

**How To Build A Micro Grow**

# HIGH TIMES

December 503

**TOP  
10  
STRAINS  
OF THE  
YEAR**

**Finding  
Perfect  
Pot**

**Mexico's  
Magic  
Mushrooms**

**Guide To  
Legal  
Weed**

**Joss  
Stone  
Interview**

**Purple  
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FEMINIZED ..... \$150

**BLUEBERRY**



80%  
INDICA

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FEMINIZED ..... \$150

**GIRL SCOUT-COOKIES**



HYBRID  
INDICA-SATIVA

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FEMINIZED ..... \$150

**NIGHT NURSE**



80%  
INDICA

7-8 WEEKS

12-SEED PACK .... \$90

**CBD GOD**



INDICA  
DOMINANT

8-9 WEEKS

12-SEED PACK .... \$90

**THE BLACK**



90%  
INDICA

8-10 WEEKS

12-SEED PACK .... \$75

**GOD'S GIFT**



80%  
INDICA

8-9 WEEKS

12-SEED PACK .... \$150

**THE BIG**



MOSTLY  
INDICA

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12-SEED PACK .... \$75

**SWEET GOD**



70%  
INDICA

6-8 WEEKS

12-SEED PACK .... \$75

**TEXADA TIMEWARP**



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SATIVA

LATE SEPT.  
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INDICA

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12-SEED PACK .... \$75

**SHIATSU KUSH**



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**SWEET ISLAND SKUNK**



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SATIVA

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12-SEED PACK .... \$75

**CHEM FIRE**



HYBRID

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12-SEED PACK .... \$75

**DYNAMITE OG**



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12-SEED PACK .... \$75  
FEMINIZED ..... \$125

**BC KUSH**



75%  
INDICA

8-9 WEEKS

12-SEED PACK .... \$75  
FEMINIZED ..... \$125

**ANIMAL COOKIES**



HYBRID

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12-SEED PACK .... \$90

**STRAWBERRY COUGH**



75%  
SATIVA

9 WEEKS

12-SEED PACK .... \$125  
FEMINIZED ..... \$125

**SOCAL MASTER KUSH**



HYBRID

9-10 WEEKS

12-SEED PACK .... \$75  
FEMINIZED ..... \$125

**NORTHERN LIGHTS**



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TOTAL: \_\_\_\_\_



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TOTAL: \_\_\_\_\_

Strain(s): \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_

Province / State: \_\_\_\_\_ Postal Code / Zip: \_\_\_\_\_

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# HIGH TIMES DECEMBER



*Extremely potent with high levels of THC, the earthy Remo Chemo delivers hints of black pepper among the overarching diesel-fuel aroma.*

*Top 10 Strains of 2017—page 68*

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Our handy guide will help you become an educated consumer by teaching you what to look for prior to purchasing pot and hash.

*By Sean Black*

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The indigenous wisdom of magic mushrooms has brought economic prosperity to a Mexican town, accompanied by some serious problems. *By Nathaniel Janowitz*

## 68 Top 10 Strains of 2017

Feast your eyes upon the award-winning cannabis varieties that wowed the weed world in the past year. We reveal our illustrious list of the best currently available strains. *By Danny Danko and T.H.Caeczar*

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Check out the latest cultivation trend: growing lush pot plants in tiny grow chambers. Learn step-by-step instructions to make your own space bucket. *By Jon Christian*

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The Controlled Substances Act has transformed federal pot laws. Find out how the CSA came about, why it has failed and what should be done about it. *By Jon Gettman*

## 101 The High Times Interview: Joss Stone

Soul singer Joss Stone gained her freedom from her record company. Now, she opens up to *High Times* about her love of weed, how it influences her music and why she'll never let anyone tell her what to do. *By Chris Parker*



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## High Horoscopes

If you're an astrology aficionado who's been looking for some cannabis-centric advice, look no further. Check out High Times High Horoscopes! Each month our own Aelie Câlin provides impeccable horoscopes for stoners of all signs. Plus, Câlin includes a unique strain recommendation that fits your future.

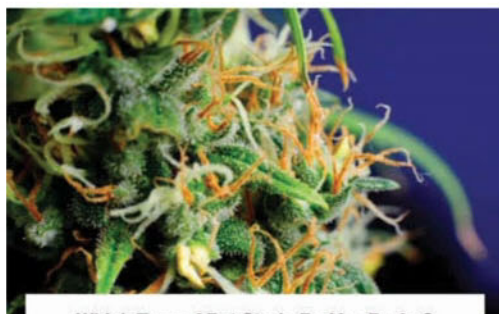
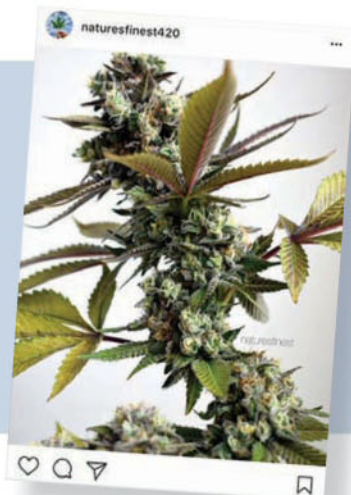
Since High Horoscopes debuted on the High Times website, readers have consistently commented on the accuracy of the advice. Don't miss out! Head to [hightimes.com](http://hightimes.com) and check out your High Horoscope (and strain recommendation) today! **Visit [hightimes.com](http://hightimes.com) for more.**



## On Instagram

While HT has fully embraced the concentrates craze, we sometimes get nostalgic for the days when flowers reigned supreme. Good thing we follow @naturesfinest420. This beauty is Critical Mass CBD from Dinafem Seeds, boasting a 2:1 CBD to THC ratio. According to @naturesfinest420, it started off as an "ugly duckling." Boy, did she mature well!

Readers who prefer the flower power should definitely give @naturesfinest420 a follow. Particularly since they promise we'll "slowly start seeing more photos like this filtering into the feed."



Which Type of Pot Strain Do You Prefer?

Sativa	25%
Indica	23%
Sativa-Dominant Hybrid	26%
Indica-Dominant Hybrid	21%
CBD	3%

## Smoking Poll

This month, we're revealing our picks for the 10 best strains of the year (see "Top 10 Strains of 2017," page 68). While our annual list contains some mouth-watering cannabis varieties, we wanted to get back to basics for this month's poll, asking simply, which type of cannabis do you prefer?

Most smokers decided long ago whether they prefer the soaring effect of a *sativa*, or the deep body buzz of an *indica*. But we wanted to check in with our readers to see if they most like a pure *sativa* or *indica*, or if a hybrid was more their speed. Of course, CBD strains are gaining popularity, so we included that option as well.

The *sativa*-dominant hybrid garnered the greatest support, with 28 percent of the vote, followed by pure *sativa*, which took 25 percent of the total. Pure *indica* came in third with 23 percent, followed closely by *indica*-dominant hybrid. CBD came in last with just 3 percent reader approval. **Take our latest poll online!**



## We Want To Hear From You!

Tweet your best high observations and comments our way @HIGH\_TIMES\_Mag for a chance to be featured on this page! And be sure to follow us on Facebook (Facebook/HIGHTIMES-Mag) and Instagram (@hightimesmagazine) for all the latest news as it's happening!

**@BuddLyfe:** I was so high on the road, I found myself waiting for a stop sign to turn green @ HIGH\_TIMES\_Mag

**@jrh\_renaud:** @HIGH\_TIMES\_Mag I dropped opioids, bentos, stomach meds, antidepressants, stabilizers, and anti-inflammatories. Only use cannabis now. Substitution can work

**@Philmoeslim:** @HIGH\_TIMES\_Mag Whatever president that gets weed legal is going down as a legend.....

**@BigBlake10:** @HIGH\_TIMES\_Mag My joint was spot on, I smoke and it's go time I cleaned my whole apartment then I got high again

**@djhendoe:** I truly believe God loves the budsmokers @HIGH\_TIMES\_Mag

**@BigSean66:** @psychofrs @HIGH\_TIMES\_Mag Weed's not a drug, it's an herb.

**@MastuhC:** @HIGH\_TIMES\_Mag Sativa seems to raise my blood pressure makes me feel weird. Indica makes me feel awesome. However it's not labeled in my state. #Legalizelt

**@atheistischen:** @HIGH\_TIMES\_Mag Facts don't matter to those whose mind is already made up. 88,000 people die from alcohol-related causes annually, Cannabis, 0 deaths.

**@BigStank420:** @HIGH\_TIMES\_Mag It's not ok for cops to do most of the things they do... But it will continue, because the only thing the system protects is itself

**@mosesGonzalez10:** @HIGH\_TIMES\_Mag Nothing says Love Like Your Girlfriend rolling one up and smoking you out this is what I call a bonding experience





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## Budding Entrepreneurs

As cannabis becomes big business, worry rises in our community about large corporations taking over the marijuana market. It's a legitimate concern, yet the only way these fears will be realized is if we give up our ability to grow our own plants. There's no need to smoke bland pre-rolls from Monsanto or Marlboro when you possess a variety of connoisseur-quality flowers, free of pesticides and grown with love.

And what a variety there is! There's a veritable cornucopia of pot strains, with many flavors, scents, potency levels and cannabinoid profiles to choose from. Cannabis cultivars have come a long way.

It's important to remember that we are not confined to the strains we already know and love. Advancements in lab technology and testing have improved and refined breeding techniques and introduced new cultivars to the marijuana gene pool. Each year in our December issue, we feature these new varieties in our "Top 10 Strains of the Year" feature, and we're excited to share our picks for 2017 with you.

Along with that valuable information and beautiful photography, we shine a light on selecting the best pot and hash, how to build your own micro-growing space buckets, a conflict going on in the world of psychedelic mushrooms and an engaging interview with singer Joss Stone. As the tumultuous year of 2017 comes to a close, we look to 2018 as a huge year in marijuana-law reform. As Canada and California legalize, the whole world will be watching, and *High Times* will be there every step of the way, representing the growing cannabis community.

*Danny Danko*  
Senior Cultivation Editor

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### Alive Again

I was diagnosed with Crohn's disease 12 years ago and my quality of life went straight to hell.

Four years ago, a neighbor heard me scream from the pain. She slipped me 2-3 grams of weed and I made a tincture in rum. That was my introduction to cannabis as medicine.

Cannabis gave me my life back. In 2017, I have had only two flares. Twelve years ago I had that many flares a week.

*Two Bears  
Arizona*

### Marijuana's Cousin

*High Times* recently reported on Tennessee senators being scared to pass a medicinal marijuana bill. When it comes to political views on the cannabis plant, Tennessee has a unique one. A few of the state's major cities (Nashville and Memphis) decriminalized marijuana. It didn't take long for the Tennessee legislature to pass a bill that would bar cities in the state from decriminalizing possession of small amounts of marijuana.

At the same time, the state was accepting a third year of applications for industrial-hemp growing licenses, leaving room in the guidelines for marijuana to be included.

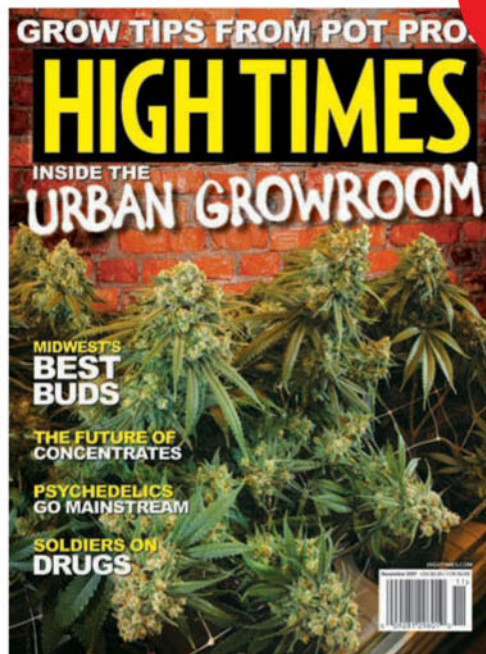
Politicians could be waiting on more research to make a decision for passing a pro-marijuana bill based on demand for hemp. Tennesseans have an opportunity to be actively influential in their representative's decisions on hemp laws and legalizing marijuana. Now is the time for Tennesseans to create a demand for hemp products. This will show the representatives that they don't have anything to fear. If the state is making money on hemp, the government is more likely to expand the laws surrounding the cannabis plant.

*Anonymous  
Tennessee*

### Don't Give Up the Fight

When Donald Trump was elected last November, the cannabis community waited with bated breath. The president-elect had campaigned on a platform that pledged to honor states' rights in regard to marijuana legalization, but his irrational decisions (and tweets) had everyone on edge. Would he remain true to his promises? Wasn't marijuana too big of a money-maker for this businessman to intercede?

But then, he appointed Jeff Sessions



**"Because I used THC for years and stopped two months ago, rogue fat cells within my large frame have been plotting against me."**

as attorney general. The idea was horrifying, and everyone in the legal weed industry panicked. The same man who once said, "Good people don't smoke marijuana," would now be leading the Department of Justice. A cannabis crack-down seemed imminent.

Now, here's where I call bullshit. I've spent most of my life covering politics for different news sources, and while I understand the fear that Trump and Sessions have sent spiraling through the marijuana industry is not unfounded, I do think it's mostly smoke and mirrors. For these two men, the War on Drugs is just a tool they can use to bring back the racist days of yore. It has become increasingly clearer as more and more days go by under this president. He doesn't want to take away anyone's weed. He just wants to take away anyone who doesn't look like him or his flock of brainwashed, MAGA-hat-wearing white supremacists.

It's horrible, but true. Trump isn't attacking the legal pot industry. Instead, he's using the legal pot industry to attack minorities, immigrants and everyone else he chooses to discriminate against. The logic (if you can call it that) is appalling, and it's something everyone in the cannabis sector should be fighting

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against. Standing up against bigots should come just as naturally as standing up against prohibitionists.

*Angelica S.  
New York*

### Being Tested

After losing my job in January, I fell on hard times financially and had to give up the luxuries I enjoy, one by one. The final luxury I let go of was my use of cannabis. The first week was the hardest, but day by day, it became easier. Hell, I figured, if I'm giving it up for good, I might as well wait it out a month or so and try to find a good paying (see: urinalysis required) job, which I had avoided in years past. I read articles and forums online telling me that most users were clean in a couple weeks, and the heaviest of users were usually clean by the end of a month—but depending on your biochemistry and other factors, it may take six or eight weeks.

So, at four weeks I began applying for better jobs. A week later I was interviewed for a position at the local newspaper. They asked me to submit a drug screen. Two days later, I got a call telling me I tested positive for THC, and that the levels "weren't low."

Now, I am patiently awaiting a call back from the people at Qwest for a job driving cabs and buses at our local transit authority. As I anxiously await the results, so many things are racing through my mind. Crack, cocaine, heroin, meth—they all leave the system in a matter of days for just about everyone. I could've done them all a week ago and passed with flying colors. But because I used THC for years and stopped two months ago, rogue fat cells within my large frame have been plotting against me.

Time will tell if I am considered a lower risk to society than the person who put down their meth pipe last week, but I learned several things from my current predicament: All urinalysis screens are not created equal, it takes much longer than a month for someone like me to pass without worry, and perhaps we should reconsider the current methods of selecting candidates for employment.

*A Fat, Former Toker  
Missouri*



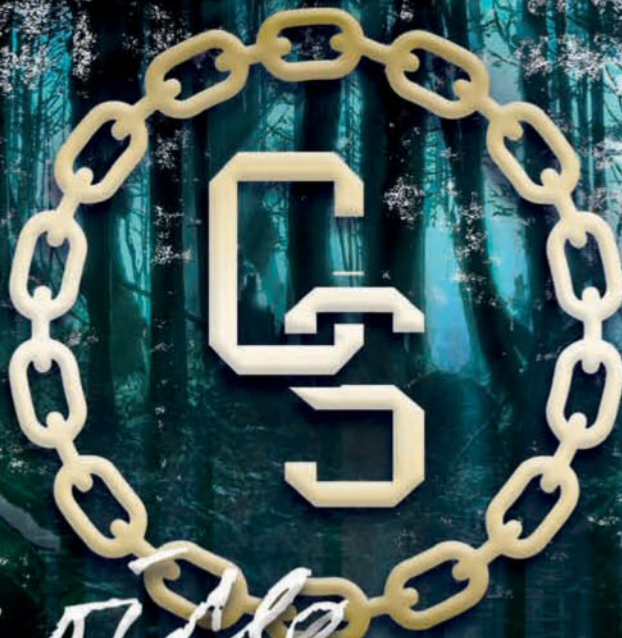
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High**

**THE TOP 10 STRAINS OF 2017** Breeders are developing new and improved marijuana varieties with an eye on increasing scents, flavors, potency and medicinal benefits. Check out our list of the year's top ten new strains, like this Remo Chemo, on page 68. *Photo courtesy of Dinafem.*















December 2017 **High Times**

**MUSHROOMS IN OAXACA** The small Mexican town of Huautla de Jiménez has for decades attracted tourists seeking enlightenment through its indigenous magic mushrooms. Residents of the town have struggled with the idea of sharing the *niños santos* (their term for magic mushrooms, which translates to “holy children”) with foreign seekers. Read more on page 59. *Photo by Nathaniel Janowitz*

**Contact  
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**QUEST FOR THE BEST** If you strive to select perfect pot products, you're in luck. Learn the tips and tricks necessary to procure the very best pot and hash available. Become an educated consumer by following our guidelines on page 44. *Photo by Justin Cannabis*

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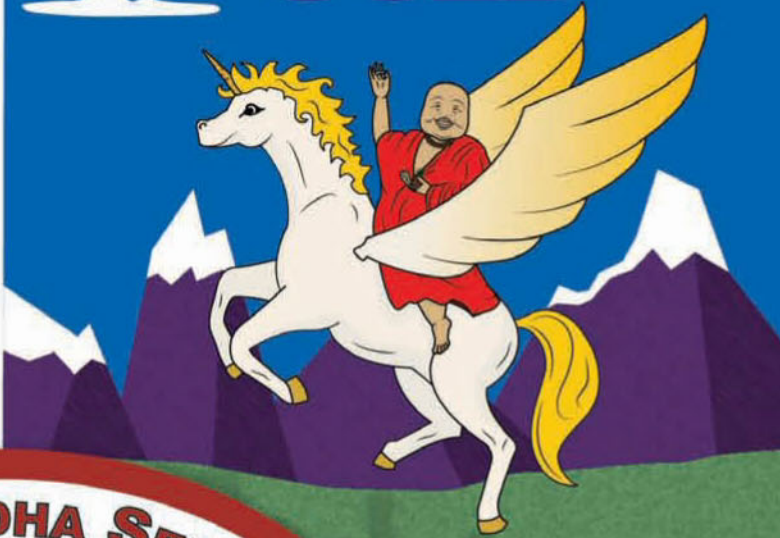




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**BIG BUDDHA**



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GOLD**



**Cookie** and  
**cream cheese**



**BLACK  
CHEESE**



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# Highwitness News

**Cory Booker has a plan to free the weed!**



## Style

### INDA Pipe

The INDA pipe necklace is a sleek and stylish way to stealthily smoke. Just pack the pendant. p.30



## Entertainment

### Gaytheist

Noise-punk trio Gaytheist are on the road again and they've got plenty of weed for the trip. p.34



Invest in your future.

## Taking Stock of the Pot Market

The cannabis industry is booming, even as federal law continues to regard it as a criminal enterprise. What's an investor to do? *By Mike DiPaola*

**It's been a year** since the New York Stock Exchange listed Innovative Industrial Properties, a real-estate investment trust with an interest in medical-marijuana entities. Investors—and the NYSE itself—are wary of weed-related firms because the plant remains illegal under federal law, but times are changing. Our own parent company, High Times Holding Corp., will soon become a publicly traded company.

Although the feds continue to keep weed under Controlled Substances Act restrictions, the green industry is young and vibrant, with a 27 percent annual growth rate. The market is expected to

exceed \$22.6 billion in revenue in 2021, up from \$6.7 billion in 2016, according to the Arcview Group, a cannabis investment and research firm.

Assuming that the retrograde dinosaurs currently running the government do not impose new prohibitions, the fastest-growing industry in the United States is a ripe environment for savvy investors. But investing in anything requires due diligence and an acceptance of some risk, and investing in the marijuana world—which is rapidly changing and is precariously at the mercy of a (currently) unsympathetic government—requires extra attention and care.

Cannabusinesses have difficulty utilizing normal banking institutions, for example, because of federal laws in the United States. They must jump through many regulatory hoops, and they have more restrictive tax burdens than other businesses.

Fortunately, there is a wealth of weed-specific investment guidance available from experts in the financial pages. Headlines like “Top 4 Marijuana Stocks to Watch...” are increasingly common. That one comes via Investopedia, in an article which both inspires optimism and advises caution: “As people sober up about the marijuana craze, the reality



of using it in medicines and other products will set in. Like any other source for drugs, cannabis has positive prospects and some failures... It is best not to invest based on enthusiasm over marijuana, and keep a level head about actual results from drug trials.”

A good launch point for would-be investors is *Marijuana Stocks* (*marijuanastocks.com*), which, among other things, maintains a list of the “Best Marijuana Stocks to keep focused on.” Here you’ll also find politics-heavy inquiries propelled by headlines such as “Will Marijuana Stocks Be an Issue for Jeff Sessions?”

*The Motley Fool* (*fool.com*) is systematic in its analyses, looking at every pot stock with a market cap above \$200 million, while sometimes reviewing the week’s best and worst picks. *The Fool*, with its informative and thorough look at individual companies, is a good starting place for investors looking to research potential buys or, more generally, for what to look for in sound investments. It also offers a diverse range of views.

Some long-established finance publications are also getting in on the act. Earlier this year, *Barron’s* (*barrons.com*) schooled its readers on “How to Score the Best Marijuana Stocks,” a

## The pot market, like all youngsters, will likely be a volatile and unpredictable force until it matures.

straightforward primer by *MarketWatch* analyst Michael Kahn. Later in the year, the journal noted how financial advisers were both optimistic about the future—“87% believe cannabis will grow into a mature, legitimate industry with broad investor appeal”—and wary about the present: A scant 15 percent of the advisers had actually encouraged their clients to invest in the green.

Some financial reportage gets right to the point. CNBC, in its 4/20 report, provided tips for picking pot stocks: Seek companies with solid management teams (duh); look for ancillary businesses, as opposed to companies engaged directly in growing or delivering weed, to mitigate risk; and be hyper-aware of state-by-state laws and regulations before investing—there’s a lot of variance among the 29 states where weed is legal or legal-ish.

The Great White North is also getting in on the action. With less than a year before Canada goes rec-legal nationwide, at least 10 cannabis companies have new

listings on the TSX Venture and Canada Securities Exchanges. Still, investors are wary. The *Globe and Mail* recently reported on some bearish behavior in the market, noting that green producer MedReleaf Corp. had tumbled by 28 percent in “the worst debut for a Canadian IPO in 16 years amid concern pot stocks are overvalued.” Similarly, shares of Canada’s first billion-dollar marijuana start-up, Canopy Growth Corp., slid 21 percent over a three-month period. In fact, the whole North American Medical Marijuana Index—tracking pot stocks in both Canada and the United States—also plunged 21 percent over roughly the same period. (The index has rebounded somewhat since.)

The pot market, like all youngsters, will likely be a volatile and unpredictable force until it matures. Investors should do their homework, research potential investments meticulously, and keep a watchful eye on legislation and regulations that can influence performance. Buy low, but never sell high. 🌿

HIGH FIVE By Mark Miller

## Yes, We Cannabis

Folks from all walks of life are embracing marijuana. Here are five positive pot quotes from influential people.



### Adam Silver

The NBA commissioner recently demonstrated a progressive attitude toward pot: “I’m very interested in the science when it comes to medical marijuana... To the extent that science demonstrates that there are effective uses for medical reasons, we’re open to it.” Silver stated that medical pot should be “regulated in the same way that other medications are if the plan is to use it for pain management.”



### Neil deGrasse Tyson

During a Facebook Live interview this summer, the celebrity astrophysicist declared, “There’s no reason for [cannabis] to ever have been made illegal.” Tyson obviously supports pot over a certain socially acceptable substance, opining that “Alcohol is legal and it can mess you up way more than smoking a few jays.” As to his past personal use, Tyson only said, “The last time I was, like, in a cloud of it.”



### Roger Stone

The malevolent political strategist who played a key role in the ascension of Donald Trump to the White House publicly admitted he’s attempting to get the president to change federal law and legalize cannabis. Appearing at Politicon in Pasadena, CA in July, Stone told a symposium audience, “Medical marijuana is now a consensus issue in the United States. And recreational marijuana is headed that way.”



### Mo Brooks

During a press conference, the Alabama congressman and US Senate hopeful explained, “Medical cannabis should be treated like any other medical treatment that saves lives or eases pains and symptoms... That is how I will vote in the Senate.” One opponent of Representative Brooks, Senate candidate Dom Gentile, responded by dropping out of the race to care for his cancer-stricken wife and officially endorsing Brooks.



### Jerry Jones

During an NFL meeting last spring, the Dallas Cowboys owner reportedly told his fellow team owners that he wants the league to “drop its prohibition on marijuana use.” Jones is going further than the players’ union, which views cannabis testing as a positive tool. Jones is also motivated to offer a liberal pot policy as a negotiating chip to arrive at a new players’ agreement and avoid a 2021 work stoppage.



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## Netflix and Chillum

Netflix viewers in the Los Angeles area were treated to a special weekend when the home-entertainment giant launched “The Netflix Collection,” 12 strains of weed for pairing with their favorite programs. Since the US mail could not be used to deliver the goods, Netflix teamed up with West Hollywood dispensary Alternative Herbal Health Services, where viewers could pick up select nuggets to enhance shows like *Orange Is the New Black*, *Bojack Horseman* and, especially, the newly released *Disjointed*. Netflix explained in a statement: “Each strain was cultivated with the specific shows in mind, designed to complement each title based on their tone. For example, siller shows may be more *indica* dominant, while dramedies will be more *sativa* dominant to help the more powerful scenes resonate.” Netflix did not technically sell the weed, nor did it profit from the 27 pounds of it sold over the weekend.

## Let’s Study This

The National Institutes of Health (NIH) has announced it is backing the first long-term study to see if medical cannabis can reduce opioid use among adults with chronic pain, including those with HIV. The NIH doled out \$3.8 million to researchers at Albert Einstein College of Medicine and Montefiore Health System to embark on this unprecedented five-year study. “There is a lack of information about the impact of medical marijuana on opioid use in those with chronic pain,” says Chinazo Cunningham, associate chief of general internal medicine at Einstein and Montefiore and principal investigator on the grant. “We hope this study will fill in the gaps and provide doctors and patients with some much-needed guidance.” Interestingly, the study will be using the good stuff: medical-grade cannabis from New York State dispensaries, not the shitweed grown by federal contractors in Mississippi, the usual suppliers for research.

## BEER WITH US



Barley-and-hops maestro Lagunitas has come out with a new brew that contains a little sumpin’ extra: cannabis terpenes. The ale, called Supercritical (“California-only release, for now...,” according to the brewer’s blog), does not include THC, but it’s nice and grassy on the palate. The brewer teamed up with vape-cartridge company AbsoluteXtracts to produce this unique adult beverage. “These are created using a combination of dozens of terpenes that we isolate and refine during cannabis extraction, and they are what give our strains their unique flavor and sensory profiles,” Kial Long, marketing veep for AbsoluteXtracts, told the *Chicago Tribune*. Boasting terps from both Girl Scout Cookies and Blue Dream, and combining no less than six different kinds of hops, Supercritical is a limited-edition ale—there’s only one batch of 60 barrels—but Lagunitas may come out with more in the future. Stay thirsty and dank, my friends.

Inside the  
Wide World  
of Weed



And justice for all

## Booker’s Bold Plan

While individual US states go for the green—eight states plus the District of Columbia so far—there is a quieter, but bigger, movement to flip the whole shebang. New Jersey Senator Cory Booker has introduced legislation to remove cannabis from the Controlled Substances Act’s list of naughty drugs, thereby legalizing it nationwide and reversing decades of prohibition lunacy. Booker’s bill, the Marijuana Justice Act, is so named because it’s framed as a means to address the gross inequities in the number of arrests of people of color, the poor and the mentally ill. “We in this country have prosecuted the War on Drugs not on everyone, but have focused it on the most vulnerable people in our communities,” Booker said in introducing the legislation. The bill would not only legalize weed at the federal level, it would withhold federal money from states in which minorities are disproportionately incarcerated. It’s unlikely to pass in the current political climate, but if voted on in Congress, it can show the public which of our politicians stand for justice, and which of them shill for an unjust status quo.



Not the  
end of the  
world

## Bunker Busted

The operators of “the biggest cannabis factory ever seen in the south of England” were busted and sentenced in Wiltshire, according to a BBC report. For three years, the men grew weed around the clock in an under-

ground 20-room complex they’d built in an old bunker originally intended to shelter 150 officials in the event of nuclear war. The three underground entrepreneurs—who employed a group of four “gardeners” to reside in the bunker in order to tend the crops 24/7—received sentences of between five and eight years for conspiracy to produce cannabis, money laundering and “abstracting electricity.” That last charge reflected the £650,000 worth of juice the men had managed to syphon off a nearby power line. Police raided the former bunker, which was built in 1985 and later sold by the Ministry of Defence, after receiving a tip that it stank of the dank.





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## FBI: Pot Reduces Violent Crime

US Attorney General Jeff “Buzzkill” Sessions has said he’s worried about a “potentially long-term uptick in violent crime,” and so his Justice Department should therefore drop the hammer on pot-legal states. Sorry, Jeff—crime statistics, even those gathered by the feds, do not justify your worries. According to FBI data, violent crime in Washington has decreased by about 10 percent since 2011, the year before Evergreen State voters legalized recreational cannabis. “As far as I’m aware there is no credible study linking violent crime and marijuana,” Washington State Representative David Sawyer, who chairs the House committee that deals with cannabis, told the *News Tribune*. “I think what more people are realizing is violent crime is linked to keeping marijuana illegal.” Elsewhere, Colorado saw a 6 percent decrease in the violent-crime rate statewide from 2009 to 2014, according to the state’s Department of Public Safety. Portland, OR, has experienced a similar drop.

## Ghost Town Goes Green

How weed-friendly is your town? Not, we bet, as verdant as what’s planned for Nipton, California, a small desert hamlet on the Nevada border. American Green, an Arizona-based cannabis business, is purchasing the 80-acre Nipton (population six) and another 40 acres nearby for a reported \$5 million. The company plans to “create a community that is accepting and understanding” of the herb, Stephen Shearin, a consultant on the development project, told *Business Insider*. “The [idea] here isn’t to create ‘Woodstock 2017,’” Shearin said. “It’s about creating an environment where people come to work and share in a community.” One of the first offerings in Nipton will be CBD-infused bottled water drawn from a nearby aquifer; eventually, visitors will be able to enjoy mineral baths, bud-happy lodging and, of course, an apothecary. The company also plans to continue developing solar-energy arrays that are already underway, making this town green indeed.

## DEPUTIES DODGE



A pair of former Kern County, California, sheriff’s deputies managed to avoid prison time for stealing from drug-bust stashes and selling the confiscated goods to a confidential informant. Logan August and Derrick Penney were sentenced to three years’ probation and a boatload of community-service time. They also have to pay back the cash they made in the deals. “The defendants in this case caused a significant breach of the public’s trust when they committed these crimes,” US Attorney Phillip A. Talbert said in a statement. “Not only did they betray the community they were sworn to serve, but also their fellow, hard-working officers who protect the Kern County community every day.” One hard-working officer who was in on the scheme, Bakersfield detective Patrick Mara, wasn’t as lucky as the jail-dodging deputies: He is now serving five years on separate charges of stealing meth from drug dealers during traffic stops. Frigging cops!



Every dog has his daze.

## Dogs With an Obsolete Skill Set

What happens when a police dog sniffs out a drug in your possession, let’s say meth, and you’re busted and convicted? If you have a clever defense, as Kevin McKnight did in Moffat County, Colorado, you appeal the conviction and inform the court that, while the narc dog was trained to detect cocaine, heroin, ecstasy, methamphetamine and marijuana, it can’t indicate which of these it has found. Since one of these items happens to be legal in the Rocky Mountain State, the search, according to McKnight’s argument, is therefore illegal under the law. The appellate panel hearing McKnight agreed and overturned the conviction. The state’s attorney general’s office is mulling whether to go up the food chain to the Colorado Supreme Court to have at McKnight again, according to *U.S. News & World Report*, but meanwhile police departments from Loveland to Greeley to Denver are starting to phase out the use of cheeba-sniffing canines. That’s a good boy.

## Mile-High Cannabis Club

Weed companies have had a hard time deploying traditional outlets for their advertising, partly because the FCC still frowns upon the use of the airwaves for touting dank products. Now Wikileaf, an app for finding weed and comparing prices, has figured out a way to air a 90-second ad it hopes will reach 8 million viewers: on a commercial airline. The app company teamed up with Virgin America to broadcast its spot in-flight on seatback screens. The ad features a young woman packing for a trip who must leave her cheeba behind to avoid getting busted at airport security. The cure for her smuggler’s blues is the app, which will help her find what she needs legally, after landing. “We wanted to get somewhere more mainstream,” Wikileaf CEO Dan Nelson told *Advertising Age*. “We had ads in various magazines and online places where it’s cannabis-focused, but we wanted some out-of-the-box ideas.”







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## SPOTLIGHT

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The INDA pipe necklace is a fashion-forward tool for inconspicuous self-healing and enjoying your medicine on the go. Designed by company founder Caroline Mauro, this beautifully weighted pendant hangs on a vintage brass snake chain and easily transforms into a working pipe. Simply unscrew the end caps, pack the bowl and puff away.

The perfect accessory for everything from on-the-go adventures to soul searching in the woods, this piece will spark you up on your creative inner journey. INDA Creations also offers a line of legal hemp and floral smoking blends to enjoy alongside your head stash. [indacreations.com](http://indacreations.com)

**A LUXURIOUS SOAK & SMOKE**

Cannabis Cup award winner Kush Queen has created a delightful all-in-one package cleverly dubbed the Lit Kit. It contains a 25-mg THC plus 25-mg CBD Relax Bath Bomb, a 0.5-gram pre-roll of Skywalker OG and a 25-mg THC piece of milk chocolate, so you can soak, smoke and satisfy your sweet tooth for sinsemilla on the ultimate chill night in.

If you're planning a romantic evening—for you or for two!—choose the Lit Kit for Love, created in collaboration with cannabis matchmaking service Highly Devoted. It pairs a Kush Queen 25-mg THC plus 25-mg CBD Love Bath Bomb with a 0.5-gram pre-roll of Private Reserve GDP and 25 mg of Ignite water-based lube for safe, sexy fun. Keep one of each kit on hand for those special nights when you need to give yourself a little extra lovin'. Available in California. [kushqueencannabis.com](http://kushqueencannabis.com)

**GETTING BACK IN THE GAME**

Floyd Landis found himself at the center of professional cycling's greatest scandal when he tested positive for steroids after winning the Tour de France in 2006. Landis was stripped of the title, despite maintaining his innocence at the time. After almost four years of contesting the doping allegations, Landis finally admitted to a longtime use of steroids, implicating Lance Armstrong and other top riders in the massive controversy as well.

Fast-forward to 2017: Landis has moved far beyond those dark times with the help of family, friends and the healing power of cannabis. His company, Floyd's of Leadville, offers a line of medical-cannabis products available in Colorado. It recently launched a line of CBD hemp-oil daily-supplement softgel capsules, which are available nationwide. The 20-mg capsules are made with all-natural hemp oil and contain no preservatives or additives. Landis says he takes a capsule every morning and every night to treat chronic pain from old cycling injuries and a hip replacement. The relaxing effects of CBD also help his anxiety. The healing herb works its magic in many ways.

For more on the natural relief that CBD hemp-oil supplements can offer, visit Floyd's of Leadville at [floydsofleadville.com](http://floydsofleadville.com).





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# Getting High in 'The Lodge'

An interview with *Twin Peaks*'s David Patrick Kelly. By Tommy Smith

DAVID PATRICK KELLY HAS STARRED AS THE BAD GUY IN ALL YOUR FAVORITE GENRE FLICKS—T-BIRD IN *THE CROW*, CHARLIE THE CLEANER IN *JOHN WICK*, GANG LEADER LUTHER IN *THE WARRIORS* AND THE ILL-FATED SULLY IN *COMMANDO*. BUT WITH A PROLIFIC CAREER SPANNING FIVE DECADES, KELLY IS THE POLAR OPPOSITE OF THE MOTOR-MOUTHED ANTAGONISTS HE OFTEN PORTRAYS. GENIAL AND HYPNOTIC, HE SPEAKS WITH A WIZENED DRAWL ABOUT THE FLICKERING HUMANITY BEHIND HIS MOST RECENT ROLE, THE NEWLY-ADDICTED-TO-POT-EDIBLES JERRY HORNE IN SHOWTIME'S MASTERFUL REVIVAL OF DAVID LYNCH'S *TWIN PEAKS*.

**It's been 25 years since you last played Jerry Horne. How did you prepare to jump back into Lynch's world?**

When I first did *Wild at Heart* for David, I sensed this kind of bifurcation in his works. This kind of straitlaced-'50s-then-goes-to-hell-in-the-'60s vibe. So I wanted to fold that into Jerry. While I was first working on the role, I was studying *Atlas Shrugged*. I thought that Jerry Horne and the Horne brothers were fully imbued with Ayn Rand's "Greed Is Good" philosophy.

**So, does Jerry Horne read Ayn Rand?**

Jerry probably reads *How to Succeed in Business* and things like that. He's not on the intellectual tip, or looking for any kind of philosophical justification for what he does. It's just about success in the world, in business deals, in his romantic conquests.

**What's Jerry's imperative now, more than two decades later?**

The consummate character actor reprises a role.



"We all know the things that we like and we don't like about different substances, and things which induce altered states."

That's interesting because it connects back to your previous question. Because now in his sort of chemically induced enlightenment, he's achieved a certain kind of enlightenment for himself. There's a kind of humility now. There's something really evolving. Shakespeare talked about "the whirligig of time," and how time can play on you. And I think that's causing a breakthrough for Jerry.

**Do you think the catalyst for this is the weed? He was not a weed smoker in the first two seasons, and since he's found psychologically a way to let go, do you think the involvement of this substance has changed his psyche?**

Well, I'm not suggesting that he couldn't have gotten there in a different way. But I am also a person who's come through the history of the '60s, and firsthand seeing the

changes in artists like Bob Dylan and the Beatles that happened that were chemically induced—who is to say? We all know the things that we like and we don't like about different substances, and things which induce altered states. But who is to say if that's not something you can achieve by yourself?

**Did you do any "research" to prepare for Jerry's pot-brownie monologues?**

Personally, for many years now, since the '70s, I'm high on existential epiphanies. That's what gets me going. And that alone has helped me create all the characters I've been blessed to be able to play.

**Do you know how this season ends? Or are you up-to-date with the rest of the viewership?**

They only gave us little pieces of the script. I think that's a blessing, because I get to enjoy it just like you do. [Laughs] And I was just stunned by episode eight. But every single one of them. From the very first one.

**It's a pretty damn great season.**

It's because David is in charge of the whole thing. Every scene is curated. Everything is taken care of. All the details. Because he's a painter, he gets to recycle his materials. And he has that intense timing. I think the directors would be way too nervous to keep nothing but a door in the frame for as long as he does. He's just going for broke. And it's stunningly good, in my own opinion. ✨

*The 18-episode third season of Twin Peaks is available on Showtime.*



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Rivera (center) insists that a bong is the key part of any art class.



**As the only member of Gaytheist who is both gay and an atheist, Rivera is also the band's heaviest smoker.**

it's just too easy to go, 'Oh, I'll try again tomorrow.'"

Luckily, scoring weed in Rivera's hometown has become a whole lot easier since Washington Initiative 502 passed in 2012, fully legalizing marijuana throughout the state. "For the last few years, there's been no level of waiting on someone or having to know somebody or hoping that the 10 people you know aren't all out or aren't going to be super-inconvenient," Rivera enthuses. "Now we have stores that are open from 8 a.m. to 11 p.m. Monday through Sunday that offer thousands of different varieties for way cheaper than street price. It's just gotten completely crazy, and I love it."

Of course, the rest of the country isn't so progressive or forgiving when it comes to getting high. Touring bands like Gaytheist often find themselves in the position of carrying at their own risk or going without. "We're kinda fuckin' dumbasses about it," Rivera concedes. "I get mad at us because we'll be driving through [someplace]—where they can just throw you in jail instantly—and we'll have two pipes going around in the van. I tend to dress very old-fashioned, like in a suit and tie, so that tends to fend off problems, but otherwise it's just pure luck and not being *too* stupid about it." 🌿

# Let's Bong Again Soon

Gaytheist frontman Jason Rivera holds forth on the pleasures of legalization. *By J. Bennett*

## Ask Gaytheist vocalist/guitarist

Jason Rivera how important weed is to the band's creative process, and he'll probably just start laughing. "Well, I'm usually high when I write music and I'm usually high when I write lyrics," Rivera explains. "It's not integral, but it tends to be a part of it."

The Vancouver, Washington-based noise-punk trio—rounded out by bassist Tim Hoff and drummer Nick Parks (who recently moved to Florida)—are getting ready to roll out on tour in support of their fourth and latest album, *Let's Jam Again Soon*, when we speak with Rivera. As the only member of Gaytheist who is both gay and an atheist, he's also the band's heaviest smoker. "I'm at the level where I'm having a good day if I *don't* wake and bake," Rivera laughs. "When that

happens, I feel like I had a lot of willpower."

Rivera, whose sartorial choices wouldn't look out of place in the 1940s, also has old-school tendencies when it comes to his preferred intake method. "I have this huge, dumb bong that I bought because it's cheap," he says. "But it's kind of a piece of shit because it can hold a bunch of ice but it doesn't have enough room for it to melt, so I'm constantly dealing with a puddle of bongwater, which is the worst thing to wake up to."

Rivera's first bong experience—at age 14—was unsuccessful. "I was at a friend's house and did not put my finger over the carb," he explains. "That was my first time smoking weed, and I didn't even get a contact high." A second attempt, this

time with his older brother, did the trick.

These days, Rivera loads his trusty bong with *sativa* or hybrid strains. His current favorites include Alaska Thunder Fuck and Green Crack. "I always have a guilt complex about not doing anything if I'm just too out of it, so I tend to stick with *sativa* because I find it's almost like there's caffeine in your weed," he says. "I like that, because even though it puts me in a somewhat dysfunctional mental state, I'm still able to create and I'm motivated to get things done. Otherwise,



## Pretty in Pink

In 2013, Gaytheist teamed up with the Portland U-Brew & Pub to make Pink Pentagon Pale Ale. "We chopped up Red Vines and dropped them into the beer as it was brewing," Rivera explains. "It sold out instantly because it was so good."



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## Think Sublime

The company Steve Davis keeps is legendary.

**News that jazz** trombonist Steve Davis had cut his 19th album came as a shock. Nineteen? That's a prodigious output for a relatively young man (just 50) who has already piled up a well-stocked résumé as a sideman (over 130 recordings) with some big-time legends. Davis has recorded or performed with Art Blakey, Jackie McLean, Chick Corea and Wynton Marsalis at myriad venues ranging from Carnegie Hall to the White House. The big gigs are all well and good, but when we think of Davis and his ax, we think of him pouring it out at Smoke, a tightly rolled joint on Manhattan's Upper West Side, cozy and sublime.



**Think Ahead**  
Steve Davis  
(Smoke Sessions)

*Think Ahead* gallops out of the gate with primal urgency in its opening track, "Warrior," before settling into a more romantic, candle-lit groove on "Polka Dots and Moonbeams." By the title track, even jazz newbs will have learned that a slide trombone in the right hands

is an instrument of complex subtlety. Its lush and poignant interplay with sax, piano and skins on "Think Ahead" is testament to this improviser's skill and to the spectrum of possibilities within his instrument's voice. Davis once stated that he was drawn to "music which challenges the listener (as well as the musicians playing it) to think, to imagine, to feel." Yup.

A great jazzman wants deep talent next to him on the stage, and to that end Davis tapped saxophonists Steve Wilson (tenor) and Jimmy Greene (alto and soprano), the legendary Lewis Nash on drums, bassist Peter Washington and Larry Willis on piano. These cats got this. *Mike DiPaola*

## MUSIC RECOMMENDATIONS



**Mutoid Man**  
*War Moans*  
(Sargent House)

➤ "Came inside of Satan's daughter / Not much later, who's the father?" So sings vocalist-guitarist Steve Brodsky on "Date With the Devil" from *War Moans*. That's just one of many tongue-in-cheek lyrical turns Brodsky takes on his second album with Mutoid Man, the virtuoso supergroup completed by

drummer Ben Koller and bassist Nick Cageao. A glorious math-metal rollercoaster of insane riffs, inhuman drumming and death-defying bass lines, *War Moans* features guest appearances by ex-Megadeth guitarist Marty Friedman and goth songstress Chelsea Wolfe. Satan would approve. *J. Bennett*



**Dizze Rascal**  
*Raskit*  
(Island Records)

➤ Dizze Rascal's latest finds the grandfather of grime spitting verbal bullets over a 16-track assault. This gloriously cacophonous album is best ingested in small doses. Rascal's lyrics speed across the bass-heavy songs, rhymes so complex the beats can't even keep up—on the

blow-off-your-car-doors track "Space," the music simply stops while Rascal loops his brutal poetry over hissing silence. But after every three songs of *Raskit*, I needed a breather—the dark, paranoid mind states painted by this brilliant wordsmith's music hold your fascinated ears hostage. *Tommy Smith*



**The Isley Brothers/Santana**  
*Power of Peace*  
(Legacy)

➤ As Carlos Santana noted, "What's the point of dreaming if you don't dream big?" Half a century ago, John and Yoko conceived the idea of using creativity and celebrity to end war. Santana and wife/drummer Cindy Blackman Santana conspire here with soul legends Ronald and Ernie Isley to

get us all a little peace—it's been scarce lately. They cover songs by Stevie Wonder, Billie Holiday, Curtis Mayfield and Marvin Gaye, among others, and create an ambitious hybrid of R&B, epic guitaristry and idealistic pursuit. We recommend you give the music—and peace—a chance. *Michael Simmons*



**Radiohead**  
*OKNOTOK*  
(XL Recordings)

➤ While the 20th-anniversary *OK Computer* reissue boasts a sonic re-haul of one of rock's most influential albums, the second LP is the main attraction—remastered *OK B-sides* assembled in thematic order by the band itself. Recorded when Radiohead still played recognizable instruments, *OKNOTOK* is a

kinetic assembly of essential late-'90s nostalgia. From the rocking "Palo Alto" to the trip-hop "Meeting in the Aisle," the album is a legitimate counterpart to its legendary predecessor, chronicling a time when Thom Yorke could still sing about California's blue skies without a hint of doom. *Tommy Smith*

## BOOK RECOMMENDATIONS



**Did It! From Yippie To Yuppie: Jerry Rubin, An American Revolutionary**  
Pat Thomas  
(Fantagraphics)

➤ The Yippies gave name to a preexisting phenomenon: dope-smoking left-wing hippie troublemakers. Co-founder Jerry Rubin has been somewhat overlooked, until now. Many argue Rubin sold out when he went from throwing money onto the stock-exchange floor as a lesson in greed to becoming

a stockbroker. And yet it's this transition that makes his life intriguing. In this beautifully designed coffee-table scrapbook, Thomas has stitched together one of the most exciting countercultural chronicles. *High Times* and founder Tom Forcade make crucial cameos throughout. *Michael Simmons*



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# Is This Finally Hemp's Moment?

America has been slow to embrace hemp's revolutionary, space-age applications—not to mention the billions of dollars that hemp production and processing could bring the nation.

J.J. McCoy is Senior Managing Editor for New Frontier Data



**T**HE EXTREME VERSATILITY and usefulness of hemp has seen an overdue resurgence in interest lately, which is rather remarkable considering that humans first began cultivating it about 10 millennia ago. Hemp is a variety of the *Cannabis sativa L* plant species, but—unlike the plant harvested for its flowers and high levels of tetrahydrocannabinol—it contains only trace levels of THC.

Traditionally used since the Stone Age as a source of food, fiber, medicine and building materials, hemp's high tensile strength and natural water resistance led to its widespread maritime use in rope and canvas sails during the Age of Exploration. George Washington famously grew hemp at Mount Vernon, both as a cash crop and for use on the plantation itself. It is extremely versatile, and is grown and used worldwide in the development of numerous commercial applications including cannabidiol (CBD) oil, textiles, construction materials, nutraceuticals, body-care products, applied materials and industrial products.

University of Manchester researchers Andre Geim and Konstantin Novoselov's cutting-edge work with graphene (a material 200 times stronger than steel, lighter than aluminum and more conductive than copper, and capable of being shaped into any form and used in batteries for "green" photovoltaic solar-energy systems) earned the pair their 2010 Nobel Prize in Physics. Following this, Dr. David Mitlin of the University of Alberta was awarded a patent for an economical method of manufacturing hemp into a material that shares many of the high-tech properties of graphene.

Now, since around the time Jay Leno posted an online video of himself test-driving a 2017 Renew sports car (with a chassis fashioned from 100 pounds of woven hemp), hemp is enjoying a bit of the limelight. After all, it's more sustainable and 60 times faster to market than lumber (a hemp harvest equivalent to a 20-year lumber forest's yield can be grown in four months). The environmentally friendly crop has proven to have



more than 25,000 product applications. Industrial hemp is used to manufacture everything from rope and cloth to oil and soap.

Nationwide, hemp products account for about \$688 million in annual domestic sales; yet while hemp has the potential to become a multibillion-dollar domestic crop, American manufacturers instead have had to rely entirely on imports of hemp from other nations—primarily Canada and China—because here it has been listed as a controlled substance under federal law.

Nevertheless, some sense is following the dollars. The Agricultural Act of 2014 signed into law by President Barack Obama allowed states to implement laws for their departments of agriculture and universities to grow hemp for research or pilot programs. Last July, New York Governor Andrew Cuomo signed legislation intended to carve out the Empire State's primacy in hemp production. His signature amended an existing statute to categorize it as an agricultural product deserving the same status as other crops. It also encouraged research on hemp as a commercial commodity and established an industrial working group to advise the state on hemp research and policies. New York is establishing an industrial

hemp-seed certification program, featuring a "one-stop shop" website to provide hemp producers and processors with information about pertinent state and federal regulations.

On the federal level, Senator Jeff Merkley (D-OR) introduced an amendment to an appropriations bill to allow farmers to grow industrial hemp in any of the 32 states where it is legal. The intention was to prohibit unnecessary interference by the federal government with any state's implementation of laws authorizing the cultivation, growth, processing, manufacturing, use, possession, marketing, distribution or transportation of industrial hemp.

As attorney Bob Hoban, founder of the Denver-based cannabis-industry-focused Hoban Law Group, told New Frontier Data (for whom he is an adviser), "I do see the hemp industry taking huge, huge, huge steps forward. I've always seen and still maintain that the hemp industry is going to dwarf the marijuana industry by a long, long, long shot. The hemp industry worldwide is a \$1 trillion industry, whereas marijuana is certainly going to be very profitable, but we're going to see large strides in hemp in the near term."

Hoban Law Group patent attorney Kevin Fortin found that a Google patent search for "hemp and graphene" yields more than 600 independent search results as research scientists from China and Europe are being granted patents for manufacturing methods and products for things like supercapacitors, integrated circuits, batteries, water filters and something called "atmospheric ion harvesting," in which electron streams are drawn from thin air to deliver electrical currents.

"The uses are all across the board, and we can develop more," Governor Cuomo said during a signing event at Cornell. "I really believe this is going to be not just an agricultural boon if we do it right, but it will also be a manufacturing boon because the processors are all on the manufacturing side, and they were really looking for someone in this country to step up and take the lead." 🌿



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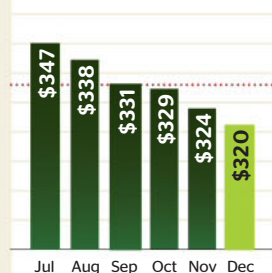
## MARKET ANALYSIS

Prices by the ounce

The price of pot continues to decline nationwide. The Southern Index experienced the biggest drop, down \$7 from its previous month's average—a result of the region's extreme pricing, which jumped from considerably above to well below the average. While the Western Index held steady, the Eastern Index was down from its November average. Overall, the average ounce of cannabis in America for 2017 cost \$330.

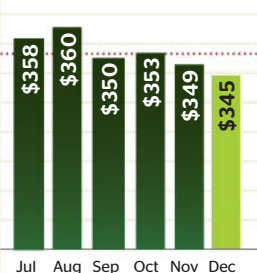
## US Price Index

YTD Average: \$330



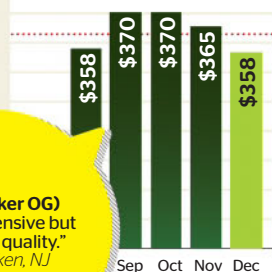
## Eastern Index

YTD Average: \$352



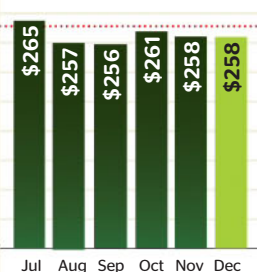
## Southern Index

YTD Average: \$363



## Western Index

YTD Average: \$263



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"Very expensive but excellent quality."  
—Hoboken, NJ

## TRANS HIGH MARKET QUOTATIONS

STATE	CITY	STRAIN	PRICE
ARIZONA	Chino Valley El Mirage	J-1 602 Headband	\$269 250
CALIFORNIA	Los Angeles Oakland	Walter White Headband	310 260
COLORADO	Colorado Springs Lakewood	Blue Dream Cypress OG	140 209
FLORIDA	Miami Tampa	Gorilla Glue Gas	350 400
GEORGIA	East Point	Bubba Kush	400
ILLINOIS	Oak Park Springfield	Purple Haze White Widow	320 400
INDIANA	Crawfordsville	Blue Dream	450
IOWA	Des Moines	Kush	200
LOUISIANA	New Orleans	OG Kush	280
MAINE	Belfast Biddeford	Blucifer Northern Lights	200 325
MARYLAND	Cumberland	Trainwreck	280
MASSACHUSETTS	Gardner	Girl Scout Cookies	450
MICHIGAN	Lansing	Mango Puff	400
MINNESOTA	Minneapolis	Purple Diesel	280
MISSOURI	St. Louis	Loud	420
MONTANA	Bozeman	Blue Dream	175
NEVADA	Henderson Sparks	Gorilla Glue #4 King Louis XIII	350 275
NEW JERSEY	Hoboken	Skywalker OG	420
NEW MEXICO	Albuquerque	The Wow	280
NEW YORK	Middletown New York City	Green Crack AK-47	450 450
NORTH CAROLINA	Charlotte Winston-Salem	Cali Kush Gas	280 450
OHIO	Columbus Greenville	White Widow Blue City Diesel	450 336
OREGON	Bend	Blue City Diesel	195
PENNSYLVANIA	Pittsburgh York	Green Crack Headband	250 280
SOUTH CAROLINA	Charleston Lexington	Kush Gelato	280 280
TENNESSEE	Chattanooga	Girl Scout Cookies	450
TEXAS	Dallas McAllen	Headband Skywalker	400 420
UTAH	Lehi Logan	Tahoe OG Blue Dream	280 420
VIRGINIA	Newport News	Kush	450
WASHINGTON	Longview Seattle	Purple Diesel Goji OG	150 300
WISCONSIN	Pewaukee	Purple Haze	280
INTERNATIONAL			
AUSTRALIA	Sydney	White Widow	A\$400
CANADA	Hamilton Toronto	Bubba OG Bruce Banner	C\$260 280
UNITED KINGDOM	London	Chem Dog	£280

High Times wants to know what you're smoking. Submit your strain information including location and price by the ounce to [thmq@hightimes.com](mailto:thmq@hightimes.com), or tweet us (#THMQ).

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In an ever-growing cannabis market, the task of selecting the best pot and concentrates can be daunting. Join us as we delve into the optimal ways to track down and choose the finest cannabis the world has to offer. *By Sean Black*




# cannab

**T** rue enthusiasts of cannabis have several things in common. First and foremost, we all foster a love and appreciation for nature's gracious green gift. This gratitude cultivates a passion to seek out the greatest strains, breeders, growers and extract artists. Whether it's finding the best plug in your neighborhood, selecting the ideal dispensary, going to a Cannabis Cup or traveling the world, true aficionados never stop searching for the ultimate herb. Let's examine how you can up your ganja game by learning how to find, recognize and select the the finest cannabis available.

## Where's the Weed?

If you're one of the lucky Americans with friendly medical or recreational laws in your state, then dispensaries are a decent place to start sourcing acceptable pot products. Quality and selection vary quite widely from business to business, and will continue to do so until there are rational regulations and standards set in the production and testing of cannabis products. Finding knowledgeable budtenders who can provide background information on a dispensary's wares is very helpful. Be sure to ask about a product's genetics and lineage, who the cultivator is, and what growing technique or extraction method was applied. Many budtenders only offer the product's expected effects based on it being *sativa*- or *indica*-dominant. Asking more detailed questions can lead to more useful information for selecting the best possible product.





# is Quest

## How to Select Perfect Pot Products

Many cannabis lovers go a step further by following known breeders, growers and extract artists who exhibit consistency, knowledge of safe cultivation and extraction practices, and access to dank genetics. Following your favorite grower or concentrate maker on social media can definitely give you a leg up as producers often announce drop locations of their products so you can easily find an already-proven source of quality cannabis. The best of the crafters can sell out in mere minutes, rewarding only the most motivated admirers.

Finding consistently high-quality cannabis in less pot-friendly states can prove more challenging. Often, the flowers and concentrates that come from out of state and enter the black market are inferior, as the choicest of the crop is held

back for local use while less heady goods are shipped out. The best products are usually found the closer you are to the grower or extractor. This presents a major obstacle for those living in prohibition states. The closer to the origin, the better the cannabis—with less chance that the product has been mishandled and degraded in any way.

Finding people in the industry that treat cannabis with passion and respect is of paramount importance. There are plenty of people and businesses looking to achieve the greatest return on their investment while disregarding safety and quality. That's one reason to hone your cannabis IQ—to avoid the pitfalls of weekend weed warriors and be able to distinguish quality cannabis from inferior product.



### Judging a Book by Its Cover

Sourcing a reliable connection is just the first step in finding your Holy Grail of cannabis. Visual inspection can unearth some information that a connection may not share. Something as simple as the way the product is packaged or displayed is a good initial indicator as to how much respect and consideration it has received. What is it packaged in? Flowers encased in turkey bags, plastic zip bags or plastic containers can lead to lower-quality results. Even the best cannabis source can result in a deteriorated, inferior end product if the goods are not handled properly. Plastic bags can be harsh to the buds' exterior, crushing pistils, compressing structure and knocking off precious trichomes. Glass jars are the preferred container for cannabis, as they protect structural integrity, retain terpenes and keep flowers from drying out. The cannabis should also fill the jar in order to reduce the amount of air within. Putting a little bit of flower in a very large jar is almost the same as just leaving it out in the open. This can result in overly dry flowers with less smell and taste.

Containers of concentrates need to be airtight. Having a gasket seal built into the lid helps retain terpenes and keeps aqueous, runny oil from leaking. Using miniature paper key envelopes can prove to be unreliable packaging as your material will degrade quickly over time and "sweat out." Terpenes can separate from THC and slowly seep through parchment, saturating the envelope. If something as simple as the packaging was neglected, how else could this product have been mistreated?

### A Keen Cannabis Eye

Next, take the time to visually inspect the cannabis itself. The color of the buds can provide hints about how old the product is. A bright green color can mean a large amount of chlorophyll is still present, revealing freshly dried material still needing a cure. The main purpose of curing flowers is to allow the chlorophyll to break down, creating a cleaner, smoother smoke. Curing will also darken the buds slightly and slowly provide shades of gold and brown.

What do the bud's leaves look like? Browned or burnt leaf tips mean that the plant was stressed at some point and not allowed to flourish. Whether it encountered a nutrient problem or was exposed to high temperatures, the plant was not given the proper environment to achieve its maximum potential.



Take notice of the bud structure. Are the flowers dense and of decent size, or are they wispy and small? Structure can depend on how well the plant was fed, how much light was introduced, the amount of oxygen that was available and whether the proper temperatures were maintained. *Indicas* tend to produce larger, denser buds, while *sativas* can yield smaller, lighter nuggets. Failure to provide optimum environments can produce inferior flowers with less bag appeal.

Is the bud compressed unnaturally like a brick? Imported weed coming from Mexico for the black market can sometimes retain the circular shape of a tire after having been packed tightly to smuggle across the border. This exposes the herb to harmful conditions like heat and pressure, which degrade the material significantly.

Focus a bit closer on the flowers. Are there seeds or little yellow/white objects resembling bananas in the foliage? This can be a sign that the plant was stressed and forced to produce hermaphrodite sites, allowing the plant to fertilize itself. Seeds can also indicate that a male plant was present in the growroom, impregnating the females and forcing seed growth. An ounce of seeded flowers can contain a third of its weight in seeds. This diverts valuable energy that could otherwise be used for cannabinoid and terpene production.

Signs of stress like burnt leaf tips or browning tips of colas and buds can mean nutrient burn or deficiency, exposure to high temperatures or placement too close to lights. These can result in low terpene counts and lack of flavor, which is so important to the full effect of cannabis.

Inspect for insects, mold, mildew, cat hair and other foreign contaminants. Dead bugs—or their feces—are signs of an infestation, and are unacceptable for consumption.

Do you see white spiderweb-like strands of fungus and mildew? Don't confuse a blanket of white powder on the surface of your flowers for shiny trichomes, as powdery mildew is a common sight on lower-grade cannabis. Mold, mildew or fungus can mean the plants were exposed to too much humidity or that the buds weren't allowed to dry properly before being stored. This can not only ruin the flavor of even the best genetics, but also be hazardous to consumers.

**Top:** Glass jars are ideal for storing cannabis.  
**Middle:** Male plants in the growroom mean trouble.  
**Bottom:** Seeds divert energy from cannabinoid and terpene production.



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Closely examine pot products for any signs of contaminants.



Check concentrates for signs of an incomplete purge.

## A Closer Look at Concentrates

Visual inspection of concentrates starts with looking for contaminants like animal hairs, plant material that escaped filtration when extracted, and even microfibers from low-quality filters and equipment used in the process. Maintaining clean, controlled extraction conditions allows for consistent and exceptional results. Far too often, pet hair finds its way into dabs, indicating extractions performed in home labs or unsanitary conditions.

Are there lots of bubbles present in uniformity? Bubbles in shatter, oil, or snap and pull can be the result of repeated flipping during purging, but a sea of bubbles throughout could be a sign of an incomplete purge that left residual solvents.

The consistency of concentrates has less to do with quality and more to do with someone's preference. Shatters and dry waxes tend to contain smaller ratios of terpenes, resulting in less flavor than sauces, wet sugars and wet budders. Dry crumble can also prove to be harder to load onto a dabber.

Concentrate shapes, much like flowers smuggled in tires, can also tell the story of its transport. Slabs of imported hashish can sometimes be found in the shape of a shoe from being packed inside a sole and smuggled. Amsterdam's hash queen Milla used to smuggle hash through airport security rolled into balls and laced onto a chain hung on her neck, disguised as jewelry! (Do not try this; Milla is a genuine badass.)

Lighter-color extracts can reveal several things. Material that has been kept cool and sealed will retain lighter colors and darken as it ages and is exposed to heat above 60 to 70 degrees. Less-mature trichomes will also yield lighter colors and result in stronger scents, but they'll provide a more mellow high that can last a significantly shorter period than fully-mature starting material. Some strains will yield darker shades than others. Be wary of very dark brown or black extracts as they can signify poor processing practices or older, less heady starting material. While extreme colors can prove to be helpful indicators for quality, the truth is that concentrate colors are less important than smell, taste and effect, which remain the strongest measures of high-grade extracts.



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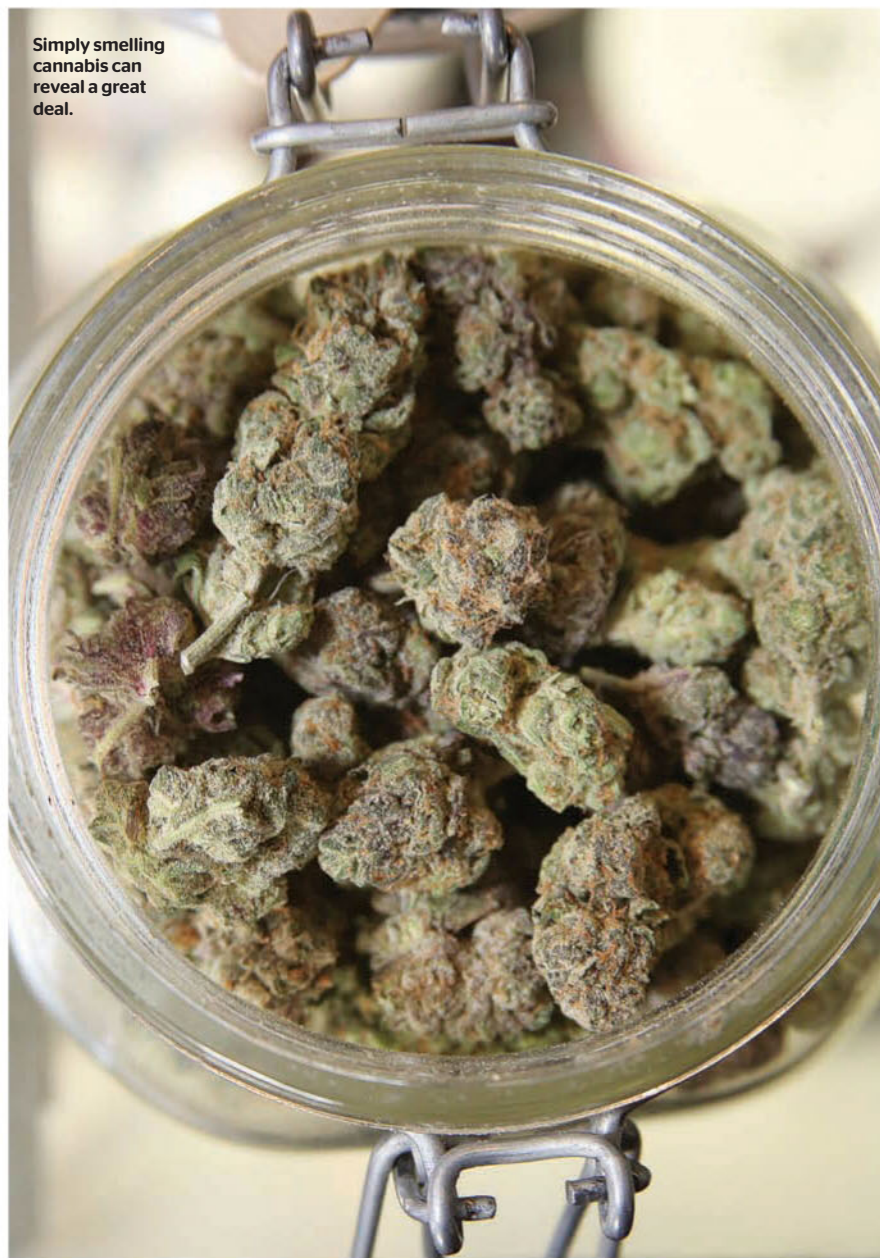
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Simply smelling cannabis can reveal a great deal.



### The Nose Knows

When you have the opportunity to inspect product, open up a jar of cannabis and immediately smell the flowers or concentrates. Terpenes have been slowly building up within the jar. Note how “loud” the scent is. A light scent can mean overly dried, badly grown or improperly purged material. Older cannabis can smell like ammonia, which can mean there’s mold present. A wet-rain smell can mean too much moisture remains in the buds. Any hint of hay means the material is old and has been sitting around, losing valuable terpenes.

If possible, squeeze or break open a bud to further release the flower’s bouquet. Stir the saucy concentrate or rub the shatter sandwiched between parchment to slightly warm it and release its

**Strong citrusy and fruity smells, like oranges or strawberries, generally indicate an energizing, sativa-like effect, while scents of gas, pine or musk can mean more of an indica body high.**

aroma. What smells are present? Strong citrusy and fruity smells, like oranges or strawberries, generally indicate an energizing, *sativa*-like effect, while scents of gas, pine or musk can mean more of an *indica* body high.

Concentrate smells should represent the flowers in the best of ways. They should present strong aromas that smell just like the flowers that were extracted—but more intensely as there’s a higher ratio of terpenoids present. Any egg-like or rotten smell can indicate that the extractors used inferior canned gas that contains mercaptans—odor markers added to odorless butane to indicate dangerous gas leaks. Alcohol or other solvent smells in concentrates can mean incomplete purges. Quite often, concentrates that have been winterized in alcohol or ethanol (a process utilizing cold temperatures to separate the fats, waxes and lipids from the rest of the material) can retain the smell and flavor of the solvent, lowering the quality of oil.

Expect a more intense aroma in concentrates due to the higher terpene ratio.







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## The Power of Touch and Taste

Many dispensaries won't let you touch the buds with your hands and often have their budtenders use chopsticks to handle products. If possible, ask to touch a bud to examine it further. Is the stem of the bud dry enough to snap and break when bent? This indicates it's dried enough to smoke properly. Does it bend and fold over easily? This means it's still too wet to smoke. Tenderly squeeze a small portion of the bud and note its texture. It should be sticky but not wet to the touch, indicating a good amount of resin production. Finally, crumble a tiny bit between your fingers. Flowers in Colorado often become too dried out due to the arid air from the high altitude. This causes buds to break up into dust rather than small bits, indicating deteriorated flowers. Conversely, if the bud is hard to break up into pieces, it could mean it's too fresh and needs further drying.

All of these indicators aid in selecting the highest-grade cannabis. However, the truest test of a product's quality is, of course, how it smokes. Rolling a joint or smoking a bowl can confirm what you've ascertained from inspection. Does the flavor taste like the smell? Sometimes cannabis can smell very pleasant but



The best way to judge cannabis is by smoking it.

doesn't follow through as strongly with its taste. Harsh smoke, acrid flavor or a burn to the throat and/or nose can mean an improper flush of nutrients or adulterants like foliar sprays or pesticides.

Does the joint or bowl have any problem burning? Joints that continually need to be relit can indicate impurities

or material that's still too wet. Examine the ash left after smoking flowers. Is it the white ash of a properly flushed flower or are there bits of grit and black ash signifying impurities such as nutrients or heavy metals? Concentrates that are rich in nutrients, contaminants or unwanted plant material will leave a black char residue on the nail. Any hissing or popping when a dab is applied to a heated nail can mean trapped water or even residual solvent.

The final judgment lies in the effect that the cannabis provides. There are many delicious strains out there that don't follow through with a prominent high. The truth is that cannabis affects everyone differently. The only effective way to understand how each strain's flavor profile stimulates you is to try it. As you discover the different ways strains influence you, you'll be able to select specific products to achieve desired results. However, a strain's *indica* or *sativa* dominance is a good rule of thumb for general effect. Do you have trouble waking up in the morning or need energy and motivation? Try a strong, citrusy *sativa* like Tangie, which invigorates and energizes. Want to relax your muscles as you sit back and watch a movie? Chem

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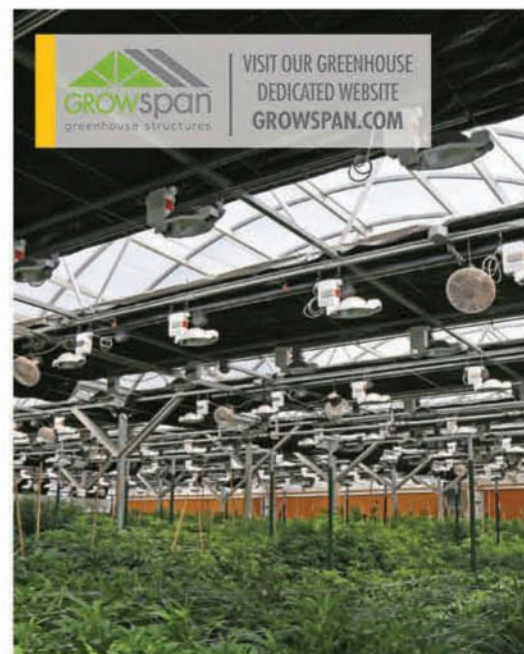
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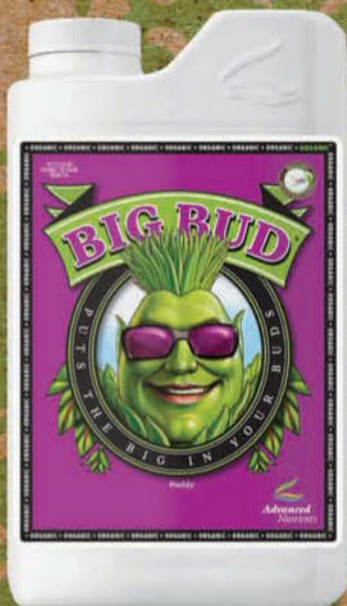
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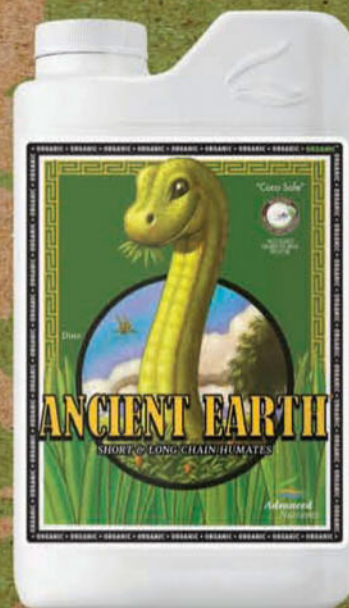


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# Magic Mushrooms In Oaxaca

Local mystic Navarro built these four *temazcales*—Mesoamerican steam lodges—by hand.



For the magic-mushroom towns of Mexico, the discovery of the fungus's indigenous wisdom by outsiders has been a blessing and a curse, as a new hallucinogenic-medicinal tourist industry evolves in the Oaxacan sierra. *Story and photos by Nathaniel Janowitz*

**C**LOUDS SETTLE OVER the Mexican town of Huautla de Jiménez, nestled deep in the sierra of Oaxaca State; the summer rainy season has arrived. For the inhabitants of the town, rain means many things, but most of all it means that its famous mushrooms will begin sprouting up in the surrounding hills.

"The first time I tried mushrooms I was 7 years old," Andrés García says. His grandfather allowed him to join a nighttime purification ritual in a special location a short hike outside of town called the *cerro de la adoración*—worship hill. It was a coming-of-age moment for a member of a clan that has lived in the region for generations.

"And each time after that was different; each time there were

messages and messages. Communication with the earth, the universe, the moon, especially the energy of the moon," García says. "The mushroom shows you everything—about your errors, your problems, all the good you've done, all the bad you've done. It's something personal."

García sounds wiser than his 20 years, walking around his family's small property on the outskirts of Huautla de Jiménez. From the outside, the few scattered shacks don't display any evidence of the famous visitors who once frequented the property to experience firsthand the sensations that García quietly describes. But one of the small buildings contains photos, clothes and artifacts from García's famous great-great-grandmother, María Sabina, considered by psychedelic scholars





*Derrumbe* mushrooms, often sold wrapped in large leaves, are easy to acquire in San Jose del Pacifico.

to be the matriarch of modern mushroom culture.

When Sabina and the indigenous wisdom of mushrooms became known by outsiders, it was a blessing and a curse, as Huautla de Jiménez and other communities across Oaxaca saw their way of life change dramatically. In the nearly 70 years since then, an increase in tourism and economic prosperity has also brought a wide range of other problems to the mushroom towns of Mexico.

The documented use of mushrooms in indigenous Mexican ceremonies goes back to early texts from Catholic friars who accompanied Spanish conquistadors in the early 1500s. Appalled by what they saw, the conquistadors attempted to suppress the rituals, forcing the communities to operate in secret for hundreds of years. Eventually, scholars incorrectly identified the indigenous word *teonanácatl* as peyote (another indigenous Mexican psychotropic), until in 1936 a Mexican ethnobotanist, Blas Pablo Reko, uncovered the possible existence of mind-altering mushrooms. He published a paper identifying *teonanácatl* as a specific mushroom, but it remained largely ignored for nearly 20 years.

The turning point came in 1955, when

an American, Gordon Wasson, along with photographer Allan Richardson, participated in a *velada*—a nighttime mushroom purification ritual. Wasson had spent several years visiting Huautla de Jiménez after reading Reko's paper, attending several *veladas*—but he was never allowed to participate.

However, Wasson eventually met a prominent local family who brought him to the home of María Sabina, and he finally was able to take the mushrooms. Although Wasson agreed not to reveal the identity of Sabina or the location of the town, he did both two years later in a book on mycology and a widely read article in *Life* magazine, detailing the sacred *velada*. Shortly thereafter, there was frequent knocking on Sabina's door.

In the following years, celebrities like John Lennon and Bob Dylan participated in *veladas* with Sabina, as did Albert Hoffman, the famed LSD scientist, who would later identify and synthesize the mushroom's psychoactive principles as psilocin and psilocybin.

But as the fame of Sabina and Huautla de Jiménez spread throughout the West, and hippies traveled to the isolated region in the 1960s, the attention remained unwanted for much of the

community. Neighbors ostracized Sabina for sharing the town's secrets, culminating in her home being burned down by unhappy locals. It's said that by the end of her life, Sabina regretted her role in introducing Westerners to the *velada*, who she thought had corrupted it.

After her death at the age of 91 in 1985, the fame of María Sabina and Huautla de Jiménez continued to grow. Throughout Mexico, Sabina's image is plastered on T-shirts and posters sold side by side with those of other Mexican icons like the revolutionary Pancho Villa and the masked wrestler El Santo.

Today, the town of Huautla de Jiménez has fully embraced its reputation as the home of mushroom shamans. The industry is blatant: A taxi company named María Sabina has its cars roam the streets, mushrooms painted on their door panels. Market stalls sell posters with Sabina's likeness alongside a wide variety of mushroom-themed knick-knacks. Stores and restaurants bear her name.

The local municipal government has commissioned numerous murals depicting the fungus and its spiritual effects in the main plaza, and even more noticeably on the wall of the main government



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building, where an elderly woman's face stares down a stormy path of mushrooms and skulls to a serene doorway.

"The mushrooms have helped the municipality, because tourism comes and it advances the economy," says Clotilde Jiménez Figueroa, the municipality's treasurer. "The main reason we're a *Pueblo Mágico* is because of the mushrooms and rituals."

Since 2001, Mexico has designated 111 towns as *Pueblos Mágicos*—"magic towns." Most receive the distinction for their aesthetic beauty or customs. Huautla de Jiménez, a somewhat ugly village, is definitely in the latter category. This also explains why law enforcement turns a blind eye to the mushroom trade in Huautla de Jiménez and other communities throughout Oaxaca, even though it is illegal in Mexico.

"The federal government knows about our rituals here," says Figueroa. "Up until now, they haven't [enforced the prohibition on] selling or using because it's a part of our culture."

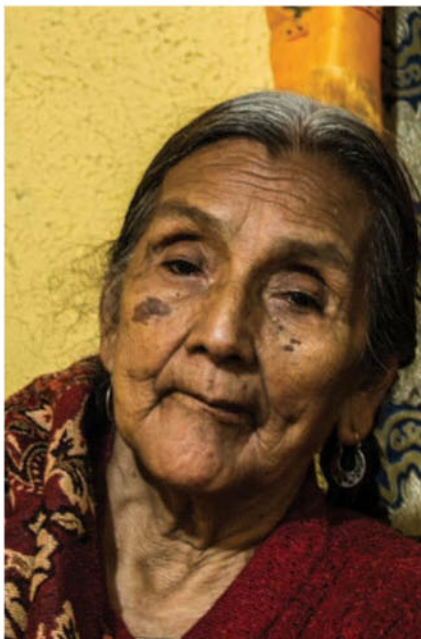
In Huautla del Jiménez, there are now several *curanderos*—healers—who offer midnight *veladas*, and perhaps none has taken the mantle from María Sabina more fully than Julia Casimiro. Doña Julieta, as she's known in the community, sits in a small room in her house near the main plaza, in which she performs *veladas*. On the wall behind her hangs a banner with Buddhist iconography, although she herself isn't a Buddhist.

"The Dalai Lama gave it to me," she says humbly. Doña Julieta gained her own international recognition when in 2004 she was named to the International Council of Thirteen Indigenous Grandmothers, a group of prominent female elders from indigenous communities around the world who focus on prayer, education and healing for the Earth.

At 81 years old, Doña Julieta still performs ceremonies for curious foreigners and Mexicans alike, a practice which is no longer frowned upon in the community. The townsfolk have accepted their role as guides for the seekers who make the pilgrimage to Huautla de Jiménez.

"It's the custom of our ancestors," says Doña Julieta. "Our job now is to guide and stabilize the trip, to allow them to gather wisdom and elevate themselves to understand it."

Doña Julieta has taught her children to lead ceremonies as well, continuing the tradition that was passed down to her. She learned the craft from her mother-in-law, and by age 17 she was



Shaman Doña Julieta

leading ceremonies herself. Doña Julieta has seen firsthand how the mushroom trade has changed the community.

"When I was a little girl, it was poor here. We didn't have television, a highway—nothing," she says. "Now we have everything."

She knew María Sabina, and she remembers the celebrities who came through, although she can't remember their names. She refers to John Lennon as that "poor boy, the one who was killed." She recalls the endless stream of foreigners coming to the town in search of mind-altering magic mushrooms, which are often referred to by locals as *niños santos*—holy children.

"I would meet with the foreigners secretly; we weren't supposed to give the *niños santos* to foreigners," she says. "It was dangerous to do it back then, to allow these foreigners into our culture. But it helped our community a lot."

Jesus Perida Merino, the proprietor of the María Sabina restaurant, says he has a special connection to the deceased healer. He claims he often worked as an interpreter for the Mazateco-speaking Sabina, who didn't speak Spanish. He fondly recalls the time he interpreted for then-President José López Portillo when he visited the community in 1980 to build Sabina a house years after hers had burned down.

"A lot of people here that could speak Spanish, they exploited her. They charged large fees to see her, and she didn't realize it," says Merino. "A lot of

people here live off what she did, but they never gave her any money—she didn't know."

But even with his connection to Sabina, Merino admits that he doesn't share any of his meager profits from his small back-alley restaurant with her family now.

At the top of the hill, Andrés García, a fourth-generation descendant of Sabina, ruminates on this issue after catching a glance at my notebook, in which I'd written the name of the treasurer.

"The government doesn't give us anything, we make everything from giving tours," says García. "No one gives us any money when they use [Sabina's] name or face without permission."

Still, he's proud of his family's place in the mushroom mythology of Mexico.

While García was born into the first family of Mexican mushroom shamans, his experience as a child is not uncommon to kids from several communities throughout Oaxaca.

Across the state in San José del Pacífico, a small town in the Oaxacan cloud forest, 8-year-old Hector Cruz Ramirez eats *enfrijoladas* after school. In the weeks to come, he'll be eating something more exotic.

"I'm excited to eat [mushrooms] for the first time. I've never tried them before," Hector says, before admitting he also feels nervous.

Several of his cousins also ingested mushrooms when they were 8 years old, as did his father and uncles; however, they haven't told him anything about the experience. But Hector has an adventurous spirit. He says he wants to be an explorer when he grows up.

Hector's grandfather, Leonardo Cruz Ramirez, is somewhat of an explorer in his own right: a patriarch of the mushroom scene in San José. Most of the townspeople call him Tío (Uncle). He's lived there his entire life, and he's helped make San José del Pacífico the town that may have usurped the magic-mushroom mantle from Huautla de Jiménez. Located in the sierra halfway between Oaxaca City and the state's famous beaches, it's become a haunt for backpackers.

"The mushroom culture here was very strong, but reserved. My grandparents, my ancestors, ate them, but with a lot of respect. The mushrooms were used as a medicine to cure and help people," Tío says.

But life in the sierra was tough growing up. When Tío was a child, San José



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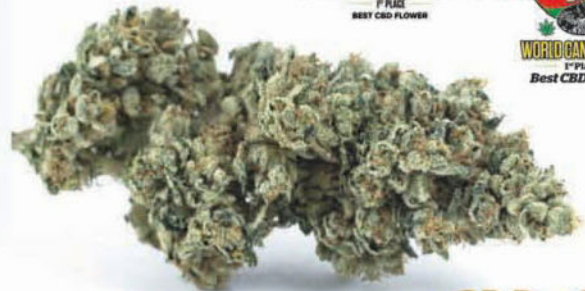
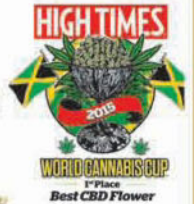
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didn't have schools or teachers, and the children worked in the fields during the day and took classes at night from an educated neighbor.

Things changed on March 7, 1970, when foreigners descended on the town in droves for a record-lasting solar eclipse (which still won't be exceeded in duration until 2024), during which the Oaxacan sierra was the best place in the world to watch it.

"When the tourists came, we thought they were weird people," remembers Tío, chuckling. "Men with long hair and women with pants. We couldn't distinguish who were men and who were women."

Many of the outsiders began asking the locals for the mushrooms normally found in Huautla de Jiménez, and the locals provided them. Until that time, foreigners had hardly heard of San José del Pacífico, but later it became well-known on the backpacker trail.

Eighteen-year-old Tío opened a small music store in town that year, catering to tourists. After saving up for several years, he bought a group of cabins nestled among the town's hills in the mid-'90s.

His cabins, Cabañas Pacífico, and restaurant do not hide their function as a safe haven for those seeking *niños santos*. Murals in the restaurant depict fungi. Lights in the cabins are shaped like mushrooms. Tío runs the business with his wife of 40 years, Ofelia, and his four sons, each of whom ate mushrooms at age 8, as did three of his grandkids.

Although Tío has been at the center of the mushroom movement in San José del Pacífico for decades, not everyone in the community likes how mushroom tourism has changed the town.

Sebastian Pinacho, a local municipal representative in San José del Pacífico, is from one of the town's oldest families. He estimates that of the 800 townspeople, about 400 trace their roots to the Pinacho family.

"There's good tourism that comes, but also bad tourism: drug addicts, people that just want to get high," Pinacho says.

He admits that San José is in a better financial situation than other towns in the region because of the mushroom tourism, but Pinacho felt directly affected from the influx of drugs after his son became a crack addict. He says that the community had never seen drugs beyond mushrooms before outsiders started arriving. For him, mushrooms are a gateway to the harder stuff.

"They say mushrooms aren't a drug.



**Tío owns a small family restaurant decorated with mushroom sculptures and paintings.**

But if it's not a drug, why are these people coming? Why are they seeing things that don't exist?" Pinacho asks, sitting in his office.

The town recently saw a minor scandal erupt when an Australian arrived in town and began dealing not just mushrooms, but allegedly other drugs. Residents didn't take kindly to the intrusion, especially a local mystic named Navarro.

Navarro animatedly recounts how he threatened the foreigner with a machete after he'd sold non-hallucinogenic mushrooms to tourists.

He considered it a great injustice to the town, and more importantly, to its *niños santos*. Navarro stresses the importance that mushrooms play as a medicine, and how San José has become a sanctuary for this form of healing.

Navarro proudly explains the three main types of hallucinogenic mushrooms common in the region: San Isidro, Pajaritos and Derrumbe. He discusses the varieties of trips, and says that each would be better after a ritual in a *temazcal*—a Mesoamerican steam lodge.

Navarro's small cabin is located a few kilometers down the highway from San José. He says he built it with his own hands, along with the four *temazcal* huts that sit outside. Here he offers an age-old purification ceremony for curious tourists.

"This is one of the few places in the world where you don't have to talk; you have to feel," Navarro says about the *temazcal*. "When you leave it, it's a rebirth. You see better, you listen better.

It's the womb of Mother Earth."

During my visit, two South Korean backpackers decide to take Navarro up on his offer. Kim and Nancy came to San José unaware of its reputation as a mushroom getaway, but after finding out, they want to give it a try. They agree to be followed while they try mushrooms for the first time, but only if their real names aren't used. For good reason: South Korea infamously has prosecuted several Korean celebrities and tourists in the last decade for drug use overseas after they were caught on social media.

We arrive at Navarro's cabin for a morning ritual. Inside the *temazcal*, Navarro has placed several scorching hot stones; outside, a special tea of wild herbs boils over a small fire. We enter the hut, and Navarro periodically brings us refills of the steaming mixture, encouraging us to dip leaf-covered branches into it and then place them on the stones. He believes that having participants administer their own ritual enhances their experience. We perform this repeatedly for 45 minutes as steam fills the dome-shaped structure.

"It felt beautiful—I feel cleaner, different, like a new me," says Kim afterward, sitting on Navarro's deck covered in sweat. "But now let's go to another world."

We drink a tea made from the mushrooms, eat the fungi, and walk into the woods. As we drop into the trip, I watch Kim lie on her side as Nancy begins meditating and softly sobbing.

Later, back at Tío's cabins, Nancy reflects on her trip.

"I was having a tough time in my life, but I couldn't do anything. I needed something to help, and people told me to try meditating. It helped a bit, but not enough," she says. "Today was totally different. I felt the third eye."

"I don't believe in God, but I met someone, I went to some special place, like heaven," Nancy says. "I feel I'm changed. Before, when I took some other drugs it made the world a bit different, but this time I'm different. I'm changed."

I've felt changed by my own mushroom experiences many times in the past, but with Kim and Nancy I feel different, as if for once I am a guide, watching the medicine change others. The afternoon brings heavy rains to San José del Pacífico, and both Kim and Nancy place their hands in the downpour, sprinkling water on their faces, appearing rejuvenated.

I ask them if they'll try it again.

"Definitely," they respond, smiling. 🌿





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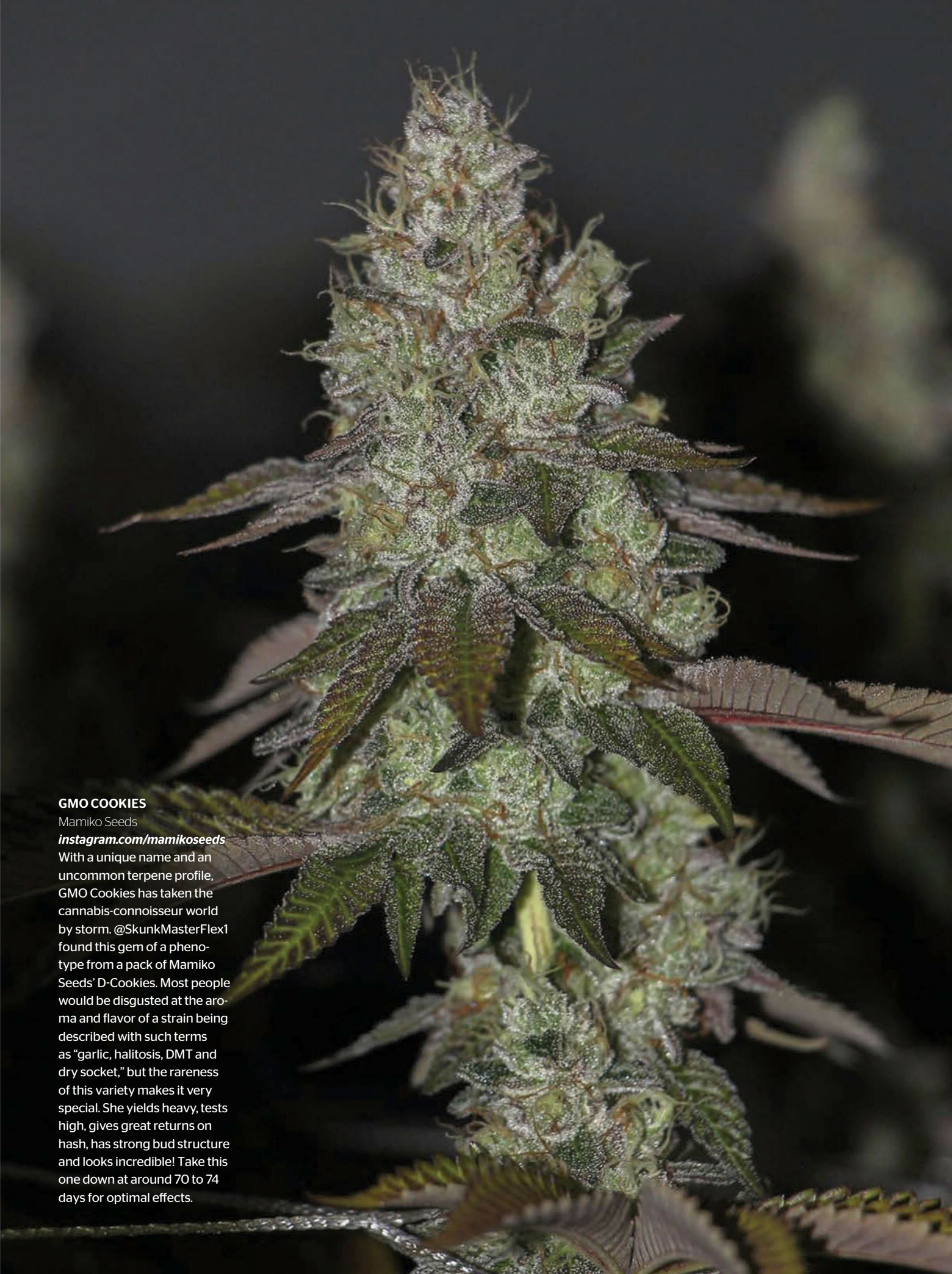
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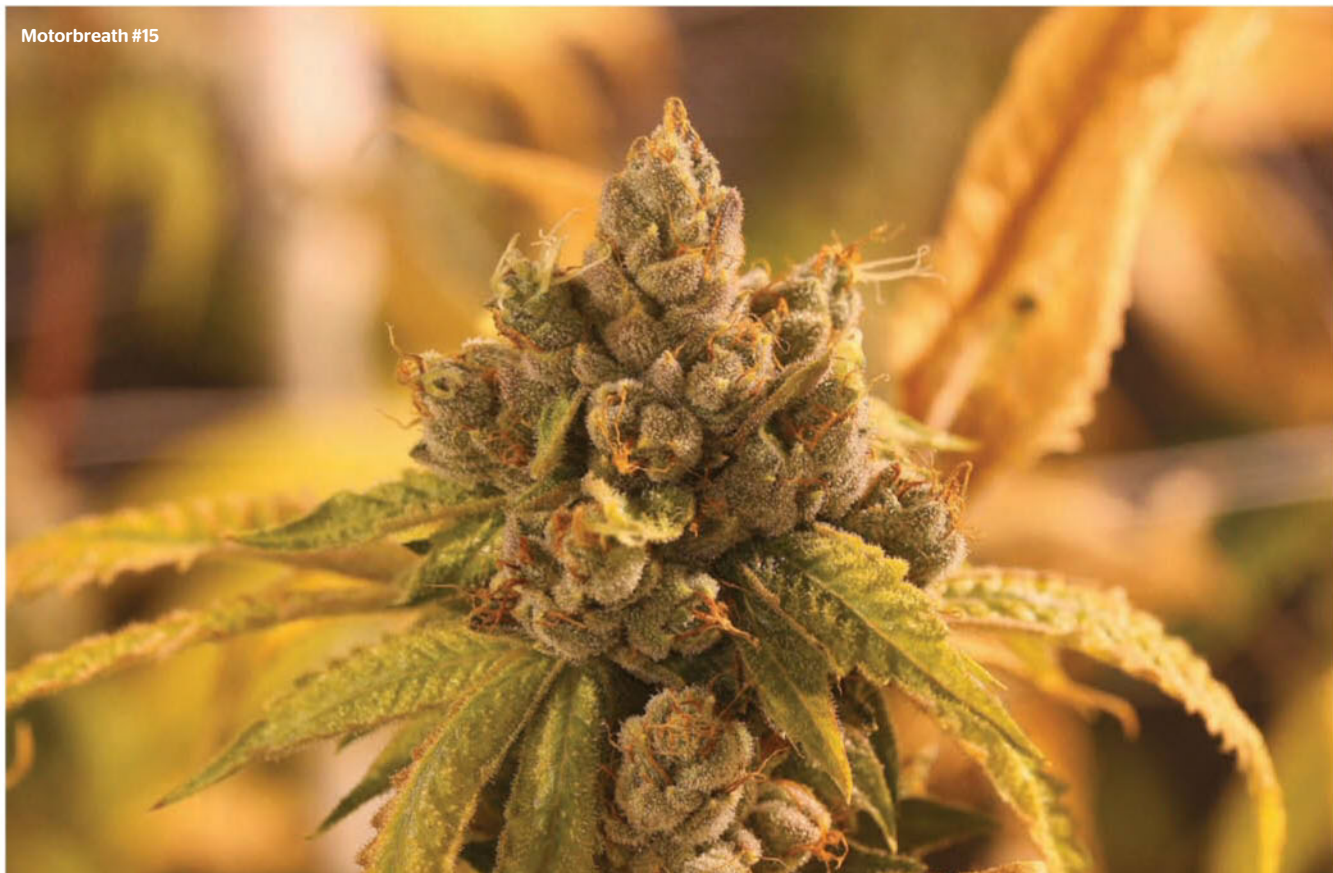
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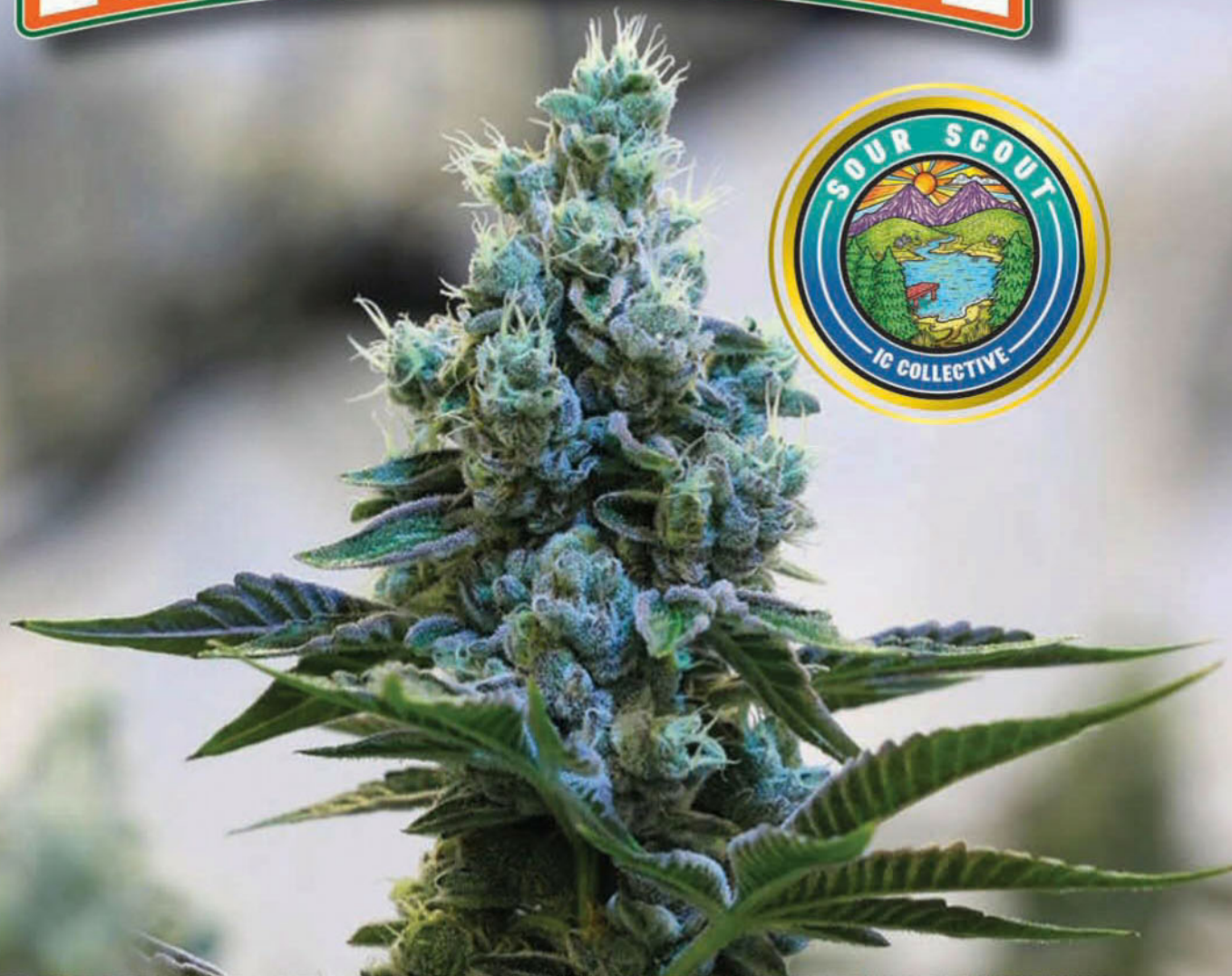
**[exoticgenetix.com](http://exoticgenetix.com)**

The name speaks for itself! Grease Monkey is an amazing cross of Gorilla Glue #4 x Cookies & Cream that glistens in the light. Terpene profiles vary from pheno to pheno, with some giving off hints of hot cocoa, caramel and paint thinner, and others with the scent of a vanilla-bean latte. The hash coming from this cultivar is insane! If you're looking for something with bag appeal, large nugs, high returns on both solvent and non-solvent extracts, an intoxicating aroma, and an intense overall effect, this might be the right strain for you.

Grease  
Monkey



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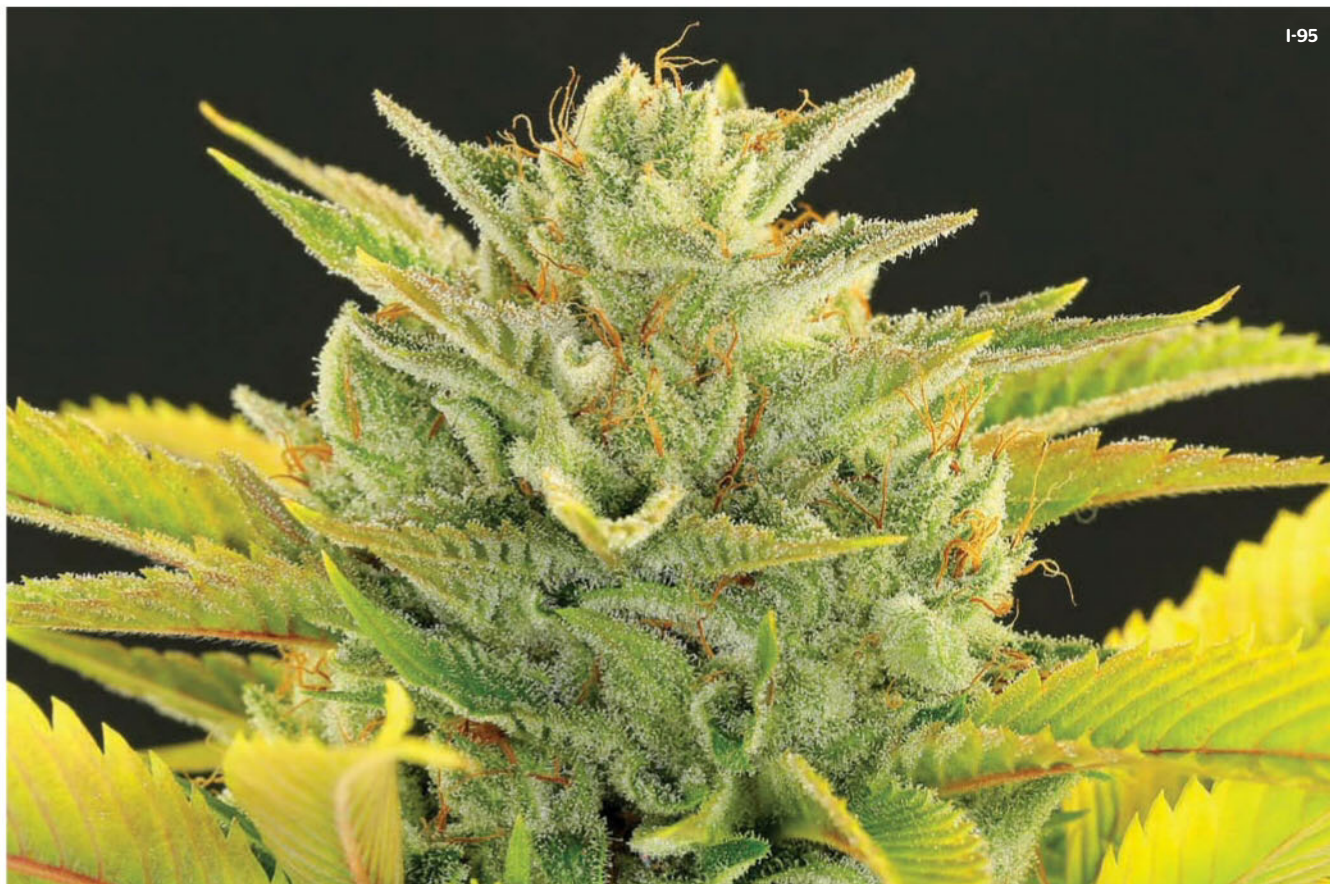


📷 IC COLLECTIVE - [WWW.ICCOLLECTIVE.NET](http://WWW.ICCOLLECTIVE.NET)

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I-95

**I-95**

Top Dawg Seeds/Money Mike

**[topdawgseeds.com](http://topdawgseeds.com)**

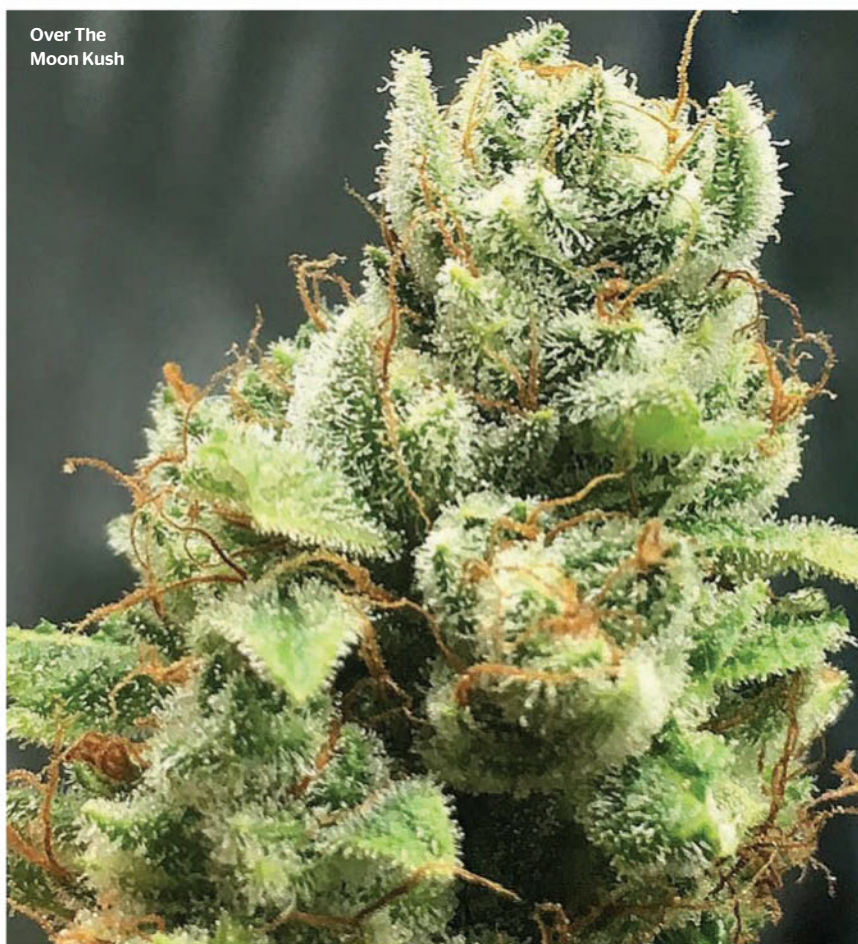
In reference to the United States' longest north-south highway, Top Dawg Seeds and Money Mike bred a cultivar using strains from the East Coast: (Triangle Kush x Legend OG) x Star Dawg. This might be the most intense Chem/OG hybrid you can find! She reeks like a skunk dipped in gasoline, with some sweet, hashy Afghan undertones. The lucky few people who were able to access these beans have all come across some gold in their seed packs. Even the males show great promise with tremendous breeding potential, as many of the I-95 crosses that have been coming out have also been incredibly potent and pungent.

**OVER THE MOON KUSH**

Sin City Seeds

**[homeofthedank.com](http://homeofthedank.com)**

We got a taste of this powerful beauty at our Cannabis Cup in Michigan, and there's no doubt as to why it has Detroit and the rest of the Midwest talking. This cross, (Headband clone only x Blue Power) regularly tests at higher than 30 percent THC, and the amount of essential oil she releases is staggering. Extract artists love the high yield of grease-filled trichomes, and growers love the tight stacking and short stocky structure of this outstanding cultivar. Make sure you try this strain and get yourself a pack of seeds of this future Cannabis Cup winner.



Over The  
Moon Kush



# To grow world-class strains, you need world-class nutrients.

Ken Estes, Grand Master Grower and originator of the world-famous medical marijuana strain **Grand Daddy Purp**, puts his faith in Advanced Nutrients to get bigger, more potent yields.

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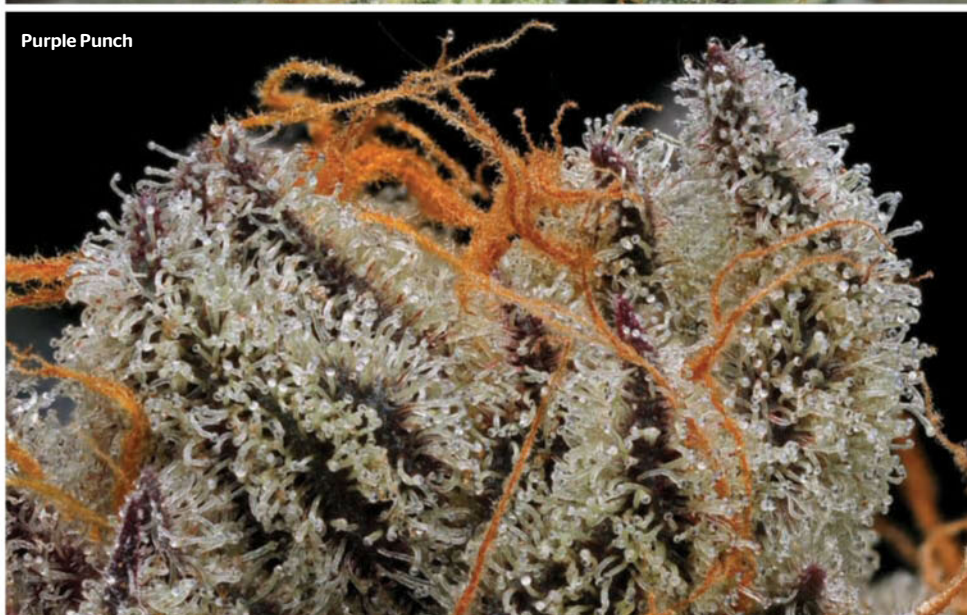
**REMO CHEMO**

Dinafem Seeds

**dinafem.org**

Legendary Canadian grower Remo united with Dinafem Seeds in Spain to produce this new therapeutic feminized strain that boosts appetite and reduces pain for medicinal patients, particularly people fighting cancer. Extremely potent with high levels of THC, the earthy Remo Chemo delivers hints of black pepper among the overarching diesel-fuel aroma. The *indica*-dominant plants grow dense and sturdy, so pruning is necessary during the vegetative stage for bigger yields when the plants ripen. Outdoors, harvest Remo Chemo around mid-October for best results.

Purple Punch

**PURPLE PUNCH**

Symbiotic Genetics

**instagram.com/symbioticgenetics**

Purple Punch was bred and discovered by Supernova Gardens in Hawaii back in 2012. The company discovered a female Grand Daddy Purp from an old pack of Granddaddy Genetics' GDP and crossed it with a Larry OG male from a pack of seeds from the Cali Connection. This variety was passed around to a few people, but it didn't really find the spotlight until it got into the hands of @Budologist420 and @\_TheVillage. Pictures of Purple Punch started showing up on Instagram a short while later, and that's when it really started to take off. It's some of the most photogenic and tasty cannabis around!

Sundae Driver

**SUNDAE DRIVER**

Cannarado Genetics

**radogear.com**

A feminized cross of Fruity Pebbles x Grape Pie, Sundae Driver represents another exquisite creation from Cannarado. This frosty variety exhibits incredible resin production with a scent and taste of grape-jelly donuts. The phenotype hunted down by Jungle Boyz caused a ruckus online with high-definition macro photos showing almost-white nuggets that look like they're covered in tiny diamonds. Due to high demand, the resale value of these rare seeds jumped nearly 1,900 percent, so if you have an unopened pack of these, cherish them and grow out a mom of your own.



**REMO CHERO**





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### WEDDING CAKE

Seed Junky Genetics

[instagram.com/seedjunkygenetics\\_jbeezy](https://www.instagram.com/seedjunkygenetics_jbeezy)

@SeedJunkyGenetics\_JBeezy is the man responsible for breeding this exquisite masterpiece from the Bay Area of California. The cross (Triangle Kush x Animal Mints) represents a true keeper with good yields, strong vigor when growing, and excellent flavor and potency. TLC in Los Angeles dubbed it Wedding Cake, and the rest is history. Extract artists will also be happy with the returns and essential-oil preservation. Breezy says: "She flowers anywhere from 63 to 77 days depending on how dialed in she is from the start of the vegetative stage." 🌱

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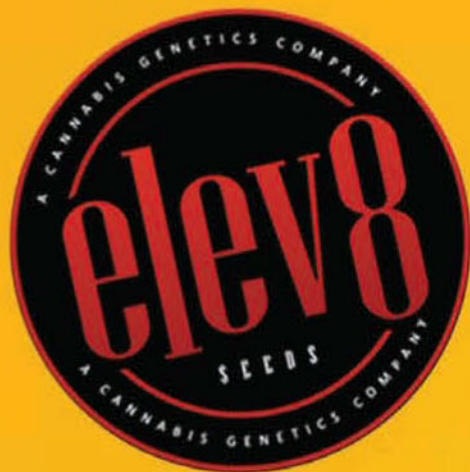
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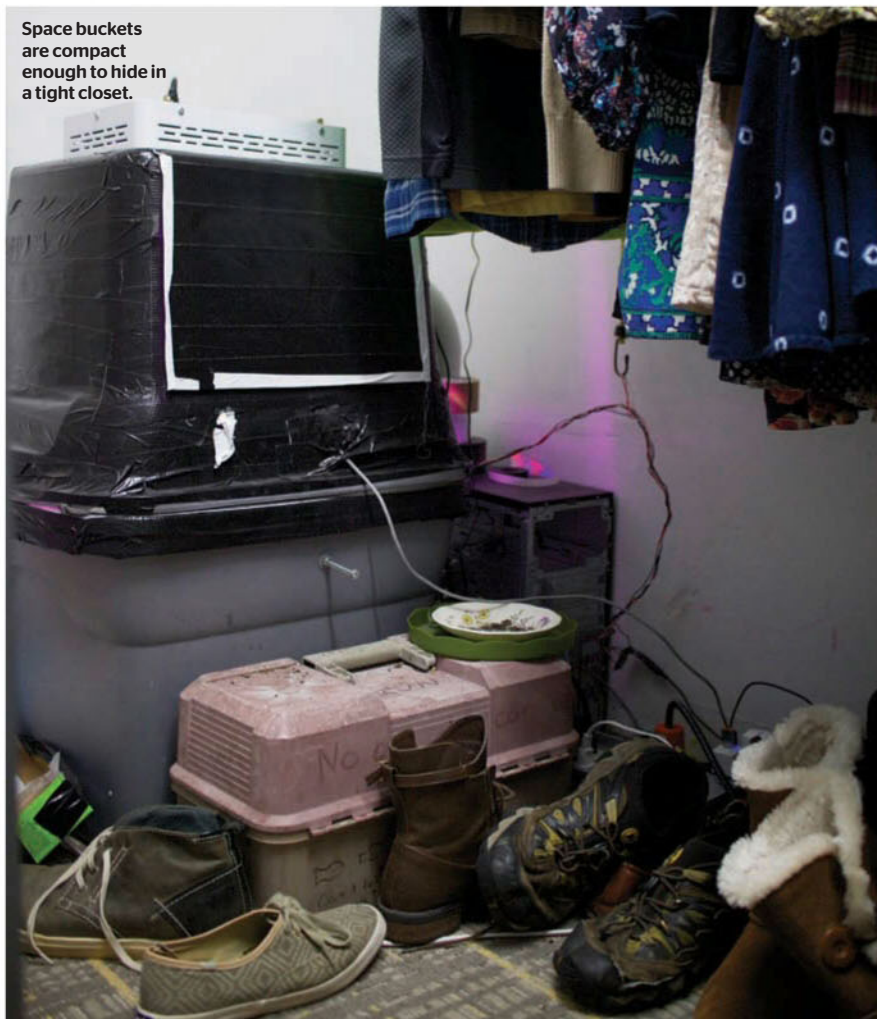


# Buckets Full of Sunshine

The latest cultivation trend: growing lush pot plants in tiny grow chambers that anyone can build. Here's how to make your own space bucket. *By Jon Christian*



Space buckets are compact enough to hide in a tight closet.



### MICRO-GROWING SPACE BUCKET STYLE

In the finished basement of a rambling green home on a sandy residential street a stone's throw from the blue-gray ocean of Massachusetts's South Shore, John is ushering us down into the cramped bedroom closet where he keeps his space bucket.

Let's be clear: We're not just peering into the closet—John, myself and my photographer are all crowded inside it, personal space at a premium, ducking to avoid clothes on hangers to check out the bucket itself, which is stashed against the wall next to a tackle box and some old boots. It's about the size of a mini-fridge, fashioned from two Sterilite tote buckets, the top one wrapped in a layer of black duct tape to prevent light from a 300-watt Mars Hydro LED system mounted to the top from escaping. Three ventilation fans hum faintly, and a narrow band of purple light leaks from the seam between the buckets.

John opens the lid, and inside is a 6-week-old female 707 Headband plant growing in the soil of a small pot, its pale buds just starting to flower in the otherworldly glow. Its minuscule size is striking: *Indicas* in particular, John

says, will adapt to the constrained space, and he's helped keep this one to a bushy height of about six inches with a combination of topping and low-stress training. When he harvests it next month, he expects it to have grown to no more than eight inches—and to end up with about an ounce of dank flower.

### BUCKET YIELDS

"I'm not growing to grow pounds," says John, whose kids are playing video games in the next room while his wife putters around upstairs. "I'm growing because it's cool."

John, who asked us not to use his last name because he's a small-business owner, is a member of a spirited new subculture of home growers who have congregated online in recent years to share information about—and instructions for building—tiny grow chambers cobbled together from 5-gallon buckets, totes, plastic barrels and materials you can buy at Home Depot or Lowe's. They call them "space buckets," and draw inspiration both from traditional closet growers and the hacker-inflected maker community, where the open-source taste for sharing knowledge and designs is deeply ingrained.



Above: You can keep a plant bucket-sized with topping and low stress training.

Below: Make use of low-wattage lighting by lining the inside of a bucket with reflective material.



### GLOW AND LOW

The concept is undeniably elegant. Cannabis isn't a difficult plant to grow, but it is notoriously picky about lighting. Unlike a closet-grow setup, which can call for hundreds of watts of power, a well-built space bucket reflects nearly all the light output back to the plant, and many growers have eked out defensible harvests with just 100 watts of LED or compact fluorescent lighting—with an electric bill uptick of just 10 or 20 dollars, depending on local rates.

There's also a certain erudition. John affects a Boston folksiness, but as he speaks confidently about vapor pressure, density and soil acidity, it becomes clear that he's a deeply experienced gardener with a citizen scientist's enthusiasm for documentation and experimentation—and that part of the space-bucket ethos that drew him in is the opportunity to control every input a plant receives.

"It's like playing God, man," he says with a grin. In fact, John and a few friends are currently planning an experiment in which they'll set up a handful of space buckets with identical conditions so that they can change one variable—the hours of light they give the



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plant during the flowering phase, say—and lab-test the potency of each harvest afterward to expand the knowledge base of effective indoor-growing praxis.

### BUCKET HEADS

Space buckets were originally the brainchild of a pseudonymous Web developer in Buenos Aires who goes by the internet handle Ekrof (who, though he takes pains to note that he later discovered a few similar designs that had been floating around the Web prior to his work, unquestionably popularized the concept).

"My first plant failed to grow because of the little sunlight I got in my apartment," Ekrof said in an online interview. "That is when I decided to add a CFL bulb to the lid of the bucket, and a couple PC fans to keep the air running. This basic design turned out to be very effective and easy to tweak and upgrade."

Ekrof recalls that he coined the term about five years ago, after photos of his space bucket and subsequent harvest he uploaded to a forum elicited astonishment from fellow growers. He ended up registering *spacebuckets.com*, a site that features user-uploaded space-bucket builds and grow guides, as well as a subreddit in which space bucketeers discuss the finer points of nutrition, lighting, carbon filters and more. Some have even documented experiments in growing plants other than cannabis: strawberries, wasabi, kitchen herbs and even avocado sprouts.

"We are a community of learners, a movement of tinkerers," Ekrof said. "Most importantly, we believe in the free flow of ideas and the unparalleled power of the internet."

### BUILDING BUCKETS

Buidls can be sophisticated—John designed his so that he can use his smartphone to check temperature and humidity, and even turn the lighting on and off remotely, using an Arduino board—but Ekrof emphasizes that a bucket doesn't need to be that complex. His first prototype, the one that caught the interest of so many growers back in 2013, was cobbled together from a couple of 5-gallon buckets, reflective tape, a few small fans and a handful of CFL bulbs.

You can grow your own quality bud today, he says, with a similar setup and a low entry cost. John's space bucket, which is large and unusually complicated, cost about \$300 including everything down to the plant food; a simpler setup, with fluorescent lighting, might run closer to \$100. (Check out the guide at the end of this story for more info on how to build your own space bucket.)

And if you're not handy with tools, there are signs that a cottage industry has started to spring up of artisans who build and sell their own space buckets. C.J. Cummings, who sells

You can piece together a space bucket from parts available at any hardware store.



His first prototype was cobbled together from a couple of 5-gallon buckets, reflective tape, a few small fans and a handful of CFL bulbs.



Repurposed fans provide cheap ventilation.

artisan space buckets through an Etsy store called MostlySafe out of Portland, OR, says that he sold about 20 units last year for \$275 apiece, and hopes to move more going forward.

### OUTER SPACE

"In five to seven years from now, you'll see space buckets being sold like hydro grow sets," Cummings says. "You need only look in the past to see how products have become mainstays."

Cummings first started thinking about tiny, controlled grow chambers when he was watching episodes of *Star Trek: Voyager* involving the airponics bay maintained by the alien character Kes; Cummings started Googling and soon ended up on the space-buckets subreddit. The rest, he says, is history.

"If we are going to go into space, and I hope we do, we need to have ways we can grow bountiful amounts of food in a controlled environment," Cummings says.

The winter in Boston is long and cruel, and it's lingered this year into a dismal gray spring. Back on the South Shore, as we watch the artificial sunlight spill out from John's bucket, I'm overcome by the illogical urge to climb in, hunker down and bask in its warm brightness until the weather warms, the days lengthen and greenery creeps back into the landscape.



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**SPACE-BUCKET MATERIALS:**

3 5-gallon buckets  
 1 5-gallon bucket lid  
 1 roll black duct tape  
 1 bottle Gorilla Glue  
 1 roll reflective Mylar  
 2 12-volt, 80-mm computer fans  
 1 12-volt power supply  
 4 wire nuts  
 10 small zip ties  
 3 bolts  
 3 nuts  
 1 4-socket light fixture  
 4 23-watt compact fluorescent bulbs

**STEP 1:** Wrap the exterior of one 5-gallon bucket in black duct tape. Use glue to coat the interior with sheets of reflective Mylar. Drill drainage holes in the bottom. Drill four small holes on the side and run zip ties through them to attach the power strip.

**STEP 2:** Use a serrated knife to cut two holes for the fans in the wall of the same bucket. Drill another small hole near each fan opening, then run zip ties through them to fix the fans to the bucket, one as intake and one as exhaust. Use wire nuts to connect the fans to the 12-volt power supply.

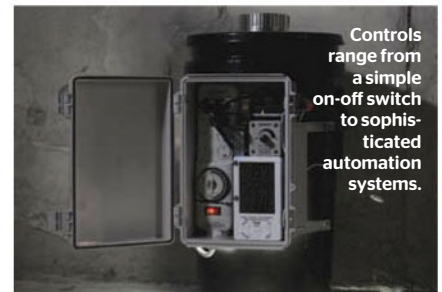
Space buckets let avid gardeners control all of a plant's inputs.



Some growers use a combination of top and LED strip lighting.



Controls range from a simple on-off switch to sophisticated automation systems.



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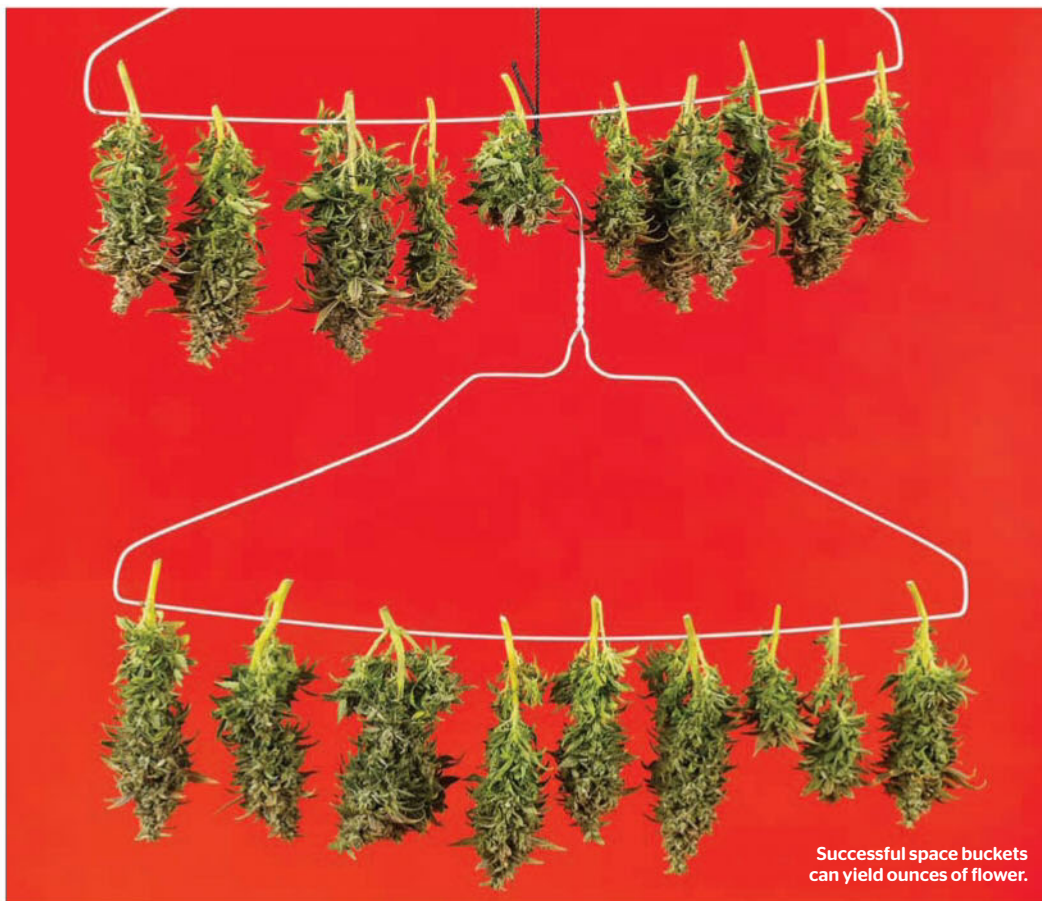
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**STEP 3:** Cut the bottoms off two more buckets to create spacers to add height when your plant outgrows the first bucket. The 5-gallon buckets should nest perfectly, so no light should escape when the buckets fit together. Save the bottom of one of the spacer buckets to catch drainage.

**STEP 4:** Cut the bottom off the fourth bucket, the same way you made the spacers. Duct-tape the lid to it and cut a hole in the lid in the shape of your light fixture. Duct-tape the light fixture to the lid so that only the bulbs emerge inside. Finally, wrap the exterior in duct tape to keep light from escaping. 🌸

*You can find much more information about space buckets at [Spacebuckets.com](http://Spacebuckets.com) and [Reddit.com/r/spacebuckets](http://Reddit.com/r/spacebuckets).*



Successful space buckets can yield ounces of flower.

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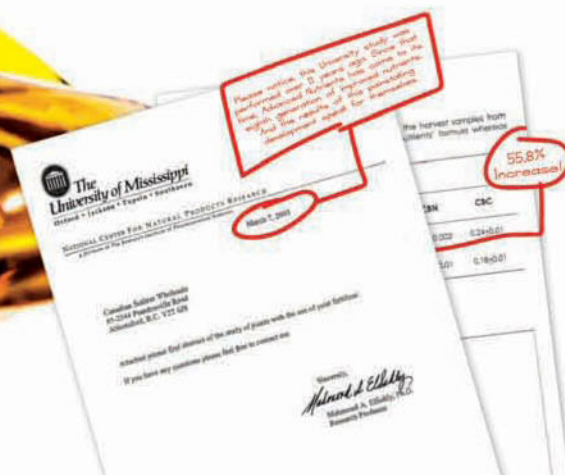
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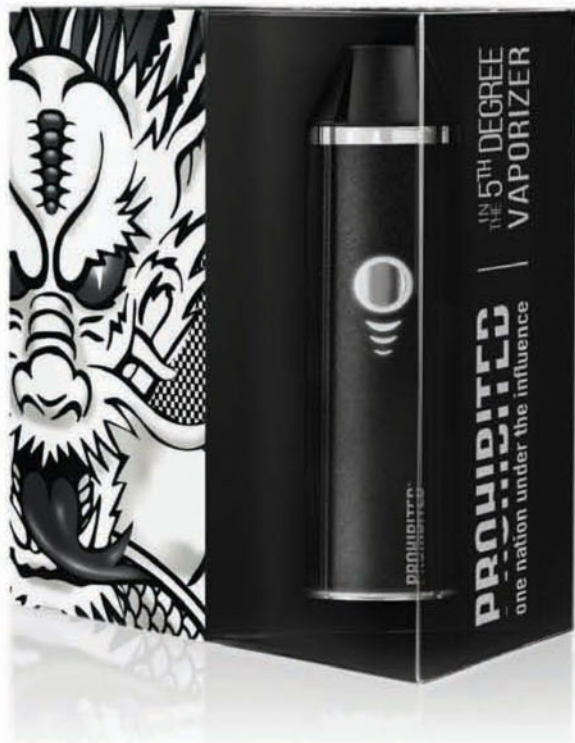
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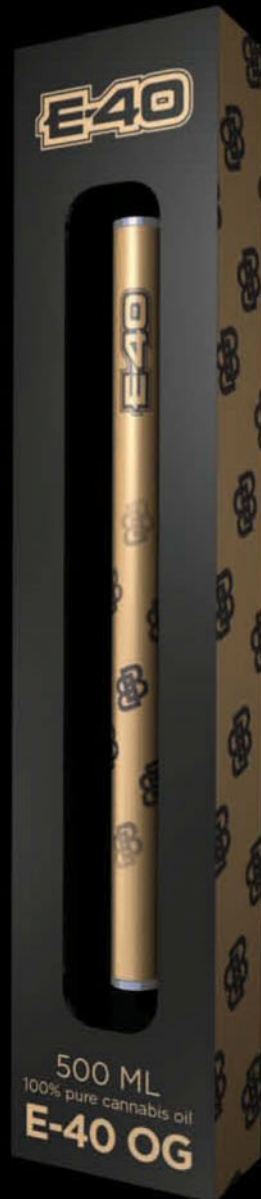
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# Controlling Marijuana:

## A Brief History



This is the story of a piece of federal legislation called the Controlled Substances Act and how it transformed federal law regarding marijuana, why it failed and what should be done about it. *By Jon Gettman*



**T**he historical, legal and public-policy details surrounding marijuana and the Controlled Substances Act (CSA) are interesting for various reasons, but they obscure a simple truth, a truth that gets lost in the technicalities of the administrative rule-making process and decisions rendered by the federal courts.

The simple truth is this: Marijuana can be, and is, grown everywhere in the United States. Thus, the CSA—which attempts to use law enforcement to govern the production of controlled substances, to create a closed and tightly monitored manufacturing and distribution system—has not and cannot work with marijuana. Eventually, this revelation will sink in and federal officials, policy-makers and legislators will abandon the CSA and replace it with some other regulatory structure. And any attempt to evade this lesson of history by trying to prolong the use of the CSA to regulate marijuana will end in failure, because the widespread nature of marijuana cultivation is a stubborn, powerful and inescapable fact.

Marijuana was legal in the United States in the early 20th century. Law enforcement became concerned about its use, especially by immigrants and minorities, and pushed for state laws against it in the 1920s. The first national prohibition law addressed the sale of cocaine and heroin, otherwise known at the time as “narcotics.” The Harrison Narcotics Tax Act was enacted in 1914 and narrowly survived a Supreme Court challenge in 1919 (*United States v. Doremus*). The mechanism for regulating narcotics was a prohibitive tax. However, the Supreme Court’s decision in favor of the law was based on the determination that the legislation would raise revenue from the legal prescription of narcotic drugs. The fact that the legislation effectively prohibited nonmedical sales of narcotics was just incidental.

Attempts to prohibit marijuana relied on encouraging state laws until the 1930s, when officials asked Congress to enact federal marijuana prohibition by way of a prohibitory tax—a levy so great as to render any commerce unprofitable. The result was the Marihuana Tax Act of 1937. This approach provided a legal basis for prohibition for the next 30 years. It fell apart when Timothy Leary took a trip to Mexico.

In 1965, the professor and psychedelic activist Leary and a small group of family

and friends planned a drive from New York to Mexico; however, the group was denied entry into Mexico. When Leary turned around and drove back over the International Bridge to the United States, a US Customs official searched his car, found some pot and charged Leary under a section of the Marihuana Tax Act of 1937. Leary took his case to court (*Leary v. United States*) and successfully argued that the legislation was unconstitutional because it required him to incriminate himself—by paying a tax on the transfer of marijuana, he would be exposing himself to further criminal penalties under state and federal law. Thus, the law violated his privilege against self-incrimination. The Supreme Court agreed with

**Schedule I drugs must fit three criteria. They must have the greatest potential for abuse, they must be unsafe for use under medical supervision and they must not have an accepted medical use in the United States. But who makes those determinations?**

Leary’s argument and, in 1969, issued a unanimous decision striking down the Marihuana Tax Act as unconstitutional.

Meanwhile, during the 1960s, there were two federal commissions taking a look at law enforcement and federal criminal laws. There was also discontent in both Congress and the law-enforcement community regarding the Bureau of Narcotics and Dangerous Drugs—the predecessor to the Drug Enforcement Administration (DEA)—which was tasked with enforcing prohibition. These factors, along with the *Leary* decision by the Supreme Court, opened the door to a new approach for federal drug-law enforcement. The result was the passage of the Controlled Substances Act in 1970.

The CSA is pretty simple, actually. There are five schedules for drugs that have addictive properties, referred to in the legislation with respect to their potential for abuse. Some of these drugs have legitimate medical uses, so this had to be balanced against their potential for illegal sales. The greater the potential for abuse, along with a lack of accepted medical use, the stricter the regulatory

control for each drug. The CSA’s goal was a closed system for drugs with medical use and prohibition for drugs with no accepted medical use. Schedule I, the most restricted category, was for drugs with no medical use and the greatest potential for abuse.

There was a dispute in Congress over how drugs were to be placed in any of the five schedules. It was resolved by the creation of a process, known as “scheduling,” in which health agencies would make the necessary scientific determination of each drug, and federal authorities (i.e., the DEA) would enforce the regulatory laws based on those scientific decisions.

Here is where two new actors take the stage with important roles in this story. The first is an official with the Department of Health, Education and Welfare (HEW) by the name of Roger Egeberg, MD. The second is the Chevron Corporation. Both play a role in marijuana’s placement under Schedule I, as well as why it has been impossible for various litigants over the years to have it removed.

Schedule I drugs must fit three criteria. They must have the greatest potential for abuse, they must be unsafe for use under medical supervision and they must not have an accepted medical use in the United States. But who makes those determinations? Under the statute, they are made by way of a scientific review by what is now the Department of Health and Human Services (HHS, the successor agency to HEW, identified in the original statute as the agency handling the science). Congress, however, made the initial determination to place marijuana under Schedule I.

Egeberg, the assistant secretary for health and scientific affairs at HEW, wrote to Congress on August 14, 1970, to support the placement of marijuana under Schedule I. Egeberg noted that marijuana did not fit the criteria for Schedule I, or even Schedule II (for drugs with a high abuse potential but accepted medical use). Egeberg wrote, “Some question has been raised whether the use of the plant itself produces ‘severe psychological or physical dependence’ as required by a Schedule I or Schedule II criterion... [O]ur recommendation is that marihuana be retained within Schedule I, at least until the completion of certain studies now underway to resolve this issue.” After all, Egeberg reasoned, scheduling could just be changed later if need be.

This, however, is where Chevron



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comes in, as the company was a key litigant in a completely unrelated legal action that created an important precedent, which affected later attempts to change marijuana's status under the CSA.

When Congress passed the CSA, changing the schedule of a substance or removing it from scheduling altogether became subject to standard administrative procedures, established by Congress in the Administrative Procedures Act of 1946. Under the CSA, any interested party could file a petition with the Department of Justice (and the DEA, which has been designated by the Justice Department to handle this) to initiate rescheduling proceedings. The petition needs to make a scientific argument with respect to eight criteria established by the CSA, and must present new or recent scientific evidence not considered in a prior proceeding. The DEA reviews the petition to see if it meets this burden and then refers it to HHS for a scientific review. HHS conducts its review and issues recommendations to the DEA, and the DEA then issues a decision. Any party affected by the decision with standing (a legal term that distinguishes between interested and affected parties) can then file an appeal with the federal courts to subject the DEA's decision to judicial review.

There have been five rescheduling proceedings since the CSA was enacted, and all of them have failed. Each one has some unique and interesting attributes and all of them make a scientific argument that marijuana does not meet the criteria for a Schedule I drug—but none of that really matters legally. Why? Because of a case involving *Chevron* decided by the Supreme Court.

*Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.* was decided in 1984. It concerned regulations enacted by the Environmental Protection Agency and subsequent litigation brought about by the Natural Resources Defense Council and later challenged by *Chevron*. The issue is a simple one: Who decides how to interpret language in laws providing the government with regulatory authority? When it comes to the CSA and what the law means by accepted medical use and abuse potential, the *Chevron* decision is why no one can force the government to reschedule or even de-schedule marijuana (remove it from scheduling altogether).

In this case, the Supreme Court decided that if a law is clear, an agency must follow the law. But when a law is subject to interpretation, the regulatory

agency gets to make its own determination of what standards, criteria or concepts it uses to decide on regulations. In other words, the *Chevron* decision allows the DEA to determine how to decide if a drug has an accepted medical use in the United States. The only limit on this discretion is that the determination and/or process by which it is reached cannot be unreasonable, arbitrary or capricious. The DEA has decided that, aside from all other factors, it will not recognize an accepted medical use of marijuana without controlled scientific studies demonstrating its effectiveness, which, of course, the federal government tightly controls.

**There have been five rescheduling proceedings since the CSA was enacted, and all of them have failed. Each one has some unique and interesting attributes and all of them make a scientific argument that marijuana does not meet the criteria for a Schedule I drug—but none of that really matters legally.**

Because of the significance of the *Chevron* decision in allowing the DEA considerable discretion in interpreting the CSA, there is really only one path to changing the scheduling status of marijuana. But it is not something marijuana-law reformers would be happy with. To evaluate this scenario, it is necessary to once again return to the original idea behind the CSA, which is to create a closed manufacturing and distribution system.

In this context, “closed” means that a drug is manufactured and distributed exclusively for medical use. Simply put, this means that marijuana would become a tightly controlled and thus highly profitable pharmaceutical product. Any company that would invest in the controlled studies required to reschedule marijuana—and it would require considerable investment capital—would only do so to obtain a return on its investment. The product tested, a specific formulation of marijuana, would become a patented commodity, and the CSA would not only protect

that investment but also facilitate a significant profit as a return on that investment. Basically, the only way marijuana will be rescheduled under the CSA would be to grant a pharmaceutical company exclusive rights to profit from its manufacture and distribution. Obviously, this is not an ideal solution.

This is where the story returns to the simple truth with which it began. Scholar and policy analyst John Kaplan wrote in 1974 about the difficulties in classifying drugs for legal control in *Controlling Drugs: International Handbook for Psychoactive Drug Classification*. Kaplan argues for what is now called harm reduction: for policies that increase benefits and reduce social costs. Kaplan also explains the importance of two variables that affect the success of control models. The first is the “degree users want the drug.” The second factor, and the key one here, is “technology of drug production and consumption.” Kaplan points out that “where the technology of drug production and distribution is not difficult to overcome, drug control will be very difficult.” Because it is not difficult to grow or consume marijuana, controlling it will be very difficult. This is even more true today than it was 40 years ago when Kaplan made this observation.

Just as the Marihuana Tax Act of 1937 became obsolete in the late 1960s and was replaced, the Controlled Substances Act of 1970 has become obsolete as a regulatory tool for marijuana and it too will be replaced. Rescheduling marijuana is no longer an option. The term “de-schedule” is gaining popularity as a mechanism to remove marijuana from the CSA, which is really the only viable option for a new regulatory framework. However, the country needs a new reference point, a new approach. “De-schedule” is a technically accurate term for what needs to happen, but it is one that frames the issue in part in terms of the CSA and the current process of asking the DEA to act administratively to remove marijuana from the schedules. That's the wrong way to make this happen. This is a job for Congress, and this new regulatory framework for marijuana needs to be created through congressional legislation. It's that simple. Whether Congress is up to the challenge of regulating cannabis fairly and reasonably remains to be seen. 🌿





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By CHRIS PARKER

# JOSS STONE

## THE HIGH TIMES INTERVIEW



**J**OSS STONE (BORN JOSCELYN STOKER) GREW UP LISTENING TO HER PARENTS' RECORD COLLECTIONS, FALLING IN LOVE WITH ARETHA FRANKLIN AT AN EARLY AGE. SHE AUDITIONED FOR THE BBC'S *STAR FOR A NIGHT* AT AGE 13 ON A LARK AND WON, LEADING TO A RECORD DEAL AND HER MULTIPLATINUM 2003 DEBUT, *THE SOUL SESSIONS*. AT 16, SHE BECAME THE YOUNGEST PERSON NOMINATED FOR THE UNITED KINGDOM'S PRESTIGIOUS MERCURY MUSIC PRIZE.

BY THE TIME SHE WAS 22, STONE WAS DONE WITH THE GLAMOUR AND GLITZ OF BEING A POP STAR. SHE PAID EMI ALMOST EVERYTHING SHE HAD—ALLEGEDLY OVER \$10 MILLION—TO BUY HER WAY OUT OF HER CONTRACT. FREEDOM WAS THAT IMPORTANT TO HER. SHE'S RELEASED THREE ALBUMS SINCE THEN, INCLUDING HER REGGAE-FLAVORED LATEST, 2015'S *WATER FOR YOUR SOUL*, PRODUCED BY DAMIEN MARLEY, WHO ENCOURAGED HER STYLISTIC STRETCH.

STONE IS SUPPORTING THE ALBUM WITH AN UNUSUAL WORLD TOUR. USUALLY, AN ARTIST'S "WORLD TOUR" ONLY INCLUDES STOPS IN A FEW LUCRATIVE FOREIGN MARKETS. NOT STONE'S. SHE'S INTENT ON VISITING EACH OF THE 204 COUNTRIES OF THE WORLD, NO MATTER THE COST; SO FAR, SHE'S BEEN TO 115 OF THEM. IN EVERY COUNTRY, SHE INTERACTS WITH LOCALS AND RECORDS WITH INDIGENOUS MUSICIANS, POSTING THE RESULTS ON HER FACEBOOK PAGE.

JOSS STONE IS A FREE SPIRIT FULL OF POSITIVITY AND SUBSTANTIAL SPUNK, WHO HAS CHOSEN HOW SHE WANTS TO LIVE HER LIFE AND HAS MADE THOSE DREAMS COME TRUE. STONE SPOKE WITH US BY PHONE FOR ALMOST AN HOUR FROM DEVON, ENGLAND, WHERE SHE LIVES IN THE SAME HOUSE SHE GREW UP IN. (*THE CONVERSATION HAS BEEN EDITED AND CONDENSED FOR LENGTH.*)



### So, how are you? How have you been?

I've been mentally busy. It's a bit crazy.

### What have you been so mentally busy with?

I've been doing the world tour, so writing songs in different languages and things of this nature. Visiting charities. We went to Italy and Georgia. It was nice, really. And then when we got home, my whole family from Beal—who I love very much—had all come down and we went camping in the rain.

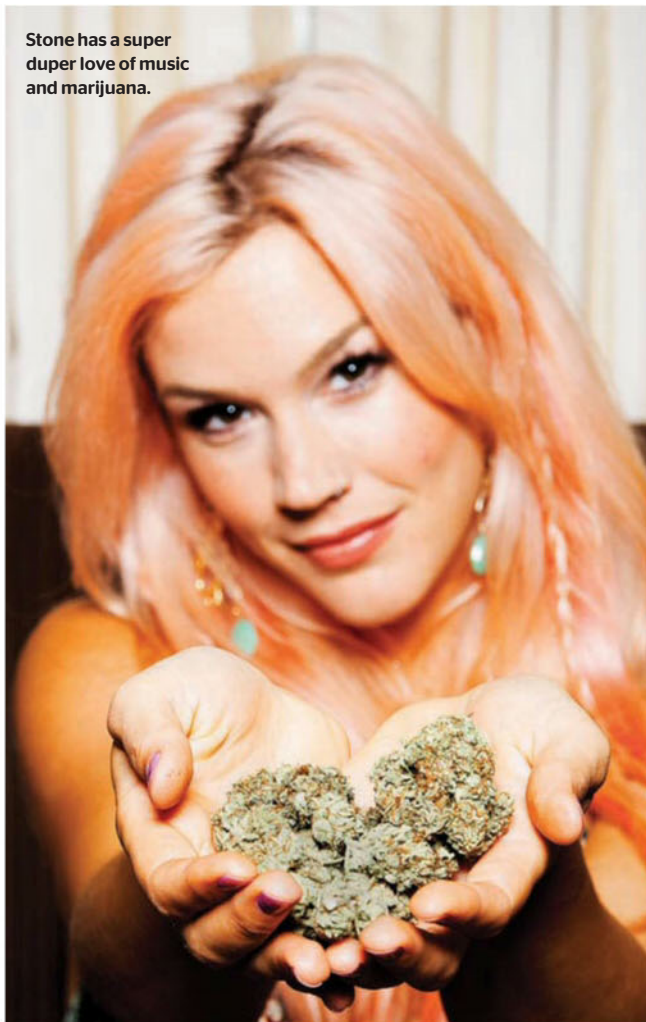
### Ohmigod.

[Giggles] Yeah, so I just got back from that. Literally an hour ago we got back loaded with children, and everyone covered in mud. It's a little bit mad, really. But it's good.

### I heard the inspiration for *Water for Your Soul* was a camper trip across Europe you took in total '60s American style.

Years and years ago, actually. Some of the songs from *Water for Your Soul* come from quite a long time ago. It's funny because I just got Dennis working again. My camper's called Dennis. It's a 1966 Opel Blitz. It's amazing. I love it. I drove from England to Spain... and it broke down in Bordeaux. I was there for ages because we needed to get a new engine. It was completely fucked. So in the time I was broken down I called my friend Johnny in England and I was like, "Johnny, hey, I'm down here. Would you like to write some songs?" 'Cause I'm just chilling. Literally. I'm parked outside this pub and I can't move." So he came and we started writing songs. There was one song called "Water for Your Soul," which we did not include on the record because sonically it didn't really fit. It was more electronic. The lyrics are saying, "Whatever it is that you do, make sure that you are fed." So water yourself, and

Stone has a super duper love of music and marijuana.



"In life, you have three choices. You have 'put up or shut up,' 'change it,' and you have 'get out.'"

the saying is: "If you don't water it, it will not grow." So you must work with whatever your food is.

### Have you always had an easy time following that advice? You come off as very free-spirited and self-possessed. Was that always the case?

I've always had that because my parents instilled it into me, but there have been fits and starts. There have been times, especially when I was a teenager, and you question "you." Because there are a lot of people around, especially since I was working with a bunch

of adults. They're pricking you constantly. They're telling you how to do this and who to be and "Well, you should really do that." It's a lot of information. So you go through a moment, or a few moments actually, where you go, "Ohmigod, am I wrong or am I right?" Now that I'm older, I think, you know, there is no wrong. You kind of make mistakes but they're there to teach you, so you should just stick to your path and go with what makes you feel good.

### You're quoted as saying you're a lot happier now than when you were younger. Why is that?

It kind of goes back to the choice thing. My dad said to me, "In life, you have three choices. You have 'put up or shut up,' 'change it,' and you have 'get out.'" If you can think of a fourth choice, please give me a call. But basically, those are your three choices in this life.

If you're in a situation you don't like—for example, I was in a record deal that lasted for years. I was learning and it was like being in school for the first bit because I was learning my craft. Then when I got older, I decided I wanted to make the music I always wanted to make. So of course I got a lot of resistance from a lot of people. And those people were a lot older than me. Big businessmen. Quite intimidating characters. And I realized that I was miserable. I didn't like what was going on. I didn't really like the promo, the photo shoots, the red carpet... I realized that was like 90 percent of my job and 10 percent was music. So I thought back to what my dad said. So I tried to change it. I tried to speak to the people that were my boss at the end of the day and I told them I wanted to do the music I wanted to do, and that wasn't happening. I put up and shut up for like a little bit, I kinda considered that option not really an option, but it's there. And in the end, I got out.

And now I can do this. I can have this lovely life filled with music. And it's so wonderful and everything I do now is really positive. So if I do have to go and do a photo shoot or walk on the red carpet, it's because I chose to do it... And tomorrow, if I choose to not do it, I just don't do it. And that'd be it.

### You said as part of your world tour you went to a festival and you were the only one that showed. And they were so grateful. That spirit has to give a lot back.

That was lovely. We were in



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Istanbul. I don't know if you remember, but they had the coup. It was a military coup and it was very kind of scary. There was a festival and there were a bunch of musicians that were supposed to be there and they all got scared, basically, and they didn't go. Which is fair enough. I mean we're talking about people's lives here. But for me, as I said, I'm on a different kind of tour. So for me that's the most important time to go. That's not the time to turn around and not go. You're supposed to be there for the people and help them feel like they're not alone. I read a few articles, and some of the public had been saying that they felt very deserted by the world when that happened. And I'm just so pleased I wasn't part of that. I'm glad I didn't desert them.

**You did several episodes playing a character on the Showtime series *The Tudors*. I'm curious about your experience.**

I loved it. I thought it was very fun. I did feel a bit out of place. I think musicians, we stay up late and we basically play like children play. So we keep our child alive, like all the time. So to us it's like, "Let's go play!" It's not like, "Let's go to work." But I've noticed that actors take it *very seriously*. So that is a different mind-set for me because my whole life and everything that's serious, I go, "Eh. You're boring me." [Laughs] And I kinda move on because I don't enjoy it. "My God, this is stressful; I'd rather just go play." So to me it was a different mind-set and I think I need to get into it more if I'm going to do more acting. I need to go, "Right, and let's be serious and let's pretend to be someone else." I think the rest of the actors were like, "What the fuck is wrong with that girl?!" But I got a lot of great advice from some of the actors as well. It was a very nice experience to do something different with my emotions.

**It's funny you said that about boring you. I know you're an Aries, and I read this article about what different signs need to learn about love. "Aries: You need to get over the idea that people are sometimes boring, you can't have excitement every single moment."**

Ahhh! That's so annoying. [Laughs] I know I do need to do that, actually. But it's very boring, isn't it! I'm the girl who wants the honeymoon period to last forever. Like it will never go away, and if it goes away, I'm over it. I'm like, "Okay. The moment is gone, you're gone. I can't have dinner with you." Yeah, I'm not the best.

**"The things that that plant can do is so much more important than getting you stoned..."**

**An Aries very much likes to conquer new things.**

Yeah, I'm just very much in love with love, you know? I have this fairy-tale idea of what love should be, and I want it to be magical. I want everything in my life to be magical, actually. If you ever come to my house, you'll see what I mean. I've made it like a fairyland. Flowers and hearts everywhere, and there's colors and little gems hanging from the windows. I just like things to be magical if they can be, and in love there's your opportunity. I think that's how it should be, and if it's not like that, then, "Nah. Don't want it."

**Tell me about the CBD oil and how you became involved with it.**

This thing to me is very important. As a singer, I've always said, "Yes, I smoke weed," when I'm asked. Of course I say yes, because why wouldn't I smoke weed? There are many reasons not to, though not that many compared to the reasons to do it. I've always been open about it... [but] people go, "Hippie! No, not listening to you," and I think that's a bloody shame.

I had this experience in my local pub. I have investigated this a lot and devoted hours and hours and days and days and spoken to doctors and people that use CBD to make medicine out of it. So I go to the pub and I'm having a pint outside. And I met this chap called Harry, who was seemingly a very nice chap, and he told me, "I'm a vet for horses." And I said, "Oh, interesting, have you looked into CBD oils for pain relief for animals, because I know they've done a lot of studies on that." And he basically turned around to me and said, "If you want to go get stoned, go get stoned." And I thought, "No, no, no, I'm not saying that. I'm just asking if you looked into it." And he goes, "I don't need to hear all this hippie-dippy bullshit." And so obviously we had a little bit of an argument. A friendly argument over a pint, but a bit of an argument, and I said, "You know what, Harry? I'm going to send you the





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information I have, but it is your responsibility as a vet and as anyone in the medical profession"—and I believe anyone that reads this article needs to educate themselves. And now he has dedicated his life to studying CBD oil. He wrote me a letter like a few weeks later and was like, "I apologize, this is absolutely incredible and I'm going to run studies on this." He's actually changed his job now. So, I mean, I feel so pleased that I could at least change one person's mind, because it shouldn't have that stigma on it. The things that that plant can do is so much more important than getting you stoned...

It's used for epilepsy and has worked with skin cancer. I actually put it on—do you know what an age spot is? You know when on your hand you get a little brown spot? I had one and I was like, "Mum! Ohmigod! What is that?!" And she's like, "Oh

honey, you're getting old." I was like, "My God!" So I got my CBD oil and I put it on and in less than a week it was gone.

#### Can you tell us the story of the first time you got high?

I remember I was supposed to be going to a club with my friend. But I was a kid. I was really too young. This is a terrible story. But I lived in the countryside where I was very bored, and what we did most of the time was smoke and drink cider. And that's very Devon country life. My friend Bonny, she was the naughty one, really. Or kind of. And she would go and get—it was hash, really, we never had weed, or any green. So she'd make a spliff because her brothers used to smoke weed. And then we'd go down, and I remember we'd have to crawl past the window so my mom didn't see us going the wrong way. We were supposed to

be going left but we went right. And anyway, so we went down and smoked the spliff. We didn't know what we were doing. We got really high, didn't know what the hell was going on. We were way too young. And then my mum was like, "I didn't see them go across the window the right way [coming back]." So she figured us out. But we didn't get caught, which was great—she didn't know what the hell we were doing. It was very funny and I'll never forget it. It was so funny, but you know that's not for me to encourage. It's not really for children to be doing. But we were bored and we were kids and we didn't have enough entertainment basically.

**We do really get so judgmental and it's so crazy. I read somebody criticizing you, about the way you make your vowels. I thought we got over this with Eliza Doolittle.**

Oh, my vowels, as in my

accent. Yeah, I know people get pissed off with how you talk. It doesn't matter. So what? God. It was funny—I was talking to a singer friend of mine and he was getting very upset. He'd done something on TV and he noticed that he was getting comments and 90 percent of them were lovely, but 10 percent were "I don't like what you were wearing" or "I don't like how you sang" or "I don't like your lyric" and "You're a dick" and da-da-da. And I was like, Jesus Christ, if I let that get to me, I would have a mental breakdown. There are too many people in this world. You cannot please everybody. And you know what? *Fuck 'em.* [Laughs] That's the attitude you have to have. If they don't like it, fuck 'em, but let's hope that they do.

#### Let's hope they do.

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Controlling temperature and humidity is as important while drying as while growing.

SUBJECT: **Proper Drying**

FROM: **Clarise P.**

🌿 What is the right way to dry weed? I've tried so many different methods.

Dear Clarise,

When you've determined that it's time to harvest, cut individual branches from your plant and hang them to dry in a cool, dark place with plenty of air circulation. Take off the big fan leaves and leave the

sticky "sugar" leaves that protrude from your flowers. After five to eight days or so, the branches should snap instead of bending, and this is the time to trim off the rest of the leaf and stems and put your buds into glass jars for curing.



*Danko Tip:* Outdoor plants grown from seeds will yield more than those grown from clones.



In aeroponic cloning, cut ends are misted with mild nutrient solution.

SUBJECT: **Lacewings**

FROM: **Billy**

🐛 My plants have aphids and my buddy suggested I use lacewings. What are these and how do I deploy them?

Dear Billy,

Green lacewings are predatory insects from the *Chrysopidae* family. Their larvae feed on the eggs and immature stages of pests including spider mites, thrips, whiteflies and more. In other words, they work great in an IPM (integrated pest management) system as an organic alternative to potentially harmful pesticides. And the good news is that lacewing larvae love to devour aphids so much so that they're sometimes referred to as "aphid lions"!

You can order them online, and they are shipped as eggs in an inert medium made up of rice or bran hulls. You disperse the mix around the base of your plants, and within a few days they will hatch and start munching on aphids and their eggs.

SUBJECT: **Organic Cloning**

FROM: **David D.**

🌱 I love to grow my plants from clones, but I haven't been able to find a method that gives me near 100% successful rooting. I avoid the use of any chemicals on my plants, but one day I realized that by using cloning gel on my cuttings I was introducing chemicals on day one. Is there an organic way to root clones?

Dear David,

There are many options for organic cloning solutions, and an online search will reveal plenty of products with which to dip your clones. The important thing for a high rooting success rate is that the clones must be kept in the proper environment while inducing roots. Warm temperatures and high humidity are essential, and I recommend a cheap and simple plastic tray with a clear lid under a bank of fluorescent lights. You will immediately see more roots appear more quickly, and your plants will have a healthier start to life resulting in a heavier harvest.

SUBJECT: **No Buds**

FROM: **Van the Man**

🌱 My plants have no signs of buds or seeds. Why is that?

Dear Van,

There are a variety of reasons why your plant isn't flowering. It could be too young and therefore still in its vegetative stage. If your plant receives more than 12 hours of light per day, it will stay in the vegetative stage and not grow flowers. Likewise, if your plant doesn't receive at least 8 hours of light per day, growth will slow to a level where flowering will be impaired.

With so little information, it's difficult to diagnose the reason why you're not seeing flowers, but keep in mind that your plants need approximately 12 hours of light per day in order to thrive. Any interruption of 12 hours of darkness can keep the plant from flowering as well.

SUBJECT: **Different Plants**

FROM: **Dan L.**

🌱 At the moment, I'm growing two auto-flowering Super Skunk plants from White Label Seeds that were germinated at the same time. I've noticed a big difference between them: One of them is doing really well and has already entered the flowering stage. The other one is much smaller, and the structure of its branches is completely different as well. It hasn't even released pistils yet. My worry is that I've done something wrong—or was it the fact that I used feminized seeds?



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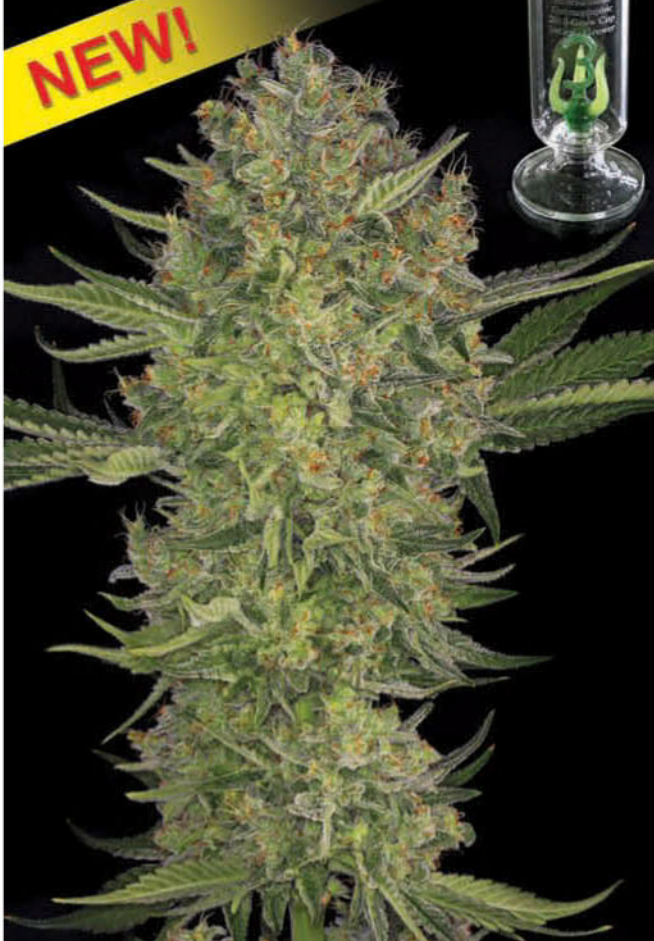

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*Danko Tip* Hydroponic reservoirs must be oxygenated with an air pump and air stones for healthy root growth:

I'm using a 300-watt LED full-spectrum light and organic soil. Would you be so kind as to take a few minutes and have a look at my pictures? I've tried to get some advice online but have had no success so far.



Dear Dan,

When you purchase a pack of seeds, you will still get a variety of phenotypes expressed in the resulting plants. Some will stretch more than others, and flowering times can vary as well. It looks like you got two distinctly different phenotypes from your seeds, but both should result in a good product. The smaller plant could take longer to flower, but the resulting buds may be more along the lines of what you're looking for.

SUBJECT: **How Much Will I Yield?**

FROM: **Hi4daze**

I am writing to comment on your response to Ronn J. in the March HT issue.

You suggested that Ronn's yield should be about 2.5 pounds per cycle for a 5-plant grow. I found this interesting because I have been raising a 5-plant grow for about five years now.

My setup is nothing unusual, but I have been tweaking the same grow space for a while now and feel I have pretty much maxed out what my 17.5-square-foot grow is capable of. I grow in five 10-gallon pots with two 315-watt CMH lights each, and my average yield is between 4 and 5 ounces per plant depending on strain (and my attention to detail). I do add a couple of LEDs, mostly in the cooler months as the temps allow.

Therefore, with half of Ronn's light and a third of the pot size and grow space, my yield is one-half of your suggested yield! You are spot on! I would love to hear your thoughts on selective defoliation for increased yield.

Dear Hi4daze,

Good to hear that my prediction matches your results! As for defoliation, I think as long as you're selective, you can increase your yield of tops substantially by removing leaves below the canopy as long as you do it during the vegetative stage or early flowering. After that, I would keep the leaves on to power the production of flowers.



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Thank you, High Times. Congratulations on your 500th issue!



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*Danko Tip:* Clones are much more likely to thrive when taken from vegetating plants rather than flowering ones.

SUBJECT: **Reefer Refugee**

FROM: **Joe**

🌱 This may be a bit of a long and unorganized read, but I really hope you can give me some sound advice. I'm a 31-year-old dude who has what most would consider a great career in the infrastructure-development industry in the Southeast. I'm not going to lie—I took the job solely for the money and, honestly, I'm just not happy here. I've dreamed of making a move into the industry and growing great weed, but I'm unsure how I can achieve this goal.

As odd as it may sound, I actually began growing weed well before ever smoking it. My younger brother was a heavy smoker and was often in court for possession. At the time, I didn't understand the benefits or enjoyment of marijuana, and to some extent I demonized the "drug."

It wasn't until I was wrongfully accused of possession that I began to actually listen and read about weed. Somehow that sparked my interest in growing it at a personal level—for my brother. I shit you not: I read about growing weed for at least a solid six months, and watched you and Jorge on *You Tube*, as well as studying many other videos, countless blogs, and a number of informational sites. I ended up buying a setup that sat around for a while before I finally started my first grow.

It was absolutely fascinating to me, watching a plant that I put time and hard work into grow into something beautiful. I learned every single day, and I read more and more. My hard work was flourishing, and I was so excited watching my first plant grow that whenever I'd open that tent to check on the girls it felt like Christmas.

I grew weed for a solid two years without ever trying it, just giving it to my brother and my close friends. We'd invest in seeds and we had a hobby. We grew outside and inside. We had ups and downs like anyone would, but we were having fun and learning so much.

I remember the first time I tried weed. We made cannabutter out of an ounce of Headband that we grew and made muffins. I was watching *The Manchurian Candidate* and remember my legs feeling numb and having to rewind the movie constantly after about an hour. I was high as fuck! It was very intense and I really didn't like it. My brother told me to eat less or just smoke a small amount next time and let it ride and become more accustomed to it. He was totally right, and the next time when I smoked it, I really enjoyed being high. It felt totally controllable, and I came out of my social shell.

Fast-forward to today. I haven't had time to grow since I moved last December, and I really miss it. That feeling of Christmastime never went away when I would open my tent, make my hike into the woods or enjoy the fruits of my labor. And now that I've become so interested in strains and lineages, and the culture in general, I want to do something about it. I want a career growing the best weed that I can grow, but I'm in the dark about how to make this happen. I'd really appreciate any advice in regard to making my dream come true. I just want to work with amazing people and grow the best weed I possibly can. Thanks, my man!

Dear Joe,

Thanks for sharing your story! If you're unhappy where you are, you should move and follow your dream to grow legally. I know so many "reefer refugees" that have relocated themselves to states in which they can somewhat safely ply their trade, and not a single one of them regrets it.

On the other hand, I know plenty of people that have chosen to stay in (or don't believe they have the means to leave) places where they remain miserable and at risk for their cannabis-related pursuits. Life is too short, and the risk in some places is far too high, not to explore your options in a more favorable location. Good luck! 🌱



GROWING  
EXPOSED

# THE GAME HAS CHANGED

Article by Jeremy Deichen

Beautiful buds ready for harvest

**Growing Exposed**, a new video series produced by Jeremy Deichen, has been coined "the MTV Cribs of the marijuana industry" for its exclusive look into the once underground world of North America's gardens. Aside from revealing secrets of industry leaders, David Robinson, author of *The Growers' Handbook*, lends his expertise to a segment called *Teachings of the Garden Sage*. You can check out gardens, like the ones that make British Columbia's Kootenay region the Mecca of B.C. bud, on the latest episodes at [growingexposed.com](http://growingexposed.com).

When Bryan Johnston began growing cannabis, it was the early '90s. He was using 1000 watt bulbs hung from the ceiling commonly referred to as "Donkey Dick" lights. During this period, British Columbia was becoming infamous for the highest quality bud on the planet and people were calling the province's crops "Beaster". A lot has changed in the 25 years since — including his setup and the base plant food he uses, thanks to Green Planet Nutrients.

An environmentally conscious guy, Bryan says he remembers, back in the day running those 1000 kilowatt bare bulbs. Today, his indoor garden uses a smaller wattage but yields dramatically more per watt than ever before.

**"Everything has changed.  
The game has changed,"**

he says. "I'm running doubled-ended P.L. lighting with four Spectrum King 600-watt LED lights and doing a massive cross spectrum of light, running four 315-watt P.L. ceramic metal halides. So I'm totaling just under 4,700 watts and yielding on average, two pounds or more for every 1,000 watts of light."

The most recent change to Bryan's garden wasn't in setup though, but to a new base plant food. Manufactured by Green Planet Nutrients, Dual Fuel is a highly concentrated, two-part formula that provides all the energy plants need without the need for calcium or magnesium additives. It's known for an easy application process which leaves less room for error.

"I've tried different brands but I've been using Green Planet's Hydro Fuel and got fantastic results, so when I went to my local grow shop and got some samples of Dual Fuel about two years ago, it wasn't a stretch to give it a try," Bryan says. "But on some level, any type of switch is a leap of faith as a grower. People who consume my product are used to a level of quality and I can't afford to give them anything less than the best."



Drying buds on the drying rack

Growing Lemon Haze since 2011, Bryan says this strain takes a little longer to flower than normal but the flavour and sativa experience is well worth it. He finds it easy to grow and the resulting product very consistent in quality. With the switch to Dual Fuel, Bryan says he noticed changes to his plants almost right away.

"The switch was really easy and the first noticeable difference was that my plants became way greener than before and they stayed lush green into the later stages of flower. It's also cleaner and I don't have salt residue or buildup. Plus I'm getting better and faster yields, so I'm saving about a week overall on my crop. I've done the math on what it costs to run other brands and not only am I saving money but I'm having better results."

With Dual Fuel, Bryan uses only three additives: Green Planet's Massive Bloom Formulation, Finisher, and Terpinator. He says when he's tested plants grown with the additives versus ones without, he's noticed way more cannabinoids.

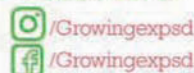
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3



4



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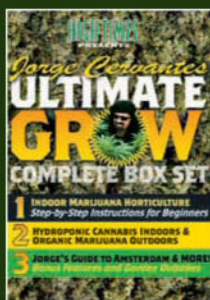


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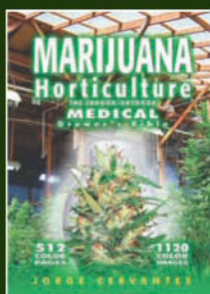


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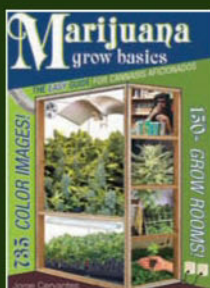
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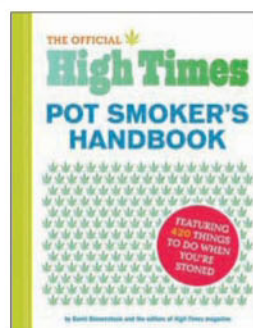
## High Times Books



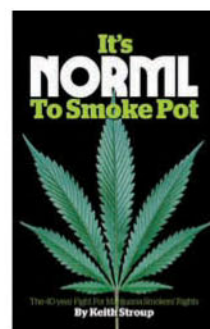
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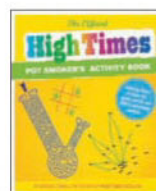
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by David Bienenstock  
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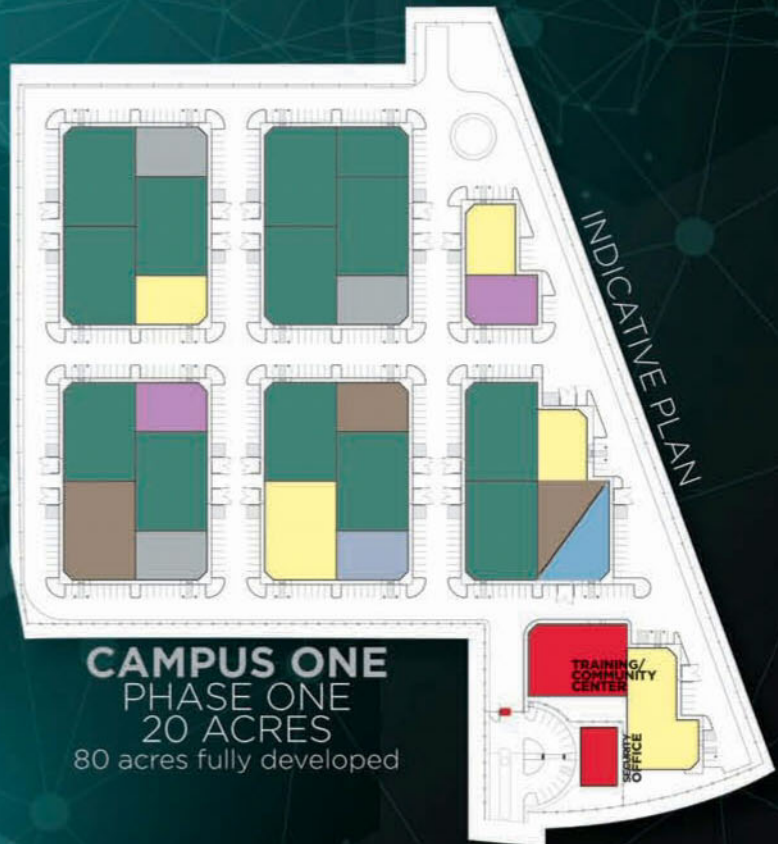
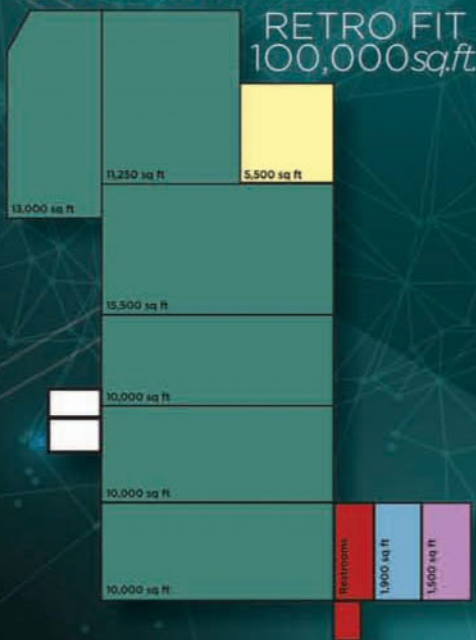
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## High-Flying French Onion Soup

Get cozy on a wintry night with this THC-infused soup from one of Los Angeles's finest cannabis chefs. *By Elise McDonough*

A bright star in LA's burgeoning cannabis dining scene, Andrea Drummer was named one of the top 10 pot chefs by *Green State* and has received praise from *Vogue*, *National Geographic* and the *Los Angeles Times*. A pioneer of combining weed with haute cuisine, Drummer graduated from Le Cordon Bleu before joining master chef Neal Fraser at respected restaurants including Vibiana and Redbird, as well as the Ritz-Carlton.

Full of fantastic recipes that are designed for the home cook, Drummer's new book, *Cannabis Cuisine: Bud Pairings of a Born Again Chef*, will teach you how to elevate your cuisine and work with the flavor of cannabis rather than seeking to cover it up. With wisdom distilled from her years running Elevation VIP Cooperative, Drummer designs custom menus, dialing in THC dosage to create bespoke experiences for private clients.

This French onion soup is a savory way to feature cannabis as a nourishing ingredient that fits well with the flavors of creamy cheeses, rich caramelized onions and crunchy croutons. Staying in on a cold night while curled up by a warm fire and supping on this indulgent soup is an amazing way to get high!

*Yields seven servings at 30 milligrams of THC per serving (depending on the strength of your cannabutter).*

### INGREDIENTS

2 pounds yellow onions (sliced thin)  
1 tbsp. cooking oil  
1 tbsp. butter  
1 tbsp. clean cannabutter (210 mg per tbsp.)  
½ tsp. sugar  
1 tsp. salt  
3 tbsp. flour  
6 cups veal stock  
1 cup Blue Moon Belgian White (or other Belgium ale)  
½ cup sherry  
1 tbsp. rosemary (chopped fine)  
1 tbsp. shallots (minced)  
1 bay leaf  
½ tsp. ground sage  
Kosher salt to taste  
12 oz. gruyere cheese (grated)  
4 oz. fontina cheese (grated)  
2 oz. Colby Jack cheese (grated)  
½ yellow onion (raw)  
2-3 tbsp. cognac  
Croutons (see House Made Croutons recipe in Cannabis Cuisine)  
4 tbsp. olive oil (for drizzling)

### DIRECTIONS

Place a heavy-bottom stockpot over medium-low heat. Add cooking oil, butter and cannabutter to pot. Add sliced onions and stir until they are evenly coated with the oil. Cover and cook for about 20 minutes until they are very tender and translucent. Then, to caramelize the onions, turn heat under the stockpot to medium or medium-high heat. Add sugar and salt and continue to cook uncovered, stirring frequently until the onions have browned and reduced significantly.

Once caramelized, reduce heat to medium-low and add flour to the onions. Brown the flour for about two to three minutes, taking care not to scorch it. (If the flour does not form a thick paste, add a bit more butter.) Stir in about a cup of warm stock, scraping the cooked-in bits off the bottom of the pan. Add the rest of the stock and the beer, sherry, sage and bay leaf to the soup. Simmer for 30 minutes.

Add the cognac and grate the raw onion into the soup, and then transfer it to seven individual small oven-safe bowls. Add a few ounces of the gruyere cheese directly into the soup and stir. Place the croutons in a single layer on top of the soup. Sprinkle the rest of the cheese in a thick layer on top of the croutons, making sure to cover the edges of the bread to prevent burning. Drizzle with a little oil or melted butter. Place in a 350°F oven for about 30 minutes. To finish, place under the broiler and brown the cheese. 🌿



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## The Science of Cannabis

THCV, cannabinoids, opioids  
and marijuana music.

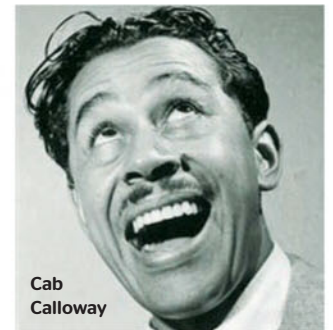
Got a question for Dr. Mitch? Email him at [420research@gmail.com](mailto:420research@gmail.com).

Could THCV help seizures the way CBD does?

*Hugo N. Weaving*

Hi Hugo, THCV (tetrahydrocannabinvarin) has shown compelling anti-seizure properties when tested on rats. It's not psychoactive, which gives it a lot of potential to be used as medicine. Unfortunately, research in the United States and the United Kingdom is stymied by its Schedule I status, so human trials are for now a long way off.

also emphasize that lots of medical users report the plant works as a substitute for prescription opioids. When you think about the bummer of opioid withdrawal, these findings seem pretty delightful.



**Cab Calloway**

Why are some strains more relaxing than others? Please don't just give me the usual rant about *indica* vs. *sativa*.

*Two Tens*

Howdy Tens, The fine distinctions among strains have not received much attention in the published literature, but terpene research provides a little insight. To oversimplify, *indica* and *sativa* strains produce different types and amounts of terpenes, which likely affect the psychoactive properties of each particular strain. Experiments reveal that both limonene and pinene seem to slow heart rates and increase relaxation.

Does heroin use go down in medical-marijuana states?

*Poppy Doyle*

Hi Poppy, Treatment admissions for heroin problems drop by 20 percent in medical-pot states in the US. Data from Canada

Do you have a favorite marijuana tune?

*DJ Trix*

Hey DJ, I play Cab Calloway's "Reefer Man" every year in my drug class.

Is legalization improving the racial disparity in drug arrests?

*Rob Hope*

Hey Rob, Alas, not really. Arrest data suggest that racial disparities still remain. Sadly, they don't seem to arise from different rates in drug use, or different rates of committing other crimes, or even living in a neighborhood where police really crack down hard on drug crimes. We're going to have to work harder to make America safe for everyone. No one is free until all are free. 🌿

*Dr. Mitch Earleywine, PhD, is the author of Understanding Marijuana and The Parents' Guide to Marijuana.*





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A dizzying variety of CBD products can be found on the market, each with a unique formulation. Variances in strain genetics, growing conditions, and extraction methods become apparent in the chemical composition, taste, and color of the final product. It's evident that some CBD products are simply better than others. Hemplucid's philosophy is that a therapeutically effective extract must honor the whole plant.

**Isolate CBD:** Extractions from the hemp plant have traditionally been derived from singled-out CBD molecules. This method has been overwhelmingly employed in CBD oils found in the marketplace. Through the process of isolation many potentially beneficial compounds are removed, including phytocannabinoids. We believe this was well-intentioned, but misguided. Studies have indicated that CBD itself has a narrow therapeutic window, with beneficial impacts decreasing significantly at a certain dosage.

**Whole Plant CBD:** Rather than isolating CBD itself, a whole plant extraction contains hundreds of different compounds, like phytocannabinoids, terpenes, and other phyto-nutrients. These compounds work in combination with CBD, creating what is



called the "Entourage Effect." With a large variety of endocannabinoid receptors in the nervous system and the immune system, a full spectrum CBD extract containing a large variety of other beneficial compounds is much more likely to provide the therapeutic efficacy typically associated with the cannabis plant. For these reasons, Hemplucid has utilized the whole plant in our extracts.

## Hemplucid Products Provide:

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## Ben Carson Diagnosed With Reefer Madness

The sleepy doctor is spreading misinformation about marijuana.

Justin Strekal is the political director of NORML. Visit [norml.org](http://norml.org).

**A**NOTHER TRUMP ADMINISTRATION official, Housing and Urban Development (HUD) Secretary Ben Carson, strayed into the marijuana-law reform debate. Unfortunately, the doctor did not know his facts. In recent remarks given to the Native American Housing Association, Carson veered into reefer-madness territory.

According to the *Flathead Beacon*, the HUD secretary briefly strayed from his prepared remarks to note that he believed marijuana use was just as problematic as opiate abuse. "I'm not all that enthusiastic about marijuana because there have been numerous studies that show exposing a developing brain to marijuana can lead to lower IQs," Carson said. "We already have enough people with a low IQ, and we don't need any more."

The ongoing stereotype of dopey marijuana consumers may be funny in the movies, but it runs counter to evidence-based science. NORML has reported on three studies over the last year and a half that have come out disproving this myth.

In London, researchers concluded, "In summary, the notion that cannabis use itself is causally related to lower IQ and poorer educational performance was not supported in this large teenage sample."

Data published in the *Proceedings of*

The ongoing stereotype of dopey marijuana consumers may be funny in the movies, but it runs counter to evidence-based science.

*the National Academy of Sciences* led researchers to conclude: "In the largest longitudinal examination of marijuana use and IQ change... we find little evidence to suggest that adolescent marijuana use has a direct effect on intellectual decline... [T]he lack of a dose-response relationship, and an absence of meaningful differences between discordant siblings lead us to conclude that the deficits observed in marijuana users are attributable to confounding factors that influence both substance initiation and IQ rather than a neurotoxic effect of marijuana."

In the medical journal *Addiction*, researchers wrote: "[W]e found that youth who used cannabis... had lower IQ at age 18, but there was little evidence that cannabis use was associated with IQ decline from age 12 to 18. Moreover, although cannabis use was associated with lower IQ and poorer executive functions at age 18, these associations were generally not apparent within pairs of twins from the same family, suggesting that

family background factors explain why adolescents who use cannabis perform worse on IQ and executive function tests."

Investigators concluded: "Short-term cannabis use in adolescence does not appear to cause IQ decline or impair executive functions, even when cannabis use reaches the level of dependence." Their findings are consistent with those of several other studies, which have found that cannabis use alone during adolescence does not appear to have a significant, direct adverse effect on intelligence quotient.

Furthermore, as to Secretary Carson's remarks in the context of the nation's opioid epidemic, it is important to note that medical-marijuana access is associated with reduced rates of opioid use and abuse, opioid-related hospitalizations, opioid-related traffic fatalities and opioid-related overdose deaths.

Don't let those who speak in outdated rhetoric fool you. Stay vigilant against those who maintain the systems of prohibitionist oppression. ✨

### FREEDOM FIGHTER

By Kevin Mahmalji, NORML national outreach coordinator

#### A Safer Alternative

Jessica Kelly is fighting for patients.

After being diagnosed with a painful and debilitating autoimmune condition called interstitial cystitis, Jessica Kelly saw firsthand the many challenges that patients who deal with chronic pain face when trying to find effective and compassionate medical care. As a result of her experience—which included having adverse reactions to most of the pharmaceuticals she was being prescribed—Kelly started to

research alternative options to manage her pain. After coming across studies suggesting that medical cannabis could be used to manage chronic pain, she wanted to learn more.

"Patients are being taken off of their medicine and denied treatment; people are killing themselves because their pain is going unmanaged. We deserve to have access to medical cannabis which is much safer and more effective for managing chronic pain when compared to opioids," Kelly said.



Feeling frustrated with the lack of advocacy efforts in her home state of Kansas, Kelly decided to get involved with the Kansas City chapter of NORML, where she quickly found

herself serving in a leadership role as a member of the organization's board of directors. Kelly was also instrumental in the passage of Question 5, an initiative that reduced penalties for possession of up to 35 grams of cannabis from a criminal misdemeanor to a civil violation punishable by a \$25 fine.

The initiative also eliminated local penalties for the possession of marijuana-related paraphernalia.

In addition to her work with KC NORML, Kelly volunteers with the New Approach Missouri campaign, which advocates for patients like Kelly to have the option to utilize medical cannabis. Kelly also manages KC NORML's and New Approach's social-media sites. "I feel privileged to be part of such a dedicated and compassionate group of activists that support patient-focused cannabis reform in Missouri," she said.



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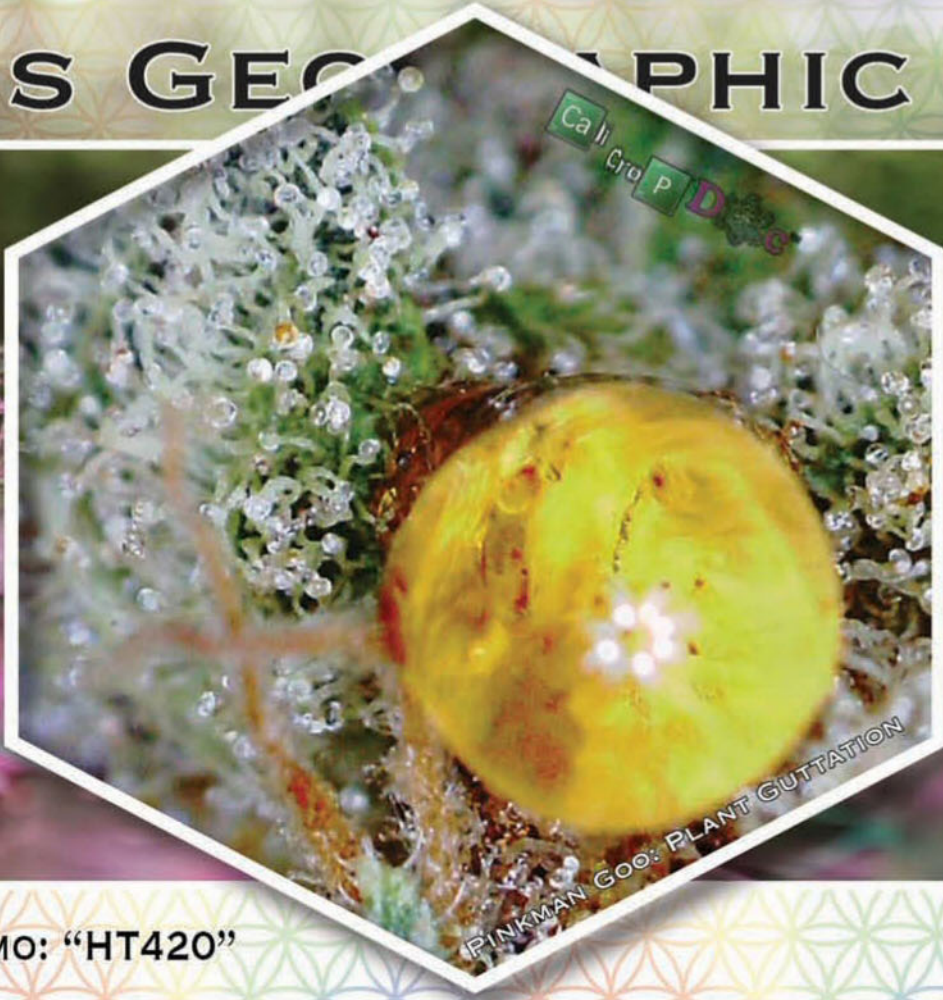
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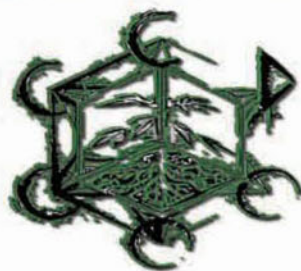


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# CANNABIS INFRASTRUCTURE: FIVE AREAS TO WATCH

Scott Holby is a Freelance Writer with a focus on Cannabis Industries

Nearly a century of senseless prohibition did little to stamp out the cannabis plant's use and production. And now that policymakers are enacting fairer regulation and legislation, legitimacy is being restored to the cannabis industry. Recent changes have brought renewed focus to retailing and production, but prohibition's legacy is most seriously felt in the undeveloped nature of cannabis infrastructure.

Every industry has a deep infrastructure based on the processing, distribution and marketing of products and services. Put together, the components make up the industry's value chain. Each step adds

new dimensions to a raw material that companies and consumers are willing to pay for. And it is these layers of transformation that often offer the most financial rewards, despite requiring greater skill and investment. *Why should cannabis investors focus on infrastructure?* Technology is shaking up every industry, from small businesses to multinational corporations. New production, distribution and marketing models reward consumers with cost savings or improved experiences, but pose a threat to established players. Cannabis companies must innovate to survive over the long term.



## 1 Tracking And Distribution

Regulations are changing, but cannabis will remain a controlled substance around the world. Governments and public

health agencies have an interest in keeping detailed records of who is producing and distributing cannabis and in what quantities, whether it's for taxation purposes or public safety. Companies like Alternate Health (CSE:AHG;OTC:AHGIF) have developed health code-compliant software and they will have a huge opportunity to set the stage for how cannabis data is maintained and how taxes are collected.



## 2 Impaired Driver Safety

The Canadian government has signaled that impaired driving is a key concern as it develops regulations surrounding legal recreational cannabis. This concern is shared by state governments, and a few companies like Cannabix Technologies (CSE: BLO;OTC:BLOZF) have made a splash in the marketplace with innovative breathalyzers focused on cannabis impairment. There's still a long way to go before law enforcement is set to use technologies like Cannabix, but market interest shows this a technology to watch.

## 3 Medicines And Therapeutics

Ever since medical cannabis began to gain traction in the 1990s, health care innovators have been pushing to harness cannabis's healing properties. Strict regulation hindered most research, but recently companies like Alternate Health have been conducting studies on medical applications for a wide range of conditions. As cannabis science continues to develop, the next generation of natural medicines will be patented and produced by these innovators.



## 4 Lab Testing And Public Safety

Whether it's smoking, vaping, or vaporizing, the largest segment of the cannabis market will still be consumption. This puts an added pressure on public safety agencies to ensure legal cannabis is free of harmful additives or contamination. This should provide plenty of new testing opportunities. Companies that have a strong laboratory program, like Alternate Health, will have the foundation to tackle a sudden surge in demand.

## 5 Shipping And Delivery

Whether it is CBD oil shipped from overseas or medical cannabis delivered by bicycle from a dispensary across town, there are huge opportunities for new players in the industry. This is a broad category of infrastructure, but one with no established models or players. Certainly a consolidated model will develop over time, but there is an excitement that the next tech giant is quietly building the model of the future.





# Handling Risk With Diversified Cannabis Companies

Nick Swan is an avid investor and advocate for Medical Cannabis Industries

Nearly everyone who has ever considered putting a few dollars away for the future has been told to 'diversify your assets' in an investment portfolio.

Why does the notion of varied investments, with their ups and downs, seem so counterintuitive – even if they even out over time? It must be because diversification's strength is not maximizing short-term returns, but instead managing risk. This approach ensures stability and reliability, generating in time the returns we are all after. But is there a way to enjoy the benefits of diversification while focusing on a high growth industry, like cannabis?

Companies use the same strategy of diversification in their operations, acquisitions, products and the holdings they secure. And this practice is not lost on the most effective companies in the cannabis industry. As the industry emerges from its infancy, serious players are relying on diversification

more and more readily to stake out a leadership position.

## The Cannabis Business Factbook 2017 indicates almost 70 percent of manufacturers of edibles also specialize in other products.

Companies are also engaged in the medical and technological aspects of the industry and these businesses are diversifying their range of services and infrastructure they supply to the industry. The advantage for investors is that a diversified corporation is accomplishing the same thing as a diversified portfolio – all under one roof. By having a stake in each of the sectors of the industry, some of the guesswork is eliminated for the investor. Professionals with history and knowledge in the industry are the ones making the calls and their track record is available for anyone to see.

The cannabis market is still developing and any attempt to make foolproof projections is impossible. But how does one limit risk in the "wild-west" landscape of the cannabis industry?

Minimizing risk through diversity is in every investor's best interest to take advantage of companies whose business models capture diversification across the market. Some investors may try to "play it safe" on their own, making a diverse selection within the industry, but businesses like Alternate Health is already several steps ahead and playing it smart.

The growing cannabis industry has attracted interest from both seasoned investors and first timers looking to get into a business that has been a hobby for a long time. The good news is that every sign points to huge profits to be made in the industry, but that potential comes with its share of risk. That's why backing diversified companies can give investors the best of both worlds when it comes to cannabis.

## Women In Cannabis



### Dr. Michele Reillo

Dr. Reillo received her MA Doctorate from the College of Notre Dame and her baccalaureate from the U of Maryland. Dr. Reillo pioneered the application of hyperbaric medicine in the field of HIV/AIDS and immunology. She has published multiple articles in the medical, nursing, and educational fields and has received governmental and private sector funding for clinical research. She has developed educational applications for health care practitioners and patients to facilitate comprehension of how the endocannabinoid system relates to wellness and management of disease processes.

► ► Why do you think women are dominating the cannabis biz?

The medical cannabis field embraces feminine energy and the element of caregiving and improving the quality of life is innate to women. What is exciting in the medical cannabis arena, is the presence of men who are also caregivers, who are openly sensitive, compassionate, and aware of the power of expressing their own feminine energy.

► ► Why have you chosen to this field?

I was actively involved in the AIDS epidemic from the

very beginning. During the years prior to the advent of antiretroviral therapy, medical cannabis was truly all we had to offer patients and was essential to alleviating nausea, pain, and loss of appetite associated with this devastating syndrome. Comprehension of how retroviruses affect the endocannabinoid system fostered my commitment to medical cannabis education, to enhance awareness of the critical importance of phytocannabinoid therapy in the management of human cannabinoid deficiencies and associated diseases.

► ► Why is it important to continue to support research and development for Cannabis related industries?

Research and development of phytocannabinoids derived from cannabis is paramount in health care. Because medical cannabis is beneficial in reducing inflammatory process in brain trauma, cancer, autoimmune diseases, and endocrine disorders, to name a few, research in the prevention of the onset of disorders such as these is immediately warranted. Phytocannabinoid and pharmacogenetic research are complimentary fields which hold enormous promise

in addressing the onset of hereditary disorders. The future of international health care is directly affected by research and development in the medical cannabis industry.

► ► What do you think is the most convincing argument for the use of cannabis as medicine.

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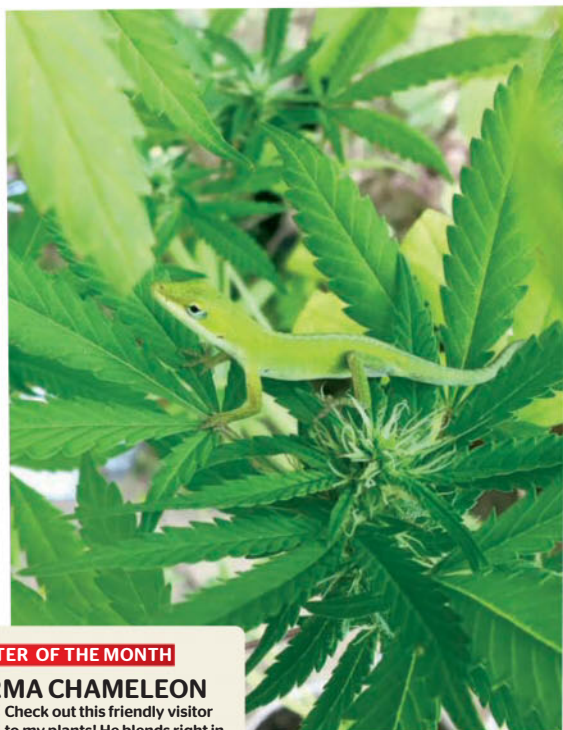
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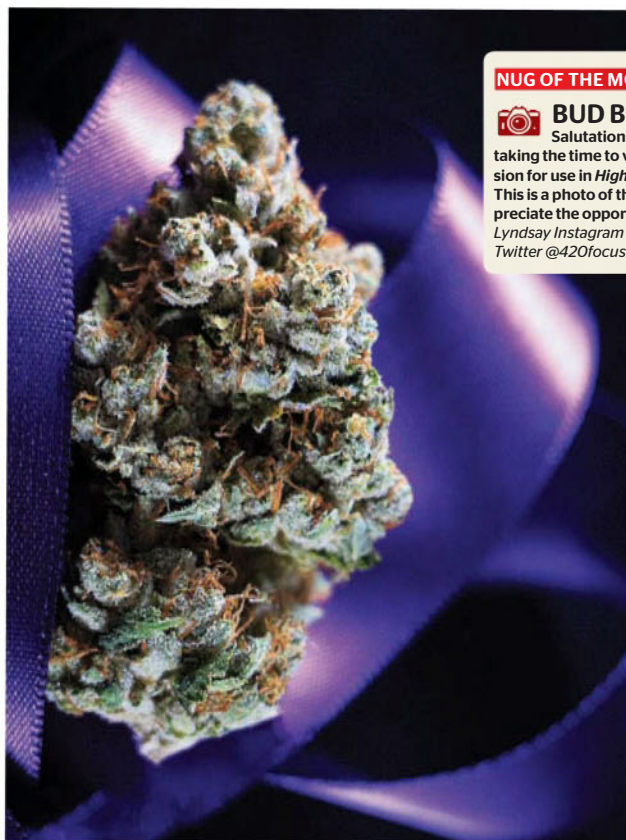


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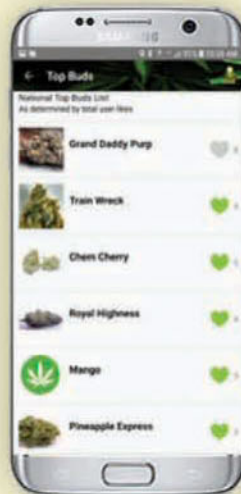
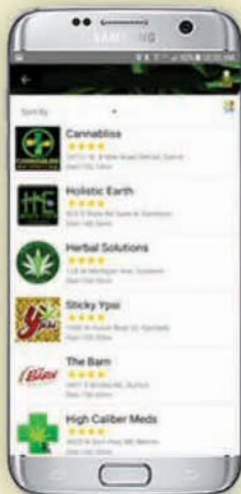
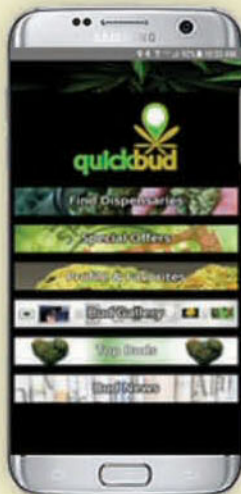
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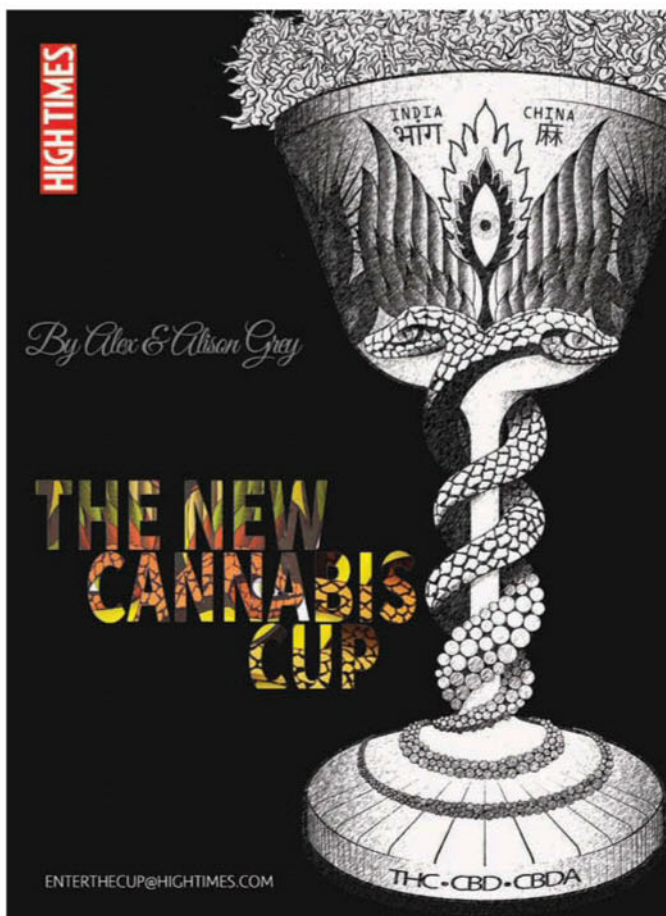
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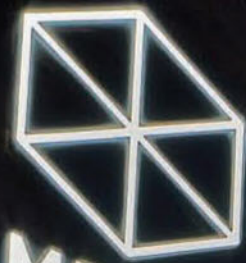
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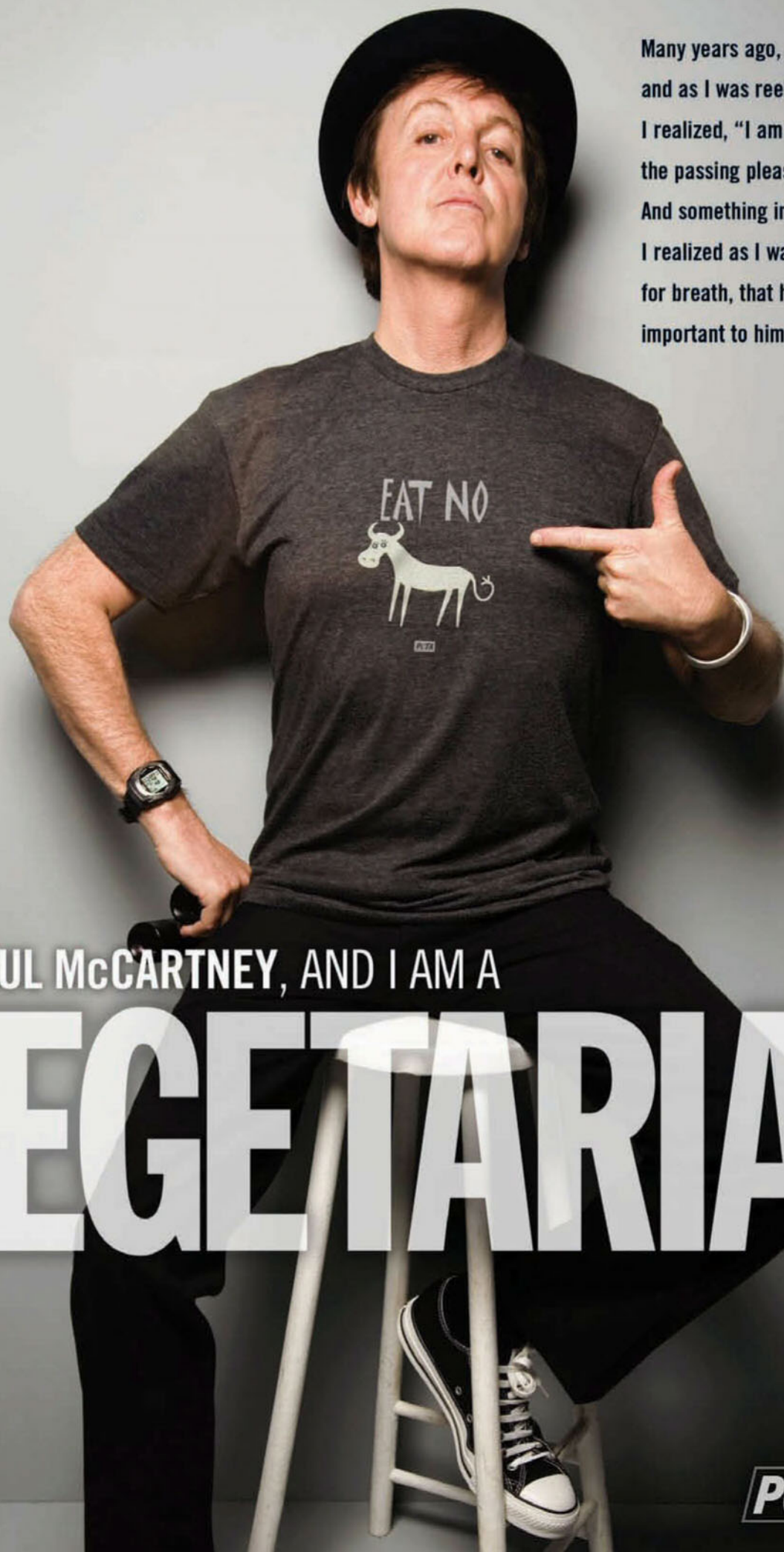
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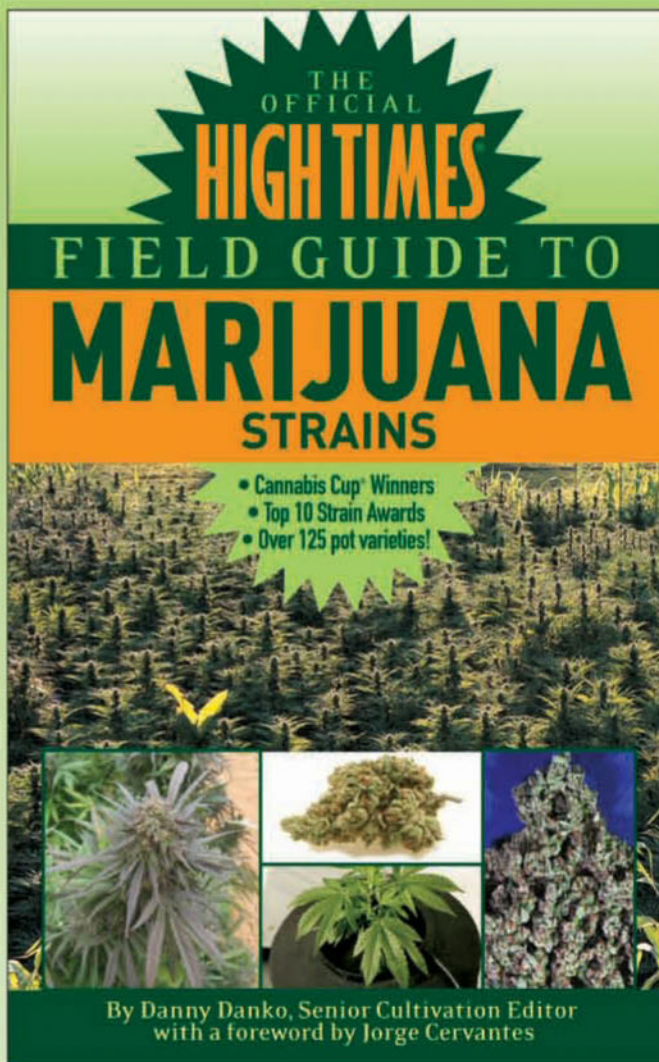


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Lambsbread	\$125	G13 Alpha Dawg	\$100	Afghani Pakistan Hash P	\$80	Pink Kush	\$80
Love Potion Next Gen	\$75	G13 Chem Dog	\$100	Afpak X Skunk	\$80	Roadkill Skunk	\$80
RockStar Kush	\$55	Golden Temple Kush	\$80	Bubble Gum Indica	\$65	Silverback Gorilla	\$125
Tuna Kush	\$100	Grand Daddy Purple	\$100	Garlic Bud	\$65	Trainwreck X Kush	\$85
<b>HYBRID</b>		Harmony	\$59	Hindu Kush	\$50	<b>SATIVA</b>	
\$100 OG Kush	\$100	Hippie Crippler	\$80	King Regular	\$100	90-Day Autoflower Thai	\$80
BC Mango X NH21	\$225	Island Sweet X Skunk	\$100	Kings Crown	\$100	Harmony X Thai	\$70
Big Bud X C99	\$80	JoJo Kush	\$59	Malawi Gold X Thai	\$150	NH #21 X Early Mullimbimby	\$225
Black Tuna	\$100	Kings Crown X Thai	\$80	Maple Kush	\$69	Sour Diesel X C99	\$70
		Kings Ransom	\$80	Master Kush	\$80	Orig. Haze x Skunk	\$80



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