

Smaller Cultivation & California Cannabis Policy:

Recommendations for a Multi-Scale Cultivation Sector



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On October 17, researchers above convened with a sense of urgency. California’s cannabis market – and the smaller-farm system that made it globally renowned – is at a crossroads. We share a unanimous conviction that policy measures must be enacted to ensure a marketplace for smaller and larger cultivators alike. It is our belief that this moment is the last chance to deliver on the intent of Proposition 64 to create a cultivation sector based upon smaller farms.

This moment is also an opportunity for California policymakers to create a new model of small-farm inclusive agriculture – a model that diverges from the dominant agricultural systems we currently have. California has the chance to lead toward a sustainable, and equitable agricultural system suited for the unique challenges of today’s world – from climate change and supply-chain security to social equity and rural resilience.

We convened to discuss what measures might be taken to ensure the place of small- and medium-sized cultivators¹ and enterprises in California’s cannabis cultivation sector.

The researchers represent seven different University of California and California State University institutions and bring a wealth of knowledge on smaller farms, agricultural regulation, cooperative enterprise, and cannabis.

It was the explicit intention of Proposition 64 (Section 2.J) that California build a cannabis industry “around small and medium sized businesses by prohibiting large-scale cultivation for the first five years.” This policy objective was undermined in several ways. Left unaddressed, smaller businesses and farms will likely experience total collapse soon. In many ways and places, this collapse has already begun.

The cannabis market – especially the cannabis cultivation sector – is in disarray. Prices are historically low; the value of licenses and farms are dropping; licensed and unlicensed cultivators are leaving the state if not the industry, leading to a brain drain and the depletion of would-be

¹ **Note on terminology:** “Small and medium” correlates to a specific canopy (up to an acre of outdoor and half-acre of indoor or mixed light) defined in state law. For our purposes, “smaller cultivators” (or “smaller cultivation,” etc.) corresponds to these license types and to a specification that *total* cultivated area of any *one* license-holding individual or entity is under this amount (whether for personal, medical, or adult use.) At times in this report, we specify size when different from these thresholds. Further research could inform a more flexible “smaller” cultivator definition. Elements that may be considered in refining “smaller” include: ownership patterns (e.g. owner-operated vs. shareholder-driven); differences in production amount/harvest cycles between outdoor, indoor and mixed light; and the potential for “smaller” to be pegged at a certain percentage of the median size of cultivation licenses (e.g. the smallest 25-30% of license-holding entities).

licensees; and regulations, rightly or wrongly, are being roundly criticized in public media from the *LA Times* to *Washington Post*. This crisis is affecting numerous California jurisdictions, rural and urban, where cultivation has been a key livelihood strategy. Of all actors in the cannabis market, the impacts of this current moment rest most heavily upon smaller producers. Part of this stems from the asymmetric burdens regulation has placed upon them – burdens that are eroding the potential for a cultivation sector built upon smaller production. Among these inequitable burdens on smaller cultivators are:

Limitations on market activity and organization:

- Limited or no access to technical assistance historically extended to other agriculture;
- Limited or no access to reliable financial services, also assumed by other agriculture;
- Restrictive cooperative regulations that inhibit economies of scale and other benefits of cooperative organization, specifically for smaller cultivators;
- Prohibited ability of smaller cultivators to access markets via direct-to-consumer sales;
- Limited infrastructure to differentiate product through appellations;
- Lack of allowances for medical cultivation, provisioning, and access, particularly small-garden, not-for-profit, closed-loop collectives and/or patient-supported community agriculture; and
- Lack of methods to differentiate products through small-farm and sustainable certifications.

Local Regulatory Hurdles:

- Local permitting bottlenecks in understaffed, low-resource, rural jurisdictions, made worse by declines in cultivation tax revenue;
- Confusing, delayed and sometimes-punitive interactions with government agents (local and state), which disproportionately impact cultivators with fewer resources;
- Volatile local regulations that carry costs in time and money;
- Policy obstruction (e.g. opt-out zones; lawsuits) by local and statewide political groups;
- Local bans and highly-restrictive zoning that excludes entire jurisdictions of previously-operating smaller scale cultivators from economic participation;
- Local restrictions and bans that make personal-use cultivation infeasible;
- Constrained retail licensing (via bans, license caps, and restrictive zoning) that favors large scale, vertically integrated firms and their agricultural product over smaller cultivators; and
- Little region-wide cooperation among permit counties (unlike ban counties, which coordinate enforcement efforts), leading to significant duplication of efforts.

Compliance Burdens & Supply Chain Impediments:

- One-size-fits-all compliance requirements (e.g. for buildings, roads, waterways) for farms that are ill-suited to smaller farms and the remote areas where they often are;

- High costs and administrative burdens for smaller farms;
- Onerous, expensive CEQA/EIR for individual farms that few other California farmers – and no small farmers – are expected to complete;
- Requirement for CEQA completion prior to cultivation, which favors well-capitalized large-scale firms in non-legacy parts of the state and disfavors new smaller cultivators;
- With advent of Type 5 Large licenses, new disadvantages for smaller cultivators, who cannot achieve similar economies of scale or market access;
- Requirements to pass cannabis through mandatory distribution licenses that entail little benefit and high risks of nonpayment for smaller producers without distribution licenses;
- Testing requirements that favor larger firms' economies of scale; and
- A licensing system that tends toward overproduction, price collapse, and farm failure.

The State of California (“the State” from here on) and Department of Cannabis Control have taken significant measures to address many of these challenges, as with the Local Jurisdiction Assistance Grant, Cannabis Equity Grants, the Cannabis Appellations Program, OCal, and recent tax relief. These measures are significant and laudable, though we anticipate new legislative action is required to correct the structural barriers to smaller cultivators and to meet the scale of present challenges.

Unrestrained competition coupled with ameliorative but limited equity programs are insufficient to support a production sector that includes smaller cultivators. A century of US agribusiness history shows: farms will decline, social fabric will disintegrate, ecologies will suffer, and regulations will be subjected to the will of fewer, more powerful interests to protect a system that most benefits them. Alternatively, we believe the State can have a central role in creating a market that supports small producer livelihoods. This will have derivative, long-term and positive effects on environmental stewardship and the stability of communities across California. An equitable farming system based on smaller cultivation will also incentivize involvement of more cultivators to transition from the unlicensed market.

By securing the place of California's diverse-scale cultivation system today – and protecting the ability of smaller scale cultivators to innovate, as they have done for decades – California will be well-positioned not only to export world-class cannabis, but also to model a world-class agricultural regulatory system that supports cultivators, communities and environments. The current moment of crisis is a moment of opportunity.

Below we offer policy considerations based on research and expertise from our respective fields. Acknowledging the hard work of officials to address many of these issues in the past, we offer these suggestions as researchers engaged on the ground with farmers, local regulators, decision-makers, environmentalists, community members, and industry professionals in the licensed and unlicensed markets. We address a panoply of issues, from the most granular details of smaller farm burdens to a broad scope of possible market interventions.

As with all documents of this size and with this many co-authors, not all of us agree on each and every policy pathway. In that light, authorship does not necessarily imply endorsement. Further, while we offer size considerations on some recommended measures below, these sizes are merely advisory and open to adjustment.

We hope these recommendations will be considered as the State Legislature, DCC and Governor's Administration set priorities for the 2023 legislative calendar and local governments set their own 2023 priorities. Please call on us to elaborate on, build from, or confer on any of these suggestions.

We also invite any and all stakeholders—farmers, workers, residents, environmentalists, other industry actors, and others—to provide feedback. While we put forward the best recommendations our research and knowledge affords, we are also eager to learn more and hear from people affected by the issues discussed below. *To respond, please contact the corresponding author below or any of the authors.*

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This briefing is broken into three sections on state-level policy reform areas to address:

- 1) small cultivator concerns and needs;
- 2) local regulatory burdens, roles and capacities; and
- 3) the state regulatory system.

Section 1: Smaller-Scale Cultivator Needs & Concerns

This section addresses matters that affect the everyday functioning of smaller-scale cultivation. We are responding, first, to the need for technical and financial services in cannabis agriculture – services that all other forms of US agriculture benefit from. Second, we saw a critical need to create more pathways for direct-to-consumer sales, which many other farmers can engage in. In particular, there is a need to open up and support a broad pathway to cooperatives for smaller cultivators to associate and achieve economies of scale. There are multiple channels for direct sales, from farmstands and on-farm sales to community-supported agriculture to sales events, like farmers markets. Third, smaller cultivation could also grow through the resuscitation of not-for-profit, community-based medical cannabis collectives and/or patient-supported agriculture. Finally, smaller cultivation could benefit greatly from multiple ways to differentiate their product, including “sustainably-grown” and “small-farm grown” labels, in addition to appellations currently being developed by the state and other labels like “locally grown” suggested in Section 2, #2. All of these openings for smaller farmers require reform to the mandated role of distributors in the supply chain and the restricted access to and protocol around testing labs (see Section 3, #3 & 4).

#1 Provide technical-agricultural assistance and financial services to smaller cultivators:

- Provide smaller cultivators free technical assistance modeled on or through the University of California’s Agriculture and Natural Resources Small Farms Cooperative Extension program.
 - Provide state funding for Cooperative Extension Advisor positions at the state-level (or a parallel program) to assist cultivators who grow cannabis with technical, production, and farming concerns.
 - If UCANR is unable to host this program because of funding streams, partner with Resource Conservation Districts, who generally do not receive federal funding and may be able to expand technical assistance to cannabis cultivators.
 - Ensure this technical assistance program provides:

- Technical assistance to smaller cultivators to develop business skills related to product differentiation;
- Infrastructure assistance to smaller cultivators to develop off-grid renewable energy, water storage systems, and road repairs that protect sensitive ecosystems;
- Technical assistance to enable transition into OCal, appellations, or other programs that exist or are proposed here (e.g. see #3 this section).
- Establish a revolving fund for credit, loans, cost-share grants, and mortgage assistance to smaller cultivators.
 - Ensure strict eligibility requirements that enhance social equity and environmental sustainability.
 - Provide appropriate State staffing for loan and grant processors.
 - Delegate staff – or work with Cooperative Extension, RCDs, or another parallel technical assistance program above – to provide technical assistance programs for financial matters, educate qualifying farmers on these services, and solicit participation.
- Leverage the existing credit union sector as a “latent” capacity builder.
 - Create a specific “cannabis carve-out” under the State’s credit union statutes.
 - Facilitate credit unions in creating specialized cannabis banking entities known as credit union service organizations (CUSOs) to specialize in cannabis and small farm business.
 - Utilize Public Banking in partnership with credit unions to offset the risk of credit union participation, while accessing capital unique to the Public Bank model.

#2 Promote economies of scale for smaller cultivators by facilitating broader pathways to cooperatives:

- Facilitate farmers to form Agricultural Cooperatives (outside the CCA system) through a dedicated state program that includes administrative and legal support.
 - Use Cooperative Extension, RCD’s, or other technical assistance centers to facilitate cooperative formation in dialogue with farmers.
 - Extend financial services (detailed above) to cooperatives.
 - Seed a low-interest loan fund (linked to FSA rates) specifically for Ag Coops that would self-fund from participant repayment and interest.
- Create a one-time grant fund for farmers to incentivize and support entry into Agricultural Cooperatives.
 - Dedicate part of this fund to supporting regional non-profit cooperative developers (ideally farmer-led) to assist cooperative formation and functioning.
- Accelerate licensing for cooperatives for an initial five-year period, with the possibility of renewal.

- Create a “cooperative exception,” similar to current equity license applicants, that would allow special CEQA compliance timeframes and reduced or eliminated licensing fees.
- Allow cooperative members to possess singular licenses (e.g. distribution, processing, transport, and cultivation, if feasible over multiple cultivation sites) for the entire cooperative.
 - Reform METRC and other relevant systems to make this possible.
- Clarify if, how, and that other license types are subject to traditional cooperative statutory guidelines.
- Immediately reform Cannabis Cooperatives Associations (CCAs) or abandon the system:
 - Recognize cannabis cultivator cooperatives as having similar legal-statutory rights as a traditional agricultural co-operative.
 - Lift the 4-acre size cap on cooperatives (no such restriction exists in any other form of co-operative enterprise).
 - Increase the maximum holdings of a co-operative member from 10k square feet to one (1) acre of total cultivated area or 60% of the median total cultivated area for all individual licensees.
 - Allow members to hold more than a single license.
 - Eliminate redundant licensing requirements within cooperatives in order to allow one licensee to serve all coop members.
 - Create a pathway for co-operatives to merge.
 - Allow for larger cultivation operations to join cooperatives for mutual benefits, but only on a non-voting or 1-vote/1-entity basis.
 - If these reforms cannot occur by 2024, retire the CCA system.

#3 Allow direct-to-consumer sales for small cultivators in order to ameliorate high supply chain costs and loss of pricing control:

- Enable cultivators to have sales events, as detailed in AB 2691 (proposed 2022).
- Allow on-farm direct sales for smaller farms, through farm stands and field stands as codified in AB 2168 (2008), including cannabis flower and value-added processed goods, so long as they do not involve volatile solvents defined in license Type 7.
- Allow a designation for smaller cultivators to provide a subscription-based, direct-to-consumer provisioning service, such as that enabled by AB 224 (2013) for Community Supported Agriculture.
- For any or all of these activities, afford smaller cultivators direct access to testing facilities instead of mandating passage of product through a distributor.
- Conduct review to ensure that these options do not require large or cumbersome administrative hurdles or costs higher than those for other agricultural crops.

#4 Re-visit small-scale medical collectives as a statewide exempted land use and as a model for future policy:

- Extend intent of AB 1186 to include ability to collectively provision and access medical cannabis by following measures:
 - Reinstitute not-for-profit, closed loop medical collectives;
 - Allow collectives to circulate medicine and reimburse member-cultivators for inputs and labor;
 - Require a membership/charter agreement delineating roles and responsibilities, inputs and cultivation methods, cost calculation, reimbursement protocols, liability, and testing protocols;
 - Grant collectives access to quality/safety testing labs, as mandated by agreements;
 - Allow collectives ability to forego quality/safety testing labs, if their agreements do not require it, but do require liability clauses in case of adulteration;
 - Exempt medical collectives from local bans and local permitting processes if under 2500 square feet of cultivated space (outdoor) and 1000 square feet (indoor or mixed light) on a property where a garden is otherwise allowed and reasonable setbacks are observed; and
 - Draw from existing Community-Supported Agriculture and medical collective case law (i.e. *People v Baniani*) under Proposition 215 to codify this capacity.

#5 Assist smaller cultivators in differentiating products by creating low-burden certifications:

- Provide technical assistance (see #1 above) to assist smaller cultivators in meeting and obtaining OCal certification.
- Develop a “sustainably-grown” certification label.
 - Administer this certification and any inspection needed through the Cooperative Extension, RCD, or another designated non-profit or governmental agency.
 - Model this certification on CDFWs Wildlife, Sun & Earth and/or regenerative agriculture certification.
 - Offer incentives like reduced taxes and grants for infrastructure improvements (e.g. solar) connected to certification (see #1 above)
- Develop a “small farmer grown” certification label.
 - This label should accord to one State definition of “small farmer” (see Footnote 1 above) and should take into account total cultivated area (stacked or otherwise) of licensee and ownership structure (i.e. it should be owner-operated)
 - Ensure that certification requires as little administrative burden as possible (i.e. automatically making certification available to all smaller farms)

Section 2

Local Control and Small Cultivators

In this section we address the matter of local control, which has produced a scenario in which two-thirds of California's counties have banned non-personal cannabis cultivation. While some localities have banned cultivation because of cultural-political opposition, many simply lack the governing capacity to create their own regulatory system from scratch. Other jurisdictions that have permitted cannabis are struggling to form policy, to maintain inspection and permitting commitments, or to legally defend their policies. Many jurisdictions place onerous conditions on personal-use cultivation that make it infeasible to self-provision. Retail bans and restrictive zoning creates bottlenecks in the supply chain, making it even more difficult for remote and smaller cultivators to access markets. Large-scale growers with easy access to capital may be able to move their operations to permit jurisdictions and navigate the ever-shifting patchwork of local regulations on top of the already high burdens of the licensing system (see Sec. 3). Yet, smaller cultivators and those with limited resources to move and rebuild their lives are left with no legal pathway, and are often treated like criminals, simply because of where their farm and life is located. Local control, then, is an equity issue. Below we suggest some ways to modify local control that could help preserve smaller farms and provisioning.

#1 Policy improvements to reduce harms of local cultivation bans:

- Create a small-cultivator CEQA process (e.g. a ministerial process) at the state level for counties that do not have programmatic EIRs so that CEQA burdens are not placed on individual small cultivators.
- Create an opt-in, state-administered boilerplate policy for ban counties that allow small cannabis farms (e.g. under 2500 square feet outdoor cultivation and under; 1000 feet indoor/mixed light).
- Explore legislative measures to prevent localities from banning smaller scale cultivation on agriculturally and residential-agricultural zoned land or land that would otherwise be covered under RTFA rules, while allowing local land use decisions, such as appropriate setbacks.

#2 Ensure the right of six-plant personal grows:

- Create a state-level oversight capacity to ensure local-level requirements for personal use cultivation are feasible, affordable, and are only sequestered to indoors with good reason (e.g. no setback possible, high density residential areas).
- Explicitly allow renters to have personal use gardens with removal stipulations/liabilities when leaving property.

#3 Policy improvements for cultivator-retail pipeline:

- Continue to encourage the opening of more retail outlets by offering incentives (like those included in AB 195 [2022]) to broaden retail access.

- Explore measures to control for retail monopolies, which often carry products from limited suppliers, particularly in retail “deserts”.
- Encourage regional marketing and shorter farm-to-consumer supply chains by issuing “locally grown” labels for cultivators within 50 miles of a retail store;
 - Support “locally grown” products with a lower excise tax (e.g. 12% instead of 15%).

#4 Promote Local Governance Capacity for Administration:

- Encourage and facilitate cross-jurisdictional pooling of resources for permit counties by providing guidance for local governments to form joint-powers-authorities that would centralize professional staff, technical assistance, and standardize and coordinate regulatory policies and practices.
- If not already done, evaluate remaining need for the Local Jurisdiction Assistance Grant and require that funds be expended immediately.
- Reward poor jurisdictions for allowing cultivation (and multiple smaller-scale cultivators rather than a few large-scale cultivators) by distributing revenue to counties based on the number of cultivation licenses they process.
- Provide a state-level opt-in program or boilerplate ordinance for smaller cultivator allowance so each county does not need to create this system on their own (See #1, Section 2 & #1, Section 3).
- Facilitate a monthly “Rural County Equity Forum” for officers and participants to learn from each other.

Section 3

Reform to State Licensing and Market Structure

In this section, we introduce a suite of policy measures intended to address the state licensing process and market regulation, more broadly. First, we are responding to the high administrative and cost barriers to state licensing for smaller cultivators. We see a need to reform how CEQA works, particularly in relation to smaller farmers. Controlling Type 5 licensing is also critical for maintaining a multi-scale cultivation sector. We reemphasize the need to reform the role of distribution and advance new models for testing laboratories that could replace or provide alternatives to the current system. Finally, we address the propensity of the current state licensing system to cause overproduction and price instability by proposing a system to control production and ensure stable prices.

#1: Remove/Alleviate Administrative and Cost Barriers for Smaller Cultivators:

- Reclassify smaller cultivation sites from a “commercial” to an “ag-adjacent” or “ag-like” designation to reduce untenable compliance barriers.

- Fund state university's Cooperative Extension, and/or another party to develop and offer services to cannabis cultivators throughout the state (see Section 1, #1).
- Create a statewide smaller-farm exemption (up to 5000 square feet) in permit jurisdictions that would:
 - Allow individuals to cultivate up to 5000 square feet of cannabis outdoors on their property, according to graduated property size and with reasonable setbacks;
 - Exempt these gardens from CEQA/EIR processes or allow these gardens to acquire a ministerial license from the State;
 - Ensure that renters can avail themselves of this capacity, so long as they remediate the area as designated in rental terms;
 - Allow participants the rights assumed by small cultivators including: on-site sales (farmstands) and ability to participate in subscription-based purchasing (i.e. Community-Supported Agriculture) (see Section 1);
 - Direct access to testing laboratories without passing through distributors.
- Create a similar statewide exemption for ban jurisdictions but with smaller garden sizes (see Section 2 #1).

#2 Reform Licensing to Ensure Small Farm Sustainability:

- Innovate small farm allowances and exemptions around CEQA. Options include:
 - Establish a statewide exemption for individual-farm EIRs with farms under 10,000 square feet outdoor and 5,000 square feet indoor/mixed light in permit counties via ministerial state licenses.
 - Now that CEQA is required of new farms *prior* to cultivation (see Cannabis Trailer Bill), establish a no-interest loan fund for CEQA compliance measures and bridge funding while smaller cultivators wait for approval (related to Section 1,).
 - Staff a statewide call-in/virtual service for smaller cultivators that would assist them in completing EIRs.
 - Since the simplification of CEQA will help farms of all sizes, including smaller farms, reform the CEQA lead agency designation. Two options:
 - Establish the State as CEQA lead agency and relieve localities of the burden of project approval; or
 - If a locality has approved a project and completed CEQA review, allow for individual projects to receive a state license without a State-level CEQA approval (see SB1148)
- Restrict and cap Type 5 licenses:
 - Freeze Type 5 large licenses after current license holders are allowed to consolidate. Modify regulations so that only operators who hold valid, stacked contiguous cultivation licenses by December 31, 2022 (or another fixed date) are eligible for a Type 5 license.
 - Keep Type 5 licenses frozen until either of the following occur:

- Federal legalization and the legalization of cannabis exports outside of California; or
- Statewide demand exceeds available supply in a year period, based on METRC data. If cannabis sales from retail, consumption lounges, or other outlets increase to the point of exceeding supply, allow new Type 5 license applications after facilitating smaller farm formation.
- Ensure strict enforcement of the restriction found in B&P Code Section 26061(d) prohibiting a Type 5 license from holding a Type 11 (distribution) or Type 12 (microbusiness) license, designed to prevent monopolistic behavior through vertical integration.
- Retire Type 5 large licenses after current licensees stop operating. If Type 5 license stops operating for a period of more than 30 days, changes ownership or executive team, or voluntarily withdraws license, then the Type 5 license is retired, and no new license replaces it.
- Peg the maximum square footage of Type 5 license holders to the currently existing largest license holder and disallow other license holders from exceeding that capacity. For example, if the largest license is 100 acres, cap Type 5 acreage at 100 acres. If that license ends, cap Type 5 at the next-highest license area.

#3 Eliminate the mandatory distribution step in the supply chain or, if infeasible, create exemptions to mandatory distribution for smaller cultivators:

- Entirely eliminate the mandate for distribution pass-through between cultivators and retailers/end-users.
 - Allow cultivators direct access to testing laboratories.
 - Allow direct sales to retailers for all cultivators.
- If full elimination is infeasible:
 - Create an exception for smaller cultivators to bypass distributors and sell directly to retailers.
 - Allow smaller cultivators direct access to testing labs.
 - Create a statewide exemption for farms under 5 or 10k square feet (outdoor) and 5 or 2.5k square feet (mixed light/indoor) in permit counties to bypass distribution (see Section 3, #1).
 - Create a statewide exemption for farms under 1000-2500 square feet of outdoor or 500-1k square feet of indoor in ban jurisdictions to bypass distribution (see Section 2, #1).

#4 Reform testing laboratory rules and roles:

- Fund public university chemistry departments to offer testing labs.
 - Reform public university policies that prevent faculty and staff from working with state-legal cannabis.

- Coordinate effort between university labs, Cooperative Extension, and/or Resource Conservation Districts to make testing services available throughout the state, in efficient, low-cost, reliable ways; and
- Open up direct access/submission to testing laboratories for smaller cultivators that: a) are part of a medical collective (see Section 1, #4); b) run a farmstand, subscription-based agriculture, or other direct-marketing effort (see Section 1, #3); c) are small cultivators granted special exemption to operate in permit and ban jurisdictions (see Section 3 #1); and/or d) are associations of smaller farmers organized as a cooperative (see Section 1, #2).

#5 Curb overproduction by implementing a supply and price management system:

- Estimate total statewide consumption needs through METRC data on an annual basis.
- Match production amounts with projected consumption needs by:
 - Creating production allotments for all cultivation license holders (area cultivated by licensee divided by total cultivated area statewide; resulting percentage is allotment amount);
 - Issuing a total product allotment to cultivators annually (their allotment percentage multiplied by total product needed);
 - Limiting percentage of total production any one individual, entity, or financially-connected network can possess;
 - Prioritizing smaller cultivators in the fulfillment of allotments by ensuring that their licensed canopy is either filled first, or is weighted to give them more than their proportion of their area-based allotment;
 - Ensuring that all cultivators under 5k or 10k square feet outdoor and mixed light and 1000 or 2500 square feet indoor are given special allotments to produce their full cultivation area first.
- Estimate average cost of production and support farmer livelihoods.
 - Partner researchers and DCC staff to estimate the cost to produce a unit of cannabis grown in different styles (indoor, outdoor, mixed light).
 - Include at baseline: living wages for workers, compliance costs, costs for high environmental standards, and inputs;
 - Convene a cultivator advisory council to advise on costs of production.
 - Explore systems of agricultural “parity” wherein farmers are guaranteed a base salary that covers the cost of production.
- Facilitate and staff auctions for cultivators to sell product periodically by:
 - Grading the product on a range from highest to lowest quality. Allow for strain names, appellations, and growing methods to be attached to high-end product;
 - Using the average costs of production as an opening bid for product according to grade and style (indoor, outdoor, mixed light).
- Process allotment sales, retirements, and temporary fallowing requests.

- For smaller and equity cultivators, provide acquisition assistance and grant/loan access (via revolving fund in Section 1, #1).
- Allow allotment buy-backs from the State, which can then be retired or distributed to equity applicants or farms seeking a Small license type (or smaller).
- Establish a voting forum of cultivators to inaugurate, intermittently reauthorize, and guide development of the program.
 - Levy a small fee for cultivators to staff and provision space for state-run auctions.
 - Use this fee for a rotating fund to purchase excess/unsold product that would be sold later or folded into the following year's average cost calculation as a loss.

Limitations

In compiling this report, we note a few limitations. First, because of time constraints and the imperatives of getting ideas circulated, we chose not to include citations of the literature or to include long explanations justifying each policy measure. We are available to elaborate on any recommendation with anyone interested.

We also flag, once again, that the term “smaller cultivators/cultivation” is a placeholder for a larger discussion about size, regulations, and markets. Indoor, mixed light, and outdoor produce very different amounts per square foot. While the licensing system accounts for this, it may need updating. Further, because of stacking, “small” licenses may not actually correspond to “smaller cultivators,” since individuals and entities may own numerous licenses. We encourage a more robust idea of “smaller cultivators/cultivation” that includes ownership details, square footage, style of production, and other factors.

We are also limited in our understanding of funding streams and technical reasons why particular measures may or may not be feasible. We deliberated to the best of our knowledge about these things and are happy to engage in conversations about more nuanced measures that might speak to the issues identified.

We also wish to reiterate that not all of us agrees on every suggestion here and that the inclusion of a policy potential here does not imply that any particular person is in favor of that policy. Our aim was to be inclusive of multiple options at multiple scales. Further, we did not exclude options because we thought they were politically infeasible. Rather, our aim was to include *good* options (at least, according to some of us), whether or not we thought they were politically feasible.

Conclusion

While our policy recommendations come from a place of concern, they are grounded in hope. California became world famous for its cannabis because of smaller cultivators. Six years into the state's legalization experiment, these cultivators are struggling and dropping out of the cannabis market altogether. Significant, imaginative measures need to be taken to realize a cultivation sector built “around small and medium businesses,” as set out by California voters in Proposition 64.

Advocacy for smaller farms is not simply a nostalgic throwback to legacy cannabis cultivation, though those legacies do need to be (re-)valued after a century of prohibition. Rather, thriving smaller farms can serve as the bedrock of communities, grounding them in stable livelihoods, ancillary economic development, and a kind of land stewardship that more often comes when farms are locally owned and operated. Indeed, if California is concerned with ensuring ecological resilience, it should look to strengthen linkages between smaller, locally-rooted agriculture and conservation. This path toward ecological sustainability stands in contrast to current strategies of intensified environmental enforcement, which not only re-criminalize cultivators who have not transitioned into the legal system for numerous reasons, but may also aggravate negative effects on environments, economies, and communities by forcing cultivators into secrecy, where exploitation and ecological harms can propagate. A smaller farm landscape could also buck larger trends in agriculture, which tend toward monopolization, adverse environmental effects, and impoverished agricultural labor and communities. Again, California has a chance to forge a new pathway, not just for cannabis for agriculture writ large.

We also support an expansive idea of smaller farms beyond cultivation for the market. A system of not-for-profit medical cultivation and collective provisioning can increase access to medicine in areas with little access to healthcare, support people with low-incomes, and build community in isolated, remote areas of California. More robust protections and allowances for personal cultivation could also provide California residents with an ability to grow for themselves, to tailor genetics to their needs, to affordably access medicine and recreation, and to reestablish the plant's horticultural relationship to humans, a relationship that goes back 12,000 years.

As all the authors of this paper can attest, cannabis is in crisis. But it is never too late to right course and build a just, equitable, and sustainable system for Californians, the nation, and the world.