



Berkeley Cannabis Research Center

Organizational Profile

Support from our home institutions:



Berkeley Rausser
College of Natural Resources

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources





UC Berkeley

Origin Story

In 2017 a small group of researchers at University of California, Berkeley, convened to discuss the social and environmental dimensions of cannabis agriculture and production. It quickly became evident: a hub for cannabis researchers was needed.

Today, our team of over 20 researchers has produced nearly 40 publications and over 30 multimedia resources. We hold webinars with subject matter experts, issue science briefs and short videos on research findings, and hold an annual research briefing, where we share our findings.

As scientists we are given the task of informing policy with research and communicating new information back to the public. Our researchers engage directly with cannabis farmers, local communities, and government agencies to bolster public dialogue, inform policies and programs on the local and state level.

From 2017-2023, Berkeley's Cannabis Research Center engaged with the most pressing issues surrounding the cultivation and regulation of cannabis in California, including concerns over impacts to the environment, effects of local, state, and national policies on cannabis production patterns, and the lived experiences of cannabis-growing communities.

Our team includes ecologists, wildlife and conservation biologists, hydrologists, geographers, anthropologists, and public policy experts in agriculture, law and land use. Our Center supports professors, postdoctoral fellows, graduate students, and outreach professionals at the University of California, Berkeley. As communities respond to rapid shifts in cannabis policy, our research group aims to deliver much-needed science to inform productive debate. We seek to contribute to the development of prosperous, equitable communities and healthy environments.

Outgoing Directors

Parting Words

Over the last five years, Berkeley's Cannabis Research Center has engaged with the most pressing issues surrounding the cultivation and regulation of cannabis in California, including concerns over impacts to the environment, effects of local, state, and national policies on cannabis production patterns, and the lived experiences of cannabis-growing communities.

We have built a reputation for rigor, scholarly discipline, and relevance. We endeavored to elevate questions around cannabis to serious scientific and policy realms, and largely we have succeeded.

While the story of cannabis in California continues to unfold, we are excited to be entering a new chapter at the Cannabis Research Center. It is an absolute pleasure to welcome Dr. Michael Polson as the new Center Director. Although Michael is new to the role, he has been a critical team member since the very founding of the Center. Indeed, whenever we want to know what is really going on in the world of cannabis, Michael is the first person to ask. His research on the dynamic interplay between cannabis policies, perceptions, and human behavior has helped all of us better understand the history of cannabis in California, and where it may be going next. There is no one better suited to lead the Center into the future.

As we step back from our leadership roles, we also reflect on how we first began our work on cannabis: Learning about weed is fun! Our conversations with researchers, government staff, industry representatives, growers, and community groups over the past several years have consistently been enjoyable, stimulating, and meaningful.

We are proud of our research accomplishments – including 40+ resources such as published articles, research fact sheets and cannabis webinars – but we are most excited by the network of colleagues that we've built around the Center. We look forward to staying engaged with the Center's community as we collectively strive to understand and shape a future of cannabis that supports prosperous, equitable communities and healthy environments – while also having a little fun along the way.

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New Director

Announcement

In 2017, just a year after California voters approved adult-use cannabis, I remember gathering with a small group of Berkeley scholars. We knew legalization was an important opportunity to open the door onto cannabis research. Though policy raced ahead, we still did not know much about cannabis, its cultivation, or the social and ecological dynamics surrounding it. This blindspot was a product of a century of prohibition, now coming to a close in California. Once again, humans were crafting a new relationship with a plant that has been traveling alongside us for 12,000 years.

We saw the need for a hub for cannabis-related research to address knowledge gaps and to grapple with the enormity of the moment.

Over the next several years, we have become a thriving hub of researchers, ranging from hydrologists and wildlife scientists to anthropologists, political ecologists and legal scholars. We have built an interdisciplinary, collegial center and tackled some of the thorniest, most pressing issues related to cannabis and its cultivation — from water use and land change to the effectiveness of local regulatory programs and tribal consultations; from basic barriers to compliance to the everyday legacy of the drug war in the present.

We've published over 40 papers, held multiple research briefings, issued a suite of publicly-accessible educational materials, advised policymakers, reporters and advocates alike. We've also fostered a generation of new scholars, myself included.

As I enter into the directorship, the Berkeley Cannabis Research Center stands on solid ground, thanks to the diligent, dedicated work of our previous directors. They fostered a wonderful atmosphere of collaboration, robust research, and a penchant for engaging the public in all that we do. I look forward to deepening our work in California, which is still the largest political entity to legalize cannabis in the world and a global, historic center of cannabis cultivation. As we grow in scope and scale, we welcome new affiliate researchers, new organizational collaborations, and renewed engagements with the people of California, the U.S. and the globe. I'm proud to be part of the Center and contributing to the mission of UC Berkeley to serve the public.

Michael R. Polson, PhD





Pexels

Mission

As an independent, interdisciplinary group of expert academic researchers at UC Berkeley, our activities focus on:

- Pursuing innovative research and applied scholarship through scientific studies and peer-reviewed publication.
- Intellectual exchange among researchers through regular meetings, retreats, symposiums and conferences.
- Public outreach to share our findings, learn from diverse voices, and encourage constructive dialogue via briefings, workshops, webinars, and panel discussions.
- Building awareness and support for our Center to spur collaborative research and inform equitable approaches to cannabis policy.



Previous Grants Awarded to UC Berkeley

01

Local Regulation of Cannabis in California

02

Transformation of Unregulated Cannabis Cultivation Under Proposition 64

03

Assessing Environmental Impacts of Cannabis-Related Noise and Light Disturbance to Inform Management of Wildlife

04

Examining Tribal Sovereignty Over Cannabis Permitting on Native Ancestral Lands

05

Cultivation Bans, Local Control, and the Effects and Efficacy of Proposition 64

06

Cannabis and Wildfire: Current Conditions, Future Threats & Solutions for Farmers

07

Cannabis Water-Use Impacts to Streamflow and Temperature in Salmon-Bearing Streams

08

The Effect of Local Cannabis Regulation on Property Prices

09

Licensed and Unlicensed Cultivation Across Banned and Permitted Jurisdictions

Current Grants

01

Understanding Investment, Operating Pressures, and Anti-Competitive Characteristics in the Cannabis Industry.

This project will examine whether and to what degree monopolistic and anti-competitive tendencies are emerging in the cannabis industry, the overall patterns of investment and ownership that threaten the competitive landscape of the California cannabis economy, the protective factors that enable small and equity businesses to withstand predatory behaviors, and the current and potential policies that are effective in preventing anti-competitive behaviors.

02

Hmong diasporas and cannabis: medicinal use, criminal justice consequences, and farm structure across licensed and unlicensed geographies

Hmong farmers have become central in debates about cannabis cultivation and medical cannabis access in California. This community engaged research builds on 6+ years of relationship and trust building with Hmong farmers who grow crops that include cannabis. The research will explore four themes: 1) Hmong medicinal cannabis uses, cultivation practices, and traditional ethnobotanical and medicinal plant histories; 2) Hmong farmer migrations and diasporas; 3) Hmong interactions with criminal justice systems, particularly environmentally based law enforcement; and 4) capital and labor dynamics on Hmong cannabis farms. Research will be primarily ethnographic and participatory, using methods such as in-depth interviews and photovoice. In addition to both ban and permit localities in California, we will conduct research activities in other regions to query Hmong diasporas and agrarian migrations, such as Minnesota, Oklahoma, and North Carolina.

03

Assessing the Environmental Benefits of Cannabis Licensure

This project assesses the environmental benefits delivered by licensed cannabis growers as they have come into compliance with uniquely rigorous state and local regulations for cannabis agriculture. Utilizing spatial data, administrative records, and mapping tools, the project quantifies and qualifies these beneficial dynamics of licensure and analyzes what environmental dynamics result when licensed farms fall out of licensure.

04

Cannabis Crop Yields: Survey & Remote Sensing

This project will improve the accuracy and reliability of cannabis production statistics in California through a two-pronged research approach consisting of (1) a survey of licensed cannabis cultivators in California and other states and (2) in-depth, remote-sensing study of licensed cultivation sites and monitored plants. These strategies will address cultivation across different types (indoor, outdoor, mixed light) and sizes (small, medium, large).

05

Agricultural Exceptionalism: A Comparison of Cannabis, Hemp, and Specialty Crop Regulatory Regimes

This project compares California's regulatory regimes for cannabis, hemp, and specialty crops to identify evidence-based policy solutions that optimize cannabis regulation of competitive markets while preserving enhanced worker and environmental protections. The project involved regulatory analysis and interviews to improve cannabis policy outcomes.

Thanks to the support of:



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