to own or with an affordable, career-length, equity-building lease; good quality soils and sufficient affordable water; and on-site or nearby housing. Addressing the lack of availability of such properties is the main focus of the following recommendations.

Recommendations

The following recommendations were identified because they address the key challenges outlined above and because they are likely to have broad support from the County’s limited resource farmers, Ag + Open Space, UCCE Sonoma, and other Sonoma County partners. These recommendations encourage the various entities listed in the sidebar to act, innovate, and collaborate in order to improve the following conditions.

Access to Quality Land

- Conduct a real estate analysis. Engage in mapping and analysis of Sonoma County land suitable and/or available for smaller-scale farming; work with local realtors to track agricultural land sales in Sonoma County with a focus on the types and scales of land and the infrastructure desired by LRFs.
- Use a Buy-Protect-Sell process to increase land ownership by LRFs with intermediate to advanced experience.
- Identify or form land-holding entity/ies, specifically land trusts and other nonprofits or a County land bank, that could provide quality (even equity-building) lease opportunities for farmers, and that could provide support for such leases. (Note Ag + Open Space is not designed to hold and manage land.)
- Invite, promote, and/or create incubator(s) and other “stepping stone” lease options for , with the caveat that these lease options will have limited utility for LRFs until suitable long-term or permanent land access and tenure options are widely available to graduates of these models.
- Identify or develop a suitable entity to manage Farm Incubator(s) and/or Ag Parks.
- Educate landowners. Create or find existing land stewardship workshops/trainings/toolkit for landowners emphasizing opportunities to provide quality leases to working farmers.
- Improve opportunities for land-linking in Sonoma County. Partner with California FarmLink to facilitate healthy land transitions (e.g. invite all partner landowners with easements held by Ag + Open Space and other Land Trusts to list appropriate lands for lease or sale to qualifying farmers). Partner with California FarmLink, Kitchen Table Advisors and others to develop and promote a list of ‘land seekers’ and farm managers, aimed at



landowners interested in land management and/or farm development services.

- Work with partners to increase opportunities for ecosystem services contracts and ecosystem services payments to grazers and other land stewards improving ecological outcomes (vs. leases in which land steward pays landowner).

Affordability of Land Access and Tenure

- Partner with community lenders (e.g. California FarmLink, American Ag Credit, Farm Services Agency) to offer financing incentives (down payment assistance, interest rate reduction, longer terms, etc.) to qualifying farmers buying land or building businesses.
- Educate landowners. Provide succession workshops/trainings/toolkit emphasizing approaches to protect land/legacy while creatively passing down land to next-generation farmers. Build on California FarmLink resources. Troubleshoot with real-world case studies.
- Educate landowners about incentives. Work with policy partners to publicize existing federal incentives, such as the Conservation Reserve Program Transition Incentive Program (CRP-TIP),⁵⁶ as well as pending state incentives that might emerge from the work of the CA Land Equity Task Force.
- Support the development of community land trusts and other equity-building lease options.
- Support the development of Ag Parks and other congregant lease options.
- Consider enhancing existing easements with tools such as affirmative ag use covenants to improve affordability of ownership and active use by farmers.⁵⁷

Housing as a Key Factor for Farm Success and Wealth-Building

- Partner with groups such as Housing Land Trust of the North Bay and other community land trusts, Habitat for Humanity, and nonprofit and

affordable housing developers to improve—if feasible through pilot projects—availability of affordable housing on, or linked to, farms.⁵⁸

- Explicitly include limited resource farmers as a sector in the County General Plan Housing Element Update, as well as in emerging local and regional policies and incentives for affordable housing and farmworker housing, in both urban and unincorporated areas.
- For both ownership and leasing, investigate barriers to more affordable alternative on-farm housing options, such as the restrictions on tiny homes, trailers, composting toilets, etc., and identify policy changes needed to address these barriers.
- Work with Sonoma County public land holding/managing entities to create a system that will enable these entities to lease existing housing on lands they manage to farmers or ranchers working on or near those properties.

Support for Land Improvements and Stewardship

- Partner with organizations such as the RCDs to leverage county, state, and federal ecological incentives and similar programs, relevant to LRFs, in areas including: water conservation, energy efficiency, healthy soils, habitat biodiversity, and additional ecosystem services.
- Identify challenges and opportunities related to farmers and ranchers with short- medium- term leases wanting to implement climate-smart agriculture practices and benefit from related incentives.
- Support the availability of sufficient technical assistance to support adoption of ecological practices by farmers who own land, but lack resources for investing in long-term stewardship.

Policies Regarding Land Access and Affordability

- Review Sonoma County Williamson Act policy and enforcement to explore optimizing support

for equitable land access and ag production, including Farmland for All opportunities.

- Review the California statutes governing the operation of Ag + Open Space to determine if any statutory changes are needed in order to modify the Ag + Open Space expenditure plan as described below.
- Review policies of Ag + Open Space and land trusts to make sure that any restrictions around housing and non-agricultural endeavors (e.g. events, processing) are sufficiently open and flexible to allow farm owners or tenants to leverage all opportunities.
- Modify Ag + Open Space policy (through action of the Board of Supervisors) to allow Ag + Open Space to hold land; and/or consider a County-wide ballot initiative that would modify (through action of the voters) Ag + Open Space's existing expenditure plan to include spending tax revenues on landholding, ecosystem services, farm infrastructure, and other expenditures that support LRFs.⁵⁹
- Review zoning options in the General Plan for the following: Transfer of Development Rights, clustered housing, farmworker housing incentives, allowance of on-farm sales and other agritourism activities, and county-level ecosystem service payments.
- Support establishing County-level Climate Resilience Financing District, an initiative currently spear-headed by the Regional Climate Protection Authority (RCPA) formed in 2009 to coordinate climate protection efforts among Sonoma County's nine cities and multiple agencies.⁶⁰
- Explore potential for a county land bank to acquire and hold priority ag lands, possibly under a Resilience Financing District as above.
- Inform LRFs about current and emerging, state-wide and federal policy initiatives that directly or indirectly support their farm business viability. Examples of California initiatives include: Beginning Farmer Tax Credits,⁶¹ conservation initiatives such as the Healthy Soils Program; Williamson Act reforms; the Farmer Equity

Act and recommendations of the Strategic Growth Council Land Equity task Force; and a statewide Easement Incentives Program similar to Washington state's Farm Protection and Affordability Investment program.⁶² Examples of emerging federal initiatives include recommendations by the National Young Farmers Coalition.⁶³

Justice and Equitability in Land Tenure

- Create a BIPOC and/or Latinx farmer task force or advisory committee, likely under the Sonoma County Office of Equity and in concert with the state's Land Equity Task Force, to provide feedback and make recommendations regarding land tenure and equitability.
- Recognize, and demonstrate through statistics, the disparity between conservation dollars paid to or used to benefit white landowners versus those supporting BIPOC landowners. Study initiatives to invest ag land conservation resources in BIPOC communities.
- Recognize the important role of older women landowners; learn from existing programs such as AFT's [Women for the Land](#) initiative and Women Food & Ag Network's [Women Caring for the Land](#) initiative.
- Create or identify materials and workshops/training programs to educate landowners about land justice, equity, land return and farmworker-to-farmer opportunities. Collaborate with recognized and unrecognized Indigenous groups, farmworker advocates, and other BIPOC communities in Sonoma County to offer landowners models, pathways, and options to lease, sell, or donate their land to Indigenous, Black, and other dispossessed and underserved communities.
- Explore California's Farmer Equity Act,⁶⁴ and keep current with the Agricultural Land Equity Task Force, to identify landowner incentives and/or other programs that could be adopted by the County.

General Farm Business Viability for Limited Resource Farmers

- Consider creating a County position to develop and deliver all landowner education needs proposed in the recommendations above.
- Create a Working Group composed of LRFs with at least three to ten years of experience, and their key service providers, in order to provide ongoing feedback about actions, including the recommendations from this study, needed to build a viable small- to medium-scale farming sector.

Recommendations for Further Research

- Quantify what is needed to create a thriving small- to medium-scale, diversified farming sector, including the total amount and types of land, types and extent of models, and additional technical and financial resources.
- Research options for access to sufficient, affordable quality water for farm viability. Map SGMA impacts on Sonoma County agricultural land; research any specific impacts on LRFs

and smaller-scale farming operations; study options for use of recycled water.

- Research best practices and options for access to sufficient and fair labor for farm viability. Investigate challenges and opportunities to address the labor gap in ways that benefit farmers and farmworkers alike.
- Research how the following seemingly contradictory trends play out on the ground, and how they impact LRFs: 1) the relatively low rate of conversion of farmland to non-agricultural uses vs a vs the relatively high rate of agricultural properties with minimal gross income; and, related, 2) the discrepancy between the relatively stable total number of farms and the ongoing loss of productive small- to medium-scale farms.
- Analyze best mechanisms for ensuring representation of BIPOC communities in discussions of land tenure and ag viability, as a means to ensure equitable access to benefits of land conservation and ag land access programming.. Research how the policies and activities of land trusts serving Sonoma County, including Ag + Open Space, translate to real-life experiences for LRFs. Explore options for focusing a subset of easements in disadvantaged areas, within and near disadvantaged neighborhoods.
- Seek precedents in other counties, states, and countries for approaches to improving access to affordable, quality land for producers of food crops, in contexts where high-value commodity ag crops (e.g. wine grapes) dominate the real estate market. Explore options for incentivizing producers of wine grapes to dedicate a percentage of their land to food production.
- Monitor and support pending legislation that is in alignment with any of the recommendations above (e.g. CA AB1197: Agricultural Protection Planning Grant Program, 2023).



The recommendations above may be relevant to the following entities that currently work in, or might in the future work in, Sonoma County:

Policy makers

- Sonoma County Board of Supervisors
- Sonoma County cities
- State-level policy-makers here as well, a number of the recommendations above are relevant to the state level

Landowners (public, nonprofit, private)

- Ag + Open Space (not presently authorized to hold land long-term)
- Institutions (universities, hospitals, etc.)
- LandPaths
- Nonprofit organizations
- Private landowners
- Sonoma County cities
- Sonoma County Regional Parks (and other County agencies)

Conservation land trusts and special districts

- Ag + Open Space
- Bodega Land Trust
- Sonoma Land Trust
- Trust for Public Land

Community land trusts

- CommonSpace Community Land Trust
- Housing Land Trust of the North Bay
- See other members of the [California Community Land Trust Network](#)

Farmer support organizations, within and serving Sonoma County

- American Ag Credit
- American Farmland Trust
- California Council of Land Trusts
- California Farm Bureau
- California Farmer Justice Collaborative
- California FarmLink
- Community Alliance with Family Farmers
- Kitchen Table Advisors
- Land Trust Alliance
- Petaluma Bounty
- Resource Conservation Districts (Gold Ridge RCD, Sonoma RCD)

- Santa Rosa Junior College/ Shone Farm
- Sonoma County Farm Bureau
- UC Cooperative Extension (UCCE)

Social Impact Investors and related organizations (some of which work in California, but not yet in Sonoma County)

- Dirt Capital Partners
- FEED Sonoma
- Manzanita Collective
- People's Land Fund
- Slow Money Northern California

Policy and Funding Partners

- CA Department of Conservation (e.g. Sustainable Ag Lands Conservation (SALC) Program; Williamson Act Program)
- Strategic Growth Council (e.g. Land Equity Task Force)
- US Department of Agriculture (e.g. numerous programs including those offered by Natural Resources Conservation Service, Farm Service Agency, Agricultural Marketing Service)

Appendix A. UCCE 2023 Sonoma Land Access Survey Results Summary

Written by Ellie Andrews, 3/10/2023

Survey questions by Stephanie Larson, Kerry McGrath, Ellie Andrews

Survey Description

A needs assessment survey was created in order to collect information about the goals, barriers, and needs of farmers and ranchers with limited resources. The goal of the survey was to determine the barriers to increasing the economic viability of small-scale livestock and specialty crop production in Sonoma County. The survey was written by Stephanie Larson (Livestock and Range Management Advisor), Kerry McGrath (Agriculture Ombudsman), and Ellie Andrews (Specialty Crops Advisor). In this county, specialty crops include tree crops, row crops, mixed vegetables, floriculture, specialty grains, etc. The survey was conducted in Qualtrics from October 25, 2022 - February 14, 2023 and consisted of three sections: demographics, specialty crop questions, and livestock questions. The survey was offered in both Spanish and English. It was electronically distributed to the Sonoma County's Certified Producer Certificate, Registered Organic Producer list, and the Producer lists in UCCE Sonoma's email platform. In addition, Kerry reached out directly to producers that identified as limited resource farmers and various farm nonprofits to solicit responses and attended in person farmer gatherings to encourage survey responses. The survey received 95 responses.¹

Survey Summary Procedure

All responses were downloaded in Excel from Qualtrics and answers to each question were summarized. The survey consisted of quantitative questions (e.g., select an answer from provided options) and short qualitative questions (e.g., brief fill-in-the-blanks). For each quantitative question, responses were summed for each category and then percentage of respondents was calculated. For instance, in question one, 50 respondents indicated that they grew specialty crops only, 28 indicated livestock only, and 17 indicated both. With 95 responses total for this question, approximately 53% indicated specialty crops only, 29% livestock only, and 18% both. Unless otherwise specified, approximate percentages are most often reported in this summary (rather than summed counts) because different numbers of people responded to each question. For each qualitative question (fill-in-the-blanks), a list was created in Excel and answers were copied and pasted into the corresponding column per question. Within each question, key recurring themes were identified and summarized below. This report provides a broad summary of the data, as no formal statistical analyses were performed. Figures were made in R using the package ggplot2. Any respondents that identified grapes as their only crop were excluded from analysis, unless they also had livestock.

Respondent Demographics

Out of 95 respondents, 53% grow specialty crops only, 29% raise livestock only, and 18% have both specialty crops and livestock. Demographic data represents all respondents. County of residence was primarily Sonoma (86%), followed by Marin (6%), Napa (3%), and three other counties. The county where

¹ These results should be considered in the context of current demographic statistics for growers and ranchers in Sonoma county (NASS USDA, 2017). It is possible this survey might not have reached certain farmer/rancher worker communities that have been historically underrepresented, and other methods for gathering information (such as interviews) may be helpful for including groups not represented in the survey results.

most respondents grow/graze was Sonoma (86%), followed by Marin (9%), Napa (3%), Mendocino (1%), and Yolo (1%).

Farm owners comprised 36% of respondents, farm workers were 12%, and respondents who both own and work on farms were 52%. The age breakdown was: 6% were 16-29 years old, 34% were 30-49 years old, 41% were 50-69 years old, and 19% were 70+ years old. Veterans comprised 6% of the respondents. 60% of the respondents identified themselves as female, 38% as male, 0% as gender nonconforming/variant, 0% as transgender, and 2% preferred not to say. 7% of respondents identified as LGBTQ+, 87% did not, and 5% preferred not to say.

0% of respondents identified as Alaska Native, Black or African American, or Native Hawaiian, while 2% identified as Native American, 1% as Asian American, 1% as Middle Eastern or North African, 86% as White, and 9% preferred not to say. English was the preferred language for 97% of respondents, while 1% chose Spanish, 2% identified as bilingual, and 0% preferred Hmong, Thai/Lao, or other. The USA was the country of origin for 95% of respondents, while the UK, Ecuador, Canada, and Ireland each had a response rate of approximately 1%. 99% of respondents identified they did not have refugee status, while 1% preferred not to say.

Off-farm income was reported for 71% of respondents, which included sources such as savings, retirement, income from separate jobs, rental properties, and private investments. 37% of respondents identified that other on-farm income supported their business. This included sources such as agritourism, event hosting, workshops, educational events, tours, farm stays (such as Hipcamp and Air BnB), hunting, rentals, consultations, rentals, timber management, and nursery production. 61% of respondents reported having experience applying for grants from sources such as the NRCS and USDA. Current and target estimated average gross farm-related income is presented in Table 1.

Table 1. Reported annual gross farm-related income for all types of respondents (specialty crop growers, grazers, and both), estimated current averages and ideal (target) average annual gross farm related income that they would like to have in the future.

Table 1. Reported annual gross farm-related income for all types of respondents (specialty crop growers, grazers, and both), estimated current averages and ideal (target) average annual gross farm related income that they would like to have in the future.

APPROXIMATE % OF RESPONDENTS REPORTED ANNUAL GROSS FARM-RELATED INCOME		
INCOME RANGE	ESTIMATED CURRENT AVERAGE	IDEAL AVERAGE
0 – \$5,000	29%	14%
\$5,001 – \$15,000	21%	14%
\$15,001 – \$25,000	11%	6%
\$25,001 – \$50,000	12%	14%
\$50,001 – \$75,000	7%	15%
\$75,001 – \$100,000	7%	9%
\$100,000+	13%	28%

Specialty Crops Responses

Respondents listed specialty crops such as diversified market garden vegetables (including greens, cucurbits, alliums, squash, nightshades, root vegetables, etc.), fruit (including strawberries, blueberries), orchard crops (including olives, peaches, citrus, apples, pears), cut flowers (including lavender, native wildflowers, hibiscus), herbs, Christmas trees, and cannabis. The most helpful resources for specialty crop growers so far included owning land, capital for land, loans and grants, FarmLink, UCCE advisors, the UC Davis Olive Center, Paul Vossen, county farm services, community college support, local ag stores, good contractors for irrigation, reclaimed water, composting on site, free manure; support from fellow farmers, friends, and family; farmstays; knowledge from experience, trial and error, education; and informational resources such as books, podcasts, YouTube, and the internet.

Considering land ownership, 57% of specialty crop growers own their own land, 26% rent or lease land from a private landowner, and 17% responded “other” which included explanations such as farming on family’s land and being a farm worker. Primary sales outlets included wholesale (18%), farmers markets (15%), farm stands (15%), restaurants (15%), CSAs (7%), groceries (6%), FEED Sonoma (5%), and “other” (19%). The “other” category included outlets such as online, special orders (floral arrangements), and wineries. Specialty crop production was 44% organic, 17% climate smart ag, 17% other, 13% regenerative, 6% conventional, and 4% carbon farming.

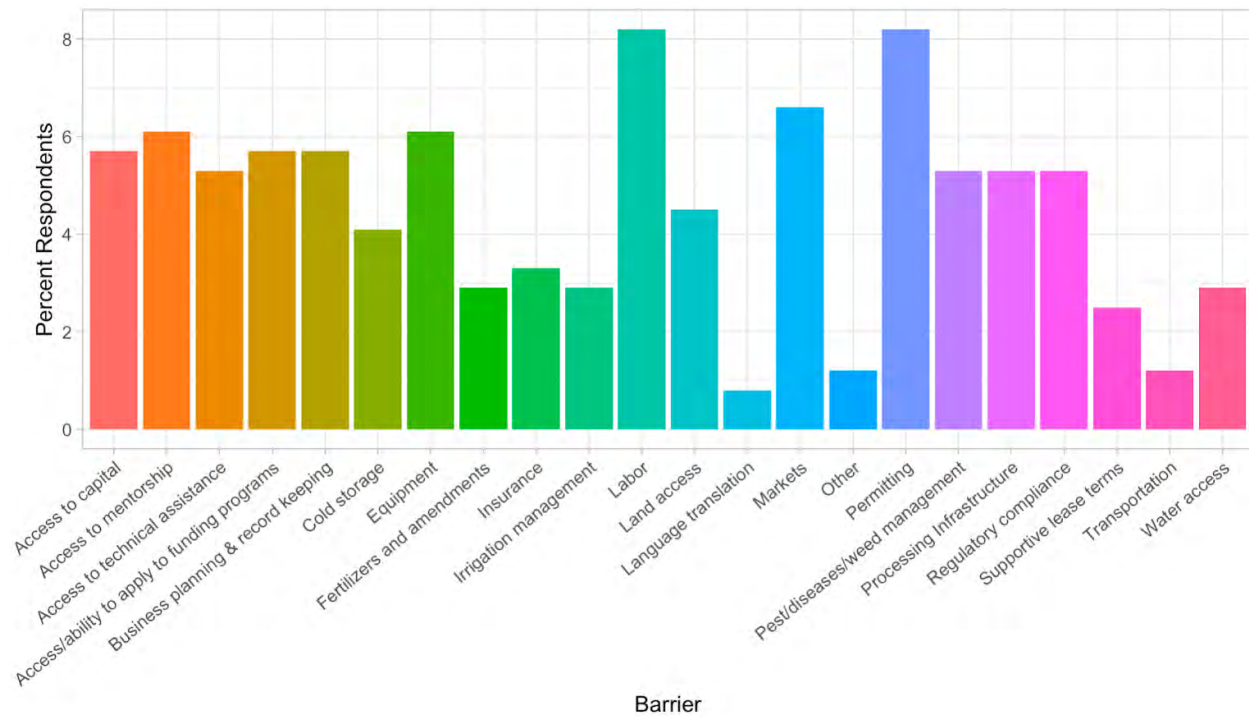
If more resources were available, respondents indicated they would develop/expand their specialty crop operation in a variety of ways. Key themes included increasing crop diversity, overall production capacity, planting more tree crops, agritourism, closed loop systems, integrating livestock, and compost applications. Growers expressed interest in hiring more employees, growing their farm team, partnering with other growers, and offering on-farm educational opportunities.

Resources needed included more labor, land access, water, viable markets, storage space, scale-appropriate equipment, harvesting and processing methods and infrastructure, business planning, and mentorship. Barriers identified included permitting, regulatory compliance, and expensive insurance. A common theme was that several respondents noted they need more reliable labor and would like to pay higher wages, but lack financial capacity to do so. In-field challenges included pest/disease/weed management, water quality, irrigation automation, and the need for affordable, reliable, local, and high-quality compost. Respondents identified the need for technical assistance applying for funding and completing the organic certification process.

Respondents were asked to select all barriers from a provided list that apply to their specialty crops operations (Figure 1a) and separately to select their top 3 barriers (Figure 1b). Labor, permitting, mentorship, equipment, land access, and business planning and record keeping were common barriers. Current and ideal target acres in production are presented in Figure 2. Ideal target acreage for specialty crop growers appears to be in the 0-20 acre range for approximately 90% of respondents.

Figure 1a. Specialty Crop Barriers: Respondents Selected All That Apply

Limited Resources Needs Assessment Survey, March 2023

**Figure 1b. Specialty Crop Barriers: Respondents Selected Top 3**

Limited Resources Needs Assessment Survey, March 2023

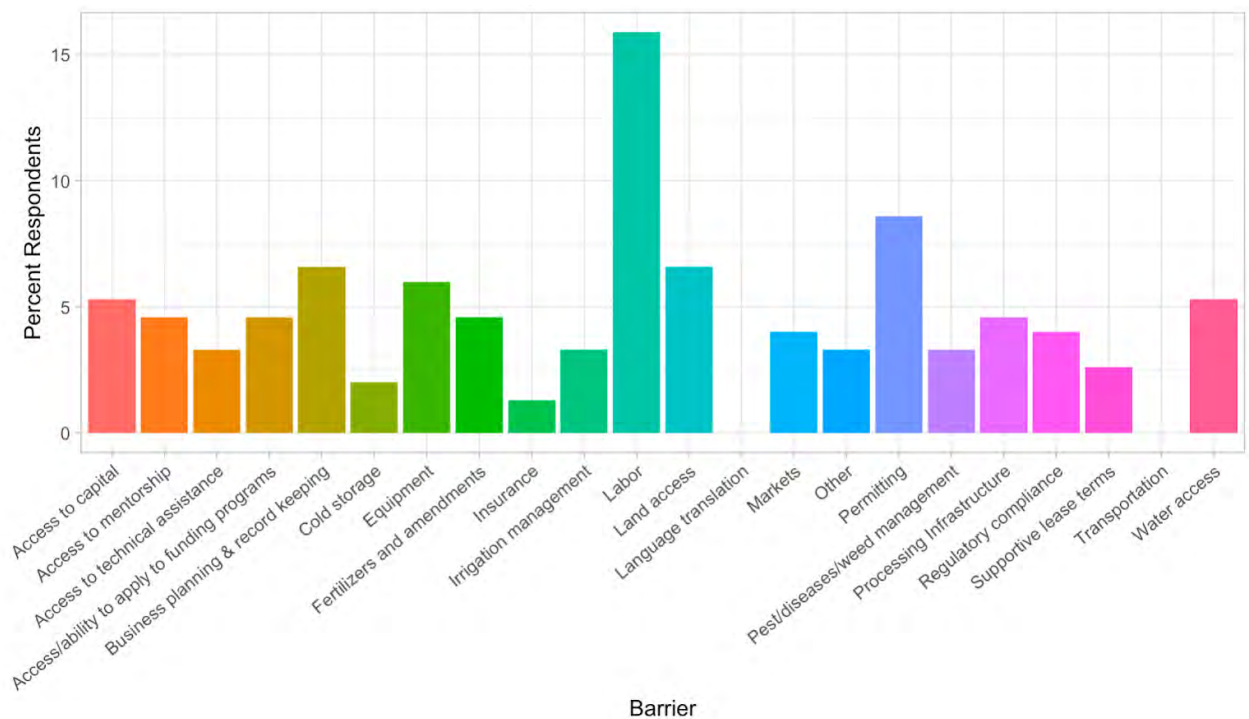


Figure 1a and b. Specialty Crop growers selected (a) all barriers that apply to their crop systems, and (b) their top three barriers.

Figure 2. Specialty Crop Acres: Current and Ideal
Limited Resources Needs Assessment Survey, March 2023

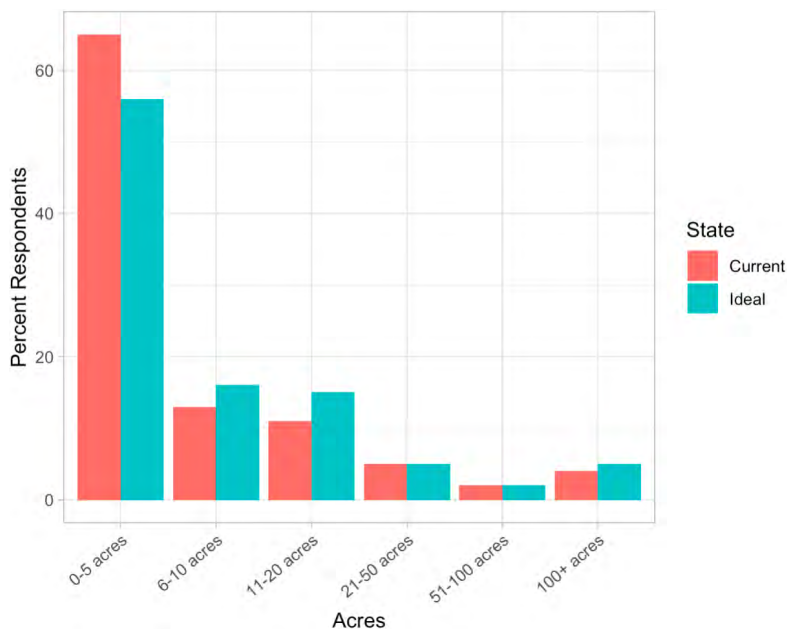


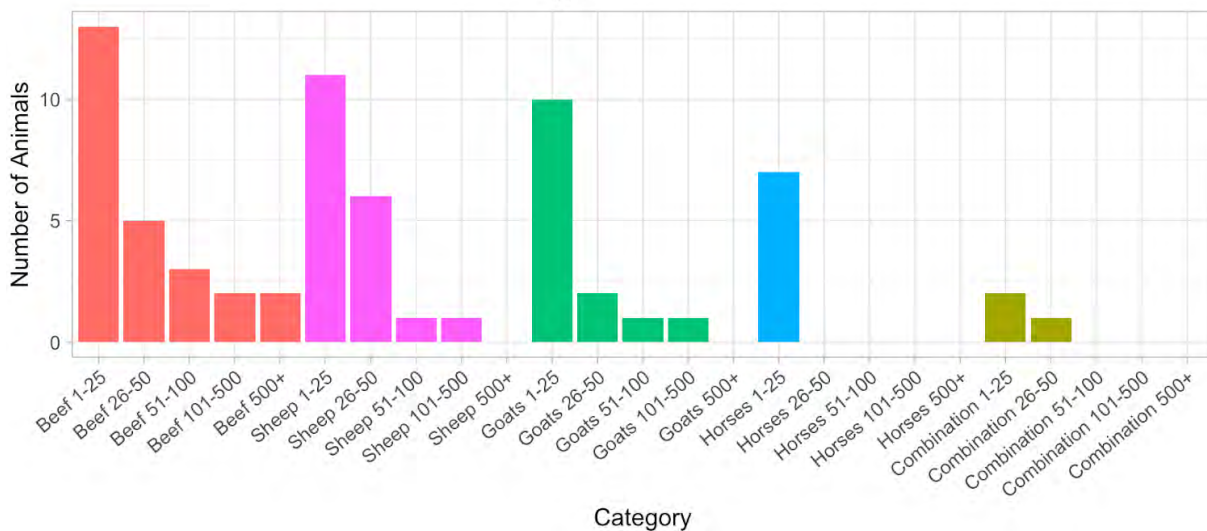
Figure 2. Current and ideal target acres in production for Specialty Crop respondents. The majority of respondents are currently growing on 0-20 acres. Ideally, most respondents would like to be growing within this range in the future as well.

Livestock Responses

Livestock business models included commercial (own/lease land, 58%), community (small scale/neighborhood, 32%), contract/target (paid for grazing, 5%), and other (5%). Approximately 80% of ranches are located in Sonoma county, 9% in Marin, 6% in Mendocino, and 3% in Napa. Considering types of grazing practices, 45% of respondents utilize rest/rotation, 18% use continuous grazing, 16% use fire mitigation, 11% use regenerative, 5% replied “other,” 3% used holistic resource management, and 3% use carbon farming. NRCS conservation plans were used by 39% of grazers, prescribed grazing plans by 22%, “other” used by 17%, carbon farm plans by 11%, and land smart plans by 11%. Number of grazing animals reported by survey respondents is presented in Figure 3.

Figure 3. Number of Grazing Animals

Limited Resources Needs Assessment Survey, March 2023

**Figure 3. Number of reported grazing animals.**

Livestock managers were asked to list three of the most helpful resources so far for their operation. Responses included NRCS, RCD, UCCE, USDA, KTA, SCFSA, SRJC, Farmlink, Fibershed, fellow farmers and neighbors, Stephanie Larson; material resources such as land, water, water infrastructure, electric fences, fodder systems, and compost; economic support such as GoFundMe, EQIP grants, and private loans; support and labor from family members; media attention and agrotourism; and informational resources such as books.

Major barriers preventing livestock managers from reaching their goals included infrastructure, access to capital, markets, and business planning and record keeping (Figures 4a and b). In the fill-in-the-blank sections, respondents indicated that land access and home ranch needs included property ownership, financial capacity, affordable land access, property taxes, and housing for workers. The main infrastructure need was fencing which several respondents reported was expensive. Transportation needs included trailers to transport animals, ATVs for checking animals daily and moving fences, energizers, and water troughs. Market needs included more direct to consumer markets and landowner education of benefits of grazing services and vegetation management. Resources are needed to pay for fire mitigation grazing. Access to capital needs included knowledge of and access to state grants, loans, housing for employees. Other barriers included lack of experience and knowledge,

expensive mistakes, permitting, drought, high cost of feed and other resources, high cost of wool production, and consumer's lack of knowledge. Other needs included labor, predator control, ag assistance, and on-site processing.

Table 3. Approximate percent of respondents grazing on different acreage ranges.

ACRES	% OF RESPONDENTS
Not yet grazing	11%
25 or less	46%
26-50	14%
51-100	0%
101-250	6%
251-500	17%
500+	6%

Figure 4a. Livestock Barriers: Respondents Selected All that Apply
Limited Resources Needs Assessment Survey, March 2023

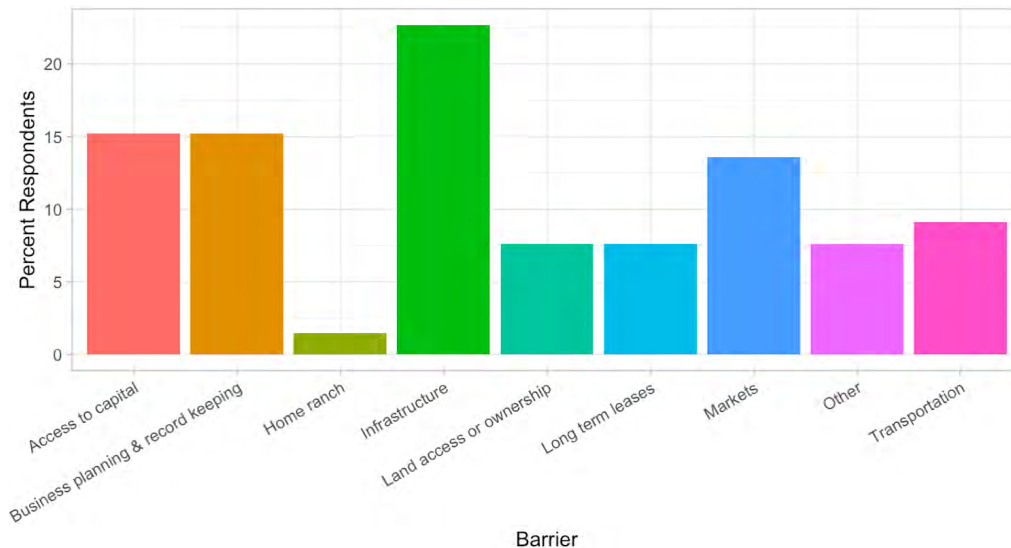


Figure 4b. Livestock Barriers: Respondents Selected Top 3
Limited Resources Needs Assessment Survey, March 2023

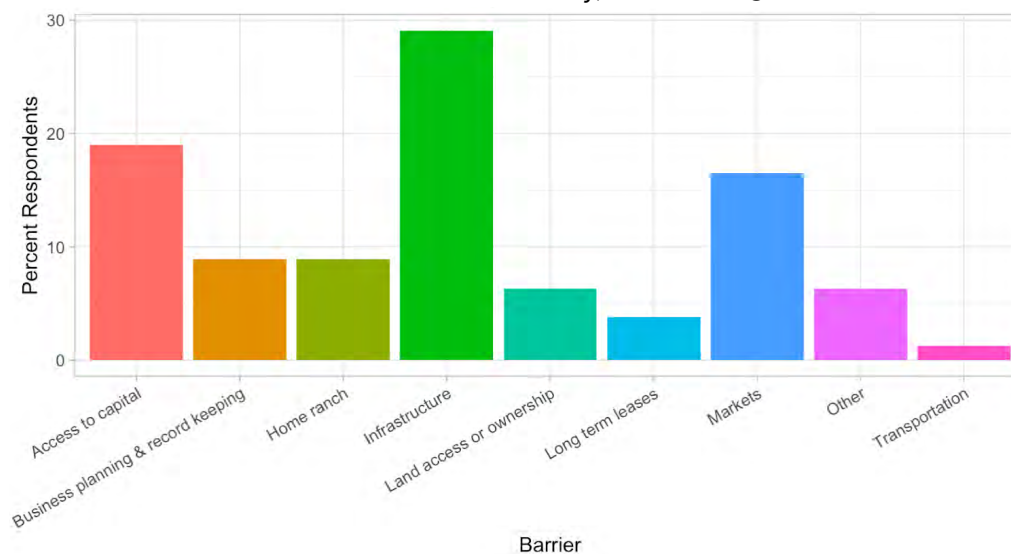


Figure 4a and b. Ranchers selected (a) all barriers that apply to their systems, and (b) their top three barriers.

Table 4. Number of years respondents have been farming specialty crops and livestock.

NUMBER OF YEARS FARMING	% RESPONDENTS	
	SPECIALTY CROP	LIVESTOCK
Have not started	3%	8%
Less than 1 year	4%	8%
1-4 years	7%	22%
5-9 years	62%	17%
10-24 years	12%	17%
25+ years	12%	28%

Conclusions

This survey determined the key barriers to increasing the economic viability of small-scale livestock and specialty crop production for Sonoma County centered on financial capacity and the need for capital to support infrastructure, labor, land access, and business planning and record keeping. Related needs include technical assistance applying for grants, mentorship by experienced grazers/growers, and assistance with in-field challenges.

For specialty crop respondents, common needs included labor, land access, water, markets, infrastructure, equipment, business planning, mentorship, permitting, regulatory compliance, and insurance. In particular, specialty crop growers expressed the need for more land access and reliable labor. Many respondents would like to expand acreage and pay higher wages to support experienced labor, but lack financial capacity to do so. In-field challenges included pest/disease/weed management, irrigation management and water quality, and finding affordable compost. Specialty crop growers need more technical assistance when applying for grant funding and organic certification. If needs were met, growers reported they would increase overall production capacity, crop diversity, tree crop acreage, livestock integration, agritourism, compost applications. Growers stated they would hire more employees, grow their farm team, partner with other growers, and offer on-farm educational opportunities.

For livestock grazers, major barriers and needs included infrastructure, capital, markets, business planning, and record keeping. Grazers indicated the need for affordable land access, labor, housing for workers, fencing, predator control, transportation, on-site processing, and better understanding of state grants and loans. Respondents identified the need for agricultural assistance and more experience and knowledge. Many barriers revolved around the high cost of resources including fencing, land, labor, feed, and wool production. Several grazers noted the need to increase consumer and landowner knowledge of the benefits of grazing for vegetation management and fire mitigation and the need for more funding to support sustainable management practices.

Appendix B. Exemplary Entities, Programs & Resources for Improving Land Tenure for Limited Resource farmers

Land Trusts and Other Conservation Groups Working on Farmland Access

Public

- [Cuyahoga Valley National Park, OH](#)
- [Countryside Initiative](#) (CVNP nonprofit partner)
- [Hawaii Ag Park Program, HI](#)
- [Massachusetts Agricultural Preservation Restriction](#) program, MA
- [Santa Clara County Open Space Authority, CA](#)
- Sonoma County Ag + Open Space District
 - Farmland for All initiative

Nonprofit

- [Agrarian Trust](#) and [Agrarian Commons](#)
- [American Farmland Trust](#)
 - [Buy-Protect-Sell](#) program
 - [Farmland for a New Generation](#) NY
 - [New York Farmland Finder](#)
- [Community Land Trust in the Southern Berkshires](#)
- [Equity Trust](#)
 - [Farms for Farmers](#)
 - [Hudson Valley Farmland Affordability Program](#)
- [Glynwood Conservancy](#)
- [Green Valley Agricultural Conservancy, CA](#)
- [Housing Land Trust of the North Bay](#)
- [Land Trust of Santa Cruz County](#)
- [Maine Farmland Trust, ME](#)
 - [Farmland Protection](#), [Farmland Access](#), [Farm Viability](#) programs
 - [Buy-Protect-Sell](#) program
- [Peconic Land Trust](#)
 - [Farms for the Future](#) program
- [Peninsula Open Space Trust, CA](#)
 - [Farmland Futures Initiative](#)
- [Vermont Land Trust](#)
 - [Helping Farmers Buy Land](#) program
- [Yggdrasil Land Foundation](#)

Financing Resources and Innovators

- [American Ag Credit](#)
- [American Farmland Trust](#) - [Farmland Access Fund](#)
- [Black Farmer Fund](#)
- [California FarmLink](#)
 - [Conservation incentives loans](#)
 - Land loans
- [Dirt Capital Partners](#)
- [Farm Services Agency](#)
- [Iroquois Valley](#)
- [The Nature Conservancy](#)
- [People's Land Fund](#)

Farm Training and Incubation Organizations

- [Agriculture and Land Based training Association \(ALBA\)](#)
- [California Farm Academy Farm Business Incubator](#)
- [Glynwood Conservancy](#)
- [Groundswell](#)
- [Intervale Center](#)

Initiatives outside of the U.S.

- [Boodhan \(Land Gift\) and Gramdan \(Village Gift\)](#) movements, India
- County Farms, England²
- [Ejidos](#), Mexico
- [Europe Access to Land movement](#)
- [Fideicomiso de Tierras Comunitarias para la Agricultura Sostenible](#), Puerto Rico (not international, but has captured interest in Latin America)
- [Kulturland Gennosenschaft](#), Germany
- [Landless Workers Movement and Assentamentos](#), Brazil
- [Parc Agrari del Baix Llobregat](#), Barcelona, Spain
- [Terre de Liens](#), France

POC-led Initiatives and Resources for Land Return

- [The Cultural Conservancy](#) and [Heron Shadow Farm](#)
- [Land Reparations & Indigenous Solidarity Toolkit](#) (Resource Generation)
- [Minnow](#)

² Land owned by local authorities in England that provides an entry point into agriculture for new farmers

- [Native Land](#) ³
- [New Communities, Inc.](#)
- [Northeast Farmers Of Color \(NEFOC\) Land Trust](#)
- [Soul Fire Farm](#)
- [White Buffalo](#)

RESOURCES, other

- [Affirmative & Affordable Farming Covenants and Resale Restrictions.](#)
- [Affirmative Agricultural Easements](#)
- [Agrihoods: Development-Supported Agriculture](#) (NCAT)
- [California Chapter American Society of Farm Managers and Rural Appraisers \(CALASFMRA\) Trends Report](#)
- [California Community Land Trust Network](#) (affiliated CLT's working in California)
- [California Council of Land Trusts](#)
- [Conservation development \(Wikipedia\)](#)
- [Criteria for starting an Agrarian Commons under Agrarian Trust](#)
- [Example of a Sale of a Farm Restricted by an Option to Purchase at Agricultural Value.](#)
- [Frequently Asked Questions about Community Land Trusts](#)
- [Center for Ethical Land Transition](#)

Additional resources

- [Building Collaboration Among Community Land Trusts Providing Affordable Housing and Conservation Land Trusts Protecting Land for Ecological Value](#) (Lincoln Institute for Land Policy)
- [Conservation and Affordability on Working Lands: Nine Case Studies of Land Trusts Working with Next-Generation Farmers](#) (California FarmLink)
- [Farmland Access Legal Toolkit](#) (Vermont Law School Center for Agriculture and Food Systems)
- [Land Policy: Towards a More Equitable Farming Future](#) (National Young Farmers Coalition)
- [Policy Incentives for Beginning Farmer/Rancher Land Access](#) (Land Access Policy Incentives Project)

³ A map that shows Indigenous territories, treaties, and languages. Sonoma County's indigenous ancestors include the Pomo, Miwok and Wappo Peoples.

REFERENCES

Endnotes, Data Sources and Resources

Ch. 2. Overview of Limited Resource Farmers in Sonoma County

- 1 [USDA](#)
- 2 [A Portrait of Sonoma County: 2021 Update](#)
- 3 https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_State_Level/California/
- 4 Ibid
- 5 These results should be considered in the context of current [demographic statistics](#) for growers and ranchers in Sonoma county (NASS USDA, 2017). It is possible this survey might not have reached certain farmer/rancher communities that have been historically underserved, and other methods for gathering information (such as interviews) may be helpful for including groups not represented in the survey results.
- 6 The USDA defines specialty crops as “fruits and vegetables, tree nuts, dried fruits and horticulture and nursery crops, including floriculture.”

Ch. 3. Favorable Conditions for Limited Resource Farmers at the Agricultural Area Scale

- 7 <https://www.irs.gov/credits-deductions/businesses/opportunity-zones>

Ch. 4. Existing Conditions for Limited Resource Farmers in Sonoma County

- 8 [Sonoma County Crop Report](#)
- 9 [CDFA Certified Farmers Markets](#)
- 10 [Sonoma County Farm Trails](#)
- 11 [Feed Sonoma](#)
- 12 [Sonoma Farm Trails](#)
- 13 [California Cheese Trail Map](#)
- 14 [Cottage Food Law](#)
- 15 <https://www.cdca.ca.gov/Statistics/>
- 16 [CDFA Ag Organic Report](#)
- 17 [Sonoma County Crop Report](#)
- 18 [California Department of Conservation and California Department of Conservation. “Documenting Changes in Agricultural Land Use Since 1984.” Farmland Mapping & Monitoring Program, 2019.](#)
- 19 Ag Census analysis, Chapter 2
- 20 [2021 Sonoma County Crop Report](#)
- 21 [Sonoma County General Plan , Ag Resources Element](#)
- 22 <https://www.sonomavalley.com/about-us/tourism-statistics>
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- 24 [Cal AgTour](#)
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- 27 Ibid
- 28 [California Farmlink](#)
- 29 <http://sonomacountygroundwater.org/>
- 30 [Sonoma County General Plan, Ag Resources Element](#)
- 31 [Sonoma County General Plan, Land Use Element](#)
- 32 [ESRI Opportunity Zones Webmap](#)
- 33 [Landsearch, land.com](#)
- 34 [LandWatch](#)
- 35 [ACS Housing Units](#)
- 36 [Sonoma County General Plan, Land Use Element](#)
- 37 [Land Trust Alliance](#), [Sonoma Land Trust](#), [Golden State Conservancy](#), [Bodega Land Trust](#)
- 38 [2021 Sonoma County Crop Report](#)
- 39 [Bay Area Greenprint](#)
- 40 [Ag + Open Space](#)
- 41 [West Coast Watershed](#)
- 42 [Bay Area Greenprint](#)
- 43 Ibid
- 44 [Data USA](#)
- 45 [A Portrait of Sonoma County](#)
- 46 [Best Places](#)
- 47 Ag Census analysis, Chapter 2

Ch. 5. Models for Land Access and Tenure

- 48 [IRS, emerging rules governing conservation easements \(Notice 2007-50\)](#).
- 49 See Center for Agriculture & Food Systems, University of Vermont Law School, Farmland Access Legal Toolkit, [Affirmative Agricultural Easements](#).
- 50 [Marin Ag Land Trust DRAWS Initiative](#)
- 51 [Frequently Asked Questions about Community Land Trusts](#), Burlington Associates in Community Development
- 52 [Native Land Map](#)
- 53 For example, see [Black Farmer Fund](#)
- 54 <https://attra.ncat.org/publication/agrihoods-development-supported-agriculture/>
- 55 https://en.wikipedia.org/wiki/Conservation_development#Conservation_community

Ch. 6. Conclusions and Recommendations

- 56 [Conservation Reserve Program Transition Incentive Program](#)
- 57 See example of the [Peconic Land Trust](#), Models Chapter, for example of use of overlays.
- 58 [Building Collaboration Among Community Land Trusts Providing Affordable Housing and Conservation Land Trusts Protecting Land For Ecological Value](#)
- 59 Modification of the expenditure plan could allow Ag + Open Space to partner with other organizations that already have such authority (e.g. (Marin Ag Land Trust and Peninsula Open Space) to fundraise for matching funds for these types of improvements.
- 60 [Governor Signs Sen Dodd’s Climate Resilience Bill](#). See also [grant guidelines](#)
- 61 <https://www.wolterskluwer.com/en/expert-insights/state-family-farm-incentives>
- 62 [Land Access Policy Incentives Project](#)
- 63 See National Young Farmers Coalition [One Million Acres Campaign](#) and [Land Policy Report](#)
- 64 [California’s Farmer Equity Act](#)

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