Washington State
Liquor and Cannabis Board

Research Brief
Home Cannabis Cultivation

April 2025

LCB Research Program

The Research Program at the Washington State Liquor and Cannabis Board (LCB) is a non-partisan, transparent resource focused on public health and safety outcomes related to the products, policy, and regulation of alcohol, cannabis, tobacco, and vapor products.

Purpose

There has been ongoing interest in home cannabis cultivation (growing plants at home) in Washington and across the United States. At a recent public meeting, the Research Program received a request from the Board to examine current regulations and potential impacts of home cannabis cultivation. This brief is based on a review of existing evidence including scientific literature, government reports, policies, and other credible information sources.

This document does not represent an official position of LCB.

Contact

For more information about the Research Program and its work, please visit: lcb.wa.gov/research_program

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Introduction

Home cannabis cultivation, also known as “home grow,” is the practice of growing cannabis plants in a private residence for personal, rather than commercial, use. As cannabis legalization expands across the world, regulated home cultivation is becoming increasingly popular.

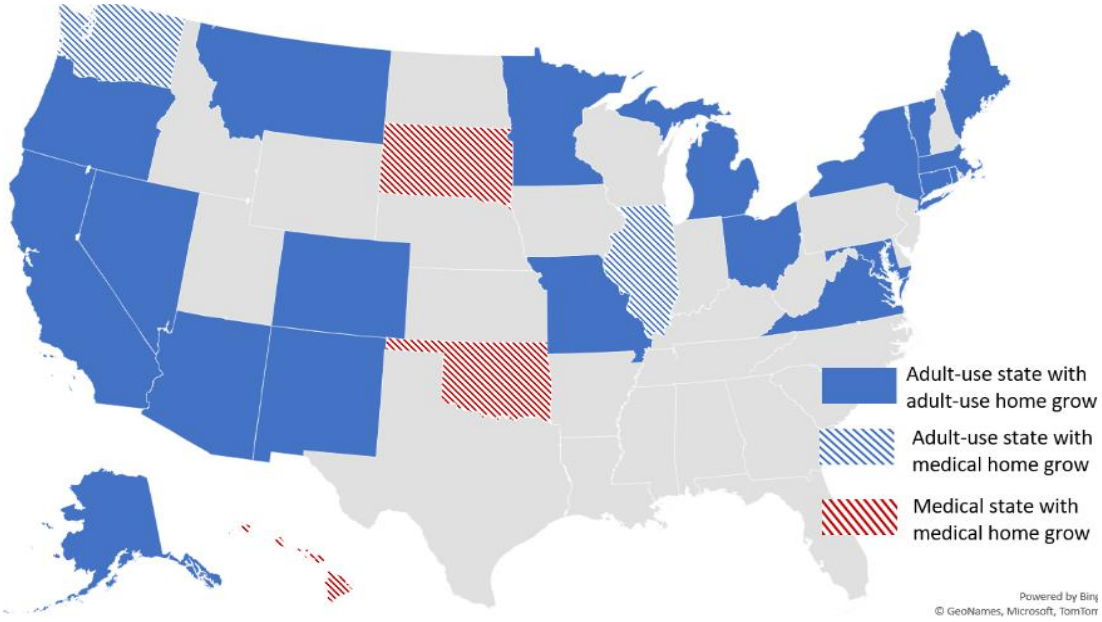
United States Regulations

In the U.S., 25 states and Washington D.C. allow home cultivation in some form (**Figure 1**).[1-28] New Jersey and Delaware are the only two states with adult-use cannabis laws that have no home cultivation provisions. Most states differentiate between home cultivation for medical and/or adult-use purposes. With the exception of Washington State and Illinois, most adult-use states allow for adult-use home cultivation.[6,29] Among states that have only legalized cannabis for medical purposes, three have allowed provisions for home cultivation: Hawaii, Oklahoma, and South Dakota.[3-5]

Specific state requirements for home cultivation vary across the nation. States that allow adult-use cannabis cultivation require individuals to be at least 21 years of age. However, there are exceptions for medical home growers.

Individual Plant Limits. Allowable plant limits across state laws generally range between two and 12 plants per adult. Some states allow medical patients to grow more plants than is allowed for non-medical purposes. For example, in Maryland, adult-use individuals can grow up to two cannabis plants, but medical patients can grow up to four plants.[1,14] Other states, however, do not have limits based on user type. For example, in Washington D.C., any adult over 21 years old can grow up to six plants.[1,28]

Figure 1. Authorization of home cannabis cultivation for medical and/or adult-use purposes by state.[1-28]



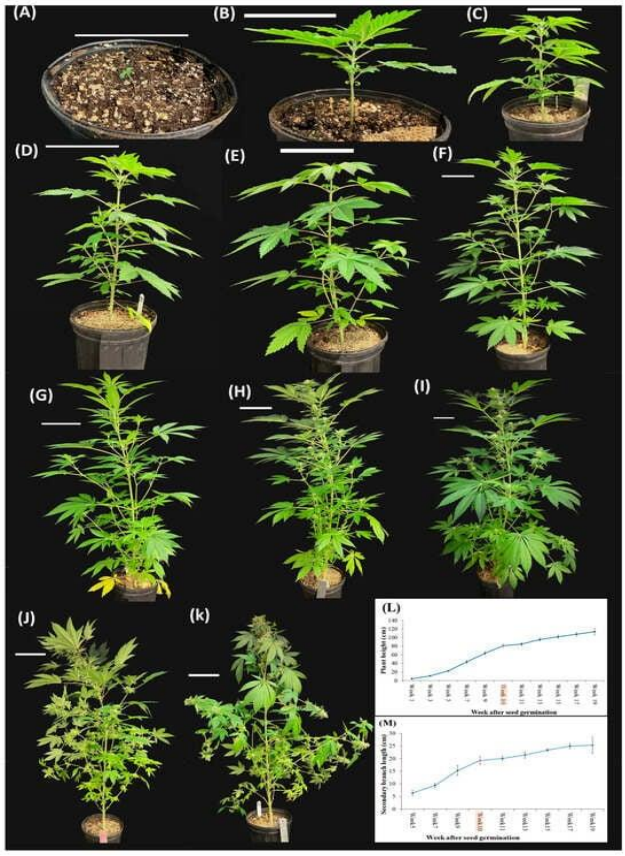
Household Plant Limits. Some states allow households with more than one adult to have more plants. State regulations vary but generally range from two to 24 per residential property.[1,2] For example, in New Mexico, each adult can have six mature plants, but one household with at least two adults can have up to 12 mature plants.[1,21]

Growth Stages. Many states differentiate plants by growth stage (**Figure 2**).[1,2] For example, New York defines a "mature" cannabis plant as "a female plant that has flowered and has buds present by visual examination" (see (*F)* in Figure 2.2). In contrast, an "immature" cannabis plant is defined as "a female plant that has not yet flowered and does not have buds present."[30] Both Maine and Oregon allow up to six mature plants and 12 immature plants for medical patients.[1,13,24] Maine additionally specifies that adults can have an unlimited number of seedlings (see stage A in Figure 2.1).[1,13]

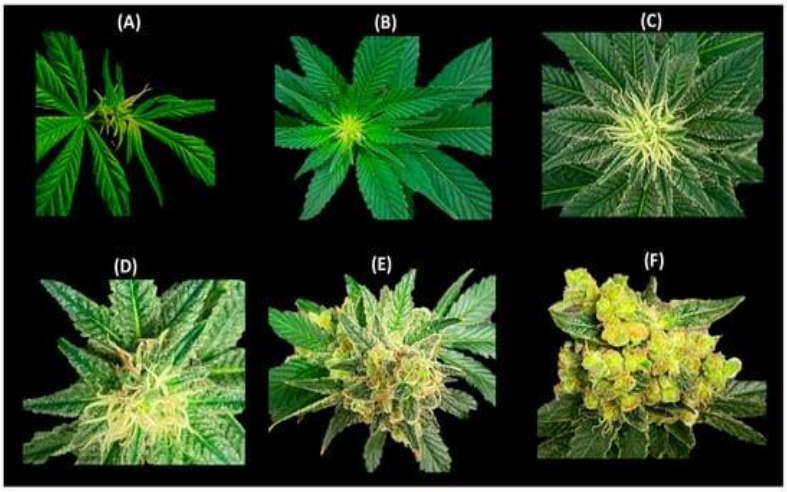
Security. Most states require plants to be located in a secure place that is out of public view and out of the reach of people under 21 years old.[1-2] For example, Oklahoma mandates that plants are not visible from any street adjacent to the property from which it is grown.[1,4] Connecticut requires that cannabis plants are only cultivated in a secluded and secured place.[1,12]

Indoor vs. Outdoor. All states with home cannabis cultivation allow for indoor grows. Some states, such as Connecticut, prohibit outdoor grows. Local jurisdictions in some states, including California, may include additional location restrictions.[1,10]

Figure 2. Cannabis plant growth stages.[31]
2.1 Plant growth from week one (see 'A') to week 19 (see 'K').



2.2 Flower development from three days after initial flower (see 'A') to eight weeks after initial flower (see 'F').



Note: Figures are from Hesemi et al., 2023.[31]

Landlord Protections and/or Permissions. Some states allow property owners to opt out, or to opt in to allow home cultivation. For example, Massachusetts and Vermont allow landlords to restrict cannabis cultivation in leases.[1,15,26] However, if it is not explicitly prohibited, it is assumed that tenants are allowed to grow cannabis.[1,15,26]

Plant Tag Systems. Some states require that each plant have a physical tag. For example, Virginia mandates that every plant have a tag that includes the grower's name, identification number, and a note that it is under authorized law.[27] Rhode Island requires certificates be stored near plants; the certificates include patient information, address, and growing status.[25]

Additional Permissions. States have additional permissions that vary. For example, in Nevada, adults can only grow cannabis if there is *not* a state-licensed retail cannabis store within 25 miles of their home.[20]

Washington State Regulations

Medical patients in Washington State have had the ability to grow a limited number of cannabis plants since 1998. When Washington passed Initiative 502, which legalized cannabis for adult use, home cultivation of cannabis did not extend beyond medical purposes. Washington State still requires a medical cannabis authorization for home cultivation. Currently, a qualifying patient who is registered by the state may grow up to 15 plants, depending on the recommendation by their health care provider. Immature plants, clones, or seeds can be purchased from a licensed producer. However, no patient is required to be registered by the state, and those who are not registered can grow up to four plants. There is currently no comprehensive data or tracking system for who is allowed to grow at home, the number of plants a patient is approved to grow, or the number of plants that are currently being grown.[7] Currently, the maximum number of plants that are allowed to be grown in any housing unit (unless it is a cooperative) is 15 plants.

Prevalence

Around the world, rates of home cultivation increased after the pandemic and, in part, appears to have stemmed from the reduced supply of illegal cannabis sources.[32] Generally, home cultivation is higher in places where home grow is legal.[33-35] In the U.S., prevalence rates of home cannabis cultivation remain relatively low. Among past-year cannabis users living in a legal adult-use state, about 10% reported growing their own cannabis.[36] However, in Washington State, where home grow is illegal for adult-use purposes, rates are estimated at about 7%.[36]

Current research suggests that people who use cannabis flower frequently (daily/near daily), and use in part for medical reasons, are most likely to cultivate cannabis at home.[37] In 2023, the top five reasons for home cultivation in Washington State included:

- For personal consumption;
- For fun or pleasure;
- Because it was less expensive;
- Because it was easier to grow than to buy; and

Because it was a preference over buying.[36]

Potential Impacts

Home cannabis cultivation has potential benefits and risks. Although some evidence exists for these impacts, more research is needed to better understand these benefits and risks.

Potential positive impacts include:

Reduced Illegal Market Participation. Home cultivation might allow people living in rural places or in places where retail stores are inaccessible to access cannabis by legal methods.[38-39]

Reduced Advertising Exposure. People who cultivate cannabis at home may have less exposure to promotions that direct them towards riskier products (e.g., highly processed products, high tetrahydrocannabinol [THC] products).[38]

Increased Product Understanding. There may be greater opportunity for those who grow cannabis at home to learn about what factors that make cannabis higher quality, or the attributes they enjoy when using cannabis (e.g., trichomes, scent), which may result in more informed decisionmaking.[38-39]

Quality and Selection Control. Home cultivation can allow users to closely monitor and control the growing cycle. This may reduce harmful additives (e.g., heavy metals, pesticides) and increase desirable plant qualities. For example, some people who grow at home may opt to cultivate cannabis with high concentrations of cannabidiol (CBD), which can be difficult to find in legal retail stores.[39]

Inclusion. Home cultivation also provides additional avenues for individuals, particularly those from communities disproportionately harmed by the War on Drugs, to legally engage with cannabis without directly participating in the commercial cannabis market. For example, for those who have opted out of or faced barriers to entry in the commercial sector due to social and economic inequities stemming from cannabis prohibition, home cultivation could provide opportunities for legal use.[40] One study found that having a strong sense of cannabis identity (i.e., when cannabis influences many aspects of life) predicted desire to cultivate at home.[39]

Potential negative impacts include:

Increased Youth Use and Decreased Youth Perception of Risk. One concern relates to increased cannabis exposure among youth who live in a home where cannabis is being grown.[42-43] The Healthy Youth Survey reported that 13-14% of 10th graders in Washington who used cannabis in the past month reported getting it from home either with or without guardian permission.[43] However, it is unknown to what extent these results were from youth in homes where parents were growing cannabis (legally or illegally). It is also unknown how these results may change if home grow becomes legal for adult-use purposes. Among 10th graders, 31% reported cannabis was "easy to get," and 26% reported "little to no risk" of perceived harm from regular cannabis use.[43] It is uncertain to what extent access and perception of harm would change if home grow were to become legal in Washington.

Environmental Impact. A concern from an environmental perspective relates to the energy-intensive nature of indoor

cultivation. Some states with legalized home cultivation require that it is done indoors. However, indoor cultivation often produces more waste, energy costs, exposure to ultraviolet lighting, and water relative to outdoor cultivation.[42,44]

Poor Air Quality. Home cultivation also produces concerns about air humidity, indoor mold, excessive odor, and levels of carbon monoxide.[42] Poor air quality from commercial indoor cannabis operations have been found to worsen respiratory symptoms and allergies.[45]

Electrical and Fire Risk. Certain grow equipment has been identified as high fire risk.[42] In California, home grow fires were found to typically be the result of overloaded electrical circuits due to the high wattage needed to power the lights and fans.[46] Other fire hazards included fertilizers and compressed gas used in cultivation spaces.[42]

Poor Quality Products. Although quality was also mentioned as a potential positive, the reverse is also a possibility. For example, home growers may use potentially hazardous pesticides or consume cannabis that is not safe to use.[42] Home cultivation does not require lab tests and it can be difficult or expensive to get lab tests for those who want them.

Enforcement Challenges. Home grows happen in private settings. This makes it difficult to ensure people follow regulations. Some research suggests people generally grow within state limits, however, verifying this can be challenging.[34] Due to these enforcement barriers, it may be easy for home cultivation to operate outside of regulations. [42]

Best practices to reduce negative impacts include:

- Public education about safe cannabis growing and storage procedures to reduce youth exposure, health concerns, and security issues;
- Public education on how to set clear boundaries and expectations for preventing youth use and addressing youth perceptions of harm;
- Local and state provisions for managing cannabis waste;
- Cannabis-specific pesticide guidance;
- Outside cannabis cultivation to reduce environmental hazards and health risks;
- Accessible safety materials such as:
    - Stickers with universal cannabis symbol;
    - Child-resistant bags;
    - Contact information for the Washington Poison Center; and
    - Guidance on indoor pesticide use.
- Monitoring and data collection of cannabis poisoning and adverse events due to home cannabis cultivation.

Additional Considerations

There are additional considerations related to home cannabis cultivation, including the following:

Cannabis seeds are not considered a Schedule I substance because seeds do not contain more than 0.3% delta-9-THC concentration by dry weight. Therefore, it is easy for people to buy cannabis seeds. Currently, LCB receives minimal

purchases reported by producers from authorized medical cannabis growers.

Additionally, it is uncertain to what extent home cultivation impacts the legal cannabis market. For consumers, it is possible that home cultivation could be less expensive. However, savings would likely be in the longer term due to the upfront costs to buy seeds, equipment, and the risks of cultivation failure.[38,41] Like any plant, cultivating cannabis takes skill, effort, and time to learn. If home growing brought cost savings, then profits and taxes would likely be reduced for businesses and government.

Notably, current research suggests only a small minority of home growers exclusively use cannabis they grow at home, suggesting that home grow is used as a supplemental cannabis source rather than a direct substitution for commercial products.[39] It is currently difficult to determine the impact home cultivation has had on the legal market since states with adult-use home grow laws have either done so when also legalizing adult-use cannabis sales or states without home grow laws are relatively new in legalizing adult use sales.

Another consideration is that as people grow products, some will also want to develop processed products, such as edibles and concentrates. Different processed products come with their own relative risks.[42,47] For example, edibles pose a risk of accidental consumption and overconsumption.[47] Concentrates, specifically when made with solvents, increase risks for burns, fires, and explosions.[42] Some states have penalties for those who produce concentrated cannabis products at home.

One potential risk reduction strategy to prevent concentrates from being made at home is to permit out-of-home processing services by qualified licensed holders, which may in turn increase profits for those who are able to safely process cannabis products.[42] However, there may be risks for allowing this, such as increased risk for diversion among home growers. Another potential opportunity might involve laboratories providing tests for homegrown products so individuals are aware of what they are growing.

Because regulations for home cannabis cultivation are new, research on long-term economic, health, and environmental impacts are needed.

Establishing data sources that examine home cannabis cultivation will help increase understanding about how these allowances impact public health and safety.

Suggested Citation

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