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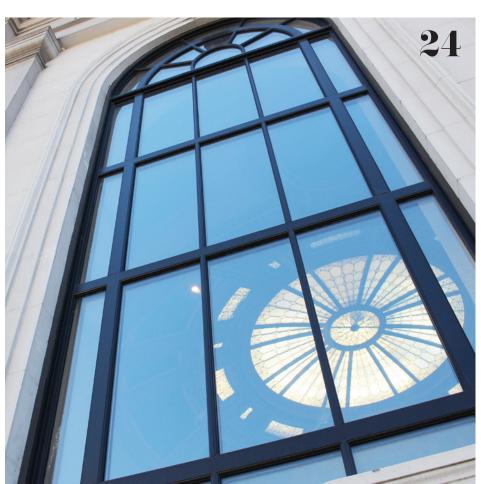
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Randall Huft



Randall Huft is president and creative director at the Innovation Agency, an advertising, branding, and public relations firm specializing in the cannabis industry. While working with blue-chip companies including AT&T, United Airlines, IBM, Walgreen's, American Express, Toyota, and Disney, he discovered what works, what doesn't, and how to gain market share.

David Kessler



David Kessler is senior vice president of horticultural solutions at TriGrow Systems Inc., a technology company providing precision cultivation solutions. He possesses more than twenty years of cannabis cultivation experience, including ten years of closed environmental agriculture (CEA) indoor farm design.

TriGrow.com

Meghan Morean



Meghan Morean, Ph.D., holds a doctorate in clinical psychology from Yale University. Currently the director of research and clinical applications for Gosire Inc., she possesses sifteen years of experience developing and managing research projects. Her list of peer-reviewed publications focuses on plant-based medicine, alcohol, and tobacco product use, including e-cigarettes.

GoFire.co

Amanda Ostrowitz



Amanda Ostrowitz, Esq., is founder and chief executive officer at CannaRegs, a web-based subscription service that provides cannabis-related rules and regulations from state, county, municipal, and federal sources. Previously, she was a regulatory attorney specializing in cannabis regulations and banking law. CannaRegs.com

Carol Ruiz



Carol Ruiz is co-founder and partner at Higher Ground PR and Marketing. With more than twenty years' experience, she crafts campaigns that capture the attention and imagination of the press, communicate the right messages to the right audiences, increase name and brand awareness, and build and maintain reputations.

Higher Ground Agency.com

Travis Scadron



Travis Scadron is director of business development at Surfside. The company empowers clients to find and attract qualified cannabis consumers through activation of digital and offline audiences via marketing, insights, and measurement. Surfside helps clients identify and understand customers based on billions of real-world signals for retention and acquisition.

Michelle Lanter Smith



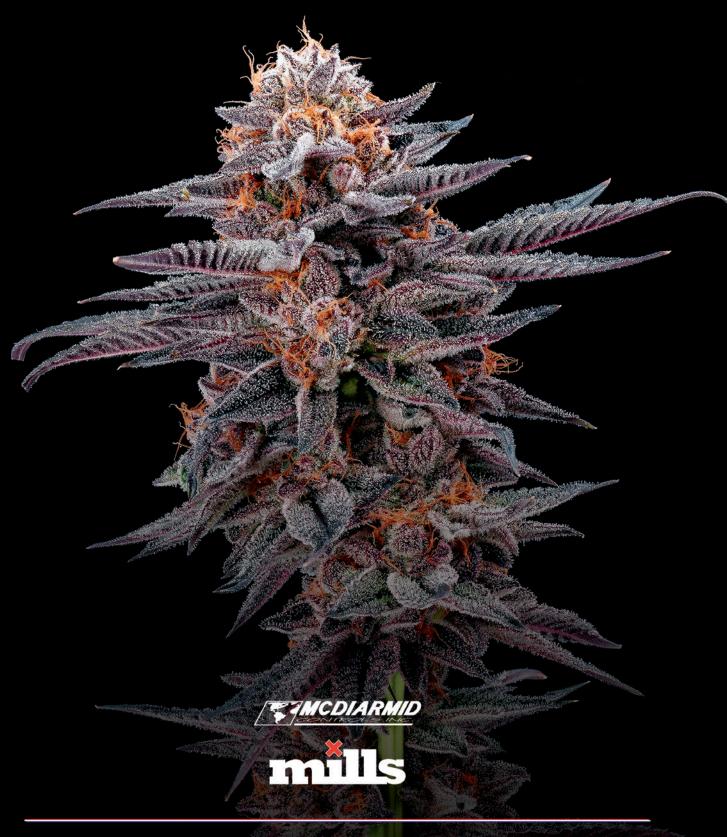
Michelle Lanter Smith is chief marketing officer at EPAY Systems, where she oversees the company's go-to-market strategy, customer success, and technical support operations. She possesses more than twenty years of leadership experience with high-tech and service-driven firms. Smith holds a Master of Business Administration from Northwestern University's Kellogg School of Management. EPAYSystems.com

Jason Vegotsky



Jason Vegotsky is an entrepreneur with an extensive background in sales and business development. As chief revenue officer at Kush Supply Co. he leads a team of more than fortyfive sales professionals; handles operations, shared services, and project management; and is responsible for expanding the company's nationwide physical presence.

KushCo.com



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Let's All Panic!



IN EARLY SEPTEMBER, a sudden outbreak of vaping-related pulmonary illnesses threw the United States into a blame-and-ban frenzy. The public demanded answers after several deaths and hundreds of hospitalizations, so the Centers for Disease Control and Prevention and the Food and Drug Administration waded into the cacophony with comments that only increased the noise: Vaping was to blame.

Initially, neither agency mentioned precisely what substance the victims vaped. Cannabis came up in passing, but so did nicotine. No brands were named, even though patients supplied investigators with the products they'd used immediately prior to the onset of symptoms. Consequently, every vape cartridge manufacturer fell under suspicion.

Health officials from multiple agencies warned the public vaping could be dangerous and vapers should reconsider their habit.

So...stop vaping? Stop vaping *what*, exactly? Did officials mean to imply anyone who vaped anything for any reason was at risk of keeling over at any time without warning? Cannabis patients froze for a moment, trying to figure out their next move. Did they give up their medicine and risk plummeting over a cliff into whatever unpleasantness awaited them if they didn't vape, or did they continue vaping and hope not to become an unfortunate statistic?

The initial FDA and CDC announcements were fair to no one—not victims, not licensed brands and retailers, and certainly not vape users. Worse, they gave ammunition to the anti-cannabis crowd, who, as might be expected, ramped up their messaging machine: "See? We told you cannabis kills! Ban vapes! De-legalize cannabis!"

The federal agencies' statements were out of character and irresponsible. Neither CDC nor FDA typically responds to public health crises by spouting vague warnings. When salmonella, listeria, C. botulinum, or E. coli outbreaks associated with food products sicken hundreds across the country, do the agencies suggest the public stop eating? No, they issue food safety alerts specifying specific brands and products, often including lot numbers or production dates. On July 16, 2019, CDC alerted consumers ground bison produced by Northfork Bison Distributions Inc. between February 22 and April 30 was contaminated with E. coli. On May 7, CDC issued a salmonella alert about Butterball ground turkey labeled with the establishment number EST. P-7345. Only rarely does either FDA or CDC issue a vague notice, like the one CDC distributed August 30, warning consumers not to "kiss backyard poultry" (I did not make that up) after 1,003 people who apparently became too friendly with fowl fell ill and two died of salmonella poisoning.

Hours after their first vape statements, the FDA and CDC clarified their positions by indicating the cartridges at issue appeared to be black market products containing vitamin E acetate, which is safe in cosmetics and dietary supplements but dangerous when aerosolized.

In one fell swoop, black market products killed at least seven people and seriously injured hundreds of others. Perhaps now legislators, regulators, and law enforcement will get serious about killing the underground.

Kathee Brewer

CORRECTION: In September's issue, we reported Post Malone's Shaboink cannabis line debuted July 4. In fact, Shaboink launched hemp pre-rolls in July. The cannabis line remains under development and will launch 'soon,' Malone's representative said in late August. In addition, Malone said Shaboink is "derived from shaboinky, the sound you make when you jump out and surprise someone." **nrg** regrets the errors.

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NEWS BRIEFING



Tucker Carlson Blames Mass Shootings on Pot

Gun control opponents and proponents, politicians, and medical professionals attempt to explain mass shootings with a variety of theories from current laws to white supremacy, presidential rhetoric, and videogames.

Fox News pundit and gadfly Tucker Carlson blames cannabis.

During an August 27 interview with Alex Berenson, former New York Times reporter and author of Tell Your Children: The Truth About Marijuana, Mental Illness, and Violence, Carlson noted an autopsy revealed the Dayton, Ohio, shooter who killed nine people and wounded twenty-seven others before police ended his rampage with a fatal shot, had cocaine, Xanax, and alcohol in his system at the time of the massacre. Without citing a source, Carlson added, "He was also known to be a long-time user of marijuana. It turns out, in fact, that many violent individuals have been avid marijuana users."

Berenson's book, published in January 2019, is predicated on his skewed theory that "Marijuana causes psychosis. Psychosis causes violence. The obvious implication is that marijuana causes violence."

Politifact, a non-partisan, nonprofit journalism project of the Poynter Institute, rated both men's claims less than factual. Berenson's is hardly "obvious," the organization pointed out, because 100 scholars and clinicians "refuted some of its central findings and accused Berenson of cherry-picking data and presenting correlation as causation" in a letter they published shortly after the book's debut.

"While marijuana does have some health consequences, a turn toward violence is not widely accepted as one of them," Politifact noted. "There is bound to be some overlap between people who commit violent acts and people who smoke marijuana because of how popular marijuana is. According to the United Nations, 192 million people worldwide used marijuana at least once in 2016."

Politifact also quoted Mark Kleiman, a professor of public policy at New York University Wagner, who in January told New York Magazine, "Cannabis consumption, and especially heavy cannabis consumption, has been on the rise since 1992. Over that period, national homicide rates have fallen more than 50 percent."



NEVADA LICENSE PROCESS FROZEN

A Nevada judge put a hold on new retail licenses in the state after alleged improprieties in the process came to light. Complainants in the action accused regulators of bias in granting sixty-one licenses despite compliance issues. The Nevada Department of Taxation is expected to appeal the injunction to the state's supreme court.



THAILAND GOES EXTRACT-FRIENDLY

The Thai government dropped cannabis and hemp extracts from its list of prohibited substances, opening the door for what the country hopes will be significant investment in the burgeoning Asian medical market. Previously, cannabis possession was punishable by up to fifteen years in prison and a fine of up to 1.5 million baht (about \$49,019.61).



FBI EYES INDUSTRY

The U.S. Federal Bureau of Investigation is keeping an eye on the cannabis industry in case corruption crops up. On the agency's podcast in mid-August, agents noted the incredible amount of money flowing through the industry creates the potential for bribes and illegal drug trafficking.



Surgeon General's Warning

U.S. Surgeon General Dr. Jerome Adams issued an official advisory cautioning pregnant women and youth about cannabis use. Remarking "this ain't your mother's marijuana," Adams said no amount of marijuana use during pregnancy or adolescence is known to be safe. He advised people within the subject classes steer clear of weed until more is known about long-term impact.



ANDREW YANG DOES THE NUMBERS

Pro-cannabis Democratic presidential candidate Andrew Yang debuted a line of campaign merch bearing his slogan and marijuana iconography. Yang is an entrepreneur, lawyer, and philanthropist known for his support of social safetynet programs. His campaign slogan, MATH, is a nod to his reputation as a numbers geek and proponent of facts-based decision-making. **Yang2020.com**



SNIFFING OUT WEED INTOXICATION

Technology company Hound Labs secured \$30 million in funding for further development and production of the Hound Breathalyzer, a handheld device that rapidly detects and measures cannabis and alcohol intoxication. The first-of-its-kind device is designed for use by organizations tasked with enforcing public and commercial safety. **HoundLabs.com**

Rapinoe, Gronk Join CBD Teams

Former New England Patriots tight-end Rob "Gronk" Gronkowski and Megan Rapinoe, captain of the FIFA Women's World Cup-winning soccer team, became the latest sports stars to join Team Cannabis. Rapinoe is an advisor for Mendi, the CBD company co-founded by her twin sister, Rachael Rapinoe. Gronk, who retired from the NFL in March, signed a deal with CBDMedic. **TheMendiCo.com, CBD-Medic.com**



CANNABIS DOING GOOD

Intended to recognize companies giving back to their communities and being kind to the environment, the inaugural Cannabis Doing Good Awards will be presented during a gala ceremony October 17 in Broomfield, Colorado, Proceeds from the event will benefit Planned Parenthood of the Rocky Mountains.

CannabisDoingGood.com



NEW HIGH IN AMICABLE SPLITS

Reality TV star and fashion blogger Kaitlynn Carter raised the bar on romantic splits when she and new love interest Miley Cyrus presented Carter's ex, Brody Jenner, a weed bouquet from Lowell Herb Company for his birthday. As a teen, Cyrus reportedly lost a business deal with Walmart after "ripping a bong."

LowellSmokes.com





Texas Accidentally Decriminalizes Cannabis

AUSTIN, Texas — Everything's bigger in Texas, including, apparently, legislative goofs. A June law legalizing hemp and CBD oil unintentionally made prosecuting marijuana possession cases all but impossible, at least in the short term.

Under the new law, Texans may grow, sell, possess, and use hemp and CBD products containing less than 0.3 percent THC. The problem? Lab tests are required to make the determination, and crime labs in the state are not equipped for such analyses. The bill allocated no funds for new equipment, so local authorities can either pay for the equipment on their own or throw out charges for possessing small amounts. Prosecutors in many jurisdictions including, Dallas, Tarrant, Harris, and Travis counties, home to the state's largest cities—have chosen the latter course. The Texas Department of Public Safety ordered officers to "cite and release" possible offenders instead of arresting them.

The Texas legislature is infamous for passing ultra-conservative and tone-deaf laws that frequently prove problematic for politicians and authorities. On September 1—the day after a mass shooting in Odessa, Texas, claimed seven lives and wounded twenty-two other people, including a 17-monthold child—new laws loosening gun possession rules and legalizing brass knuckles went into effect.



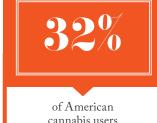
GREENLANE GROWTH

In the space of four weeks, publicly traded Greenlane, a global distributor of accessories, CBD, and liquid nicotine products, signed exclusive distribution agreements with five manufacturers: Sherbinskis, Omura, Bouquet, Cookies, and Canopy Growth's Storz & Bickel. The brands join manufacturers including PAX, JUUL, Firefly, Grenco Science, Boveda, and o.PenVAPE in Greenlane's catalog. GNLN.com



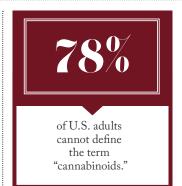
of U.S. adults do not know the difference between the effects of CBD and THC.

(Source: BDS Analytics)

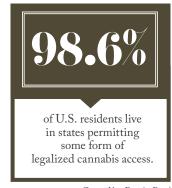


cannabis users age 21 and older partake daily.

(Source: PAX Labs/Ipsos poll)



(Source: BDS Analytics)



(Source: New Frontier Data)

Hot Cargo: \$2.3 Million Worth of Cannabis Found in Jalapeño Shipment

SAN DIEGO — "Smoking marijuana" took on a whole new meaning in August when U.S. Customs and Border Protection (CBP) agents at the Otay Mesa border crossing discovered more than 7,500 pounds of cannabis hidden in a shipment of jalapeño peppers. They estimated the street value of the 314 individually wrapped packages at \$2.3 million.

A canine team patrolling the area sniffed out the illicit substance, setting agents hot on the trail of what Otay Mesa Port Director Rosa Hernandez called "a transnational criminal organization." It is unclear whether the 37-year-old male Mexican citizen driving the tractor-trailer transporting the shipment was aware of the unauthorized cargo.

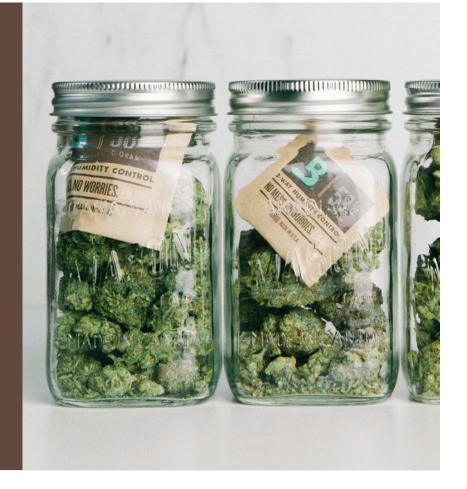
A similar bust at the Otay Mesa facility one week earlier discovered 10,642 pounds of cannabis in a shipment of plastic auto parts.

Although cannabis is legal in California, federally owned ports of entry are a hotbed for illegal drug shipments. Marijuana that escapes the federal dragnet may end up in other states or California's black market.



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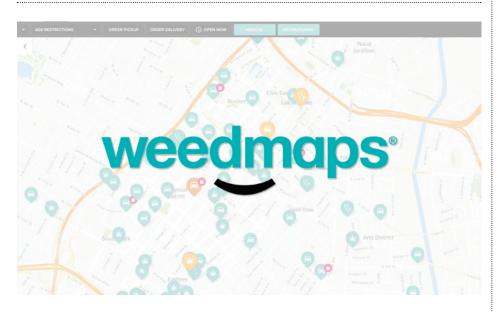
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70K-square-foot Stiiizy Dispensary Opens

Inspired by the Los Angeles art scene, Stiiizy DTLA in Los Angeles incorporates both dispensary and manufacturing operations. Owned by the cannabis products brand of the same name, the facility is intended to provide an "art-gallery-like" experience and allow consumers a window into the manufacturing process, according to designer Gi Paoletti. Stiiizy.com, GPDesignLab.com



Weedmaps Drops Listings for Illegal Businesses...Finally

IRVINE, Calif. — In late August, online cannabis platform Weedmaps announced it no longer will host pages for illegal cannabis retailers. Going forward, the company will allow only licensed entities to conduct online transactions on its platform, and by the end of the year, all listings must display a license number.

The company also committed to supporting social equity efforts by offering training, coaching, and assistance in the licensing process to minority entrepreneurs and those impacted by the war on drugs. New licensees from those communities will receive a free oneyear listing on the Weedmaps platform.

Weedmaps has been under pressure from licensed retailers and state regulators to remove listings for unlicensed vendors, especially in California. BDS Analytics estimated California's black market could be as large as three times the size of the legal market, thanks in part to combined tax rates as high as 40 percent on legal purchases in some jurisdictions.

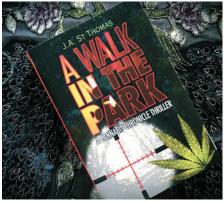
The Weedmaps announcement followed an FBI notice the agency is seeking tips and leads about illegal cannabis businesses.

New Products



SHABOINK PRE-ROLLS

Shaboink, the brand founded by singer-songwriter Post Malone, debuted its first product in July: Americangrown hemp pre-rolls enhanced with terpine flavor from Posty OG, a proprietary strain. The product is a collaboration between Shaboink, Mario Guzman's Sherbinskis, and Icon Farms. Available from Greenlane. Shabo.ink



A WALK IN THE PARK

Inspired by gumshoe detective novels and classic action thrillers, J.A. St Thomas's A Walk in the Park wraps a love story around corporate intrigue, sabotage, betrayal, and the rise of the cannabis industry. The author is co-founder and CEO of The Mad Hatter Coffee & Tea Co.

JAStThomas.com



MATCHA CHOCOLATE NUG BAR 1:1

NUG's newest bar combines ceremonial-grade matcha tea with white chocolate, cocoa butter, cane sugar, sunflower lecithin, and vanilla beans. Infused with the company's single-source distillate extracted in-house from NUG-grown plants, each 1.5oz. bar contains 100mg THC portioned into sixteen servings.

NUG.com



Utah Abandoning State-run Dispensaries Plan

SALT LAKE CITY — If a bill pending before the Utah legislature becomes law, the state will exit the dispensary business and expand the number of commercial licenses from seven to twelve. During an interview with Fox 13 News, State Senate Majority Leader Even Vickers (R-Cedar City) attributed the change of heart to "anxiety" on the part of lawmakers.

Under the initial model, which is still being hashed out after the legislature scrapped a voter-approved initiative passed in 2018, the state would have dispensed medical cannabis through county health departments and a smattering of privately owned dispensaries. District attorneys in Davis and Salt Lake counties, among others, advised local health departments not to participate in the program because they could be prosecuted for drug distribution under federal law.

Utah would have been the only state to operate its own distribution program.

Although advocates are glad to see the state handing the program back to private industry as voters intended, they worry awarding only twelve licenses to serve the entire state will leave rural patients without access to cannabis medicine.





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THE CALIFORNIA CANNABIS MARKET: JUST HOW BIG IS IT?





Insights from Arcview Market Research and BDS Analytics' California: Lessons from the World's Largest Cannabis Market report

California's legal cannabis market is forecast to surpass its 2017 high-water mark by the end of 2019, generating nearly \$3.1B in spending. The latter half of 2018 and the beginning of 2019 have seen considerable improvement in the state's management of the industry's ever-growing footprint, including expanded availability of retail licenses in growth-critical municipalities.

CALIFORNIA RETAIL STORES



The number of legal retail stores dropped overnight from 1,150 to just over 100 when adult-legal sales kicked off Jan. 1, 2018.

SALES & REGULATIONS



Sales dropped from \$247M in June 2018 to \$214M in July, which marked an end to the grace period that allowed retailers to sell product not compliant with the new comprehensive lab-testing regulations.

MARKET NUMBERS △ = 1,000 adults The current number of adults age 21+ per licensed retailer CO OR 4,240 Adults Per Retailer 5,567 Adults Per Retailer 35,147 Adults Per Retailer

Regulators need to get past their Prohibition-era prejudices. There would shortly be no more illicit market for cannabis than there is for liquor if regulations for the two products were the same, i.e. testing to keep out harmful chemicals and checking IDs at stores. The rest is regulatory overreach.

Tom Adams

Editor in Chief, Arcview Market Research Managing Director, Industry Intelligence, BDS Analytics

> Learn more at bdsanalytics.com

CANNABIS GROWTH

Legal cannabis sales in California are projected to grow by 23% in 2019 to \$3.1B and are forecast to reach \$7.2B in 2024, a 19% compound annual growth rate (CAGR).

CALIFORNIA LEGAL CANNABIS SPENDING

(in billions)



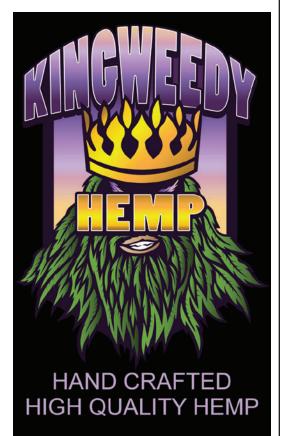
This infographic was created exclusively for mg Magazine readers

These insights and more are available in California: Lessons from the World's Largest Cannabis Market © 2019 BDS Analytics









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October **EVENTS**

The following is a list of select industry events taking place this month.

MAINE CANNABIS CONVENTION OCTOBER 5-6

Portland Sports Complex, Portland, Maine
The open-to-the-public conference will offer
demos, accessories for sale, and samples of soil
and growing products, as well as educational
sessions about legalization, banking, payment
processing, packaging, patient education,
cultivation, manufacturing, hemp, hydroponics,
legal resources, POS and management software,
and private equity and investment resources.

NECANN.COM

WEST MICHIGAN CANNABIS EXPO OCTOBER 5-6

Deltaplex Arena, Grand Rapids, Michigan
Focusing solely on the emerging Michigan
cannabis market, this event will combine
business-to-business and business-to-consumer
components in an effort to attract investment
and involvement in the nascent Michigan market.
Industry leaders, policymakers, entrepreneurs,
and newcomers will discuss best practices, policy
issues, and insider secrets.

WMCANNABISEXPO.COM

CALIFORNIA CANNABIS BUSINESS CONFERENCE OCTOBER 8-9

Long Beach Convention Center,
Long Beach, California
Hosted by the National Cannabis Industry
Association and focusing solely on the world's
largest market, the conference will include
educational sessions about California-specific
regulations, market trends, policy, advocacy,
and research. More than 200 exhibitors, 3,500
business leaders, and 100 policymakers are
expected to attend.

CALIFORNIACANNABISBUSINESSCONFERENCE.COM

BUDTENDER AWARDS OCTOBER 11-12

Mandalay Bay Resort and Casino, Las Vegas
The main event is an awards ceremony honoring
budtenders' professionalism, promoting their
efforts, and acknowledging their influence,
but an educational track and expo will be
included. The expo hall will be divided into four
experiential areas where attendees may explore
cannabis culture and its effects on society in the
past, present, and future.

BUDTENDERAWARDS.COM

SUPPLYSIDE WEST OCTOBER 15-19

Mandalay Bay Resort and Casino, Las Vegas Cannabis and hemp will be among the themes at SupplySide West, which is expected to bring together more than 17,000 buyers and suppliers from the dietary supplement, food, beverage, personal care, and sports nutrition industries. The expo expects more than 1,300 exhibitors and will present forty hours of educational programming. WEST.SUPPLYSIDESHOW.COM

RETAIL & DISPENSARY EXPO OCTOBER 23-24

Oregon Convention Center,

Portland, Oregon

The inaugural RAD Expo in January attracted 100 exhibitors and 1,000 attendees. Organizers expect to double those numbers at the second show. Exhibits will include POS products, shelving, display cases, accessories, food, drinks, refrigerators, programming consultants, packaging, POP displays, legal experts, accounting pros, and medical products.

THERADEXPO.COM

CANNABIS WORLD CONGRESS & BUSINESS EXPOSITION OCTOBER 24-26

Hynes Convention Center, Boston

A business-to-business trade show for the legalized cannabis industry, CWCB Expo provides a forum for dispensary owners, growers, suppliers, investors, medical professionals, government regulators, legal counsel, and entrepreneurs seeking business success and/or attempting to identify potential areas of growth in a dynamic industry. Exhibits and seminars will be part of the mix.

CWCBEXPO.COM

CHAMPS CHICAGO OCTOBER 29-31

Donald E. Stevens Convention Center, Rosemont, Illinois

Founded in 1999 and now one of the largest counterculture trade shows in the world, CHAMPS draws exhibitors and buyers in the thousands from around the world. Vendors offer glass pipes, vaporizers, cleaners, and extraction machines, among other stock. A new Dispensary+ section is tailored for the cannabis industry.

CHAMPSTRADESHOWS.COM



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Don't Be Chevrolet

Brands leave a lasting impression. Be careful how you launch and care for them.

eneral Motors' venerable Chevrolet brand is in danger of extinction—and if the golden goose dies, GM will have no one but itself to blame. Founded in 1911, the iconic brand, along with its famous bowtie logo and influential vehicle designs, has been a part of the American landscape for more than 100 years. From the amazing Corvette to the lusty Camaro, the powerful Silverado, and the family-favorite

Impala, Chevy has been as American as...well, as apple pie. But all that soon will go away.

Executives at GM began the slow-motion destruction of the division with the Blazer, creating a new commercial that officially and unequivocally re-brands one of Chevy's most famous models in the worst way possible. The honchos at GM say the Blazer "speaks for itself." From what I can hear, it is crying for an intervention.

The premise of the new commercial is random people see the car on the street for the first time. One woman says, "It looks like a piece of candy." Another says, "It's my 'sexy mom' car."

Introduced before the term "SUV" became the acronym for a type of rugged vehicle, the Blazer was one of Chevrolet's most popular models. Launched in 1969, it was designed to compete with Ford's Bronco, International Harvester's Scout, and Jeep's Cherokee. Early ads boasted the car would "take you into wild, roadless places with more power and wider tread than others of the breed." Moreover, the company used the slogan "Built to Stay Tough" to promote the Blazer. This was the vehicle for cops and cowboys and everyone else who aspired

After a series of management missteps, the line was discontinued in 2005. Now, fifteen years later, the tough-as-nails vehicle is being resurrected as a "piece of candy" and "sexy mom car." How the mighty have fallen.

GM has a long history of making perfectly wrong choices, many of which culminated in the company's government-assisted bankruptcy in 2009. What once was the number-one car manufacturer in the world (for seventy-seven consecutive years) has slipped to fourth place, and the downward trend shows no signs of slowing.

Rebranding an established line is not new at GM. The company has been trying and failing at this for years. You may remember the infamous campaign, "It's not your father's Oldsmobile," when the GM geniuses thought they could convince the public through a headline and a slogan change that their stale, old-style brand was young and hip. Shortly after that campaign failed to attract younger buyers, GM shuttered the entire division.

Fast forward to today, and the same thing is happening with the Blazer. Tell people the Chevy line is something it never was intended to be, and magically sales will improve! Or at least that's the plan at GM.

In addition to being blissfully forgetful about their own history of rebranding failures, the folks at GM must not understand some basic branding principles. Advertising legend David Ogilvy once described "brand" as "the intangible sum of a product's attributes," meaning brands live in customers' hearts and minds. It takes years to forge a brand, and once established, it's nearly impossible to change the public's perception of what that brand stands for.

Moreover, brands must be authentic. Attempting to sell the Blazer as a sexy mom car that looks like a piece of candy is no different from attempting to promote McDonald's as an upscale restaurant. You can claim anything you want in advertisements, but merely asserting something doesn't make statements true or believable.

Unfortunately for GM, they continually fail to remember their brands, while owned by GM, exist in the minds of the public. What customers think, imagine, and feel when they hear a brand's name are fixed and unlikely to change.

That's why the Blazer rebranding campaign will fail...and if GM doesn't change course, the Blazer could be the first domino on Chevy's unfortunate path to join Oldsmobile.

What can the cannabis industry learn from GM? A brand is vitally important. It can make or break a company. Accordingly, be extraordinarily careful with how you launch and care for your brands. Your success, quite literally, depends on it.

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NETA Brookline fuses historic architecture with contemporary style.

> HE founders of NETA Brookline sought to make a splash in Boston—and they did. The dispensary is housed in the renovated former Brookline Savings Bank building designed by the Swiss-American architect Franz Joseph Untersee, best known for his ornate Roman Catholic churches, and built by James Driscoll & Sons in 1922. The comely Beaux-Arts building is listed on the National Register of Historic Places.

NETA kept most of the iconic features: a large dome with teal accent paint around the skylights, arched windows with mahogany frames, chandeliers, and a balcony overlooking the polished stone floor.

"The Bank," as the staff likes to call the shop, is not only a jewel of Boston history but also one of the most unique retail cannabis spaces in the country. "Believe it or not, the building was somewhat perfect to house a dispensary" even before remodeling, according to Director of Compliance Amanda Rositano. The edifice is located in a choice urban spot with lots of foot traffic; steps away from public transportation, trendy shops, restaurants; and minutes from Fenway Park. The building also has a parking lot—a rarity in Brookline Village—which eases access for older patients. And "from a security standpoint, an old bank is an ideal place to house cannabis," Rositano said.





RETAILING



The Brookline Savings Bank, built in 1922, is listed on the National Register of Historic Places.



Our patients hardly wait in line inside and never wait in lines outside.

-Amanda Rositano, director of compliance, NETA

Opening a dispensary in any location is a challenge, but getting NETA licensed and operating was no easy feat. Because of the building's documented historical status, NETA had to ensure the project not only gained approval from local residents, but also met all guidelines of the town's Historic Preservation Department. The three-year process required about forty meetings with local officials. "We went through the licensing process twice in Brookline-once for medical, once for adult use—and there were parallel licensing processes at the state level," Rositano said. "Our approach has been, and continues to be, to work collaboratively with our neighbors and local host communities."

DÉCOR

The dispensary's design strikes a delicate balance between the venerable bank's grandeur and a functional, friendly, and accommodating retail space. The Beaux-Arts style emphasized classical Greek and Roman forms and features, massive spaces, and heavy masonry. Hallmarks include elaborately decorated surfaces, soaring ornate ceilings, lofty windows, polished cement floors, and sturdy woodwork. All those elements-including the bank's grand vault-were preserved and accessorized with strategically placed glass display cases, flat-screen TVs, and black leather couches.

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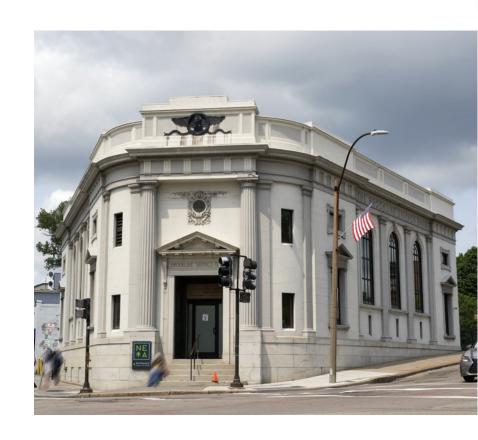


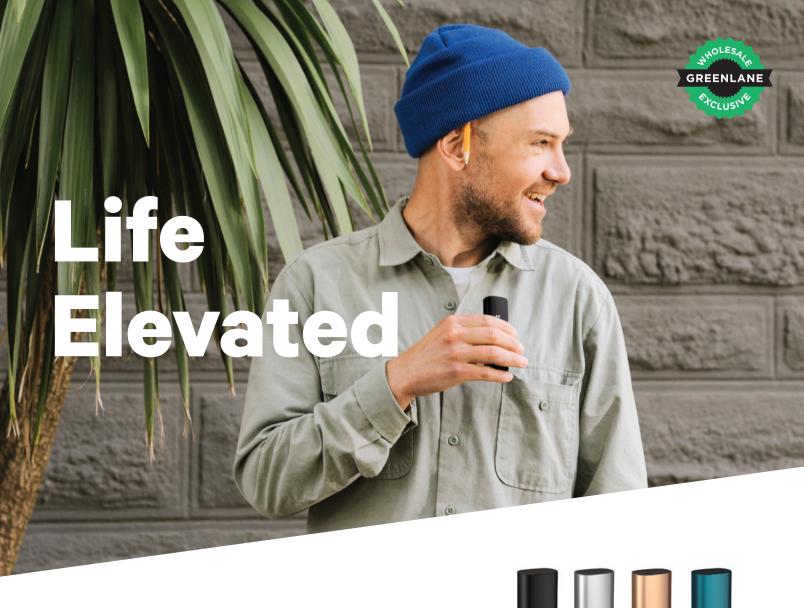
The ornate domed ceiling is one of NETA's most striking features.

"The first thing we want people to feel when they walk into our stores is comfortable and excited about the prospects of cannabis," said Rositano. To that end, NETA installed fullservice stations where budtenders introduce the dispensary's product inventory and answer questions. Customers receive an old-school printed menu they can keep.

LOGISTICS

NETA opened for medical use in 2016 and received a recreational license in March 2019. Staff, officials, and neighbors spent months preparing for the hundreds-even thousands-of people they expected on rec launch, anticipating potentially clogged sidewalks, packed intersections, and parking shortages. Dispensary employees handed out food and drinks to customers waiting in line. The final visitor tally surprised even NETA executives: 2,500 customers. The number encouraged the dispensary to proceed with testing a "reserve ahead" program that allows people to peruse products and place orders on the shop's website. The system worked without a hiccup.







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Because of the building's documented historical status, NETA had to ensure the project not only gained approval from local residents, but also met all guidelines of the town's Historic Preservation Department. The three-year process required about forty meetings with local officials.

While customers appreciate the historical preservation of the space, smooth functionality keeps them coming back, according to Rositano. "We wanted to make sure people had enough space while maximizing the number of stations we could have open to serve patients and customers," she said. Accordingly, the shop offers separate spaces for medical patients and adult-use customers, allowing quick checkout even when the shop is buzzing. "Our patients hardly wait in line inside and never wait in lines outside," Rositano said. "In building out the space for the introduction of adult-use sales, our primary concern was how to minimize impact on our medical patients."

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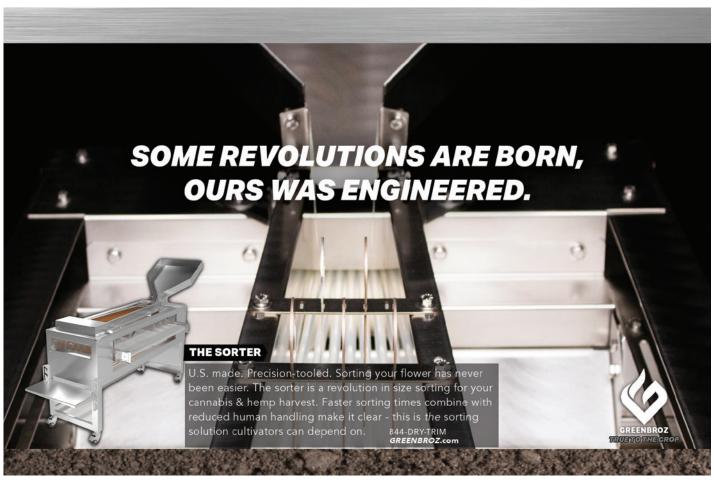


Being a vertically integrated, seed-to-sale business, the NETA team has built a world-class, 100,000-square-foot indoor facility in Franklin, Massachusetts, to house cultivation, extraction, and infusion operations. The company offers a portfolio of more than 250 SKUs covering a wide range of cannabis products and a large variety of strains. "We love that we control the quality and integrity of our products and our brands," said Rositano.

The hard work and planning paid off. With the Commonwealth of Massachusetts being one of the fastest growing adult-use cannabis markets in the U.S., NETA was a prime target for acquisition. In June, Atlanta-based Surterra Wellness bought the chain. The deal set the stage for future growth.

"NETA will continue to provide patients and customers with the high-quality brands and extraordinary service they have come to expect," said Kevin Fisher, co-founder of the dispensary chain. "Together, we can build upon what NETA has already accomplished in ways that bring superior products and services to our current and future patients and customers."

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Keeping the Pressure on Social Justice Reform



HERE IS NO SHORTAGE of controversial topics in the cannabis industry, but the intertwined issues of social justice and social equity reside near the top of the list. Politicians, activists, and industry operators from coast to coast generally agree social justice should be prioritized on local, state, and federal levels, yet there are few, if any, meaningful programs

to help people of color (POC) gain a financial stake in the fast-growing, multibillion-dollar industry. No matter how well-meaning existing programs are, POC still represent a tiny fraction of stakeholders in the industry, and individuals who were targeted during the drug war still face many of the same challenges they did during prohibition.

To this day, African-Americans and Latinx represent almost half the convictions for drug law violations in the United States, despite representing only 32 percent of the population, according to the Drug Policy Alliance. Some of the

top priorities for social justice and equity proponents include expunging cannabis arrest records, initiating small business incubators and education/mentoring programs, and offering no-interest loans and grants to people who were adversely impacted by the drug war.

California was the first state to raise the social equity flag, but local and state programs have been lackluster even there. Promising signs in the Midwest and on the East Coast indicate meaningful reforms could make 2020 a breakthrough year.

A SLOW GRIND OUT WEST

Nobody said reform would be easy. Myriad political, economic, and social factors make designing and implementing programs challenging for both legislators and industry operators. That's not to say success stories don't exist, but they are few and far between in an industry that enjoyed more than \$10 billion in sales during 2018 and is projected to surpass \$12 billion this year, according to New Frontier Data.







Chicago NORML's board of directors.



It's really frustrating to see how equity is discussed in the media. The headlines are always salacious and...it becomes a negative narrative.

-Kiana Hughes, educational director, Chicago NORML

Proposition 64, which legalized recreational sales and use in California, sparked lively discussions about social equity, protections for small farmers and other operators, and creating a fair and balanced industry. But despite proponents' good intentions, the reality has been disappointing. Large corporations and investors with deep pockets flocked to the state to dominate the industry from top to bottom. Much the same is happening elsewhere.

Chaney Turner co-founded The People's Dispensary (TPD) in San Francisco in 2017 with a mission to promote social equity and cater to marginalized communities including POC, queer, disabled, the formerly incarcerated, and economically disadvantaged people. When she looks at the competition now, in the Bay Area and beyond, she sees few other companies on the same track. The state needs to do more to promote social justice policies, she believes.

"They have not done that well, and they are not taking the lead in making [the social justice situation] better," she said. "Equity isn't that hard, and being socially responsible isn't that hard. When elected officials and people in policy bring up equity, they want to make it a big math equation, but it's not. Just give the people what they need."

She explained California has not allocated enough funding to support

equity programs. Paperwork from prospective POC businesses is piling up in San Francisco and Oakland. "These cities want to throw out the word 'equity,' but there isn't any action behind it. I feel like the onus is put on small businesses of color to get things done. But we need some type of support from the state. If you look at all these cities, it's POC with no capital."

Turner and her POC and queer business partners who started TPD have developed a co-op-style business model, allowing investors from the community to have an ownership stake in the dispensary. Turner and her co-founders have offered to help people in other states open like-minded dispensaries and are actively pursuing projects across the country.

"We are invited to certain places and we partner with communities there, and we want to make sure we partner with people that are valuesaligned with our mission," she said. "Part of that is having non-accredited investment, reinvestment into employees and local communities. Whatever cities we operate in, those people do the civic engagement and hiring. Make sure the empowerment is into the community we serve, [because] the priorities are different in every city. TPD is about partnership when we go to outside communities."







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It looks like New York is on the social justice and decriminalization path but they are at a standstill, and I think it's smart to hold off.

> -Shanita Penny, president of the Minority Cannabis Business Association's board of directors and member of the New Jersey Cannabis Industry Association's board of trustees

PLOTTING A NEW COURSE

In the Midwest and on the East Coast, legislators and industry operators are watching social equity developments on the West Coast, duly noting the pitfalls and challenges. They're optimistic they can do better.

Legislative initiatives in Illinois and Massachusetts are attempting to reach individuals who have been economically disadvantaged, disproportionately impacted by the war on drugs, or both. However, Massachusetts's program has been slow to develop, and to date only 1 percent to 2 percent of cannabis businesses are owned by minorities. Illinois was the first state to legalize the sale and use of recreational marijuana through legislation, and activists have praised the law for its social equity components, which include reduced application fees and grants and loans. Some financing comes from existing cannabis companies. Of course, now the state must determine how the loan and grant program will work. The application process opens in October.

"There is a political will in Illinois," said Kiana Hughes, educational director for the Chicago chapter of the National Organization for the Reform of Marijuana Laws (NORML). "We will be the flagship [equity program] in the Midwest, and the provision that passed is more

comprehensive than anything out there across the U.S. It can happen and will happen here, but there is some confusion about how exactly it's supposed to work."

In Massachusetts, the state senate recently rejected Democratic Senator Sonia Chang-Díaz's proposal to make zero-interest cannabisrelated business loans available to benefit small businesses, diverse owners, and disenfranchised communities. A proposed budget of \$1 million was meant to be self-sustaining through a portion of projected tax revenue and other sources.

In New York, lawmakers recently agreed to decriminalize cannabis by decreasing penalties and allowing expungement of previous arrests for small amounts of cannabis. The state legislature was unable to muster enough votes for a legalization bill, in part because the bill lacked enough social equity provisions.

"It looks like New York is on the social justice and decriminalization path but they are at a standstill, and I think it's smart to hold off," said Shanita Penny, president of the Minority Cannabis Business Association's (MCBA) board of directors and a member of the New Jersey Cannabis Industry Association's board of trustees. "I'm happy to see them being

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Everybody is responsible for making sure this nascent industry gets off on the right foot and people who were harmed by the drug war can participate in the industry in whatever way they can.

-Barrington Rutherford, senior vice president, Cresco Labs

thoughtful. New Jersey has a deadline for four more vertically integrated licenses. That will require significant capital, and those opportunities are geared toward larger operations. But there are pending licenses that will be available without the requirement around vertical integration, and that will open the door for smaller operators."

Nelson Guerrero is co-founder and executive director for the Cannabis Cultural Association, a New York-based nonprofit group that helps marginalized and underrepresented communities participate in the legal cannabis industry. "We've seen all these mistakes on the West Coast," he said. "When I was in Governor [Andrew] Cuomo's office, I reiterated we don't want be a copy of the West Coast. That's the opposite of what we need here. These programs have always been underfunded, and sometimes the equity applicants get sharked at the last minute—people getting offered \$50,000 to \$100,000 to be on the application as an equity applicant" even though they will have no role in the business.

Guerrero explained Latinx and African American communities have been disproportionately criminalized for marijuana possession, making individuals in those communities hesitant to use cannabis for medicine or participate in the industry at any level out of fear they may be prosecuted. Nonetheless, he believes the equity legislation proposed in New York and New Jersey will be impactful and said promising models that give equity applicants a legitimate ownership stake in the industry are being developed in other states.

"I've seen franchising models come up where there is a multi-state operator (MSO) and an equity applicant, and those seem to be working," he said. "It's not the most ideal model, because they are giving a large chunk of ownership to a private corporation. But if that gets you going to create a viable business, and there's a way to have a buyout option, that's one of the better solutions going forward. Hopefully, on the East Coast it will be enacted better. The last thing we want is a bunch of MSOs like MedMen with 100 locations."

PUTTING CORPORATIONS ON THE SPOT

Effecting real change by integrating social justice into the foundation of the industry will require MSOs and other large corporations to support meaningful programs that give drug war victims and POCs the education, training, and other tools to help them find long-term employment and a genuine financial stake in the industry.

Chicago-based Cresco Labs is one of the few major MSOs to initiate a comprehensive program. The company's Social Equity & Educational Development (SEED) initiative, launched in May 2019, is designed to promote "inclusion, equality, and community engagement" and centers on three main components: social equity, a community impact incubator program, and workforce development/education.

Barrington Rutherford, senior vice president of community integration at Cresco, grew up on Chicago's rough-and-tumble south side and knows all too well the drug war's impact on urban communities. He explained social justice and equity are part of Cresco's foundation. The company worked with Governor J.B. Pritzker, a Democrat, to design SEED and advocated the legislature mandate cannabis companies offer social justice programs.

"Our CEO [Charles Bachtell] told the governor that if you want to see diversity and equity, then force the industry to do it," Rutherford said. "It's a privilege to be in this business, and we should treat it that way. We were part of crafting what the minimum standard should be, and we will exceed that, but we are also thrilled to be able to help out and become an on-ramp for people who want to enter this industry."

Cresco is mentoring eight equity groups, providing education and applied experience members will need to work in the industry or start their own businesses. The company plans to roll out similar programs in every state where it operates and scale up as they go. Cresco also hosts expungement events and partners with community organizations across the U.S., and it has secured large law firms' commitment to help people through the process.



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Cannabis Cultural Association team.



When I was in Governor [Andrew] Cuomo's office, I reiterated we don't want be a copy of the West Coast. That's the opposite of what we need here.

-Nelson Guerrero, co-founder and executive director, Cannabis Cultural Association

"The [Illinois] governor and the legislature did a phenomenal job of setting a standard saying everyone should be responsible for fixing this problem, and I think Illinois will be the model for the rest of the U.S.," Rutherford said. "Everybody is responsible for making sure this nascent industry gets off on the right foot and people who were harmed by the drug war can participate in the industry in whatever way they can."

NORML's Hughes is cautiously optimistic about the social equity programs and incentives in place in Illinois, but she also is aware how starting any small business can be difficult in a highly regulated industry

"Think about living in an area where there are businesses owned and operated by black people. It's so layered and multi-faceted," she said. "A dispensary is a retail business, so there is some general understanding of entrepreneurial business stuff that is lacking. And then the people who do have the capital and business mindset, there is fear or trepidation about being in the cannabis industry or even being associated with it."

LEGISLATING SOCIAL JUSTICE

Important reforms also are under discussion at the federal level. In February, Senator Cory Booker (D-N.J.) introduced the Marijuana Justice Act, which would remove cannabis from the federal list of controlled substances and expunge past convictions. Senators Bernie Sanders (I-Vt.), Elizabeth Warren (D-Mass.), Kamala Harris (D-Calif.), and Kirsten Gillibrand (D-N.Y.) co-sponsor the bill.

The list of prominent Democrats who support some form of comprehensive cannabis reform grows by the day and includes presidential hopefuls Beto O'Rourke (former U.S. Representative, D-Texas) and Senator Amy Klobuchar (D-Minn.). Whether federal legalization becomes a major campaign issue in 2020 remains to be seen, but advocates expect progress on issues including banking, expungement, and other aspects of the social justice equation. Three pending comprehensive reform bills call for removing cannabis from the Controlled Substances Act: the Marijuana Justice Act; the Ending

Federal Prohibition Act, sponsored by Representatives Tulsi Gabbard (D-Hawaii) and Don Young (R-Alaska); and, the Marijuana Freedom and Opportunity Act, sponsored by Senator Chuck Schumer (D-N.Y.).

On the federal level, MCBA's Penny said the SAFE Banking Act may be the policy initiative that could have the biggest impact for people of color, because it would create new opportunities for small business owners who need loans, access to traditional banking services, and tax write-offs that every other business in the U.S. enjoys. Since most banks do not work with cannabis companies, operators often must come up with the capital to start a business themselves, which is another major challenge for POC looking to start a cannabis enterprise.

"SAFE Banking is definitely something that is going to tip the scales, and it is critically needed wherever you are in the industry," she said. "The large MSOs are losing millions because of [inability to write off] business expenses and are having trouble operating at scale. So, the industry needs it, minority business owners need it, social equity participants need it, and I am very excited about it passing this year. It would be a big step in the right direction, and it has bipartisan support to give relief to states that are implementing programs."

In July, a formidable group of civil rights and cannabis advocates formed a coalition in order to lobby for more social justice considerations as legislators begin debating legalization bills in the House and Senate. The coalition includes the Drug Policy Alliance, Human Rights Watch, NORML, American Civil Liberties Union, Center for American Progress, and Students for Sensible Drug Policy.

The coalition's top agenda items include removing cannabis from the Controlled Substances Act, justice reform measures like expungement and resentencing, eliminating public-benefit penalties related to cannabis use, directing tax revenues to local governments to reinvest in communities most impacted by the war on drugs, and eliminating cannabis testing and arrests as factors for child welfare and immigration cases.

"Black and brown people have been traumatized by our racist marijuana laws and, as the federal government embraces reform, our groups will make sure any proposal will repair the damage done to those communities," said Queen Adesuyi, policy coordinator at the Drug Policy Alliance.

MAKING THEIR VOICES HEARD

While politicians and industry leaders talk a big game about social justice and equity, very few laws compel companies to make programs an integral part of the industry. The tide seems to be turning, though, as more attention and debate develops in states where legalization is on the horizon and legislators want to create equity from the beginning.

"New York almost had adult use in the budget but there was no social equity in the bill, so the legislature wasn't for it," said Guerrero. "Whatever eventually passes will be similar to what Illinois passed. We can't avoid the social equity question, or there won't be an industry here. We have yet to see one that is perfect, so it's a work in progress."

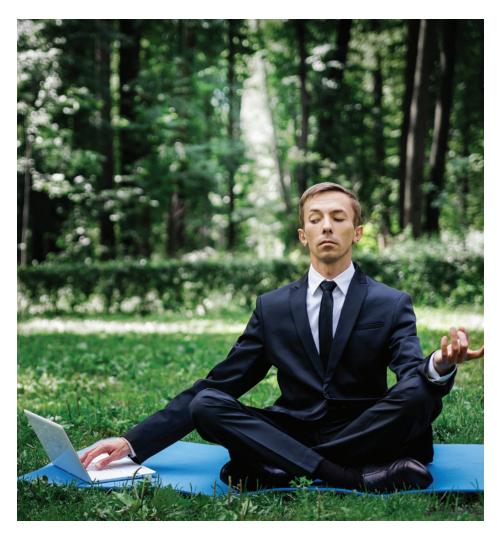
Regardless the slow progress thus far, activists fear criticizing current efforts will discourage people of color from continuing critical work that remains to be done.

"It's really frustrating to see how equity is discussed in the media," said Hughes. "The headlines are always salacious and emphasize that black people don't think enough is being done to address the problems, and it becomes a negative narrative. But it's off to a great start in Illinois, and way more than we're seeing across the U.S."

Penny agrees progress is being made, slowly but surely, and remains optimistic about the future for people of color at all levels. In some respects, the answer to further progress is the same as it always has been: activism and advocacy on the front lines, both locally and nationally.

"You should see the lines to get into congressional hearings," she said. "People are lined up so they can get a seat for those hearings and are becoming more educated and understanding their impact."





Comply or Die

CannaRegs keeps up with cannabis laws across the country to make compliance easier.

small compliance error can mean the death of a cannabis company. Operators do their best to stay up to date about the complexities of local, state, and federal cannabis laws, but while they spend copious time pouring over legal documentation, attempting to make sense of complex regulatory language, something else may slip through the cracks.

CannaRegs helps clients keep up with constantly shifting regulatory environments and remain within compliance parameters. Every day, a team of lawyers, fluent in local, county, state, and federal law make about 100 updates to the CannaRegs database. The unique repository organizes compliance information and requirements not only based on location, but also by issues including taxes, zoning, licensing, labeling, and packaging.

Chief Executive Officer Amanda Ostrowitz founded CannaRegs to do the research business owners, compliance officers, and others in the industry need. Ostrowitz, an attorney, possesses unique insight into complex legal arenas, having worked for the Federal Reserve. During her time with the government, research into banking regulations led her to realize just how onerous operating a cannabis business had become. "Not only did I learn there were close to eight [local] agencies overseeing cannabis, but my city had completely different laws in place than the next city over," she said.

The discovery led Ostrowitz to consider how to simplify a system she saw becoming more complex by the day. "I knew we needed to create a legal research platform, which ultimately evolved into a comprehensive policy tool for lobbyists and hyper-local industry professionals," she said.

Creating an organization like CannaRegs takes much more than one sharp and determined legal mind. The company employs an entire team of attorneys and legal experts to stay on top of an endless tangle of regulations in a growing number of jurisdictions. "Almost 50 percent of our staff are on the legal research team. At least half of these are attorneys. That makes 25 percent of our whole company lawyers," Ostrowitz explained.

CannaRegs benefits from decades of legal expertise, including Ostrowitz's, but the company doesn't shy from young employees or fresh ideas. "When it comes to new-hires, we tend to hire a lot of candidates right out of college," she said. "We find they are really driven individuals with incredible skill sets. Additionally, they are really excited about working within the cannabis industry, as it's seen as full of opportunity."

Lawyers are accustomed to jokes at their expense, and cannabis lawyers are particularly magnetic for corny wisecracks. The tables have turned now, though, according to Ostrowitz. She used to hear "Oh, you're a cannabis lawyer? Ha ha. Is that a thing?" Now, "there is less of that because cannabis is becoming so normalized," she said. Despite the serious nature of their work, the CannaRegs staff tries to try to take things as lightly as they can in the office. "Usually, we are just making nerdy regulatory jokes," Ostrowitz said. To get the punchline, "you had to be there."

Joking aside, CannaRegs deals with difficult issues. No two states are alike when it comes to laws and regulations. "With Massachusetts, for example, everything is extremely complex because of the way the law is structured and the way the government is formed. Both are different from anywhere else in the United States," said Ostrowitz. States like Michigan are challenging because they harbor so many local governments. In California, about twenty state agencies are involved in regulating some aspect of the industry. Despite all the chefs in the kitchen, Ostrowitz said she finds getting information from California to be a bit easier than in other states. "[California's] agencies are compelled to produce relevant info within seventy-two hours following meetings related

to cannabis because of the Brown Act," she said, citing 1953 legislation named after State Assemblyman Ralph M. Brown, who authored the bill guaranteeing public participation in the legislative process. "This means we can get the information we need to our clients very quickly and efficiently."

Working with the plethora of agencies across the country is vital to CannaRegs's mission. "We build proprietary systems to manage information, and we also build unique technology and workflows for each state," Ostrowitz said. CannaRegs invests considerable time in building and maintaining relationships with governments in all legal states and on all levels. Because of the relationships, the company is able to get information almost immediately. "We call hundreds of offices across the country every week," she said. "Governments have realized answering our calls actually saves them time.

might be, [allowing them to get] ahead on a business idea or get ahead in their existing business," Ostrowitz said. The calendar is synced with CannaRegs's email alerts, allowing users access to important information instantly. Users may specify the jurisdictions for which they want to receive alerts.

Although, CannaRegs' clients include attorneys and cannabis business owners, a large portion comprises government offices. They need to remain up to date about what's happening in their own states and others. Consulting firms, lobbyists, and real estate companies also utilize CannaRegs' services: Identifying cannabis-compliant properties is one of the most challenging aspects of opening a business in the industry. "Real estate firms find our service particularly beneficial, as they are looking to purchase property in the respective area as soon as the idea is put out there," Ostrowitz said.

CannaRegs Components



Searchable rules and regulations: Three search functions allow users to browse, search laws, and "smart search" the company's database. Research that previously took hours may take only minutes.



Custom email alerts: Users receive daily emails about selected cities of interest as new developments, meetings, or announcements are published.



Rule-making calendar: A consolidated, city-by-city schedule of rule- and policy-making events helps users stay up to date about potential and actual changes to laws and regulations.



Official publications: The database offers quick access to forms, official guidance documents, industry bulletins, position statements, product recalls, and more.



We call hundreds of offices across the country every week. Governments have realized answering our calls actually saves them time.

–Amanda Ostrowitz, founder and CEO, CannaRegs

Once we have the info uploaded [to our database], then they won't receive phone calls from everybody else."

Maintaining friendly working relationships with government agencies allows the company to offer clients detailed, in-depth services that can help them stay out of regulatory trouble. CannaRegs's Smart Search, for instance, provides access to regulations in each jurisdiction, accomplishing with the click of a mouse what otherwise would be hours of work.

CannaRegs's event calendar also represents a boon for compliance. The user interface resembles popular workplace projectmanagement tools and often provides information weeks before local governments publish it. "Our calendar tells clients the first time something has been discussed, meaning clients can get involved very early on in the conversation, whatever that conversation

In addition to helping shops keep their doors open, CannaRegs empowers employees and saves time for operators and managers. "We allow budtenders to search their queries themselves, making them selfsufficient and compliant," Ostrowtiz said. "CannaRegs can be used to coach staff on what not to do, and also can be used as a training tool to ensure staff understands the consequences of non-compliance."

Regulators are not apt to forgive compliance errors just because an entry-level employee goofed-and errors occur more frequently than one might imagine. "Think of five companies you love right now, and two of those will not be here in five years due to non-compliance," Ostrowitz said. "It needs to be realized that compliance is not a cost center; it's the heartbeat. If the heartbeat is gone, the whole thing dies."



In High Demand

Before plant-based medicine can advance, science has a lot of catching up to do.

he demand for plant-based alternatives to pharmaceuticals and Western medicine has never been greater. Yet, while support for plant medicine increases, our understanding of its potential medical benefits and risks remains inadequate. As more patients seek alternative solutions for chronic pain, post-traumatic stress disorder, anxiety, and other conditions, there remains a lack of standardization surrounding recommended dosing and no firm evidence-based guidelines for healthcare providers to follow. In place of hard evidence, patients rely on anecdotal feedback from friends, relatives, and those who work in retail pharmacies and clinics.

This lack of information persists for an understandable reason. Plant-based medicine has been shunned for decades in the United States and, as a result, research has been met with resistance.

However, persistence on the part of those with an interest in learning more about its properties has paid off: Today there are more researchers interested in conducting clinical trials, more innovators working to identify novel uses for the plant, and more consumers hoping to find symptom relief through plant-based medicine use.

Despite this surge of interest, researchers continue to face numerous regulatory and logistical barriers. Many of these barriers are linked to the plant's classification as a Schedule I drug under the federal Controlled Substance Act (CSA) of 1970, meaning that it has no accepted medical use and high abuse potential. The classification likely has fostered negative attitudes more than anything else, but as legalization proliferates across the United States (and, indeed, the world), the expanding demand for information is spurring a corresponding demand for research.

CHALLENGES OF CONDUCTING RESEARCH

To understand why scientific investigation has been so limited, it is important to consider the many hurdles researchers face when developing and executing plant medicine studies. The plant's classification as a Schedule I drug requires many conditions be met before a study can commence. For example, the U.S. Food and Drug Administration (FDA) must approve all proposed research. If human subjects are involved, the Schedule I classification requires researchers to submit a new drug application to the FDA. Furthermore, all studies must secure a Schedule I registration through the Drug Enforcement Administration. Finally, product used in nearly all federally funded research studies must be obtained through the National Institute on Drug Abuse (NIDA) Drug Supply Program.

The final requirement arguably creates the most meaningful barriers to scientific advancement in the field. Two of the most important goals of research are indentifying how different chemovars impact different individuals and conditions, and how different cannabinoids interact with each other to generate specific outcomes. When research is restricted to NIDA-provided product, which has been shown to be more genetically similar to hemp and to contain less THC than many commercially available products, scientists are limited in the chemical properties of the plant they can study. In addition, university biologists cannot cultivate plants with specific chemical properties for investigation.

Furthermore, the CSA prohibits researchers from analyzing the chemical properties of existing plant-based goods in the market, thereby making it impossible to verify the health impacts of commercially available products. When considered in concert, these restrictions make it extremely challenging for researchers to evaluate the potential utility and risks of real-world products with a sufficient degree of scientific rigor.

THE GOOD NEWS

Despite the many challenges, exciting developments are on the horizon. For example, in 2017 the National Institutes of Health reported a total of \$254 million in grant funding to support more than

400 cannabis research projects. In addition, according to the International Association of Cannabinoid Medicines (IACM), 651 cannabis-related studies are underway in the United States, and many new studies are in development. As the trend toward legalization continues, stigma surrounding the plant is decreasing and acceptance of its use is increasing, particularly for those seeking a solution outside traditional pharmaceuticals. Consequently, there has been a spike in desire for additional data as more patients, physicians, and manufacturers seek information about usage, efficacy, and dosing regimens.

In its June 2018 announcement approving Epidiolex, the nation's first FDA-approved drug derived from cannabis, the FDA cited "controlled clinical trials" as the "most appropriate" way to bring plant-derived treatments to patients. Epidiolex, an oral solution designed for the treatment of seizures associated with two rare and severe

report, which is susceptible to bias, and have quantified dose size using an "inhale while counting" approach. Unfortunately, the lack of standardized, accurate measurement tools for research has limited the conclusions that can be drawn from the resulting data. However, recently introduced precise, technologically advanced assessment tools have the potential to change the research landscape by increasing the quality of trial data and the conclusions that can be drawn from it.

In June, researchers at Colorado State University in Fort Collins, Colorado, launched a study using the Gofire Health Suite, which employs a metered-dose, IoT-enabled vaporizer that connects to a smartphone app in order to monitor and track intake in real-time. The three-stage trial is designed to evaluate the efficacy of Gofire's data-gathering technology for alternative medicine research and the efficiency of Gofire Inhaler's medicine delivery process. Called a "milestone event for

As legalization proliferates across the United States (and, indeed, the world), the expanding demand for information is spurring a corresponding demand for research.

forms of epilepsy, was approved following three randomized, double-blind, placebocontrolled clinical trials. Its approval provides an excellent example of the rigorous scientific research needed to propel evidence-based alternative medicine into the mainstream.

The list of needs for plant medicine research remains lengthy and broad in scope, but most interested parties agree primary goals should include evaluating the efficacy of the plant for treating the symptoms of different conditions and examining how dosing can impact patient outcomes. Specifically, physicians and patients are eager to know which chemical compositions create preferred outcomes for specific conditions as well as how different cannabinoid/terpene combinations impact patient outcomes. Scientists are diligently addressing these research aims, with a goal of building the evidence needed to inform prescription and dosing recommendations. To get to the point where we have truly prescribable plant-based medicine, precise measurement tools for conducting research are critically important.

Historically, most researchers have tracked participants' use and outcomes via self-

[plant-based] medicine" by the study's lead researcher, Bradley Conner, the project will be completed in Fall 2019 and may usher in a new era of research.

The ultimate goal, as previously mentioned, is to reach the point where we have reliable, scientifically supported plant-based medicines physicians can prescribe with confidence and patients can feel comfortable using. Sound, scientific evidence likely will generate further support for plant medicine among healthcare, consumer, and legislative audiences; increase physician and patient confidence; "normalize" plant-based medicine use for new patients; and finally remove the guesswork and "trial and error" that surrounds plant-based medicine use today.

I like to imagine a future where physicians can confidently prescribe effective plant-based medicines for chronic pain, epilepsy, neuropathy, PTSD, anxiety, and a host of other conditions and where an increasing number of patients can experience clinically significant symptom relief. This future is possible. We will realize it through scientifically rigorous research.

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Kevin Murphy's

After building a powerhouse brand, one of the most powerful men in cannabis has his sights set even higher.

creage Holdings is in a unique situation for a publicly traded company. In June, shareholders voted to enter an arranged marriage of sorts (contractually an "Arrangement Agreement") to a much richer Canadian bride, Canopy Growth. The engagement may become the longest in history, because the wedding cannot occur until cannabis is federally legal in the United States. While the lovebirds wait for larger forces to decide their fate, the company waltzed away, albeit with everyone's approval, with a dowry of hundreds of millions of dollars to spend on itself. Even better, the groom also can legally utilize all the bride's assets (brands, resources, intellectual property) for free with the understanding the assets will be used to benefit Acreage and its shareholders.

An even wealthier patriarch—Constellation Brands—sits over the couple's shoulders, determined to control whatever chaos erupts in order to ensure the marriage happens as planned. No wonder Acreage Chief Executive Officer Kevin Murphy, who founded the company, raised it, and betrothed it to Canopy, is so at ease. Despite the ups and downs of the market (cannabis stocks in particular); despite all the regulatory hurdles and delays that test the patience of compliance managers, shareholders, and market analysts; despite all the unknowns that come with operating a cannabis business, Acreage is putting into place a strategy to increase its footprint in the twenty states in which the company currently operates.



BECOMING ACREAGE

Connecticut-born Murphy, 57, is a former Wall Street money manager. Eight years ago, he used his own money to underwrite the start of his cannabis career in one of the country's small but venerable weed markets. "It was in 2011 when I was introduced to cannabis through a very dear friend of mine who had made an initial investment in Maine, which was the first state on the East Coast to embrace medical cannabis," he said.

Murphy was an athlete, a linebacker at College of the Holy Cross who spent a season in the United States Football League before starting his career in finance. Like many investors in cannabis, he did not use weed personally but quickly realized the industry presented irresistible opportunities far beyond making money. "I was interested in

the economics of the business, but equally as important I learned about the medicinal value of the plant and was convinced at that time that we could supply clean, predictable medicine to people in need," he said. "From my vantage point, that was one of the major push points in getting involved. From there, learning from the experience, as a private investor I increased my footprint to include New England. From Maine I moved to Connecticut, Massachusetts, and New Hampshire, and for the first three years in existence it was my family's capital I put at risk."

The investment was significant—in the tens of millions of dollars, according to Murphy—but he said the calculation was not terribly difficult to make. "One of the ways I got comfortable and I got my wife comfortable with making the investment was

realizing that while the perception of risk was exceedingly high, the reality of risk was exceptionally low," he said. "And I say that only to the extent 'Who has more to risk in this equation?' I'm an investor with millions of dollars at risk, but how about the law firm that represented me? They had a lot more to lose. And what about the governor and the General Assembly of Maine? They took a big risk instituting a medical cannabis program. So, my attitude was that I had a lot less to lose than everyone else, and I was willing to risk that capital because I believed the return was going to be extraordinary.

"The simple math is if you can grow something for \$400 a pound and sell it for \$400 an ounce-well, I wasn't a math major in college, but it seemed like a pretty good equation to me," he added.

In 2014, Murphy created an investment group called High Street Capital Partners as a more formalized offering for outside parties. "I invited a handful of investors to come along with me to establish our footprint," he said. "I had seen what I believed to be an extraordinary opportunity, and I guess the old business pitch held: Do what everyone else is not doing, and do it right. I thought that was particularly applicable to cannabis. It was an exciting opportunity to take part in what I would call the prohibition era of cannabis."

In 2018, High Street morphed into its current form. "After becoming familiarized with the market, we transitioned the business from an investment group into an operating holding company called Acreage Holdings. We surrounded it with more topflight executives and employees and eventually with a world-class board of directors, which now includes [former U.S. House of Representatives Speaker] John Boehner and [former Massachusetts Governor] Bill Weld. It's been an extraordinary journey."

The journey is far from over. Inverting a normal business strategy in which a company develops strategies but journeys toward an unknown future, Acreage Holdings, Canopy Growth, and Constellation Brands have laid

out the future of the three entities ahead of time and now must execute the plan.

EXPANDING THE FOOTPRINT

Across the country, Acreage is working overtime to maintain its position as "one of the largest vertically integrated, multi-state operators of cannabis licenses and assets in the U.S." In August, the company announced the rollout of its "House of Brands" strategy to introduce a variety of consumer products into new markets.

"The Botanist, a wellness brand devoted to unlocking the benefits of the full cannabis plant, expects to launch in Iowa this month with its first product, a line of high-CBD tinctures for Iowa's medical market," read the announcement. "Natural Wonder, developed by Acreage's Form Factory division, is a convenient and discreet micro-dose sublingual breath spray, available on select dispensary shelves in Oregon. Live Resin Project is expected to launch in California later this month, bringing to market new live resin products in a variety of raw concentrates and easy-to-use vape cartridges."

Murphy sees product and brand diversity as key to Acreage's prosperity. "Long term, I think you're going to see very strong

international brands, very strong countryspecific brands, and some strong regional brands, very much like most [consumer packaged goods] categories," he said. "I also think you're going to see brands that win in the adult-use market and other brands that win in the medical market. From our vantage point, we'd like to take the brands we've made internally and couple those with [Canopy Growth's] brands, but we're also looking to others that have brands of their own, and this is where we can help from a social and economic standpoint.

"If you're a young or old entrepreneur with a wonderful brand and a great way to deliver cannabis, we need to know about it," he continued. "We can help support you in the twenty states we're currently in and give you the outputs to go and build a national brand. We believe that in this country and internationally, people want different products. They want choice, and it's our goal to give them that choice from not only our own brands and Canopy's brands, but also from the brands of others. That is going to be a critical mission going forward."

Does the promised assistance run the gamut from production and marketing to distribution? "All the above," Murphy said.





The simple math is if you can grow something for \$400 a pound and sell it for \$400 an ouncewell, I wasn't a math major in college, but it seemed like a pretty good equation to me.





The success of Acreage has everything to do with the partners we are surrounded with at the executive level and at the employee level.

"We are working with a very sophisticated copacker and a very sophisticated CPG company, where they can take conceptually what someone would like to do and essentially create those products and distribute them in the states in which we operate.

"It's very difficult to create a brand in mass scale if you don't have wide distribution not only nationally, but internationally. It would be impossible to create a Coca-Cola brand if you're just in New Jersey," he added. "That's why we are striving to increase our footprint as best we can. Brands will start to resonate well when there is more social consumption. A watch can be many things, right? It can be a status symbol, a timepiece, a collectible, an heirloom; it can be so many different things. I think brands represent the same type of thing, and I think [cannabis brands are]

going to really resonate with people when there's more social consumption of products with fast onset and a predictable outcome."

To support its goals, Acreage has been hiring new people, including recent additions with deep experience in operations and retail technology, among other skill sets, suggesting a focus on tangible growth. "We believe the transition of this industry has gone from basically a cottage industry into more of a small business industry-and really now, today, into a CPG business," Murphy said. "We are looking to surround our organization with people who are passionate about what they want to do career-wise, but we're also looking for a high-caliber capability. We have a very clear focus going forward to hire on a diversified basis.



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"We have very important roles state by state, which include a general manager for each state—really, the CEO or president of that state—a role that is responsible for all things that take place in that state, and some of our best [general managers] are women," he added. "They are extraordinary."

Murphy said he's "passionate" about increasing small-business opportunities in the industry, not only for social equity applicants but also for mom-and-pops, the middle-class businesses any mature industry needs to be truly sustainable. "It takes an extraordinary amount of resources and money to get ahead in this business," he said. "We were lucky enough to have the capital to create the organization we have today, but what if we took some of the money and some of the profitability of our business and worked with minority groups who now have an opportunity to benefit not only from our capital, but also from the experience we have gained from the successes we've had and also the mistakes we've made, so they don't have to make them again?

"We're currently working with some very high-profile folks who grew up disadvantaged but are now inspirational to the people in their community," he continued. "We're going to be a part of that movement going forward, and we couldn't be more excited and more pleased to participate in that way."

Murphy is not unaware Acreage has been soundly criticized for tapping not just any Republican for a board of directors' seat, but John Boehner, who was not exactly a FOP (friend of pot) while serving as House Speaker. He is, however, decidedly unapologetic about putting together what is arguably the highest-profile board of directors in the industry. "People historically have given me a bit of a hard time by saying we have these high-profile politicians and the like on our board," he said. "But let me tell you, these folks can help us help people, because they, too, have a voice, and they, too, have shown the courage to change their views. They are not only helping our organizations, but also helping the organization of everyone else in this business."

Having effectively set up Acreage for success, Murphy returned to the subject of giving back. "We have such a wonderful opportunity to better the lives of so many people," he said. "And to think there are so many people in this country still incarcerated for low-level amounts of cannabis possession. To me, it's sickening, and we are going to work hard to address that at not only a state level, but also the federal level."

Q2 EARNINGS AND BEYOND

When market analysts look at the cannabis space these days, Acreage is mentioned in the context of the Canopy Growth deal, which also inevitably pulls Constellation into the conversation. Canopy, which earlier this year was the number one cannabis company in the world, was downgraded following its less-than-stellar Q2 report, a situation that brings with it a slew of disparaging comments about the wisdom of the Acreage deal. The naysaying is based on speculation about what may happen in the future, but none of that has shaken Constellation's faith in its multi-billiondollar investment in Canopy. During an investor conference call in August, Constellation Executive Chairman Rob Sands expressed his support for Canopy's growth potential, remarking, "Over the past year, we've come to better understand the cannabis market, the tremendous growth opportunity it presents, and Canopy's market-leading capabilities in this space." The company's investment in Canopy also is prominently presented in its investor deck, implying Constellation has no intention of backing away.

That Constellation was so unhesitant in its decision to terminate Canopy's then-CEO Bruce Linton in July indicates how seriously the beverage behemoth takes Canopy's future, which represents its stake in the cannabis industry. Murphy's name was one of the first to surface among speculation about Linton's replacement.

"I am frankly humbled and flattered that my name was mentioned among the candidates to take that job as the CEO of that organization," Murphy said. "I can tell you, and I admit humbly, that I believe I'd be a great candidate. But there are several other extraordinary people out here that I

think could do the job equally as well as myself, and maybe better. And maybe [the board will decide] to take someone from the CPG world with vast experience in that aspect of business. I'm in touch with a number of folks who I think would be excellent candidates for that job.

"I am of the belief that Constellation and Canopy will choose the exact right person for that job," he continued. "They are taking their time to do it, and I know for sure they will make the right choice. Again, I'm flattered and humbled that I was part of the conversation, but they will make the right choice and I will be fully supportive of it whether it's me or somebody else."

One almost gets the sense Murphy feels as though, having delivered the groom to his betrothed's door, his mission at Acreage has been accomplished and that other, perhaps greater challenges await him. He didn't come out and say as much, but he did speak somewhat wistfully about his role at Acreage and about the help he has received throughout his career.

"Acreage Holdings essentially has nothing to do with Kevin Murphy anymore," he said. "Yes, I am the founder of the organization and ran it for years, but the success of Acreage has everything to do with the partners we are surrounded with at the executive level and at the employee level. And also, Canopy is now further involved with Constellation, so whether it was the insurance company that helped me as a partner in the money-management firm I started or whether it was my coaches in college and professional football, they were like partners, they were the people who helped me achieve what I wanted to achieve. There are certain things I think I do exceedingly well and there are things that are just not in my lane, and I'm fortunate to be able to surround myself with people that are better equipped to do the things I can't do in the organization. So, it has been an enormous privilege and honor to be a part of this organization."



Yes, You Can **Advertise Cannabis**

Know the options, research your ideal customers, and devise a unique message that rises above the noise.

annabis is moving forward. Despite how exciting it's been to operate in an emerging industry, each passing day brings greater clarity about regulations and less confusion about what we can and cannot do.

As we move toward federal legalization and the true end of prohibition, the market will become saturated with licensed operators, and brands with the largest audiences will survive. There will always be a space for craft but, even there, operators will fight for regional dominance.

Market maturity breeds greater competition and increases the importance of building a strong, recognizable brand.

With increased competition, marketing becomes ever more necessary. The growing need for brand recognition means marketing budgets are expanding. New technology will help level the playing field between small and large companies and shrink the education gap with a massive number of consumers. Additionally, as businesses evolve and consumer education begins to catch up, advertisers need to be more resourceful, targeting their spends to support both brand awareness and customer acquisition strategies.

HERE TO STAY

Like it or not, big businesses are coming in with large advertising and marketing budgets, and they're going to bring brand awareness to every consumer in the country whether or not they're currently a cannabis user. Through mass media campaigns, they'll educate and inform, create an aura of comfortability with 240 million potential customers, and slowly drown out other companies' voices by restricting their access to new markets and reducing competition in the long run.

Whereas in the past small- to mediumsized entities and mom-and-pop operations could survive on their small but loyal customer base by establishing quality products and services, advertising has become crucial to retaining and growing a consumer base. No matter a company's size, advertising to users across all avenues ensures the business will remain competitive as it secures space in the minds of current and future users. Brands thrive by convincing consumers the brand can be trusted in a product category that is new for many people.

LEVELING THE PLAYING FIELD

While it's true this industry is limited or banned from advertising on platforms like Facebook and Google, it's important to realize those properties block cannabis advertising as company policy, not because weed is illegal at the federal level. However, this does not mean your ability to reach new consumerswhether your brand is business-to-business or business-to-consumer—is thwarted. The ability to advertise at scale exists, and there are many ways to do it.

Although large portions of the population do spend time on social media platforms, there are millions of other sites that don't restrict cannabis advertising and where plenty of people spend their time. Every one of us has countless other apps or visits other digital properties daily where advertising exists and cannabis brands are allowed: news sites, sites for sports scores, weather and gaming apps, text messaging or social apps...these are all on people's phones.

With new-age advertising tech, aggregating these other small and large media properties provides advertisers the same, if not more,

scale and targeting capabilities than a Facebook or Google property. With access to these pools of inventory, you can reach consumers according to their location, purchase preferences, demographics, and many more attributes that ensure you are targeting the right people rather than just the right sites or apps.

TACTICS FOR SECURING AUDIENCE LOYALTY

A number of different tactics can help businesses identify and reach consumers, but a few form the foundation of most campaigns. The most basic is website retargeting. Once someone opts in to a mailing list, you can send messages encouraging them to make a purchase, visit a retail environment or, if they've already made a purchase, offer a special deal to earn their loyalty. One caveat, and it's a big one: In order to comply with federal law, make sure people who sign up on your website give permission for you to contact them with advertising messages, and make sure every message you send includes a link at which they can unsubscribe.

"Lookalike" audiences are another way to target consumers. By profiling the foot traffic at your store and visitors to your digital assets, then combining that information with information gleaned from your customerrelationship-management database and purchase data, you can begin to understand which demographic groups are interacting with your business. What age groups and income levels are represented? What conditions do they seek to alleviate? What lifestyle choices do they want to enhance? How do those factors correlate with specific products? Examining demographics and behavioral patterns is a powerful targeting mechanism that will enable you to pinpoint potential new audiences that mirror your existing customers, providing your brand with a more cost-efficient approach to reach converts and potential loyalists.

In addition to demographics and behavior, location can be a great way to understand potential. For example, if location data places a consumer in a dispensary multiple times over a month, that's a shopper dispensaries want to keep and brands should court. Do those people share any characteristics that could help you identify an untapped market?

Mixing and matching all the different targeting techniques can be a daunting task, but data that helps inform your decisions

about audience and location can make media campaigns and revenue generation more successful.

MEDIA PURCHASING

With the absence of Facebook, many companies are buying out-of-home placements (billboards, for example), print ads, and/or media space on specific websites. In cannabis, we tend to see a lot of digital media network buys: space on a group of sites, usually all with similar content or audience profiles. Network advertising allows businesses to spread their message across a broad audience or micro-targeted audiences. The tactic may not result in immediate sales, but the goal is brand recognition, not sales.

Ad networks have enormous value in reaching people who are enthusiastic about whatever the collection of sites presents: hobbies, cooking, lifestyles, sports, travel... The list is endless, and it includes cannabis. When placing ads directly on high-value sites or a network that has control of on-site placement, the big advantage is being able to create memorable experiences that are not available when buying via programmatic systems like Google Ads and Facebook's advertising engine. Networks and independent sites often offer custom placements like website skins, takeovers, skylines, intercepts, and billboards, any of which can help your brand rise above the noise. Cannabis advertisers are concentrated on cannabis sites and ad networks, making unique messaging important to ensure your business isn't drowned by others offering similar wares.

Don't forget to balance exposure against reach. Reach is the total number of people who engage with a given site; exposure is the number of people who will see your ad. Direct buys generally offer more customization but less reach. Most cannabis-specific sites and networks engage only a small fraction of the 21-and-older consumer market. They also usually lack some of the segmentation and targeting capabilities, because they normally allow only run-of-site (ROS) or run-of-network (RON) buys. ROS and RON arrangements mean your message can appear anywhere on any site at any time, and the audience will be any visitor instead of the specific subset of visitors you seek. Lack of reach and limited scale are common across all media outlets because inventory owners, media providers, and laws prohibit cannabis advertising. Given the restrictions, it becomes

even more important to invest in technologies that allow you to reach the masses accurately and at scale.

While it's true new technology like programmatic ad buying can reach 99 percent of known and potential consumers on their digital devices, an omnichannel media presence is the optimal path to developing a strong brand. Exposure across different screens and forms of media (omnichannel) drives a significant increase in brand recognition through multiple exposures and forms of ingestion. Expanding your message beyond current consumers and reaching people before they enter the market is essential to the continual growth of your business. Simply retaining customers is not enough as more and more well-funded competition enters the arena with a plan to swallow market share.

TAKEAWAYS

There's no right or wrong way to expand your market. The important thing is to find what works for you. Rather than making assumptions about where to deliver your message and who to target, use data to make informed decisions. Customer data will help you figure out where to start; then, utilize that education to expand your reach across multiple properties and mediums.

Rather than competing with the noise, build unique experiences tailored to your ideal customers so you present nuanced, personalized messages that drive results. For any business to do this successfully, measurement is key. Measure not only clicks and views, but also foot traffic and sales that result from all the different touchpoints you have with customers. Advertising strategy should be founded on making informed decisions that are backed by data. As you continue to move forward, you must remain agile while also finding a way to continue measuring everything.

If you engage out-of-home advertising, make sure you're reaching the correct audience, buying the right locations, and measuring results. If you execute print or digital ads, make sure you understand the likelihood a campaign will send a high-value consumer back to your doorstep. Go omnichannel, be agile and aggressive and innovative, and explore every option you have—but constantly test, measure, and optimize toward the platforms and partners that are driving real results.



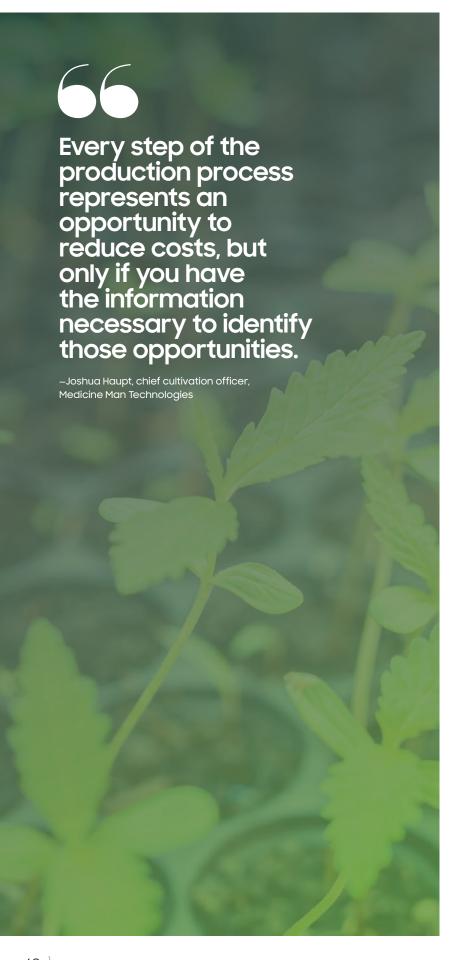




The Cost of Doing Business

Cultivating cannabis is expensive. How expensive? That depends on location.

Photo: Shutterstock Professional / Shutterstock



O THE OUTSIDE WORLD, the legal cannabis industry appears to be one big cash machine. While it's true lots of money can be made, the price of doing business can be steep, particularly for those at the pyramid's foundation growers. Beyond direct cultivation costs like utilities, nutrients, and labor, farmers must move their crops from fields to distributors, processors, and retailers. And let's not forget state and local jurisdictions' off-the-top cuts in the form of taxes and fees.

The so-called "green rush" has been tough on smaller, boutique growers as the focus has shifted to large-scale cultivation. In fact, facilities larger than 250,000 square feet, capable of yielding more than 50,000 pounds of flower, are not uncommon anymore. For example, Arizona is home to the largest greenhouse complex in the United States: 300 acres, or 13 million square feet.

Although expensive, cultivation—or at least cultivation licenses—can be extremely profitable. For instance, Florida, with a population of more than 21 million, has licensed only thirteen companies, all for seed-to-sale operations. In 2017, one of those licenses sold for \$40 million before the company earned its first cent. Another license sold for \$53 million in 2018. New York, with a population of 20 million, has issued ten vertically integrated licenses, one of which fetched \$26 million pre-revenue.

INDOORS VS. OUTDOORS

Indoor grows typically are more cost-intensive, thanks to rents as high as \$75 per square foot in some places. (The nationwide average is about \$50 per square foot for greenhouse and combination grows.) Indoor operations also pack on the expense because every aspect of the environment must be controlled. That means loading up on equipment like grow lights, systems for temperature and humidity control, and automated water and nutrient technology. A state-of-the-art lighting system can set even small growers back \$120,000, security systems can run \$50,000 or more, and other necessary equipment lands about \$150,000 on the balance sheet. A lean operation could see gross profit of 55 percent to 57 percent, depending on state and size.

Outdoor grows, on the other hand, use the light of the sun and let Mother Nature manage the environmental controls. That can be a double-edged sword, though, because Mother Nature can be temperamental. Land averages \$10 to \$17 per square foot, although in some locations the cost can be significantly higher. Labor, too, may cost more because automating tasks can be more difficult.

While sun-grown operations can produce multiple harvests per year in temperate states like California, cultivators in states with short growing seasons—Colorado, Ohio, Illinois, and New York, for example—must grow at least some crops indoors if they intend to operate year-round.

COOPERATIVES REDUCE COSTS

Some small and mid-size cultivators have found banding together in collectives or cooperatives can help them reduce expenses enough to compete with bigger operations. The opportunity is not available in all states, but California's Medicinal and Adult-Use Cannabis Regulation and Safety Act allows groups of three or more cultivator licensees to farm together as long as each license covers no more than 10,000 square feet of outdoor canopy and the collective incorporates no more than four acres.

Co-ops allow growers to spread fixed costs like rent, equipment leases, bulk purchasing, insurance, and labor across all partners. Members can enter into collective marketing agreements, which allow them to offer customers a steadier and larger supply of uniform products. The economy of scale creates a more competitive market position than growers could attain on their own, while still allowing the time and attention required for producing high-quality appellations and artisanal strains. The cooperative model also eases the pain of licensing and regulatory compliance through group access to consultants, accountants, and attorneys familiar with the group's operating model.

So, how much does it cost to make money growing weed? The answer varies by state. To find out, we spoke with cultivators, consultants, and suppliers about fees, gripes and challenges, and ways they manage expenses.

NEVADA

When Nevada went recreational, the state had one major concern: whether supply would be able to keep up with demand. Partially, that was due to the state's high taxes and fees: Cultivators pay \$5,000 for the application, plus \$30,000 for the initial recreational grow license and a \$10,000 annual renewal fee. Medical grows pay the same \$5,000 application fee but only \$3,000 for the initial license and \$1,000 per annual renewal. Wholesale excise taxes are assessed by the Nevada Department of Taxation at 15 percent of what the department determines to be fair market value. Cities and counties may add fees and taxes of their own. Add in labor, utilities, nutrients, and other expenses, and cultivators easily can spend hundreds of thousands of dollars before selling their first bud.

Despite the expense, Solaris Farms is expanding its indoor grow from 34,000 square feet to 350,000 square feet. According to Chief Executive Officer Michael Sassano, in Nevada the industry is all about scale, and the "the bigger, the better."

"Our costs are pretty typical of the state," he said. "Water and power averages \$10,000 for summer months, and \$8,000 for winter months. Labor, the biggest cost, is \$60,000 a month." Solaris also allocates \$10,000 monthly for technology and automation, \$4,000 monthly for fiberoptic cable and computer software updates, and \$3,000 a month for lab testing.

"Our costs are much different from outdoor [grows] or normal greenhouses," Sassano said. "Not only must your product look and be amazing, but your facility must also. Upkeep and efforts to remain on the cutting edge cost money, but if you do it smartly you will be successful. We currently are at \$333 a pound in costs and trending to \$150 a pound without sacrificing anything, because we are improving yield and quality."

OREGON

In Oregon, where the state increased license awards after early product shortages, flower prices are declining, which is driving boutique cultivators out of business. Larger growers must operate lean. The good news-and the bad news—is Oregon has among the lowest application fees in the country: \$250. The state taxes only retail sales of recreational products.

Jazen, a cultivator at Wisely Organics, said an estimated 20 percent of the 20,000-square-foot indoor grow's revenue goes to federal and state income taxes. The grow budgets another 5 percent for licensing and regulatory fees; 10 percent for water, power, and other utilities; and 15 percent for rent and supplies. Like most other cultivators nationwide, Wisely's biggest cost is labor, at 42 percent. Although the trend in the state is to replace workers with tech, Wisely puts a premium on employees. "We are intentionally low-tech," Jazen said. "Our highest tech is a skid steer tractor. We tried a trim machine to replace workers and found very quickly the workers produce better product. We now use the machine on only 2 percent to 5 percent of harvest batches."

Like other farms its size, Wisely balances costs with environmental friendliness, and some techniques save money. For instance, Wisely focuses on building living, organic soil with local natural inputs and organic wastes. "We grow with regenerative, highly efficient, sustainable practices that produce quality craft cannabis at significantly lower cost," Jazen said. "We strive to avoid expensive technologies, practices, nutrients, vendors, and gimmicks marketed to cannabis growers."

The biggest gripes among Oregon cultivators are out-of-state ownership and too many licenses in a relatively small market. When supply proved insufficient to meet demand in the beginning, the state overcompensated. The resulting weed glut has left farmers in a financial bind. Jazen believes the state should not have issued licenses to out-ofstate owners until interstate trade opened. "We need interstate commerce immediately," he said. "Based on the costs of production, price, and lowquality cannabis in other states, our cannabis will be in high demand in the interstate market."



Not only must your product look and be amazing, but your facility must also. Upkeep and efforts to remain on the cutting edge cost money, but if you do it smartly you will be successful

-Michael Sassano, CEO, Solaris Farms





For us, technology will never replace a good worker, but it does allow us to operate more efficiently during peak growing seasons or when there's a labor shortage.

> -Joshua Keats, co-founder and president, Henry's Original

OHIO

In Ohio, cultivator licenses are broken down in two levels. At level I, which allows a canopy up to 3,000 square feet, growers pay an application fee of \$2,000, initial license fee of \$18,000, and an annual renewal fee of \$20,000. Level II growers, who may cultivate up to 25,000 square feet of crops, pay an application fee of \$2,000, an initial fee of \$80,000, and an annual renewal fee of \$200,000.

Andrew Rayburn, chief executive officer at Buckeye Relief, which operates a 60,000-square-foot grow, said he budgets 2 percent of projected annual revenue for payroll taxes, 3 percent for licensing fees, 3 percent for water and power, 24 percent for labor, 17 percent for rent and supplies, and 1 percent for technology. "The bulk of our costs are labor, rent, and security," he said, adding that his biggest challenge in managing costs is the small number of retail outlets attendant upon a young market. He expects product demand to increase, though. "It's getting better quarter by quarter," he said.

He also said investing in ever-improving technology is essential for managing other costs. The grow's automated environmental control system, for example, trims costs associated with wasted water and nutrients; LED lights reduce heating and cooling costs.

Though fees are high compared to current production, Rayburn said Ohio growers see a future filled with promise. "Our regulators have been great partners," he said. "They are open to suggestions for improvements to make the program work for patients, retailers, and suppliers."

CALIFORNIA

Annual application and licensing fees—which range from \$135 to \$8,655 and \$2,420 to \$77,905, respectively, plus a weigh-master license of \$155—are relatively low in the country's largest and most mature

market, but taxes can be onerous. The state assesses \$9.25 for each dryweight ounce of flower, \$2.75 per dry-weight ounce of trim, and \$1.29 per ounce of fresh plant, or \$5,000, whichever is greater. In addition, cultivators pay an excise tax of 15 percent of average market value, even if their crops sell for less or not at all. Counties and municipalities may add additional taxes and fees. Some jurisdictions also apply a land use tax even if a field is fallow.

As if those weren't enough, most supplies and equipment purchased for business use are subject to state sales tax. Farm equipment, buildings, solar power facilities, and diesel fuel may qualify for a partial tax, but liquified petroleum gas (LPG) does not.

Almost everyone along the supply chain believes California's tax structure is the single biggest contributor to the state's notoriously problematic black market.

Aside from taxes and fees, the biggest costs are packaging, distribution, marketing, and labor. Like many other legacy Northern California farms, Swami Select, a mid-size outdoor grow, is off the grid. The operation annually pays \$750 irrigation and \$25,000 Fish and Wildlife permits for its rain catchment pond, but water and electricity consume only \$2,500 annually. "We're largely on solar power," said owner Swami Chaitanya. "But we do spend about \$5,000 annually for gas to run the backup generator for extra power to run dehumidifiers and fans during harvest and drying and for compost tea brews every two weeks in summer."

Technology at the farm includes a dissolved oxygen meter to test aerobic compost teas, walkie-talkies to communicate on the sprawling property, and a drone outfitted with a high-powered scope to shoot photos of the grow from above. The equipment's purchase price set the farm back a bit, but maintenance fees are moderate. "We also are required to have water meters now for information," Swami said. "But none of this has affected our workers. We still have trimmers. They just can't be working here on our property now as we do not have commercially permitted buildings for them."

The cost of doing business increases every time regulators or legislators make changes to the rules, adding outlay for consultants; lawyers; accountants; electrical, carpentry, and plumbing contractors; compliance officers; geologists, foresters, and biologists; designers; and marketing professionals. Most state and county agencies periodically mandate upgrades to address security concerns and zoning restrictions.

Joshua Keats, co-founder and president at Henry's Original, spends much of his time trying to manage taxes and labor shortages. "It can be difficult to find enough staff for peak periods around harvesting and planting," he said. "Additionally, as we scale, we frequently have to pay overtime and hire expensive contract labor."

Henry's operates 92,000 square feet of greenhouse and hoop house space. According to Keats, the farm pays combined state and local cultivation taxes of \$148 per pound. In addition to state excise tax, the company pays a 2.5-percent gross receipts tax to Mendocino County. Although the amount fluctuates with the product's market value, the total is roughly \$25 a pound.

Because the grow uses rain catchment ponds, water is among its lowest expenses. "As a sun cultivator, we don't use huge amounts of electric power [either]," Keats said. "Our nursery uses some lighting, dehumidification, and fans for air circulation and cooling, and our flower farms use irrigation pumps and air pumps for mixing fertilizer teas. Spread out, I would estimate electric power to cost us about \$10 per pound."

Thanks to negotiation, Henry's lease costs only \$30 per pound, significantly lower than average. Labor is the operation's largest expense: \$150 to \$200 per pound. With a team of more than 100 people, the farm is one of the largest employers in Mendocino County. "For us, technology will never replace a good worker," Keats said. "But it does allow us to operate more efficiently during peak growing seasons or when there's a labor shortage. Planting and harvesting are still very involved processes requiring many hands. As we expand from two to twenty acres, we plan to implement standard farming machinery that will allow us to prepare our soil and plant more efficiently and with smaller crews." Because finding enough staff for harvesting and planting season can be difficult, he expects to pay overtime wages and hire expensive contract labor as the farm grows.

Keats said fertilizer, inoculants, and pest management expenses are minimal. "We estimate approximately \$10 per pound for these inputs," he said. Technology for soil monitoring, irrigation, and fertilizing allow lower labor costs. "We also pest-scout with high-powered digital microscopes, allowing us to deploy pest management resources only when signs of increased populations surface," he said.

COLORADO

Like California, Colorado also levies a 15-percent excise tax based on average market rate, with a 2.9-percent additional fee on some transfers. What really bites Colorado cultivators, though, is utility expenses. Indoor operations—the most common type in the state—account for 10 percent of Denver's total electricity consumption. Every watt of lighting





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produces heat, so cooling requires additional resources, often in the form of water-chilled HVAC systems.

"The two big energy sucks are the climate systems and lighting," said Brandy Keen, vice president of sales for environmental equipment design-andmanufacturing company Surna. "You've basically got thousands and thousands of watts of heating in a space that needs to be at 78 degrees for the plant." Cultivators are attempting to mitigate some expenses by migrating from warehouses to greenhouses, which cost about half as much to operate. Even in greenhouse environments, electricity costs can top \$350 per pound.

Real estate presents its own set of challenges. "The big difficulty is finding a location where the city will allow you to construct a greenhouse," said Dave Gardner, senior horticulturist with consulting firm Colorado Cannabis Systems. "Even if you find a piece of property, you really need to purchase that property. To develop it and build the greenhouse, that's a huge [up-front] cost."

Colorado's over-supply has lowered prices, exacerbating profitability concerns among the state's 1,300-plus grows. Joshua Haupt, chief cultivation officer at Medicine Man Technologies and author of the book Three a Light, said falling prices mean growers must find ways to reduce average cultivation costs from the current \$800 to \$1,000 per pound to around \$400 a pound to remain competitive. He suggested technology and artificial intelligence are keys. "Cultivators need technology that keeps them updated in real time on their cost information at every step of the process to ensure they are identifying ways to reduce costs,"he said. "Every step of the production process represents an opportunity to reduce costs, but only if you have the information necessary to identify those opportunities. By tracking costs and staying aware of industry performance standards, cultivators will be better equipped to compete in this rapidly changing market."

Colorado cultivators have become experts at cutting costs using green alternatives including renewable energy, LED lights-which can be 60-percent more efficient than other bulbs-and water efficiency via reverse osmosis systems that can recycle 75 percent to 97 percent of water used in irrigation or other parts of cultivation.

Regardless a grow's type, size, or location, the path to profitability lies in creativity, flexibility, efficiency, and funding. Luck plays a role, as does governmental greed. To mitigate the latter, maintain good communication and friendly relationships with state and local politicians, regulators, community members, and growers' associations.

LICENSING. APPLICATION FEES, AND TAXES BY STATE

The information below pertains only to states that do not require vertical integration. Current information for states with new programs or programs in transition may not have been available at press time.

ALASKA

Application: \$1,000 License: \$1,000 to \$5,000, depending on size Annual renewal: \$1,400 Taxes: \$50 per bud ounce or \$15 per trim ounce

ARIZONA

Application: \$5,000 Initial registration: \$5,000 Annual renewal: \$1,000

ARKANSAS

License: \$100,000

CALIFORNIA

Annual license application: \$135 to \$8,655. depending on size and type Annual license: \$2,420 to \$77,905 Taxes: \$9.25 per dry-weight ounce of flower, \$2.75 per dryweight ounce of trim, \$1.29 per ounce of fresh plant (weighed within two hours of harvesting), plus 15 percent of average market price

COLORADO

Application: \$4,000 Annual license: \$1,100 to \$5,300, depending on size Taxes: 15 percent of contract price or average market rate calculated by the state; 2.9-percent transfer fee on some transactions

CONNECTICUT

Application: \$25.000 License registration: \$75,000 Annual renewal: \$75,000 Taxes: \$3.50 per gram **DELAWARE** Application: \$5,000 Certification: \$40,000

(paid every two years)

DISTRICT OF COLUMBIA

Application: \$5,000 Annual renewal: \$3,000 Annual registration: \$5,000

ILLINOIS

Application: \$25,000 to \$100,000, depending on type License: \$100,000 every two years Business development fee: \$250,000 to \$750,000 Taxes: 7 percent wholesale excise

MAINE

Application: \$300 per patient Annual license: \$300 per patient Taxes: \$335 per pound on flower and mature plants, \$95 per pound on trim, \$150 per immature plant or seedling, 30 cents per seed

MARYLAND

Application: \$6,000 Annual license: \$125,000

MASSACHUSETTS

Application: \$100 to \$600, depending on size and type Annual license: \$625 to \$25,000

MICHIGAN

Application: up to \$8,000 License: \$10,000 to \$67,000, depending on size

MINNESOTA

Application: \$20,000 Annual license: \$75,000 to \$100,000

MISSOURI

Application: \$10,000 Annual renewal: \$25,000

MONTANA

Annual license: \$1,000 to \$5,000, depending on number of patients

NEVADA

Application: \$5,000 Initial license: \$30,000 Annual renewal: \$10,000 Taxes: 15 percent of fair market value as determined by Nevada Department of Taxation

NEW HAMPSHIRE

Application: \$3,000 Annual license: \$40,000 to \$80,000, depending on location

NEW MEXICO

Application: \$10.000 Annual license: \$30,000 to \$90,000, depending on number of plants

NORTH DAKOTA

Application: \$5,000 License: \$110,000

OHIO

Application: \$2,000 to \$20,000, depending on size License: \$18,000 to \$180,000, depending on size Annual renewal: \$20,000 to \$200,000, depending on size

OKLAHOMA

Application: \$2,500

OREGON

Application: \$250 Annual license: \$100 to \$5,750, depending on size

PENNSYLVANIA

Application: \$210,000 Annual license: \$10,000 Taxes: 5 percent wholesale excise

RHODE ISLAND

Application: \$5,000 Annual license: \$5,000 to \$80,000, depending on size

UTAH

Application: \$10,000 License: \$100.000 Annual renewal: \$100,000

WASHINGTON

Application: \$250 Annual license: \$1381

WEST VIRGINIA

Application: \$5,000 Annual license: \$50,000 Taxes: 10 percent wholesale excise

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Top 3 HR Compliance Challenges

Overcome obstacles with sound hiring and onboarding practices.

espite widespread legalization and social acceptance of marijuana, the cannabis industry continues to face some of the toughest compliance and business obstacles out there. Hiring, onboarding, and even employee retention struggles often are the result of conditions employers can't control. With the cannabis market rising to a \$57-billion industry by 2027, challenges are going to increase as workforce and output expand.

Managing a smooth hiring and onboarding process while meeting industry compliance requirements is especially difficult due to conflicting federal and state laws. Here are the top three problems and their solutions.

1) OVERCOMING HIRING HURDLES

Hiring is hard. Regardless whether your business is hiring for cultivation, production, or retail, a host of details must be gotten right. From using the correct words in job descriptions to sorting through and interviewing candidates, each critical piece holds the potential to lower turnover and maximize productivity. But be warned: Hiring is often a cannabis business's greatest weakness.

In an increasingly competitive landscape, you need to make sure your business isn't losing potential employees due to an outdated hiring

process. According to Glassdoor, job openings in the cannabis industry rose 76 percent from 2017 to 2018. Candidates are far more likely to say yes to a company's offer if they've experienced a positive interview process.

Here are a few ways to keep potential candidates informed and engaged while maintaining compliance:

Lead with the correct expectations. Take care to include all aspects of a given position, especially concerning specific verifications or qualifications required to fulfill each role. When describing ideal candidates, avoid words that could be considered discriminatory. Most of all, be transparent about the process you'll follow once a candidate is considered. This helps avoid setting your potential candidates up to fail.

Hire a human resources specialist.

Recruiting, posting jobs, managing leads, and hiring requires a great deal of effort and attention. Don't make the mistake of thinking it's too expensive to hire a full-time HR specialist. HR pros should know how to interpret compliance laws to avoid lawsuits from employees, suppliers, and business partners. The money and headaches saved by entrusting compliance to an expert more than pays for itself.

Automate your process. Workforce management software allows you to integrate

with leading job boards, screen applicants, and track potential employees throughout the hiring process with minimal effort. With so many types of information to manage, using modern solutions can ensure an operation is free of missteps and inconsistencies in a fraction of the time required to do everything manual operations would require.

2) AVOIDING I-9 COMPLIANCE PITFALLS

The I-9, or Employee Eligibility Form, is the federal form filled out by both employers and employees to verify their identity and eligibility to work in the United States. The form was created by Citizenship and Immigration Services. For many, this is by far the most difficult part of a compliant hiring and onboarding process.

Providing documentation is not always straightforward. If someone was not born in the U.S. but is legally able to work here, they are not to be denied employment due to lack of citizenship. The Immigration Reform and Control Act prohibits any form of discrimination based on citizenship or national origin where legal permission and representation have been obtained.

The best way to navigate this step in the hiring process is to:



Use E-Verify. E-verification allows employers to verify the identify and employment eligibility of new hires electronically. The system compares information provided by employees on the I-9 with records maintained by the Social Security Administration and the Department of Homeland Security.

Operate in a timely matter. One of the most common errors employers make is not completing the I-9 form within three business days of the employee's first day on the job. Make sure to register new employees with the state to avoid accumulating penalties.

workers are required to fulfill each position and what federal and state compliance dictates for each type.

Classify your employees correctly. You may be hiring seasonal contractors as part of your harvesting or trimmers force come fall, but most marijuana businesses hire primarily full-time or part-time employees. The rules for these two employee types (contract and non-contract) are typically mutually exclusive, so be clear and consistent with each type of employment.

Know your city- and state-level specifications. Don't assume federal compliance is enough. Things like minimum

In an increasingly competitive landscape, you need to make sure your business isn't losing potential employees due to an outdated hiring process.

Be transparent with potential employees from day one. The last thing you want to do is select a perfect candidate, only to face complications clearing them with the federal government. The more transparent you are from the start about what verifications are needed, the more likely you are to avoid complications.

3) ACHIEVING WAGE COMPLIANCE ON EVERY LEVEL

Wage compliance may end with payroll, but it starts with classification. If you are classifying employees as contractors when they're actually full- or part-time workers, you risk not only internal conflicts, but also legal penalties, costly lawsuits, and incorrect tax filings as well. You need to identify, from the get-go, what types of

wage and number of employees affect various types of compliance depending on the rules and regulations within your city, county, and state and the size of your business. Review elements such as shift differentials for hires taking on multiple roles and overtime regulations to keep one onboarding mistake from costing you down the road.

The cannabis industry is evolving rapidly, and for many new and growing businesses, there is still much to learn. By developing sound hiring and onboarding practices and maintaining strict labor compliance, you can overcome common challenges and position your business for maximum growth.





The Imitation Game

As counterfeits of popular products increase, brands and states are scrambling to knock off the knockoffs.

Counterfeit products generally are of dubious quality, but many consumers aren't experienced enough to know when what they purchase is not up to a brand's usual standards.

t's bold, brazen, and illegal. Cannabis counterfeiting is popping up at industry trade shows. Understandably, brands are livid, so they, and some states, are fighting back.

To combat the problem, brands are turning to new packaging and labeling in an attempt to help consumers spot fakes. In June, California's Bureau of Cannabis Control launched "Get #weedwise," an initiative designed to educate consumers about the risks of unlicensed cannabis.

Many counterfeit products arrive in states where cannabis isn't yet legal. But they're available in states that have legalized adult-use, too, where some consumers still turn to the black market to avoid paying sales taxes. States and local jurisdictions can tack on astronomical fees: Buyers pay excise tax of 15 percent in California and a whopping 18 percent in Colorado. While knockoffs may be cheaper than licensed products, the black-market bargains aren't necessarily a good deal: Fakes can be laced with dangerous chemicals, as the City of Los Angeles noted in a lawsuit it filed against an illegal dispensary. The city alleges the illegal storefront sold cannabis containing a fungicide used on golf courses—one the U.S. Environmental Protection Agency classifies as a toxin.

Newness and the dynamic nature of the cannabis industry enable counterfeiting to thrive, because many of the small business owners who make up the industry don't have the resources to defend their trademarks and other intellectual property. Meanwhile, a majority of first-time consumers are unfamiliar with cannabis brands. The confluence of brands that can't fight back and consumers who don't

know enough to make informed decisions has opened the door for a growing gang of imposters.

Counterfeit products generally are of dubious quality, but many consumers aren't experienced enough to know when what they purchase is not up to a brand's usual standards. One bad experience can lead to a negative impression of Brand X, and that impression not only discourages the consumer from purchasing legitimate products from the brand, but also may be reflected in reviews they post online and what they tell their friends and family. That's a critical problem, because 45 percent of new consumers are "strongly influenced" by personal recommendations, according to BDS Analytics.

To create even more confusion, some brands play both sides: They deliberately funnel some of their legitimate products to unlicensed retailers to maximize profits. Then, if asked, they claim the merchandise is counterfeit. That ends up hurting other brands and licensed retailers, who follow their states' laws. Vaporizer manufacturer Grenco Science was awarded \$47 million in damages in 2017 after it successfully sued sixty-five online retailers for selling counterfeits. In an effort to prevent that from happening to him, one Texas pharmacist refuses to sell CBD products until after he has reviewed lab results personally, so he is assured they're safe and the manufacturer is complying with the law.

California's Bureau of Cannabis Control launched "Get #weedwise," an initiative designed to educate consumers about the risks of unlicensed cannabis.

In the current environment, companies that are not backdooring products are inadvertently punished because licensed retailers don't want to take chances and often won't stock products that have the misfortune of being the frequent target of counterfeiters. So, brands take a hit from both sides: Consumers won't purchase branded products after having a bad experience with poor-quality counterfeits, and retailers refuse to stock legitimate, high-quality products because consumers won't buy them.

Efforts are underway to implement more robust anti-counterfeiting programs, such as unique QR codes that consumers can scan to verify a product is legitimate. These sorts of programs will give consumers peace of mind and also empower brands to more easily protect themselves. Anyone leaving a negative product review can be asked for the identifying code from the package. If the code is missing or fake, companies can prove the product was counterfeited.

For now, though, before buying, consumers should ensure the packaging and brand aesthetics are in line with what the company posts on its website or social media. Test and batch data presented on labels indicate products are more likely to be legitimate.

There's only one way to ensure a product is legitimate: Buy from a licensed retailer or delivery service. But as long as excise taxes remain high, feeding the black market, counterfeiters will remain a threat to the legal industry.











Do You Have A Crisis **Communications Plan?**

You can't always avoid negative publicity, but you can be prepared should a crisis arise.

n September, our industry suffered a major crisis that brought national media scrutiny and criticism. I'm talking about the vaping-related illness outbreak, of course. You've no doubt read about it and pondered the ramifications. There's been much hand-wringing and histrionics surrounding the situation, so I won't dive into the details of the issue itself.

What the vaping predicament illustrated is crises often come out of nowhere when companies least expect them. The cannabis industry is no different from any other in that regard. Yes, the vaping crisis is still new and we don't know how it ultimately will play out, but the situation proves a point: Cannabis companies need a crisis communications plan to make sure their reputations stay intact. When a scandal or emergency happens, the press likely will report every little detail in the most spectacular way possible. Having a crisis plan will help you control the messages being broadcast about your company and mitigate damage. Here are four things to know.

CRISIS COMMUNICATIONS PLANS, DEFINED

No two crisis communications plans are the same. However, all are designed to put protocols in place that help collect, process, and disseminate information to protect your company's reputation in major and minor situations. Your plan should address events driven by thirdparty sources such as media coverage, social media, and word of mouth. Having a clear and defined plan of action in place before a crisis happens is the best way to ensure no single event can have a significant impact on your business. Remember, a crisis actually represents an opportunity—a chance to convey clear, consistent messaging that supports your values.

ELEMENTS OF YOUR PLAN

Your plan should have a nailed-down protocol of steps that a pre-assigned team takes the lead on once a crisis occurs. A negative comment on social media? A bad review on a cannabis review site? Unhappy customer interaction? These all need to be addressed by the team, who should be able to identify a crisis, decide on when to present it to the executive team, and discuss and determine what steps to take. A strong protocol lets teams drive the situation and be more in control of what's being reported about or written. A well-thought-out protocol is just as important as crafting and delivering the response.

GO INTO ACTION

Once the team has gathered and decided on next steps, it needs to act accordingly so the actions meet the pre-approved communications plan roadmap. At this point, the team should determine the strategy and response. This could mean anything from releasing a simple statement to the media and responding to media questions, to drafting an op-ed piece for the local paper or holding a press conference. Whatever the action, you need to draft talking points and messaging that will be communicated to alleviate the crisis and protect your reputation. As part of your talking points, you should weave in corporate messaging and brand pillars to reinforce the company's values and vision.

Once the team has established a response, it's time to deliver. This could be externally, to a reporter, to your board of directors, and even internally to staff. Remember social media, too. Drafting posts or posting photos to your various platforms like LinkedIn or Instagram can help spread your messaging to different influential audiences.

GET STARTED—NOW

The time to draft a communications plan isn't during a crisis but before one happens, so you can be ready to react and respond in a calculated way when a crisis occurs. The vaperelated commotion showed many cannabis companies were not prepared to act and mitigate the media frenzy.

A crisis is like an earthquake. We all know the big one is going to happen at some point. Will you be ready with a crisis communications plan?

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Clearing a Path for Win-Win in Local Communities

Ask questions, respond to concerns, and lay out a plan to invest in the community.

n June, Illinois Governor J.B. Pritzker signed legislation allowing recreational marijuana possession and sales starting January 1, 2020. In so doing, he gave final approval to a new opportunity for businesses to grow a potential \$2 billion market. Residents of Illinois will be able to purchase about an ounce of cannabis flower, and there will be limits on cannabisinfused products such as edibles or tinctures. Out-of-state visitors will be allowed to possess half the amount residents may obtain.

In a tweet, Pritzker stated, "We're also creating a \$30-million, low-interest loan program to create the opportunity for entrepreneurs in the communities that deserve it the most." The program could revitalize neighborhoods that had been criminalized during the war on drugs.

However, some Chicago neighborhoods are debating whether to keep marijuana out of their ZIP codes before the law even goes into effect. Naperville, Libertyville, and Bloomingdale moved to block cannabis businesses even if marijuana is legal in the state. North Aurora, Deerfield, Bannockburn, and Mokena plan to vote on whether to ban cannabis in the coming months.

The new rule opens a world of opportunity for those hoping to expand existing medical marijuana businesses or jump-start new, innovative companies that can meet the demand of the market. Currently, fifty-five dispensaries in the state sell medical marijuana. The stores will be eligible to sell cannabis recreationally, as well. In addition, Illinois plans to award permits for as many as seventy-five stores, forty processors, forty craft growers, and thirty cultivation centers when the law goes into effect. Current medical cultivators will be the first eligible to apply for an adult-use cultivation center license.

But based on the reaction of some outlying suburbs, the lesson is clear: No matter whether you're a new venture or a well-established company, working through the proper channels of government is key to gaining a foothold in any neighborhood poised to say "no."

SHOW UP AND SHUT UP

The first step to positive advocacy in any newly legalized state is to listen and learn. Suburbs with a lot of children will be a hard sell, but more industrial areas could be looking for growth opportunities.

Research the areas that make sense and get involved in local government. Services like CannaRegs allow you to have the most up-to-date information about bills working through state legislatures, sort through government documents, and track legislation as it progresses. It's imperative to "be in the know" before laying out your case for business expansion or new development in front of local committees.

Once you have done your research and created a targeted plan, attend community meetings and talk to influencers. Observe what's driving decisions and attitudes. What are their concerns? Is this a place where schools are underfunded or are parks in disrepair? What compels people to visit the area?

In the book Getting to Yes, two children



fight over who can have the last orange in the house. To solve the problem, a mediator cuts the orange in half. Each child gets 50 percent of what they wanted. But while one child eats the orange, the other uses the peel to bake a cake. They both could have gotten what they wanted if they had communicated with each other. The book is an excellent example of how communication is key to a successful resolution.

Never walk into a meeting using phrases like "give me" and "I want." Instead, listen to what they want first and then return with an action plan that has both give and take for each side. Understanding the community's concerns will give you the opportunity to educate. Let them know what cannabis can do for their area in the form of job creation, tax revenue, and education campaigns to keep usage safe and limited.

HAVE A CAMPAIGN AND ACTION PLAN ALREADY BUILT

Once you understand the concerns, you can

No matter whether you're a new venture or a well-established company, working through the proper channels of government is key for gaining a foothold in any neighborhood poised to say "no."

address how adult-use cannabis would be controlled in the community. If there is a concern about too much access, be ready to provide examples of how cannabis can benefit the community. Remind naysayers access to cannabis actually reduces the number of drug dealers on the street.

As an advocate, go further by having an education campaign developed for children while providing individuals over the age of 21 information about how to purchase cannabis legally and safely. It's a lot of preliminary footwork but will help demonstrate you take the community seriously and strive to ensure the cannabis industry is represented in a professional, legal manner.

At the end of the day, communities must recognize cannabis is here, whether in the illicit or regulated market. Local governments can ban the regulated market, but they can't realistically ban cannabis. However, working jointly, you can provide local residents access to safe, regulated cannabis that meets standards approved by the state.



The Science Of Consistency

It all begins with a clear taxonomic structure.

s consumers, we demand consistency. You expect a Coke, for example, to taste just like all previous Cokes.

In the modern cannabis industry, that type of consistency doesn't exist. In part, this is due to the more than 400 chemical compounds that appear in different combinations, proportions, and amounts based on the particular environment in which a plant is cultivated. But a greater issue is at work: No taxonomic structure currently is applied to the species.

Cannabis was classified in the mideighteenth century by Carl Linnaeus as he attempted to provide a framework for the classification of all living things. In Species Plantarum, Linnaeus described cannabis as a single species: C. sativa. Since then, other taxonomists have suggested up to four distinct species. A species is a group of interbreeding natural populations that

are reproductively isolated from other such groups (although this definition is a point of significant contestation throughout the scientific community).

When people talk about cannabis today, they often refer to "land races." A land race is a variety of cannabis from a specific (often isolated) region that has evolved into plants with a distinctive physical structure and unique chemical profile (chemotype). Due to human intervention, land races have been collected, grown, and bred into the diverse plethora of strains we have in contemporary cultivation. Some think unadulterated species no longer grow in natural populations.

The vast majority of cannabis grown today is far removed from its species ancestry. As it exists in modern cultivation, the plant is an amalgamation of undocumented strains made from complex polyhybrids. Most other plant families that have been bred

extensively follow a set of taxonomic rules for naming hybrids, recording lineage, and differentiating unique specimens. That is not the case in cannabis.

At the core of the naming system for cultivated plants is the variety, or "cultivar." Each cultivar is the product of human selection and the result of a breeding program designed to achieve particular goals. Those goals may include higher yield, shorter stature, increased trichome production, specific chemical profiles, etc. Due to cannabis's illegal status the past eighty-plus years, documentation of these unique hybrids is a mixture of conjecture, story, fact, and lore. Unlike orchids-of which botanists have documented more than 150,000 hybrids since 1856, collecting lineage and recording the hybridizer for each cross—there is no repository of cannabis information.

Cannabis varieties commonly are referred to as strains, but without a set of universally agreed-upon rules governing documentation, a huge amount of ambiguity about identities has developed. A strain should be the intentional crossing of two unique and stable varieties. (Stable plants reliably produce offspring without significant genetic divergence from the parent, barring spontaneous mutation.) The ambiguity starts here. Many modern cannabis varieties are not stable or homogenous, which dramatically increases variability among offspring.

Consider the basic science lesson of dominant and recessive genes. When a mother and father look very similar—both are tall, slender, blonde-haired, and blueeyed—one would expect their children to be tall, slender, blonde-haired, and blueeyed, too. (That's a simplified example for illustration purposes. Human genetics are extremely complex.) Similarly, stable varieties of plants, known as "IBLs" or inbred lines, produce offspring that are fairly homogeneous.

Now, look at the offspring of a short, Rubenesque woman with black hair and brown eyes and a tall, slender, blondehaired, blue-eyed man. More physical diversity would be expected in those children. When the children—polyhybrids for purposes of this illustration—produce children, even more diverse traits will appear. Crossing polyhybrids, or unstable lines, produces greater variability in the



offspring. Cultivators often search unstable lines, or "pheno-hunt," for exceptional genetic combinations. The genetic combinations that check all the boxes for yield, vigor, chemotype, aroma, flavor, and aesthetic appeal may be found only in the top 0.1 percent of the population, as the distribution of traits follows a bell-shaped curve.

When pheno-hunting, the larger the sample size, the more likely hunters are to find an exceptional specimen. When a cultivator finds a specimen worth cultivating, they usually give it a clonal name—"Gelato," for example. Gelato is a hybrid of Sunset Sherbet and the varietal formerly known as Thin Mint Girl Scout Cookies (GSC). The strain Gelato was introduced by the Cookie Fam, and one particular varietal-#33, which leans toward its GSC heritage—has been recognized as extraordinary. The cultivator denoted this particular cultivar

and buy ten different samples of Gelato, the resulting medical benefits and psychotropic experiences may vary significantly from sample to sample. For new consumers especially, this lack of consistency can be frightening.

Exceptional cannabis cultivars often are passed from one person to the next through circles of cultivators. Occasionally, growers want to differentiate their product and knowingly change the name of a strain so it appears they have a unique offering in a particular market. Sometimes the tactic works, and sales increase dramatically based on nothing more than a name change.

This added ambiguity further muddies the waters when it comes to helping consumers clearly understand what they are purchasing.

Cannabis exhibits more than 25,000 genes—more than human beings have! The genetic variation in cannabis is responsible for each strain's nuanced differences in

Cannabis varieties commonly are referred to as strains, but without a set of universally agreed-upon rules governing documentation, a huge amount of ambiguity about identities has developed.

was different from other Gelato plants by adding the clonal name "#33."

Cannabis varieties that lack adequate descriptions as required by the International Code of Nomenclature for Cultivated Plants (ICNCP) technically should follow this naming format: Cannabis strain, clonal name. So, Gelato #33 should be written as Cannabis strain, Gelato #33.

Every seed and resulting plant made from crossing Sunset Sherbet and Thin Mint GSC should be called Gelato. Here's the problem: Because the two parents are not homogenous, their offspring will exhibit different phenotypic and chemotypic traits. That means each plant may look different from the others, and the myriad chemical compounds produced in each plant will vary in proportion. This leads to significantly different psychotropic effects. So, if you go to ten different dispensaries

appearance, flavor, aroma, and psychoactive effects. While applying taxonomic structure to the genus would be ideal, that is impractical at this juncture.

A move toward identifying strains by their unique genetic fingerprint, or genotype, is both sensible and possible. To quote C.J. Schwartz, PhD, "Determining the genetics of a strain is paramount for accuracy, consistency and transparency. This is exceptionally important for telling strains apart for consumers and validating claims of the uniqueness of a strain..."

I predict in the near future we will see the cannabis industry move toward branding that incorporates genetic data, bolstering consumer trust and addressing consumers' desire for consistency.

How Does Your Garden Grow?

From plant-based learning and vertical integration to deploying technology and reducing costs, four experts offer advice for cultivating profit.



ARE THERE ADVANTAGES TO A VERTICALLY INTEGRATED OPERATION?

Being vertically integrated certainly offers a competitive

advantage—the biggest being total control of the supply chain. When you have 17,000 square feet of grow rooms that provide hundreds of pounds of premium cannabis per week, you have options as to how the product will be used. Typically, most of the flower will get packaged into eighths, quarters, ounces, and pounds for wholesale. You can also fresh-freeze forty pounds to sixty pounds per week for concentrates, meaning you don't have to rely on a trim supplier for concentrates or a flower grower to stock your dispensary.

Another advantage of being vertically integrated relates to relying on others for perishable products. Because you will be using your own flower and trim for extracts, you'll know exactly what nutrients and compounds have been used in the growth of the plants.

Lastly, vertical integration allows easier forecasting because you'll have a specific set of metrics to calculate how much flower and trim you can produce in a week. Furthermore, the dispensary and wholesale teams will be able to see which strains and what quantities will be available for their respective departments. Having all this information ahead of time ensures products are moved to their final destinations as quickly as possible with the least amount of time for degradation.

Mike Lempert, director of logistics Seed & Smith | SeedAndSmith.com



DO BOUTIQUE FARMS SHARE CHARACTERISTICS NOT FOUND AT LARGER GROWS?

Small cannabis farmers have

resilience and adaptability built into their DNA—just like this plant. I'm humbled every day by the strength and resilience of this plant. It's taught me to be present, connect, stay open, and accept the natural elements as guiding

forces. Try not to get bogged down by the mechanics like regulations, operations, logistics, administrative hurdles... Just grind through it and get the real work done. Small farmers need to understand the connection and purpose of putting intentional energy into their plants. The outcome will be clear to consumers.

This is just the beginning of a new era where patients and consumers finally have access to information about cannabis and the farmers who cultivate it. A consciousness shift is occurring that will favor small-batch, sun cultivators. Small farmers in the Emerald Triangle and other heritage cultivation regions are finding support in local and greater communities. Regenerative certifications like DEM Pure and Sun and Earth assure patients and consumers their flower and flower products were cultivated with social responsibility and the best practices to promote the health of the planet and the plants.

Tina Gordon, founder and owner Moon Made Farms | MoonMadeFarms.com



HOW CAN GROWERS REDUCE COSTS WITHOUT LOWERING **PRODUCT QUALITY?**

First, preventive plant care from the start will help foster plants'

overall health. Preventive spraying, [eco-conscious] bug use, even how you prune your plants at the beginning will determine how much labor you spend on trimming, spraying, monitoring, feeding, etc. How many times you have to spray for bug eradication or how much to feed a plant is important to evaluate. Too little food and you have less yields; too much and your cost of fertilizer is higher than it has to be. Heavy feeding can attract heavier-than-normal bug pressure, like aphids, causing the need to spray more often or add more predator bugs.

Secondly, automation equipment can save a lot of labor in all areas of cultivation, and many of these ideas come out of Big Agriculture vegetable processing facilities. Machines like conveyor belts, electric carts, and self-dumping trailers are key to moving plants or products throughout the farm, from the potting room to the vegetation

area to the flowering houses. This alone can reduce manual labor up to 50 percent, especially in labor-heavy areas like drying and processing.

Lastly, energy savings are key to cutting costs. One way to conserve is to work directly with your energy company to determine the best rate for your grow. Another is maintaining stable temperatures day and night. Excessive temperatures at night will affect the bottom line. Ask yourself what type of lights you buy. Using high-pressure sodium (HPS) or LEDs can reduce your energy bill by 30 percent or more. LEDs have a higher upfront cost, but in some cases you can get a rebate for 20 percent to 30 percent of the cost of the fixture.

Doug Brothers, VP of farm operations Harborside | ShopHarborside.com



CAN CLOUD-BASED TECHNOLOGY HELP CULTIVATORS IMPROVE PRODUCTIVITY AND YIELDS?

A solid cloud-based system

can dramatically improve trackability by having your data integrated into a single system, communication by getting everyone on the same page, reporting by predicting and confirming expected yields while understanding the math behind each harvest, and profitability by increasing yields per strain and decreasing costs overall.

A cloud-based cannabis cultivation app can replace whiteboards, spreadsheets, and sticky notes. You can also transform your [standard operating procedures] into a phone-accessible project manager that is checked after each task is performed. This keeps track of how long each task takes, which in turn lets you know what the cost of each task is down to the individual plant level. Plant concerns or recommendations can be tracked in a system that everyone, even offsite grow managers, has access to. Pictures and videos can be submitted by team members showing issues like mites and fungus as well as just-in-time video training showing each team member how to perform the assigned task.

Brett Strauss, founder and president FolioGrow | FolioGrow.com



ADAM GROSSMAN ENTREPRENEUR

As a graduate from Georgetown
University in 1987, with law
and master of business
administration degrees, forming
a cannabis company was never
on Grossman's professional
agenda. After a steady,
successful career in investments
and finance, Grossman explored
cannabis extractions as a way
to ease the pain and suffering
endured by his parents. The
result of these efforts became
Papa & Barkley, a multimilliondollar, market-leading brand.



Issue 37 Adam Grossman Founder & CEO Papa & Barkley

"I think I comfort the mothers, but I inspire young women."

-Mother Indica



How did you become a cannabis coach?

I'm a nutritionist. That's what I trained for. All I'm doing now is adding my knowledge of cannabis to the nutritional side of counseling and coaching. [Trying cannabis] is kind of a scary thing, and if it goes wrong the first time, unfortunately, a lot of people who could really benefit from it are turned off. That's the coaching aspect—just helping people kind of cross that threshold.



What question are you most often asked?

What I'm finding with all my clients is the number one thing they need is permission; that it's okay [to use cannabis]. I always thought it would be like the particular strain and the method and all the nittygritty, but really it's "Oh, okay, I can do this? Thank you." All they need is the permission to let go and enjoy, and then everything else falls off. The anxiety goes away. The insomnia goes away. They lose weight without even realizing it.

Mom's the Word

What started as an anonymous blog on which Erin Willis discussed using cannabis to heal from postpartum depression turned into MotherIndica.com, a proud platform for education, inspiration, and storytelling. Willis now works as a writer, educator, and social media manager for Onda Wellness.

@MOTHER INDICA





Is there a story behind the name Mother Indica?

Mother Jones really inspired me, and then also Mother Goose. The children's storybook is one of my favorites that I read to my son, and that I grew up on as well. And then Indica, that's me showing my psychedelic side. You have the subspecies Cannabis sativa and Cannabis indica. When those were nomenclatured, Cannabis indica actually was the one high in THC.



Do you have any social media advice for brands?

I try to be as creative, free-flow, and honest as possible. You know, social media is so new for humans. It's like, "What is this thing that's been created?" It's insane. So, when you're able to cut the bull crap and truly speak authentically, people catch on to that. There's also imagery. Onda's co-founder is a great photographer, so that helps me with the story branding. My advice: Create and craft a story to make [your brand] accessible to the potential customer.

NETWORK STATS

Instagram followers

Recipes on her blog

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