

When California voters legalized cannabis in 2016, a key argument for legalization was that legalization would benefit the environment. If cannabis growers necessarily operated outside the law, then they had little incentive to comply with environmental regulatory standards. Instead, cannabis growers might trespass on private and public lands, cause significant damage to habitat, use illegal pesticides and chemicals, illegally divert water and dry up streams needed by fish and wildlife, discharge polluted water into rivers, and more. The initiative set stringent standards for environmental performance for cannabis operators, so that the newly legal cannabis cultivators would be on the cutting-edge of environmental practice.

Unfortunately, the outcome for the legalized cannabis market in California has not yet matched these expectations. Only a relatively small fraction of cannabis cultivators are believed to have entered into the legal, regulated market, leaving many cultivators still in the black market. That raises real questions about whether legalization in California can deliver on the promises of environmental protection that were made to the voters in 2016.

There is a range of reasons why compliance rates have been so low in California. Some factors are outside the state's control: For instance, much of the cannabis grown in the state is exported to other states, but California cannot legalize that interstate market, so long as federal law continues to make cannabis illegal. But other factors may be more within the state's control. For instance, the ballot initiative legalizing cannabis allowed local governments to continue to prohibit cannabis cultivation, distribution, manufacturing and/or sales - and those limits on legal markets at the local level may significantly interfere with the development of a legal market system, driving down prices and demand for legal cannabis and deterring cultivators from entering the legal market.

But two other key factors may also be driving the reluctance of cultivators to enter the legal market. First, many long-time cultivators have an antagonistic history with government and the legal system. They were the subject of law enforcement activity for decades. Many cultivators who entered into cannabis cultivation when it was illegal may have deep distrust of the government and the law. It may not therefore be surprising that many of these growers may be skeptical of the new legal market.

Second, the new legal regulatory system can be complicated and expensive to enter into. There are lots of regulations to comply with: The state cannabis permitting system requires cannabis cultivators to get approval from local agencies (e.g., the county or city), and even if the local government allows cannabis cultivation, it will have its own permitting system; permit applicants need to establish water rights for the water they will be using for the crops, and they need to also get a permit for discharge of their waste water; there are strict

limits on pesticide residues and contaminants for cannabis sold in the legal market, with rigorous testing systems; there is a track-and-trace system for each individual plant grown in the legal system; there are requirements for detailed site plans for new operations. In addition, the fact that cannabis cultivation requires an up-front state and local permit before cultivation can begin triggers regulatory enforcement that doesn't generally apply to most agricultural operations – for instance, imposition of state building code and disability access rules, or requirements for upgrading the road access for farms that are often quite remote. All of these requirements can impose money both for the direct costs of doing the upgrades, as well as paying for consultants or other assistance to navigate what can be a byzantine regulatory system.

Which of these dynamics is the dominant one deterring cultivators from entering the regulatory system: antagonism to the government, or the costs of regulation? The answer matters because it shapes the responses the state might take towards improving the regulatory system so that more cultivators might come into compliance.

To help answer that question, a team of researchers (including me) undertook a first-of-its-kind survey of outdoor cannabis growers, both compliant and noncompliant. We undertook broad outreach to growers to solicit survey participants. Because survey participation was self-selected, it is not a random sample of the broader population of cannabis growers. However, a random sample wouldn't be possible for noncompliant growers, so our survey provides an important window into what might be motivating grower compliance or noncompliance.

Our survey asked a range of questions about the kinds of operations that cultivators are running, whether they are compliant with the new regulatory system, why they are or are not compliant, and more. [Our results](#) indicate that for many growers, the primary motivation for entering into the regulatory system was not antagonism to the government, but instead a calculation about the costs and benefits of compliance. Growers in the regulatory system believed it would help them economically, and growers outside the regulatory system often emphasized the complexity and cost of going through the regulatory process to get approved, and uncertainty about whether that investment would pay off.

These results point the way to steps to improve California's cannabis regulatory system – making the system easier to navigate, facilitating compliance for small cultivators, and more. We will continue to explore ways to advance these goals in future research.

The article can be accessed [here](#).

