Challenges in Organic Agriculture in California:

Summary of findings from a statewide needs assessment

2 April 2024

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Organic food has a farm-gate value of $9.9 billion (USDA NASS, 2020) and sales value of $61.7 billion, representing 6% of all US food sales (Organic Trade Association, 2022). The last decade (2011-2021) has seen a tremendous growth in organic agriculture across the US, with a 79% increase in certified organic acreage and 90% increase in the total number of organic farms (USDA NASS, 2021). California is the leading producer of organic foods by volume and acreage. As the industry has grown and diversified, so have the challenges that stakeholders face.

The University of California Organic Agriculture Institute (UC OAI) was established in 2020 with the aim of meeting the research and extension needs of the organic agriculture industry in California, both by leveraging the unique expertise of the UC as well as supporting existing networks of organic stakeholders. This brief summarizes findings from a statewide needs assessment (funded by USDA NIFA, CA-R-ENT-5234-CG) to help guide the activities of the UC OAI.

Key findings from our survey show that development of more organic markets, maintaining organic integrity, and reducing certification and regulatory burdens are of high priority for stakeholders throughout the sector. Organic growers additionally reported challenges with production costs, weed management, water and labor.

Methodology

OAI's needs assessment used three strategies to identify challenges within the organic sector:

1. **Qualitative, semi-structured interviews** with 60+ key stakeholders across the state who represent various stages of the organic value chain (e.g. growers, input suppliers etc.), crop groups (e.g. citrus, vegetables etc.), and interests (e.g. certification, advocacy etc.). The goal was to understand their motivations, challenges, needs, and anticipated trends.
2. **An online survey** that was sent to all certified organic growers to identify production and structural challenges. We received 423 complete responses from various regions of the state (Figure 1).
3. **Participant observation** during farm visits and workshops on organic agriculture supported by the UC OAI. At the time of writing, location tours had been conducted in Los Angeles, San Diego, Riverside, Imperial Valley, and Humboldt Counties.

Figure 1: Responses to the grower survey by region of California

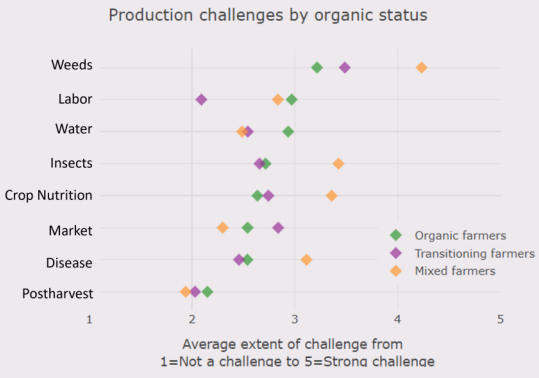
How do challenges differ by organic certification status?

Our survey found that the specific challenges prioritized by growers tended to vary with their organic certification status and overall operation type.

Fully certified organic farmers tended to prioritize pest management, postharvest issues and labor costs, as well as farm business planning and management.

In contrast, **farmers transitioning to organic** reported strong financial and market barriers, such as access to capital, certification costs and finding viable markets for organic.

Finally, **mixed farmers** (i.e., land under both organic and conventional production), mostly reported production challenges, such as soil health management, pests, diseases, and weeds. They also reported increased difficulty with regulatory requirements such as food safety and recordkeeping.



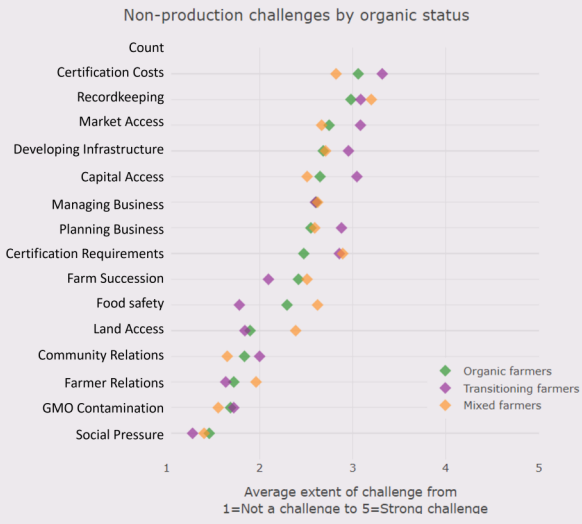


Figure 2: (Left) Production challenges and; (Above) Non-production challenges by organic status. Note that mixed growers are those who have land under both organic and conventional production.

Production Level Challenges

How do they vary by crop group?

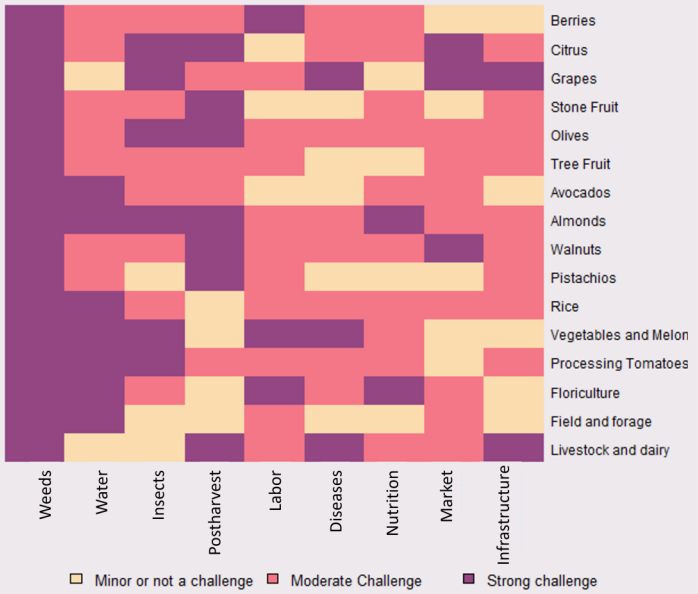


Figure 3: Crop-specific production challenges

In our key informant interviews, we asked growers to elaborate on challenges with each crop they grew, and then qualitatively coded these into minor, moderate and strong challenges.

Weed management was the top challenge across all crop groups. Water and labor shortages were also a major consideration. Small growers ineligible for agricultural water supply or those who reside in restrictive SGMA (Sustainable Groundwater Management Act) districts reported the greatest water challenges, whereas labor issues were most important to growers close to urban areas who cannot afford to pay comparable wages.

Among agronomic challenges, pest and disease issues varied by crop type, but tended to be exacerbated by climate variability, as well as a lack of reliable management strategies and technical assistance. While soil nutrition products are available, they are considerably more expensive, which raises production costs, especially for permanent crops. Growers also wanted more information on nitrogen availability after cover cropping or the addition of manure/compost.

Postharvest stakeholders reported shorter shelf lives for some produce due to more rapid spoilage compared to conventional produce, and an inability to fumigate by NOP standards. Infrastructure for small-batch harvesting and processing was also lacking for many organic operations.

Systemic Challenges

♦ Certification and Reporting

The burden of meeting certification requirements was a challenge reported by many stakeholders but varies by their scale of operation. Small growers mostly struggled with the costs of getting certified, especially with multiple fees to be paid to both their organic certifier as well as the California Department of Food and Agriculture State Organic Program (CDFA SOP). Operations which hired fewer workers also expressed difficulty with managing the paperwork in addition to their farm. On the other hand, large operations, and those which are vertically integrated, faced difficulties with managing multiple types of paperwork. For instance, large retailers conduct independent audits of their organic and sustainability metrics that shifts the burden of compliance upstream. Handlers and larger growers must comply with multiple independent audits to sell their produce, requiring a duplication of their effort.

♦ Market Size and Consumer Awareness

Stakeholders reported that rapid growth in the organic industry has led to an influx of new farming operations, consolidation of buyers, and a drop in the price premiums that growers received, particularly for crops with saturated markets. Since yields in organic production are typically lower than under conventional production, growers were finding it increasingly difficult to meet their costs of production at these lower price points. A lack of consumer awareness of the USDA Certified Organic label and the stringent regulatory processes that it entails also contributes to reduced price premiums. Parallel labels advancing various sustainability metrics(e.g., pollinator friendly, regenerative agriculture etc.) has added to consumer confusion and a perceived drop in the value of the organic label.

♦ Organic Seed

Most growers still use some or all conventional seed for their production, an exception permitted by the US Department of Agriculture National Organic Program (USDA NOP) when organic seed cannot be found. A study by the Organic Seed Alliance found no meaningful improvement in organic seed use between 2016-2022, due in part to agronomic challenges associated with organic seed production (Hubbard, Zystro and Wood, 2022). Our interviews with growers, seed contractors, and seed suppliers suggests that there is very little incentive for the seed market to develop without external stimulus (Figure 4).

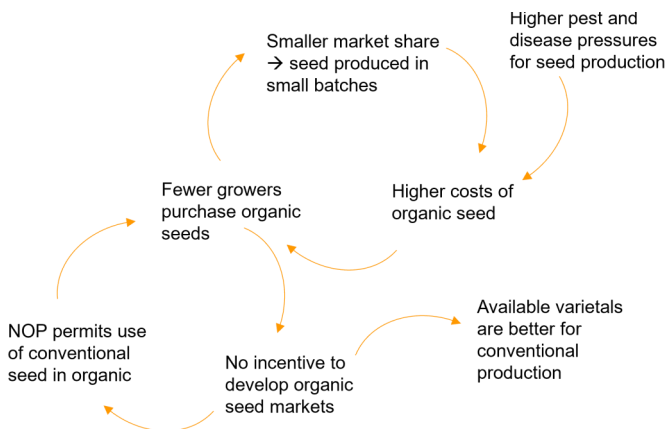


Figure 4: Flowchart of the challenges in organic seed

♦ Organic Integrity

Challenges with maintaining organic integrity are felt differently across the value chain. The current system for maintaining organic integrity is hugely trust-based. Aside from annual inspections by the organic certifier and sporadic spot checking of produce by CDFA and other auditors, there is very little continuous oversight. Multiple stakeholders reported being aware of co-mingling of conventional and organic produce, likely due to the higher organic prices. Trust in the integrity of organic imports is low. Furthermore, due to the need to maintain integrity, only the largest processors receive the volumes required to run an organic batch, or dedicated organic processing line, leaving many small growers without access to organic processors. Growers selling at farmers' markets also report misuse of the terms 'local' and 'organic' among growers who are not certified but use some organic farming practices.

Preliminary Recommendations

♦ Research Needs

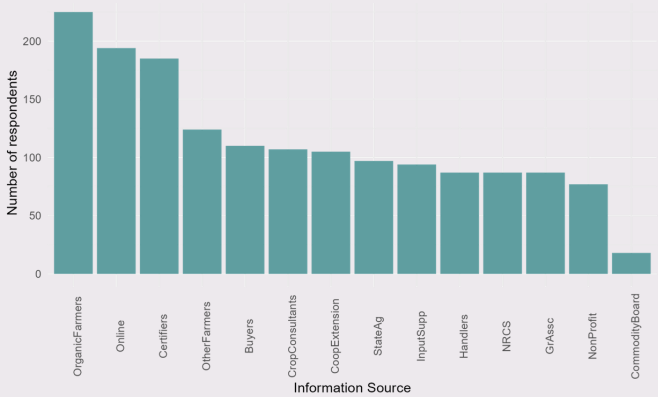
– Support the development of new practices to address the myriad agronomic challenges faced by organic growers, (Figure 3) in both

Where do organic farmers get their information from?

Most growers speak to other organic growers and use online information sources. Many growers lamented the disinvestment in UC Cooperative Extension, particularly Farm Advisors well-versed in organic agriculture. Although many used private consulting services, the siloing of research in private companies and proprietary information excludes smaller growers.

The grower survey also showed regional variations in access to information. Sacramento Valley growers had access to the largest number of information sources. Regions of the Far North and North Coast used fewer private sources of information (e.g. input suppliers, buyers etc.) while the most agriculture-intensive belts in the San Joaquin Valley and Central Coast relied more on these.

"Resting on our laurels, feeling over confident that we are the number one organic state, I think, within California has caused a lot of atrophy and lack of support within our public institutions in California, and by those public institutions I mean, CDFA and UC Cooperative Extension." - Grower Interviewee



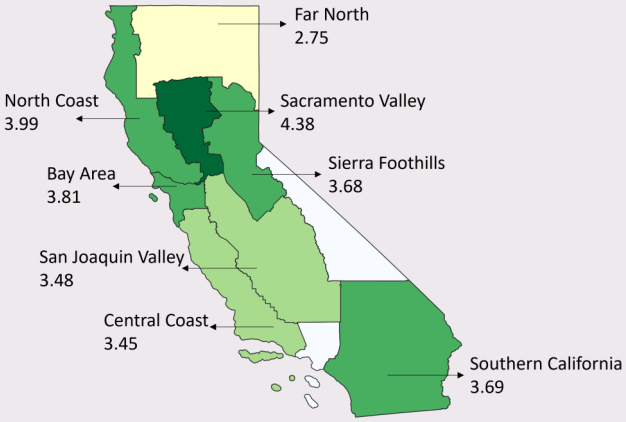


Figure 5 (Left): Information sources by the number of participants who reported using them; (Right): Average number of growers' information sources by region

public research organizations and private industry through research grants, new Cooperative Extension positions focused explicitly on organic, incentives for on-farm trials, and fast-tracking of organic input certification.

- Incentivize the development of organic seed markets and varietals suited for organic production. Encourage participatory plant breeding not just by the University, but also by independent farmers and non-profits; insure against losses due to pest or disease pressure; and support selection of climate resilient traits.
- Fund systems-level research to understand how different organic farming practices interact with each other, with the goal of encouraging the adoption of a more integrated approach to production.
- Support the design and development of small-scale infrastructure, such as machinery or equipment, that can suit the needs of smaller organic growers.

♦ Regulatory and Policy Supports

- Minimize risks associated with transitioning to organic farming by providing financial subsidies to mitigate the challenges that transitioning growers face during the 3-year transition process (e.g. no organic price premiums, higher production costs etc.).
- Encourage adoption/expansion of organic farming by providing growers with economic and/or non-monetary incentives.
- Streamline the organic inputs certification process to ensure that newly developed solutions are quickly available on the market. Provide grants and forums for independent third-party trials of organic inputs to encourage transparency and grower adoption.

♦ Market Supports

- Improve consumer awareness of the USDA Certified Organic standard, with focus on the wide range of human health and environmental benefits of organic agriculture, as well as regulatory requirements and integrity of the label.
- Enhance organic integrity throughout the value chain by developing more effective monitoring systems, maybe in partnership with handlers and buyers. Increase transparency on organic standards in direct-to-consumer markets/ farmers' markets through farmer awareness, consumer awareness and increased penalties for misrepresentation.
- Create a marketing order dedicated to research and marketing of organic produce. Support public and private research on market availability and pricing of various organic commodities to support business planning among organic stakeholders.
- Encourage uptake of organic products by mandating organic food purchasing in state institutions such as public schools. Incentivize the purchase of organic food in state-supported supplemental nutrition programs such as SNAP and WIC.

♦ Advisory and Extension Supports

- Build capacity for technical assistance by funding UC Cooperative Extension positions dedicated to organic agriculture with expertise in priority areas for organic research.
- Assist farmers, especially smaller farmers, in meeting the regulatory requirements for organic certification.

*Note: Research findings in this report are a work-in-progress and subject to change.

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