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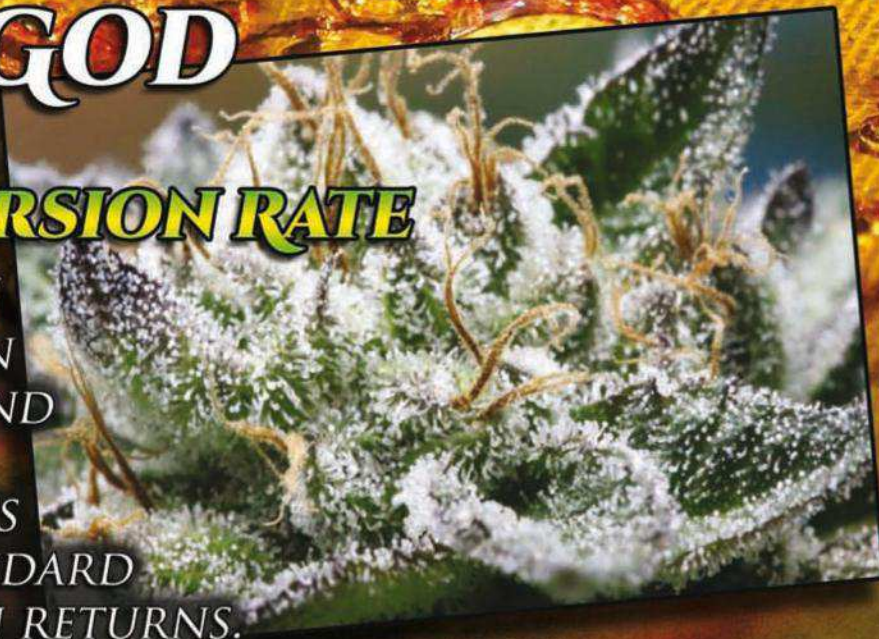
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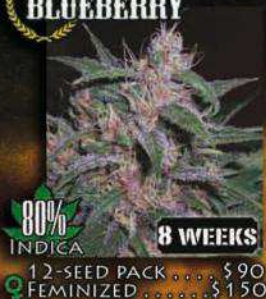
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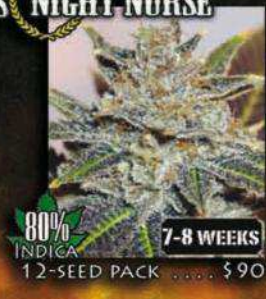
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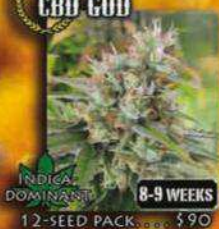
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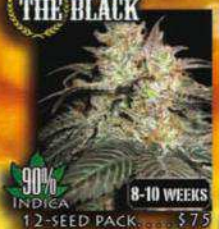
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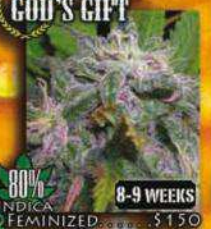
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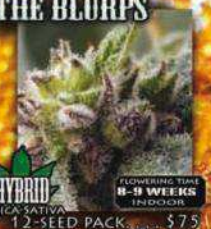
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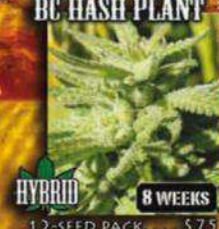
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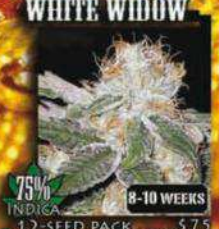
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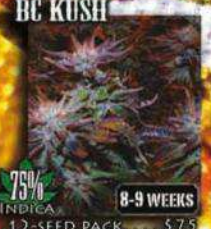
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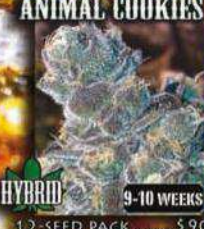
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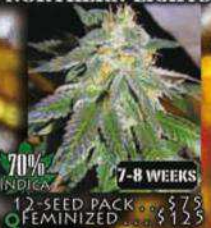
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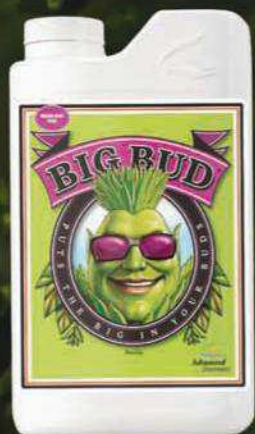
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HIGH TIMES JULY



"INDIVIDUALS WHO CHOOSE TO GROW THEIR OWN CANNABIS SHOULD HAVE ACCESS TO CULTIVATION SOLUTIONS THAT ARE IN CONTROLLED ENVIRONMENTS, SAFE AND CAN PRODUCE HIGH-YIELDING, HIGH-QUALITY CANNABIS."

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44 BIGGER YIELDS MADE EASY

With legal markets emerging, garden productivity is more important than ever. Learn how to increase your yields with simple horticultural techniques. *By Nico Escondido*

59 LEGAL WEED IN URUGUAY

Uruguay is the first country in the world to legalize pot. We investigate the South American nation's burgeoning recreational cannabis scene. *By Nathaniel Janowitz*

66 THE WORLD'S BIGGEST GROW!

Take a tour of Aurora Cannabis Inc., a licensed producer in Canada with massive cultivation facilities including a mind-boggling 800,000-square-foot greenhouse. *By Danny Danko*

80 CLONING FAQ

Successfully reproducing clones from a mother plant can vex even expert cannabis cultivators. Learn everything you wanted to know about rooting cuttings! *By Stoney Tark*

93 HIGH HOSTS

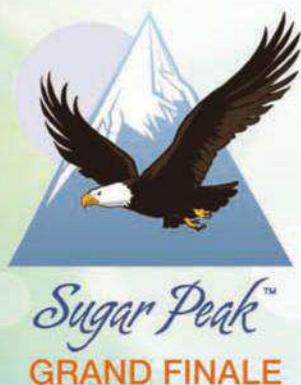
High Times brought the fire on consecutive nights this winter, celebrating women in the cannabis space and the 100 most influential people in pot in two epic events. Don't miss the highlights!

101 THE HT INTERVIEW: JACKIE MARTLING

Stand-up comic Jackie Martling talks dirty jokes, choosing pot over booze and his time as the head writer for the *Howard Stern Show*. He's shy about it but he also has a new book out. *By Mike Gianakos*



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► HIGH TIMES HOW-TO

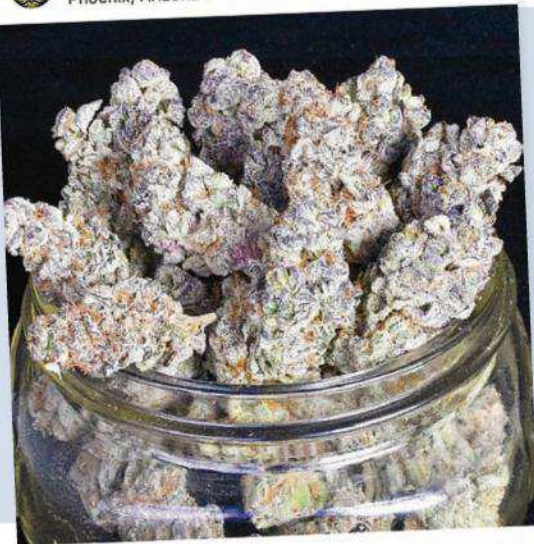
We're all about passing along the helpful stoner knowledge we've acquired over 44 years of being the world's premier marijuana magazine. While we offer up advanced tips and tricks for seasoned cultivators (see "Bigger Yields Made Easy," on page 44), we also have plenty of advice for newbie tokers looking to cover the basics. Take, for instance, our handy guide on "How to Hide the Smell of Weed." Every stoner—and particularly those in prohibition states—should master the methods to hiding the smell of pot. Our guide discusses the proper storage, ventilation and consumption methods and much more to make sure you're not attracting unwanted attention when you puff.

Those new to the cannabis world will also want to check out our step-by-step guide on "How to Roll a Joint." While joint-rolling can be tricky to master, our easy-to-follow primer will have you spinning tight, beautiful cones in no time. **Head to hightimes.com to learn more!**



Roll with HT.

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Phoenix, Arizona >



► ON INSTAGRAM

Just about every situation in life can be improved by Ice Cream Cake. Especially when it's served in the form of gorgeous, frosty nuggets. This glorious batch, bred by @seedjunkygenetics_jbeez and grown out, hang-dried and hand-trimmed by @phoenixcannabisco, reportedly tipped the scales at a whopping 29 percent THC. Even if that number is a tad... ambitious... we desperately want to sample this jar. Patients in Arizona can find Phoenix Cannabis Co. products at dispensaries throughout the state.

► THE SIX CRAZIEST ANTI-WEED PSAS

It's easy to forget, given the increasing mainstream acceptance of cannabis in recent years, that it wasn't that long ago that television was rife with anti-pot public-service announcements. While pot propaganda PSAs were never taken seriously, these ads now appear entirely preposterous—almost as if the creators were telegraphing how ridiculous the subject was with increasingly outlandish and surreal premises.

One '90s spot features the Teenage Mutant Ninja Turtles (notorious stoners) declaring, "Drug dealers are dorks!" A PSA from the 1980s features a stoned surgeon in scrubs puffing on a joint and cackling before an operation. And who could forget the contributions to the genre by the government-scoold organization Above the Influence? The talking dog ("Hey Lindsey, I wish you didn't smoke weed") and the melted-into-the-couch girl ("This is the way it's been since she started smoking pot") were instant classics.

Most recently, Australia dropped its "Stoner Sloth" campaign, in which pot causes teens to transform into giant sloths and forget what salt is, for some reason. Head to hightimes.com and check out our picks for the six most ridiculous anti-pot PSAs of all time!



► 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/HighTimesMag) and Instagram: (@hightimesmagazine) for all the latest news as it's happening!

@livinlegal: @HIGH_TIMES_Mag Weed relax me so much at bedtime I wanna just stay awake all night

@StephaniedeJag3: @HIGH_TIMES_Mag I find the credit unions more accommodating to this industry. The big banks are dropping known cannabis industry people like flies. Don't get it.

@Cannabis_Corner: @HIGH_TIMES_Mag So... Any cannabis plant with .3% THC or less will be a commodity. Any cannabis plant with more than .3% THC will be Schedule 1. Enforcement will be a nightmare.

@DagoStayRising: I just wanna be on that plane heading my way to the @HIGH_TIMES_Mag SoCal Cannabis Cup already

@LiliaKilmer: @HIGH_TIMES_Mag While not technically a senior yet, I'm 52 and I use it daily for aches and pains, perimenopause symptoms, joint pain, PTSD, you name it. It works.

@Cpntom: @HIGH_TIMES_Mag Stop the widespread drug testing for THC and synthetic marijuana will go away

@_thedoughlife: @HIGH_TIMES_Mag All depends...in theory indoor is better as the grower is capable of controlling all variables when done correctly, however, outdoor is the 'natural way' and that means more than the overall quality to some.

@joeproctor30: @HIGH_TIMES_Mag High AF is the mission no need for permission thanks though

@rox1smf: @HIGH_TIMES_Mag If you're a smoker and don't carry at least an emergency lighter, we can't be friends!

@lifeofkyesi: @HIGH_TIMES_Mag Bill Murray for president



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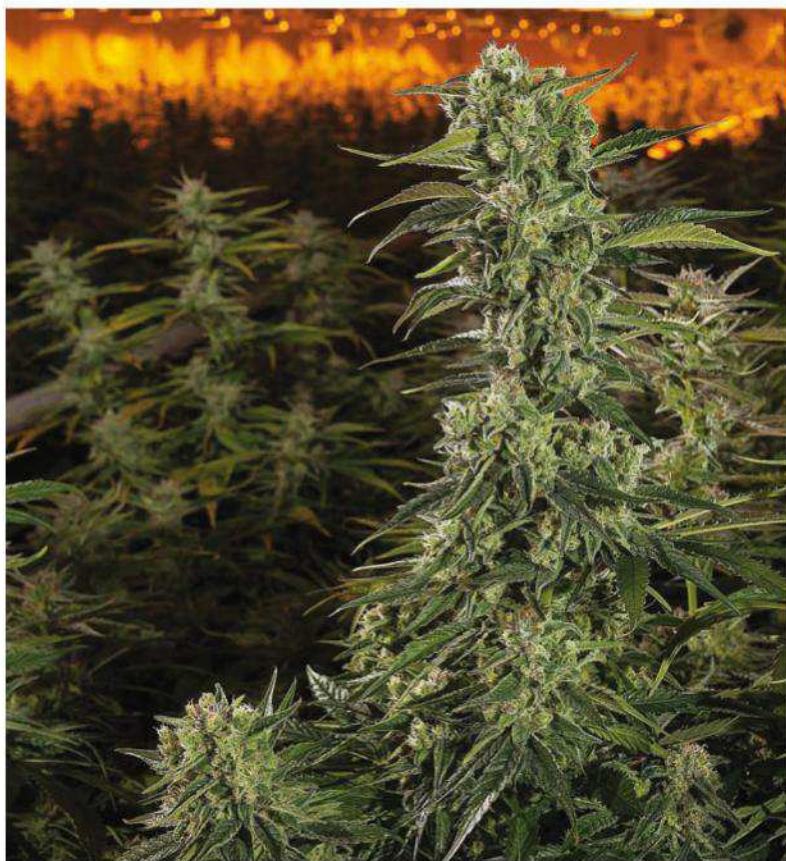
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BIGGER & BETTER

WITH CANADA SET to become the largest country in the world to legalize cannabis this summer, we head north to explore the world's largest marijuana-production company. Aurora Cannabis is a licensed producer (LP) of pot boasting four state-of-the-art facilities across Canada—including a mind-wobbling 800,000-square-foot greenhouse known as Aurora Sky located in Edmonton. Aurora Sky cost \$100 million to build and is capable of producing over 100,000 kilograms of cannabis a year. Our senior cultivation editor, Danny Danko, visited the facility and could only truly appreciate its remarkable proportions by helicopter. And Danko wept for its beauty (this is a really big grow).

Impressive as its cultivation locations proved to be, Aurora Cannabis is setting itself apart through quality, consistency and innovation. And, thanks to a recent expansion that has Aurora supplying partners in Europe, Australia and South America, an even greater number of patients and partakers are in very good hands. Learn more about this extraordinary company on page 66.

Also in this issue, we check in with the first country in the world to legalize cannabis. In 2013, Uruguay launched a nationwide legalization effort aimed at diminishing drug trafficking and destabilizing the black market. Five years later, the South American nation is hitting its stride, offering affordable, government-grown weed through pharmacies and higher-end pot through sanctioned cannabis clubs. Join us for a tour of Uruguay's legal marijuana scene.

Plus, Nico Escondido offers up three simple tips to maximize your indoor garden, we examine frequently asked questions about cloning to improve your success rate and we catch up with the former head writer for *The Howard Stern Show*, Jackie "the Joke Man" Martling.

Enjoy the 510th issue of *High Times* magazine.

Mike Gianakos

EDITOR-IN-CHIEF

HIGH TIMES

PUBLISHER & CEO

ADAM LEVIN

EDITOR-IN-CHIEF

MIKE GIANAKOS

ART DIRECTOR

FRANK MAX

SENIOR CULTIVATION EDITOR

DANNY DANKO

CULTURE EDITOR

MARY JANE GIBSON

STAFF WRITERS

CHLOÉ HARPER GOLD

AB HANNA

COPY EDITORS

MATTHEW GRACE

MIKE DIPAOLO

RESEARCH ADVISOR

DR. MITCH EARLEYWINE

FOUNDING

PUBLISHER/EDITOR

THOMAS KING FORÇADE

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EXECUTIVE VICE PRESIDENT

OF PUBLISHING

SCOTT MCGOVERN

CHIEF REVENUE OFFICER

MATT STANG

CONSULTING PUBLISHER

MARY C. MCEVOY

VICE PRESIDENT

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DAVID NEWBERG

CHIEF CANNABIS OFFICER

NICO ESCONDIDO

PROGRAM MANAGER

JACKEE STANG

SOCIAL MEDIA MANAGER

LEO RECHETNIAK

DIRECTOR OF SALES

CHRISTIAN RAMIREZ

CONTRIBUTORS

MIKE ADAMS, ERIK ALTIERI,

PAUL ARMENTANO, JEN BERNSTEIN,

ERIK BIKSA, SEAN BLACK,

JUSTIN CANNABIS, FRANCESCA GENNARI

ANDRE GROSSMANN,

BRIAN JAHN, K OF TRICHOME TECH,

KEVIN MAHMALJI, MAUREEN MEEHAN,

MARK MILLER, HARRY RESIN, CHRIS ROBERTS,

MICHAEL SIMMONS

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THE TIME IS MEOW

Just got a peek at the June 2018 issue and so excited that you guys put the Super Troopers on the cover. Almost as excited as I am to see the new movie (nice timing by the way). *HT* and Broken Lizard is the perfect pairing—and that cover is awesome. Well done.

Jim
Hoboken, NJ

MYTH BUSTING

In New York State, medical cannabis is legal with physician approval but I have not applied for such a card and therefore, I do not smoke or use it. But I do believe in the healing power of plants and I fundamentally believe that when a natural substance can be used to heal, it should always take precedence over its chemical cousin. A number of years ago, I had to fill a prescription regularly for a family member and found myself at the local pharmacy almost every other day. The pharmacists' most challenging customers were the individuals looking to refill opioid prescriptions. Their suffering was real and it was heartbreaking. As I waited and I watched, I began to change my point of view. I had always accepted the myth of cannabis. I accepted without question that it was a gateway drug. Oh, sure, there were exceptions. A close family member smoked cannabis most of his life and became a very successful businessman but still, the myth lingered.

But seeing those suffering at the pharmacy changed me. I began to consider the possibility that I had been raised on a myth. As I continued to confront the myth, I learned that even the term *marijuana* was intentionally used to create the fear of something foreign and nefarious. Connecting cannabis to Mexicans was just racist and distracting. As a child in the Seventies, there was no such concern about alcohol. Alcohol was viewed as an acceptable rite of passage. Universities regularly had keg parties on the first day of college for freshmen and every college had a campus pub. Alcohol was part of college life, even if it increased sexual assaults on campus or violence or drunk driving.

Today, the majority of Americans support the legalization of marijuana and believe that the criminalization of marijuana has disproportionately impacted people of color (who do not smoke more than their white counterparts) and prevented people with serious medical ailments access to a plant that may alleviate their suffering and even possibly eradicate



THE MYTH OF CANNABIS HAS INCREASED OPIOID ADDICTION, PREVENTED HEALING FOR THE SUFFERING, AND UNNECESSARILY FILLED OUR JAILS. WHEN FICTION DICTATES LAW, LAW IS WITHOUT JUSTICE.

their symptoms. For me, I learned that just because words are repeated will not make them accurate and just because laws are created justice will not necessarily follow. When I read of a child with severe epilepsy unable to function being denied the very medicine that has the power to reduce the number of seizures, I am saddened beyond words. When I think of the cancer patient experiencing loss of appetite from chemotherapy denied cannabis in states that do not allow medical marijuana, I am horrified. When I think of veterans denied marijuana to alleviate symptoms of post-traumatic stress disorder, I am astounded. These same individuals are freely prescribed heavier drugs with greater side effects in the name of healing. Heal the patient. Do not place profits above healing or agendas above health or greed above well-being.

The myth of cannabis has increased opioid addiction, prevented healing for the suffering, and unnecessarily filled our jails. When fiction dictates law, law is without justice. Let the facts stand. Yes, let cannabis be on trial and let the people decide. A national referendum on the legalization of cannabis may be the one vote that unites us all.

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COMMON SENSE

While I am very thankful to have a job, it is slowly sucking the life out of me. So, I smoke weed on the way to work and on my way home. If I don't, I'm pretty sure I would be a road-rage story on the 5 o'clock news. There are a handful of problems associated with my self-medicating situation though, number one being that I live in Texas—and not the free-loving, stay weird city of Austin either.

While we openly talk about needing a beer or glass of wine, wanting a puff of green rarely comes up. I know for me that just a little hit releases some of the anxiety and pent-up anger. It's like nature's medicine. Not everyone agrees with my theories though.

I had a conversation recently with a family member about weed and it went south quickly. She proceeded to talk about how marijuana was a gateway drug and just as dangerous as heroin.

I couldn't believe it. I politely interjected that yes, some people who smoke weed will also do harder drugs. But the progression has more to do with who you hang with. I have seen first-hand what heroin can do to somebody and have no idea how people can even begin to compare the two. It just baffles me.

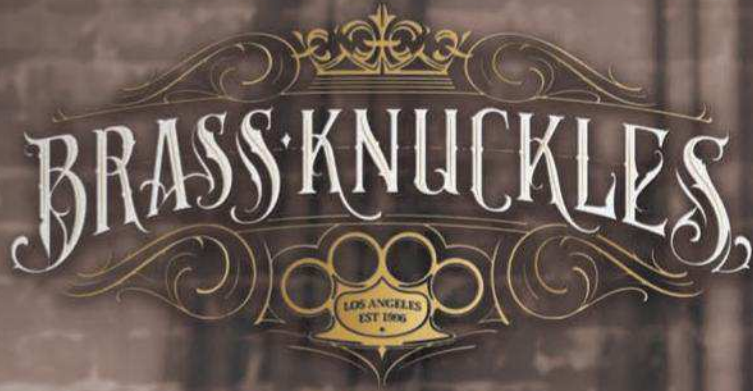
So, my plea today is for states that have moved forward with legalization—please set a good example, so that the rest of us have a chance too.

Sarah
Texas

ART THERAPY

I am on my life's mission to change the world's view on cannabis. I'm attempting to accomplish this by bringing the most popular cannabis strains to life like never before. I grew up with my father being the chief of police so you can only imagine how cannabis was portrayed my whole life. I have since overcome all the disinformation fed to me since I was a child. Now I want to show every single person on earth just how amazing and life-changing cannabis is to me. Check out my artwork at blazinbuddies.com.

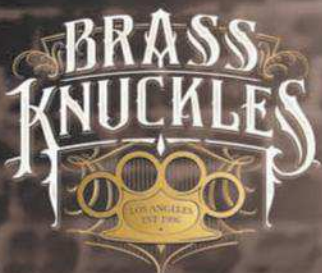
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CANADA'S AURORA GLOW Behold the mighty strain called Thor in the gargantuan ganja gardens of Aurora Cannabis Inc., a licensed producer for the upcoming legal adult-use market in the Great White North. Tour their massive marijuana cultivation facilities starting on page 66. *Photo by Justin Cannabis*





JUST THE FAQs Growing from clones is a great way to maintain a consistent crop featuring the characteristics you most desire from your cannabis. Our Cloning FAQ feature (on page 80) will increase your cloning confidence (and success rate), which will lead to steady production of healthy pot—like these mouth-watering Honey Badger buds. *Photo by Justin Cannabis*

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**CONTACT
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BIGGER YIELDS These young clones will stay in a vegetative stage for two more weeks allowing them to develop and grow up through a multi-level trellis system. For more on smart trellis techniques to help increase yields see our "Bigger Yields Made Easy" feature on page 44.
Photo by Nico Escondido



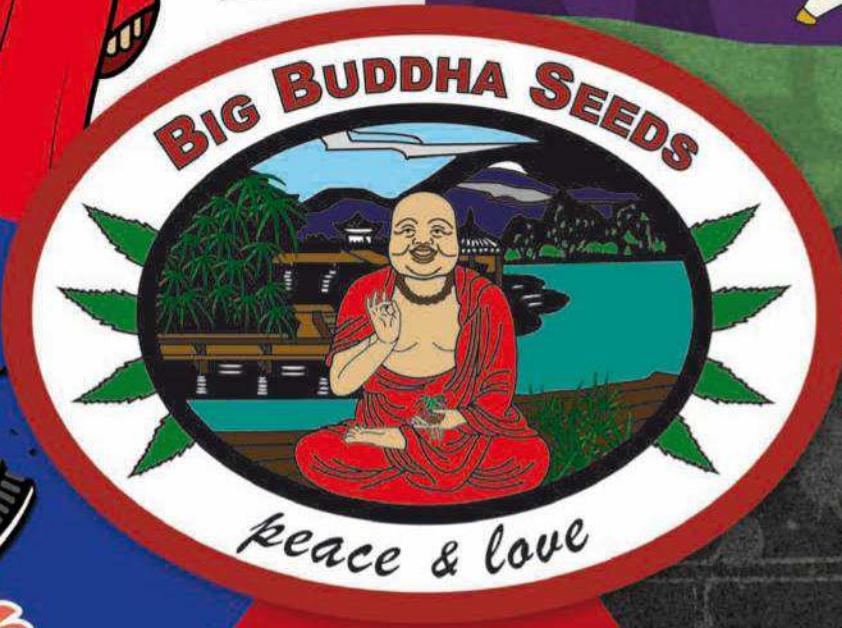
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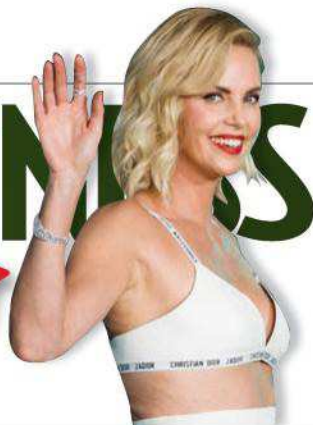
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HIGHWITNESS NEWS

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STYLE

HEMP HAMMOCKS

Get more out of the great outdoors with Grand Trunk's new Hemp Hammock Series. p.30



ENTERTAINMENT

MODEST MOUSE

Modest Mouse drummer Jeremiah Green addressed anxiety and depression with cannabis. p.32



powers is not completely unexpected. It's inevitable in an emerging industry that monopolies will form and, without oversight, overwhelm their smaller competitors. Capitalism gonna capitalize, after all.

But even bigger players can run into problems in the nascent industry. Consider the case of Stephanie Smith, who claims to be California's largest landlord of marijuana businesses. She is currently

suing the city of San Bernardino for a new ordinance that she alleges can create monopolies and prevent her from renting property to growers and other cannabis businesses.

The edibles industry as a whole in the Golden State is consolidating—that is, smaller players are being nudged out—as full legalization takes effect, which is not what pot reformers had in mind. In 2016, the state's share of the edibles market topped \$180 million in sales, according to a report in *GreenState* by *High Times*'s own edibles maven Elise McDonough, but today there are only 28 licensed edibles companies. Small and medium-size cannabis-infused food- and drink-makers are getting shafted by steep rents and onerous new taxes and fees, and by local governments that are banning cannabis businesses outright.

UNPREDICTABLE HICCUPS

THE BRAVE NEW WORLD OF LEGAL CANNABIS IS THE ONE WE'VE BEEN DREAMING OF AND FIGHTING FOR. YET SOME UNEXPECTED ISSUES ARE TAINTING OUR UTOPIAN DREAMS. BY MIKE DIPAOLA

SO MUCH GOOD has come from legalization, of course. But within the tangled webs of rules and regulations spun by the various local jurisdictions around the United States, there are emerging unexpected consequences, presenting a challenge for policymakers and stakeholders.

One consequence is that small businesses, whether they're grow operations, retail shops or anything in between, are being edged out by bigger players. Small farms in Washington, for example, which exalted in new opportunities when cannabis became legal, are finding it difficult

to compete with the big boys, which are better suited to shoulder the burdens of regulations (and their attendant taxes and fees) and survive through periods of very low wholesale prices.

As a representative snapshot of this phenomenon, look at the October 2017 numbers as documented by the *Stranger*: The state's largest weed producer, Northwest Cannabis Solutions, sold more product (\$2.647 million) than the rest of the state's 500 smallest farms combined (\$2.638 million).

Granted, the consolidation of economic

« Of course, it would be unrealistic to expect a formerly black-market sector to be free of growing pains as it transitions to a legit enterprise. In California, the degree of pain depends on whom you talk to. “Nothing is going smoothly,” Jackie McGowan, the director of local licensing and business development for K Street Consulting in Sacramento, said at a recent California Cannabis Industry Association conference. “There’s a lack of licensing. A lack of quality product. A lack of labs to test quality product. A lack of distributors that are following the rules. And then a lack of a retail point of sale to get product to the customer.”

The recently launched medical-pot program in Pennsylvania is certainly popular, as evinced by dispensaries in that state having difficulties keeping up with demand. But lawmakers are concerned that patients’ jobs could be at risk, if and when positive drug tests begin challenging the state law that prohibits employers from firing or discriminating against patients—a conflict that will almost certainly get its day in court.

Ohio is facing the very same issue. Its medical-pot regime will officially begin

IT’S INEVITABLE IN AN EMERGING INDUSTRY THAT MONOPOLIES WILL FORM AND, WITHOUT OVERSIGHT, OVERWHELM THEIR SMALLER COMPETITORS.

on September 8, but many of the state’s largest employers have not yet formulated policy to handle employees who might test positive for legal cannabis use. These uncertainties might have been avoided with more thorough planning, but such is the nature of a brand-new industry.

The adult-use era begins in Massachusetts this summer, even though there is somewhat of a logjam of applicants awaiting permits to go into business. Oddly enough, smaller growers might have an advantage here, since grow sites of 10,000 square feet or more of canopy are allowed lighting of only up to 36 watts per square foot, while the little guys can burn as much as 50 watts per square foot. Some observers say big grows will have no choice but to use LED lighting, which is more energy-efficient but requires more money up front (and may not produce the best flowers).

It is worth mentioning here that not

all claims of unintended consequences are really consequences at all. It has become fashionable in certain retrograde circles to claim that legal pot has brought with it rises in crime, homelessness, automobile accidents, teenage consumption and so on—but none of that is true, the result of cherry-picked or faulty information being exploited by prohibitionist scolds. Perhaps *that* consequence was easily predicted.

Unexpected outcomes are unpredictable, hence the term, but many of the issues noted here could be alleviated, if not avoided entirely, if federal laws jibed with those of local governments. Declassifying cannabis as a Schedule I drug is key to meaningful reforms, but until then, cities and states grappling with the rise of legal weed should be learning from the early mistakes of pioneer jurisdictions. The good news is that these problems are not insurmountable and that we can learn from them, and grow. 🌿

HIGH FIVE

SILVER HEADS

MEDICAL-CANNABIS ADVOCACY AND EDUCATIONAL GROUPS FOR SENIORS. BY FRANK GREGORY



GRANNIES FOR GRASS

This organization has grown to include chapters all over the US and international locations in countries such as Canada, Denmark and Australia. There are 73 chapters across the globe (and counting). The group’s site (granniesforgrass.com) is an excellent resource and provides info about medical marijuana and the endocannabinoid system. Grannies for Grass is affiliated with other like-minded groups and provides recipes on its site as well. The group is quick to point out that grandpas are also invited to get involved, as are non-grandparents.



AMERICAN LEGION

Chartered by Congress in 1919 as an organization focusing on service to veterans, the American Legion has evolved into one of the most influential nonprofit groups in the United States. The American Legion’s national executive committee passed two medical-marijuana-related resolutions in 2016 and 2017. One calls on the DEA to license privately funded medical-marijuana research in the US; the other calls on the Department of Veterans Affairs to allow medical providers to discuss the use of marijuana for medicinal purposes with vets, and to recommend it where legal.



SILVER HAIREDD LEGISLATURE

The Silver Haired Legislature advocates for seniors in several states across the country. All members are volunteers who serve without pay. Among the five priorities set this year by Missouri’s SHL is the legalization of medical marijuana in 2018. Walt Bittle, the SHL’s senate president pro tem, says that “to not provide one of the best medicines in the world is cruel and unusual punishment!” Bittle says that legalized medical marijuana should be “prescription-based only” and emphasizes that Big Pharma should not be in control.



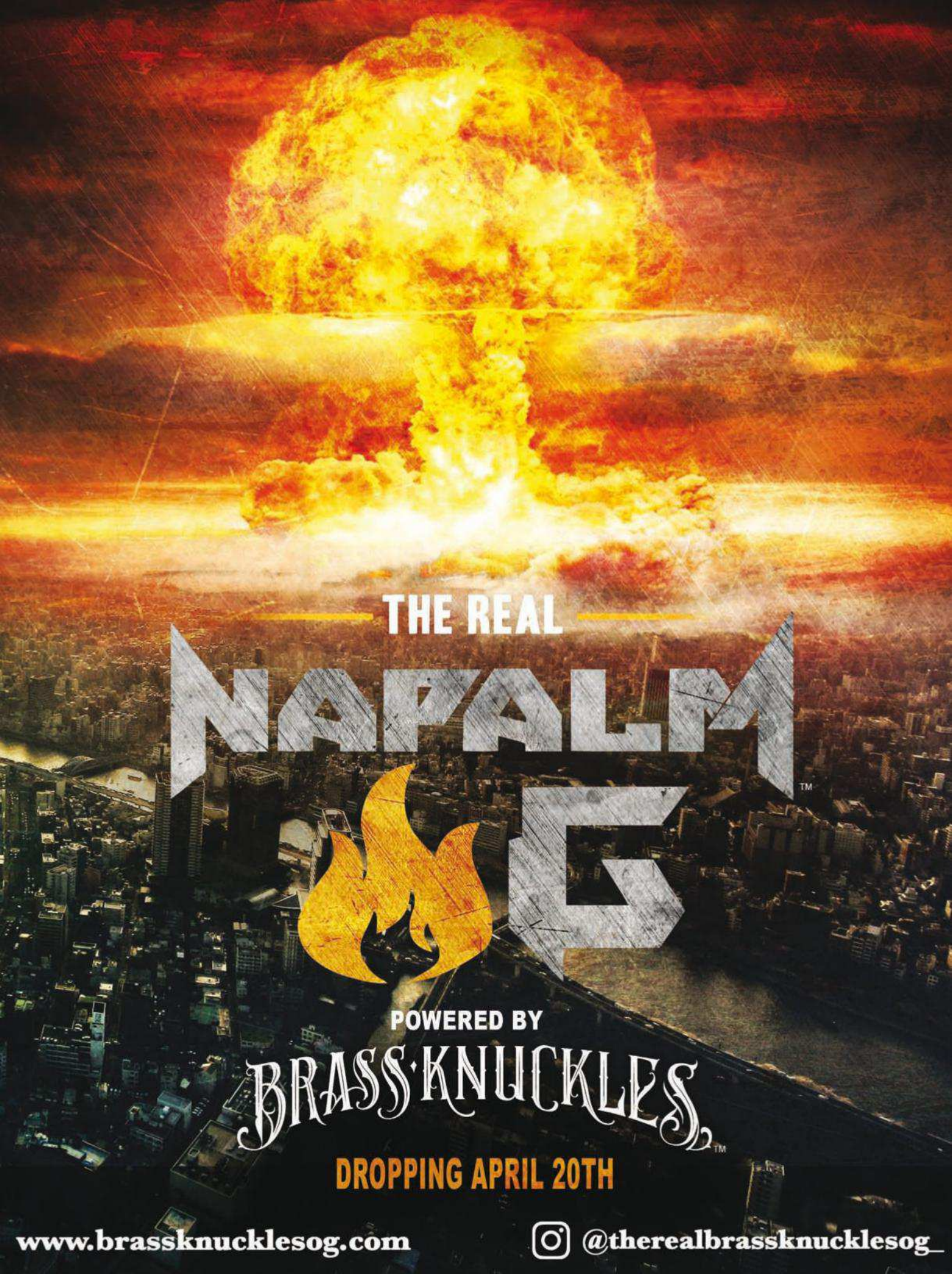
SILVER TOUR

The Florida-based Silver Tour is an education and advocacy group founded by Robert Platshorn, the former cannabis smuggler known as Black Tuna. After serving 29 years of a 65-year federal prison sentence, Platshorn founded the Silver Tour to educate seniors about medical marijuana. The group provides lectures and uses billboards, social media, and radio and TV advertising to spread the word that pot can benefit seniors. The Silver Tour is also working to assist the state in developing infrastructure to support recently passed pot legislation.



SUE TAYLOR

Sue Taylor is dedicated to educating and advocating for the health and well-being of senior citizens. Taylor is certified to teach California health-care providers about medical cannabis, and she serves on Alameda County’s Advisory Commission on Aging. She also travels the country, speaking to local officials and hosting seminars. This summer, Taylor will open the iCANN Health Center, a medical dispensary in Berkeley designed with the elderly in mind—a place where seniors can get advice about pot from their peers.



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Coffee consequences

JAVA JIVE

Drink a lot of coffee? If so, you may be messing with your endocannabinoid system. According to a new study published in the *Journal of Internal Medicine*, something in coffee can make blood metabolites involved in the endo system drop off. Put another way, coffee suppresses the same endocannabinoid chemicals that cannabis consumption boosts, says Marilyn Cornelis, assistant professor of preventive medicine at Northwestern University Feinberg School of Medicine, who led the study. The researchers asked 47 Finnish adults, habitual coffee drinkers all, to abstain from the joe for a month, then start downing four cups a day for one month, then eight cups per day the following month. It's unclear what the coffee-cannabinoid connection means for coffee, cheeba and human health. "We hope that this will be hypothesis-generating," Cornelis said, which is researcher-speak for "more study necessary." Something to think about when we wake, bake and sip.

PATIENT PERIL

As the newly launched medical-cannabis program takes shape in Pennsylvania, news now comes of an unintended consequence: the risk that patients could lose their jobs if they test positive for pot. At a recent Philadelphia City Council fact-finding meeting, a panel of lawyers, medical professionals and other stakeholders discussed the precarious position patients could be put in under the new regulations. Although Pennsylvania law prohibits employers from firing or discriminating against patients, it also states that "Employers may prohibit patients who are employees from performing any task which the employer deems life-threatening to the employee or other employees while under the influence of marijuana." No one knows if that law will stand up in court, but we'll probably find out soon enough. The medical-cannabis program is only weeks old and dispensaries are already running out of product.

INSIDE
THE WIDE
WORLD OF
WEED

Mother knows best.



MOM'S HOLDING

Actor Charlize Theron was once a dedicated stoner—"Yes, oh God yes, I was a wake-and-baker for most of my life," she told *E! News* recently. "Then," as she explained to Jimmy Kimmel, "my chemistry just changed one day and I found myself frozen in front of my fridge for like eight hours." Recently, though, she's back on the stuff, largely to help with her insomnia, a condition she shares with her mother. Theron shared a charming anecdote with Kimmel about the time her mom, Gerda Maritz, scored some edibles for her. "She was like, 'So I got some blueberry-covered chocolate ones, but if you want it faster-acting, you should go for the mints. Those you suck, and it works faster.'" Theron was plugging her recent film, *Gringo*, a darkish comedy about medical-cannabis shenanigans in Mexico City. "Your mom," Kimmel enthused. "She'll score you weed. It's really... what a woman."



Hemp has friends in high places.

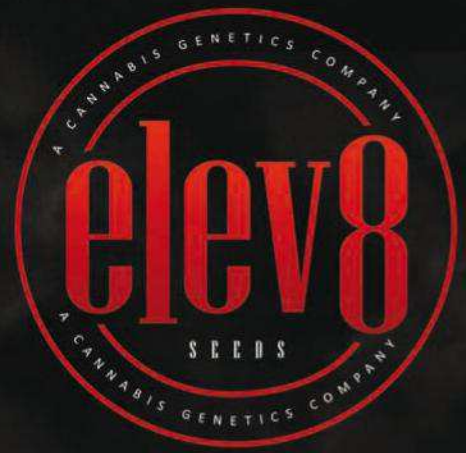
CROP BOOSTER

Hemp has a powerful new friend. Senate majority leader Mitch McConnell has announced he'll be introducing legislation to get hemp—marijuana's straight cousin—off the Controlled Substances Act. His home state of Kentucky was a major producer of hemp back in the day and is at the forefront of the versatile crop's comeback, with more than 12,000

new acres approved in the state this year. "Hemp has played a foundational role in Kentucky's agricultural heritage, and I believe that it can be an important part of our future," McConnell enthused at the announcement. Since the 2014 federal farm bill allowed states to designate hemp projects for research, some 19 states have started growing in limited, strictly controlled amounts. "It's now time to take the final step and make this a legal crop," McConnell said. If the tentatively titled Hemp Farming Act of 2018 becomes law, the plant's renaissance will be on its way.



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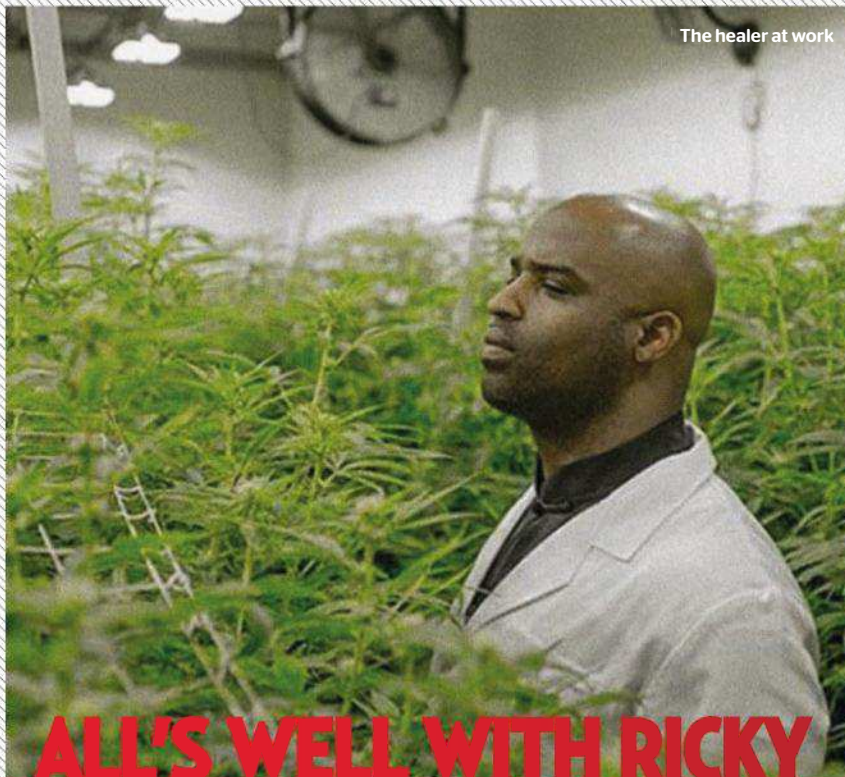


STAY AND HAVE A SPLIFF

California, the nation's cultural trendsetter, permits marijuana smoking at the point of purchase, so long as the retailer has a specially designed lounge. So far, this Amsterdam-like convenience is available at only a select few establishments in San Francisco. The Barbary Coast Collective on Mission Street is gaining traction as a one-stop shop for flowers and dabs, with a comfy lounge in which to enjoy them responsibly. The director of the city's Office of Cannabis (a.k.a. the marijuana czar), Nicole Elliot, says new permits will be issued once certain regulations are worked out. City health officials need to safeguard workers from secondhand smoke and protect neighbors from smelling the dank. Elsewhere in the Golden State, West Hollywood plans to issue up to eight lounge licenses and Alameda a couple more; Oakland and South Lake Tahoe will each have one lounge. Sacramento, Los Angeles and other cities have not authorized any lounges.

GOOD BOOK, BAD IDEA

A Nevada, Missouri, woman did what a lot of people in the Bible Belt do: She delivered the Good Book to a prisoner in jail. Unlike most Bibles given to the incarcerated, however, this one was packed with weed and methamphetamines, the drugs crammed into the book's binding. Ashley Despain was charged with delivery or possession of a controlled substance to the Vernon County Jail, a felony, the *Kansas City Star* reported. Despain was arrested in the jail's parking lot, along with the passenger in her car who had an outstanding warrant. "If you show up at the sheriff's office with drugs, you shouldn't be surprised when you get arrested," Sheriff Jason Mosher said. "Usually [a Bible] is something you bring to help somebody through situations," the sheriff added. "That's probably the wrong kind of help—putting drugs in it." Despain's bond was set at \$5,000.



ALL'S WELL WITH RICKY

Former NFL running back Ricky Williams was known for gaining yards and failing drug tests (four of them over the course of his career), but today he is leveraging his longtime pot advocacy into a vocation as a healer. With the launch of Real Wellness by Ricky Williams, the 1998 Heisman Trophy winner is bringing out a line of salves, tinctures and vape cartridges—including one called Ricky's Choice—that are geared toward healing, many containing therapeutic extracts like arnica, lavender and turmeric. "Surprisingly enough, our research found that the main demographic coming into the [cannabis] market are women ages 35 to 60," Williams told the *Sun-Sentinel*. "Cannabis coming on the scene is a reemerging of herbalism back into our culture." For now, the RW line can be found in dispensaries in San Diego, Los Angeles and the greater Orange County area. Very soon the products will be available online at rw.life.



the company, which doesn't file with the SEC, doesn't have the financial capacity to buy the town or develop the project." Such doubts were warranted, as the company has sold off its Nipton holdings for \$7.73 million to Delta International Oil and Gas Inc. (\$3.75 million of which assumes American Green's debt), with a provision that American Green can develop the town for the next five to 10 years. The transfer of holdings will purportedly give American Green the financial wherewithal it needs to "focus on implementing the revenue-generating components of Nipton," according to company chairman David Gwyther. *New Cannabis Ventures* remains skeptical, advising investors to "steer clear of the company."

GHOST-TOWN BLUES

Last summer, when the weed-tech company American Green purchased the entire town of Nipton, California, with a plan to turn the desert dot on the map into a cannabis destination, some wondered whether the penny-stock company had enough capital to make it work. *New Cannabis Ventures* warned that "Investors should be extremely cautious, as

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SPOTLIGHT

WHO WANTS TO HANG?

Adventurous stoners looking to accessorize this summer are in luck. Travel-gear purveyor Grand Trunk has released its Hemp Hammock Series, the perfect product for getting outdoors and reconnecting with nature. The Hemp Hammocks are lightweight, easy to set up and made from durable parachute nylon. They're also 20 percent larger than regular hammocks, making them perfect for sharing while camping or at a festival. Available in four different styles, each Hemp Hammock is backed with a lifetime guarantee. And for every hammock purchased, Grand Trunk donates \$2 to the Trees for Us program, improving our national forests. [Visit grandtrunk.com](http://Visitgrandtrunk.com) for more info.

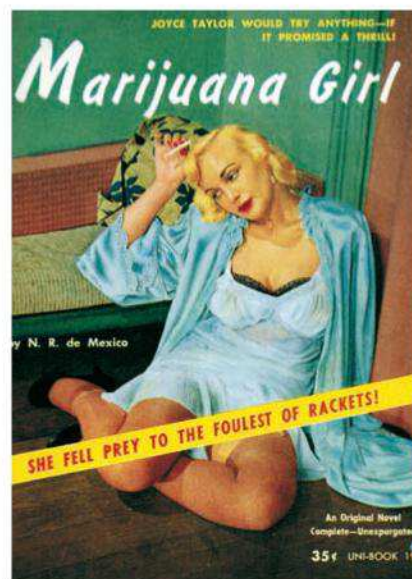
UP IN SMOKE AT 40

We won't ruin the context for those who somehow still haven't seen Cheech & Chong's 1978 film debut, *Up in Smoke*, but most experienced heads will find the punch line "It is a toothpick!" hysterically funny, no doubt having had similar experiences.

The baked duo's stoner classic was the first feature-length comedy from a major Hollywood studio made explicitly by, for and about those who smoke pot. As we tentatively celebrate long-overdue legal sanity concerning cannabis, the *Up in Smoke* 40th-anniversary collector's editions serve as tribute to those who've worked for years to combat the Drug War's scaremongering by using humor to remind us that... it's only grass, maaaaan!

The editions arrive in three versions: from Paramount Home Media Distribution, a DVD or Blu-ray/DVD combo, and from Rhino (rhino.com) an *Up in Smoke* 40th Anniversary Deluxe Collector's Edition that features the Blu-ray and a CD and an LP of the soundtrack, plus a seven-inch picture disc, booklet, poster and oversize rolling papers for the kind of bomber Chong offers Cheech when the duo first meet.

The film is a time capsule of 1970s Los Angeles. Scenes of LA's car culture, ethnic diversity and early punk rockers add realism, while memorable characters like Vietnam vet Strawberry, the Ajax lady and arch-narc Sgt. Stedenko capture period archetypes. But the film works simply because Cheech & Chong make us laugh—even 40 years later. *Michael Simmons*



ROLLING PAPERBACKS

Among the fallacious arguments that drug warriors used to maintain reefer madness were that cannabis causes a physical addiction akin to narcotics and that smoking pot is a "gateway" to harder drugs. Not surprisingly, many Americans received their drug educations from mass-market paperback books—a cheap, popular format that used the same hysteria to sell books that politicians used to pass laws.

A new coffee-table anthology called *Girl Gangs, Biker Boys, and Real Cool Cats: Pulp Fiction and Youth Culture, 1950 to 1980* (pmpress.org) collects the covers of these paperbacks, as well as their publishing histories and plot breakdowns. The milieus of these tawdry tomes reflected the evolving countercultures of the mid-to-late 20th century: juvenile delinquents, beatniks, hippies, ghetto kids, groupies, punk rockers and so on. Then as now, sex meant sales, so the covers often featured models wearing minimal (if any) clothing.

Cannabis-themed tomes include *Sex, Pot and Acid*; *The Young Lawyers Test Case*; *Death of a Hippie*; at least two called *Marijuana Girl* ("She traded her body for drugs—and kicks!"); and one that doesn't beat around the bud, simply titled *Stoned*. Our current attorney general, Jeff Sessions, apparently used his time at law school reading *The Grass Pipe*, in which the teenage protagonists are scared straight after a "marijuana trip."

Between the unintentional comedy of bargain-basement hacks and the come-hither-and-read-me covers, this collection of a long-gone low-brow art form expresses attitudes that were absurd even in their day. One can only hope—AG Sessions notwithstanding—they remain so. *MS*

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CHEAP THERAPY

Isaac Brock and Jeremiah Green float on with Modest Mouse.

ISAAC BROCK AND JEREMIAH GREEN TALK MODEST MOUSE, USING CANNABIS FOR DEPRESSION AND HOW CRAZY CAN BE INTERESTING. BY KYLE EUSTICE

JEREMIAH GREEN is in Issaquah, Washington, trying to find a place to smoke a spliff outside of his grandma's house. He's momentarily bothered by a passerby, but he goes about his business like it's any other day. The Modest Mouse drummer has been smoking cannabis for years to alleviate his depression, a condition that led to his temporary exit from the band he and front man Isaac Brock established over 20 years ago.

"I went on antidepressants, and I got all manic and weird," Green explains. "I just blew up one day. I was acting hella weird. I ended up in the hospital for six hours and realized pretty quick I didn't want to be there."

But quitting the band wasn't something Green meant to do. Modest Mouse was still basking

in the critical acclaim of 2000's *The Moon & Antarctica* and had its sights firmly set on a promising future.

"It basically took me a long time to call them because I was embarrassed," Green confesses. "All of a sudden all of that happened, and within a week or so, I was off antidepressants and I figured out what the fuck had gone on. I got back to normal and was like, 'Holy shit, I ruined my whole life basically.' [Laughs] I sat around depressed for like a year. I didn't do shit. Luckily, those guys were cool and got me back in the band."

During Green's hiatus, Benjamin Weikel kept his seat warm and Modest Mouse powered through with 2004's *Good News for People Who Love Bad News*, the band's most commercially

successful album. When Green eventually returned, things had changed.

"It was a good opportunity for him to see if he wanted to be a part of the band," Brock says. "When he got back, he was getting super-high all the time. He had normal-people weed-smoking abilities at that point. It was super-weird, because he'd be [drumming] super-slow or super-fast. It was never right. Then he got super-good at weed smoking, if that's a thing—and I think it is," Brock continues.



JITTERY JEREMIAH

"I like *indicas*," Green explains. "It's definitely helped me for sure with depression. If I drank a bunch of coffee and smoked *sativa*, I'd be shaky though. Coffee is even more gnarly."

"I SMOKE REGULARLY... AFTER TAKING THE ANTIDEPRESSANTS, I STARTED TO REALIZE CANNABIS WAS PROBABLY THE BETTER WAY TO GO."

"Master-expert level is where he is now. He can walk on tight ropes and do trigonometry with it and shit. He's always Jeremiah. I love the guy. Even when he was crazier than a shit-house rat, I had patience for it. His crazy was kind of interesting."

Brock occasionally smokes with Green and fellow band member Tom Peloso—whom he calls "some Cheech-and-Chong motherfuckers"—but for the most part leaves the toking to them.

"I smoke regularly," Green explains. "After taking the antidepressants, I started to realize cannabis was probably the better way to go. I've smoked for so long I don't really get high anymore. I just sort of smoke on a low level."

Modest Mouse are still touring in support of their latest project, *Strangers to Ourselves*, and despite becoming a new father, Green is looking forward to being on the road.

"Marijuana helps the time go faster on tour," he says. "I feel like I maybe smoke a little more on tour. It's like cheap therapy."

On the other hand, Brock, who is also a new father, has his reservations.

"I got a newborn daughter and I'm not looking forward to not being around her for five months," Brock admits. "It bums me the fuck out. I really like her. Supposedly—and this will change because all medical info from Western civilization changes every four years—the first six months is when they develop their personality, and I am terrific, so I'd like her to have some of me." 🌿

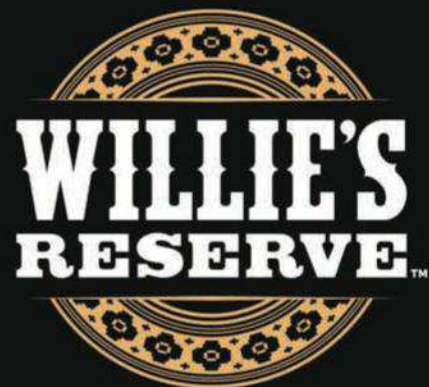
The Legend & his JOURNEY



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The Sword and
the stoned



POWER GRAB

THE SWORD ARE REACHING FOR A NEW KIND OF BLADE—BUT DON'T ASK THEM TO DROP THEIR BLUNTS. BY POLLY WATSON

"DON'T GET TOO Comfortable" is the title of a track appearing halfway through the Sword's sixth full-length studio album, *Used Future*, and though the song itself is a hazy, riff-laden jam in which bandleader J.D. Cronise muses about the dystopian future of our increasingly less green planet, it could also be a warning to the group's longtime fans that this record represents another step forward in the band's march away from metal.

It's been a dozen years since the Sword rode in on the doom-cold winds of *Age of Winters*, the debut album that landed their music in *Guitar Hero*, their faces on the covers of

numerous metal magazines, and the band, eventually, in arenas, heating up the pit for thrash pioneers Metallica. Since then, the Sword have evolved from sci-fi-channeling metalians to hard'n'heavy rockers of the order that walked the earth nearly half a century ago—or, given the speed at which popular culture now metamorphoses, eons ago.

In short, the boys of the nameless decade are now the men of the bleak present, and they no longer have to look to Philip K. Dick to extract—for inspiration and for lyrical content—horrors of the kind now looming on our event horizon. Lyrically, their latest release touches on mortality,

loneliness and earth's expanding desertscape, all in language as colorful and evocative as that of their previous efforts. Musically, it marries blown-out analog synths worthy of John Carpenter or Tangerine Dream with massive Led Zeppelin riffs and scorching, ZZ Top-style licks to yield boulder-heavy hard rockers rich with flange and distortion, interspersed with dreamier, fuzz-toned explorations.

SHUTT PREFERS TO ROLL HIS OWN JOINTS, OLD-SCHOOL STYLE. "JUST FLOWERS AND PAPERS," HE SAYS, WAVING AWAY THE BELLS AND WHISTLES OF MODERN TECHNOLOGY.

"We finally sound like ourselves," enthuses guitarist Kyle Shutt, speaking with *High Times* on the phone from Austin, the band's hometown, where they are about to kick off the first leg of a three-month US tour. "Like the best rock band!" He credits, in part, producer Tucker Martine, known largely for his work with indie darlings Decemberists and My Morning Jacket. With Martine, the band experimented with various instrumentation and forswore the digital whenever possible, in favor of the analog.

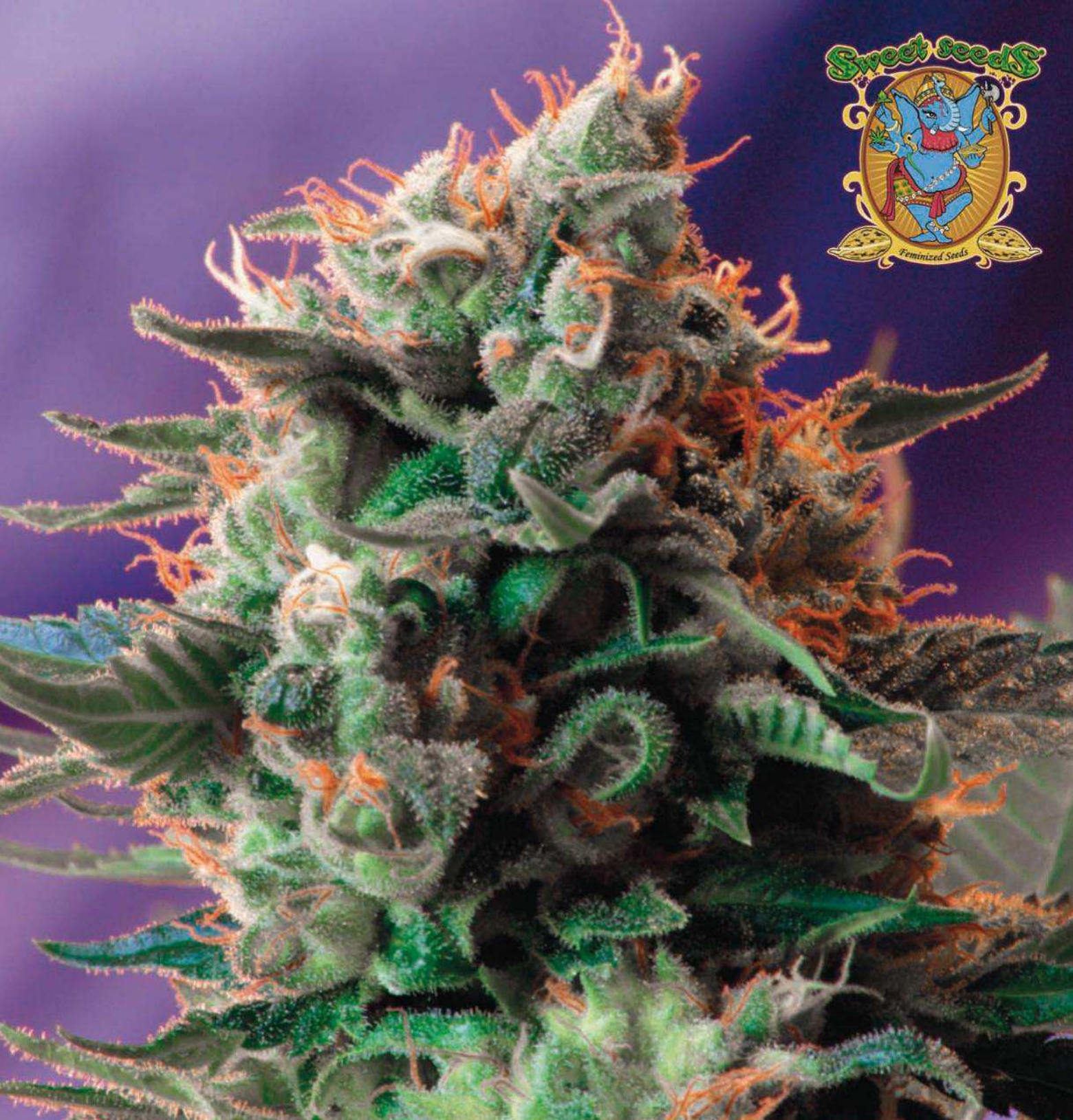
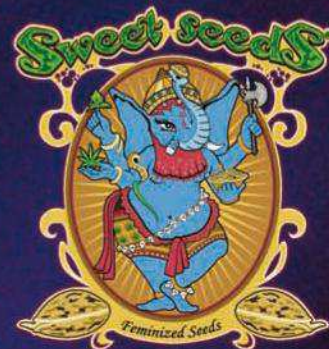
The band recorded in a Portland, OR, warehouse, stepping outside to toke, so as not to damage the delicate recording gear. All members of the Sword smoke weed. Shutt prefers to roll his own joints, old-school style. "Just flowers and papers," he says, waving away the bells and whistles of modern technology. He draws the line at dabbing: "Seven grams of THC in one hit—no thanks. That's a young man's game!"

Though weed figures in both the band's lyrics and its videos (check out the Nintendo-style vid for *Used Future*'s title track), the band had a unique opportunity to make their love of the plant public. "We played in Denver the night weed was legalized in Colorado," Shutt recalls. "It was New Year's Eve. We went offstage" and "came out holding bongos and then hit them at the same time. The crowd went totally insane. Probably the biggest response we've ever gotten!" ✨



PLAIN ABOUT THE STRAIN

To date, the Sword have a beer, a hot sauce and a BMX bike named after them; when *High Times* asks Shutt if the band would consider lending their moniker to a strain of weed, his reply is unequivocal. "Yes," he says spiritedly. Fans who grow, take note!



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ONCE MORE UNTO THE BREACH

THE FIFTH INSTALLMENT OF THE FAR CRY FRANCHISE MANAGES TO SATISFY

WHEN BOOTING UP *Far Cry 5*, everything about it feels different from its predecessors. Gone are the tropical islands, maniacal warlords and one-man-army tropes, replaced with rural Montana, deceptively charming (but still maniacal) Christian cultists and more recruitable comrades than your enemies can handle.

First things first: Montana is a gorgeous location to explore, full of secrets to discover (sometimes too many; *Far Cry 5* continues the Ubisoft tradition of overwhelming the already gigantic map) and cultists to chase down. The location and plot—your character is trying to defeat a deranged false prophet building a militia to create his own sovereign state—manage to feel fresh and timely,



FAR CRY 5
(Ubisoft)

but without being political. There's a huge selection of customizable weapons to play around with, and you'll get plenty of experience with them thanks to the borderline-annoying number of cultists and aggressively rabid animals walking about.

Here's the thing about *Far Cry 5*: It's the culmination of a series of pretty great games. A fresh coat of paint and some plastic surgery has been applied to everything, so it thrills and shines and excites (we can *finally* ride around in helicopters) just like the other games in the *Far Cry* series. But underneath all the makeup, there's not really a whole lot new here. However, at this point, we already know exactly what we want and crave from this title—and *Far Cry 5* delivers.

At the end of the day, *Far Cry 5* is a fantastic game, no matter how familiar it feels. The gunplay is tight, the plot is engrossing, the wide-open world is a joy to explore and the new *Far Cry Arcade*—where users can create custom levels and share them with the world—ensures new content will continue to flow. *Far Cry 6* will need to be a major reinvention if the series wants to remain relevant, but for now, *Far Cry 5* is everything you'd expected and more. *Casey Holliday*

MUSIC RECOMMENDATIONS



A PERFECT CIRCLE
Eat the Elephant
(BMG)

➤ The first Perfect Circle album of original material since 2003 revisits the visceral facets of Tool vocalist Maynard James Keenan in his musical marriage to guitarist Billy Howerdel. The title track signals a starker aesthetic for APC's reunion, while "Disillusioned" advises cellphone culture: "Time to

put the silicone obsession down, take a look around." *Elephant* gets heavier when the pounding percussion of "The Doomed" is reinforced by the furious "TalkTalk." Closer "Get the Lead Out" plays with expectations of tempo, while the groove hooks listeners just in time. *Mark Miller*



VARIOUS ARTISTS
Brown Acid: The Sixth Trip
(RidingEasy Records)

➤ As intriguing as the 11 tracks of late-'60s/mid-'70s hard blues and proto-metal featured here are the bands themselves, rescued from oblivion by this compilation. San Francisco's esoteric group Gold provide the fuzzed-out opener "No Parking," while Canadian band Heat Exchange's

"Inferno" is a jazz-prog excursion. Iowa-based Truth & Janey represent with the razor-tinged "Midnight Horseman," and Ohio's Purgatory take listeners on a "Polar Expedition." Chicago's Zendik close the album with "Is There No Peace?" and its controversial—but catchy—chorus of "God is dead." *MM*



THE MELVINS
Pinkus Abortion Technician
(Ipecac Recordings)

➤ In their ongoing mission to do whatever the hell they want, glorious rock weirdos the Melvins have recorded an album with not one but two bass players. In addition to recent recruit Steven McDonald of Red Kross, Melvins ringleaders King Buzzo (guitar/vocals) and Dale Crover (drums/

vocals) have re-enlisted Jeff Pinkus of the Butthole Surfers to run amok on his four-string. The result is thick and delicious, as evidenced by their James Gang/Surfers mash-up "Stop Moving to Florida," the honky-tonk of "Break Bread" and a blaring cover of "I Want to Hold Your Hand." *J. Bennett*

BOOK RECOMMENDATIONS



HOWL AND OTHER POEMS
Allen Ginsberg
(Craft Recordings)

➤ The opening line of Ginsberg's 1955 poem "Howl" ("I saw the best minds of my generation destroyed by madness") seems to have captured more imaginations and rerouted more life paths than any other literature of its time. This commemorative box set includes the poet's first LP on red vinyl

of him reading "Howl" as well as "America," "Kaddish" and other early classics; the pocket paperback published by City Lights Books that could be found in any hip, cultured pad back in the day; liner notes by Beat scholar Ann Charters and poet Anne Waldman; and other ephemera. *Michael Simmons*



STICKY FINGERS:
The Life and Times of Jann Wenner and Rolling Stone Magazine
Joe Hagan
(Alfred A. Knopf)

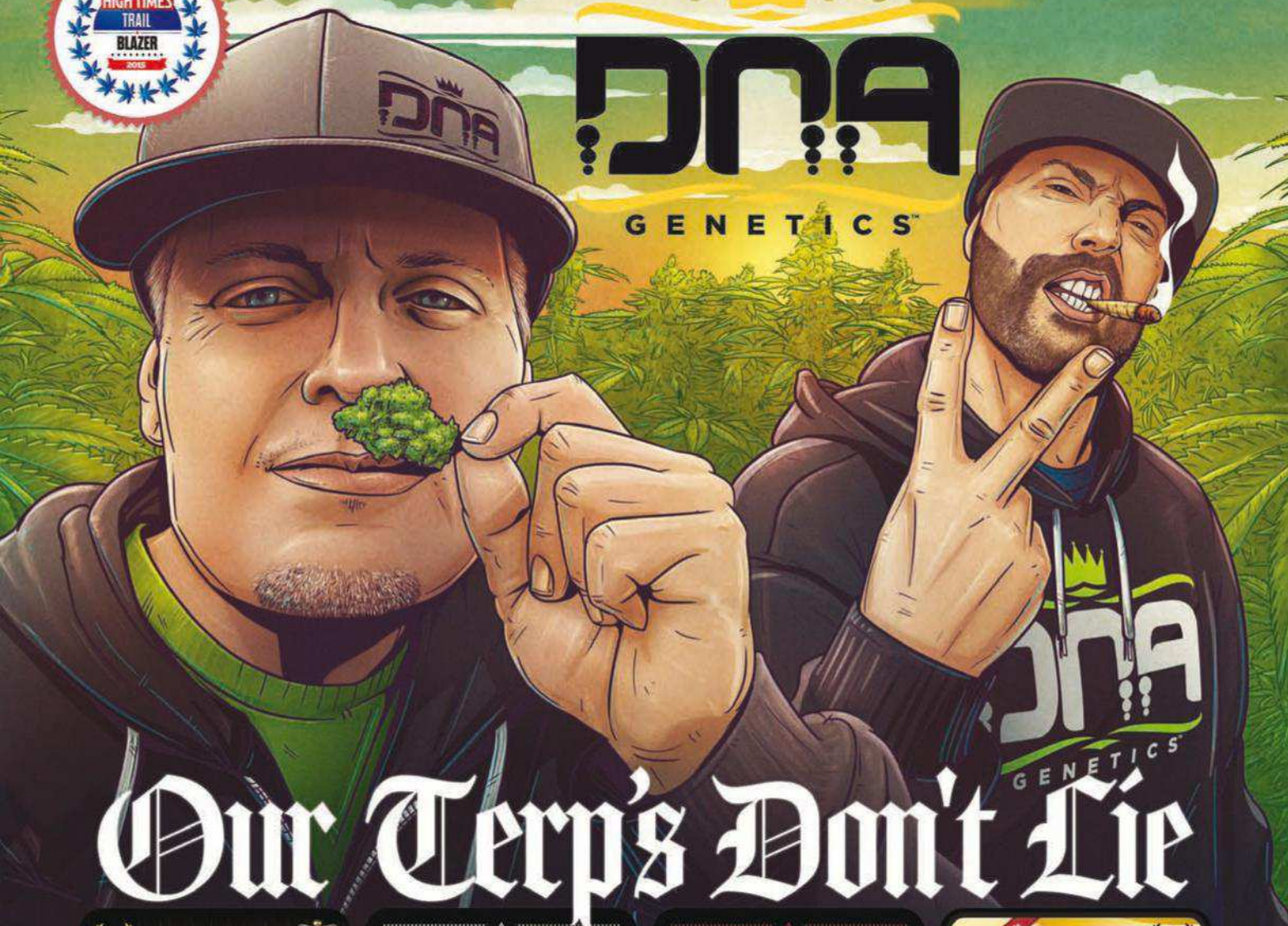
➤ Like other 1960s kids, Jann Wenner idolized the Beatles, Dylan and the Stones. He made millions by starting an incredibly successful magazine devoted to his idols. *Rolling Stone* became the voice for the youth of the '60s by publishing interviews with their idols, prose that

danced to their music and work by hip scribes like Hunter S. Thompson and Tom Wolfe. Wenner made lots of friends and enemies, indulged in lots of sex and drugs, and eventually sold out for money. But in fairness, Hagan's fascinating bio shows that Wenner indeed had a soul to sell. *MS*

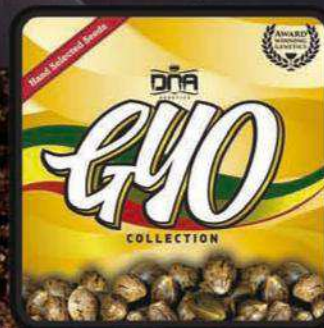


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THE HEMP REVOLUTION

ANTICIPATING THE NEXT BIG THING IN THE REFORM MOVEMENT.

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

IT'S BEEN A persistent urban myth among some cannabis advocates that the Declaration of Independence and its 56 signatures were written on hemp paper. Of course, that theory has been thoroughly debunked by researchers at Monticello (Thomas Jefferson's estate), the Library of Congress and the National Archives. The final document signed by the founding fathers at the Continental Congress in 1776 was engrossed on parchment made from animal skin. The original rough draft, written by Jefferson and kept among the Jefferson Papers collection at the Library of Congress, has watermarks indicating it to be Dutch-made paper consisting of flax or linen rags.

Nevertheless, some 242 years later, hemp is revolutionary in its own way. As recently noted in our December 2017 column ("Is This Finally the Big Moment for Hemp?"), hemp is enjoying an international renaissance. Both extremely versatile and ecologically friendly to produce, hemp is being grown and used worldwide in the development of an ever-expanding array of commercial applications including hemp-based cannabidiol (CBD) and terpenoid oils, tinctures, foods, dietary supplements, nutraceuticals, body-care products, textiles, construction materials, applied materials and industrial products.

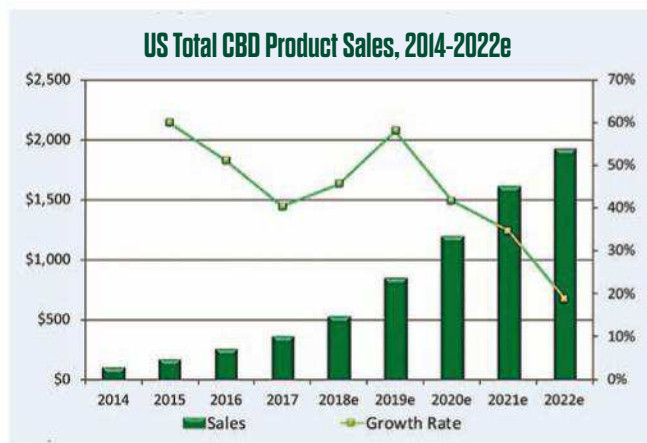
Despite a long, rich history in America (preceding the establishment of the United States itself) and being touted for its benefits as recently as World War II ("Hemp for Victory!") was a rallying slogan to defeat the Axis), for the past half-century industrial hemp has suffered prohibited federal classification because of its kinship to cannabis. The plants are related, but while marijuana remains banned under the federal Controlled Substances Act due to the psychoactive properties of THC, hemp typically contains less than 0.3 percent of it, whereas medical and adult-use

cannabis commonly features between 5 and 25 percent THC.

New Frontier Data is tracking some detailed prospective market trajectories, and recently acquired the *Hemp Business Journal* to bolster resources for leading data and market intelligence in the industry. As Sean Murphy, New Frontier Data's director of hemp analytics, notes, "There is continued tension in the industry, with actions being taken by and between hemp and marijuana players in states like Oregon. There's also industry love happening with an increase of M&A [mergers and acquisitions] deals in Canada being driven by Canadian LPs [licensed producers], Big Tobacco, and Big Pharmaceuticals placing bets and positioning their interests in the market."

As detailed in the *Hemp Business Journal's* "CBD Report 2018," the total CBD market in the United States grew at a rate of 40 percent in 2017 and is projected to reach \$1.2 billion in sales by 2020, and nearly \$2 billion by 2022. In 2017, \$190 million of those sales came from hemp-based sources, compared to \$177 million from adult-use and medical cannabis sources. Given the potential profits involved, it is no surprise to learn of some fissures opening among interested players within the reform movement.

Some US cannabis operators are already resenting how hemp products are increasingly battling for retail shelf space in dispensaries.



Hemp is cultivated by the acre on farms, whereas cannabis is grown by the square foot in greenhouses or indoor-cultivation facilities, giving hemp growers an economic advantage to scale and dominate supply chains for CBD products.

Hemp acreage in the United States keeps expanding, if unevenly. While Oregon recorded nearly 3,500 cultivated hemp acres in 2017, its neighbor Washington cultivated about 175

acres—a 20-to-one difference.

With legalized hemp programs in 34 states, protectionist legislation is being proposed in several legislatures to shield the legal cannabis market from hemp-based competition.

Canada's hemp production continues to set the pace for the fledgling US market. Health Canada reported 138,000 acres licensed for cultivation in 2017, and the *Hemp Business Journal* estimates that 110,000 acres were under cultivation (actual cultivation data is yet to be verified by Health Canada or the Canadian Hemp Trade Alliance).

As Canadian hemp can now be used only to yield seeds and fiber (leaving leaves and flower unutilized), global competitors from China, Switzerland and other European Union nations are buying whole plants for expansive processing.

Even so, Canadian LPs are quickly positioning themselves to penetrate the global CBD market by acquiring hemp companies in preparation of new cannabis laws this summer. The spike in M&A activity among Canadian LPs and small hemp cultivators and extractors is a clear sign of Canadian LPs moving quickly into the CBD market upon passage of the new legislation.

Assuming such skirmishing to be indicative of future market activity, projections for the production, use and sales of low-THC products will remain sky-high. 🌿

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POISON
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-Denver, CO

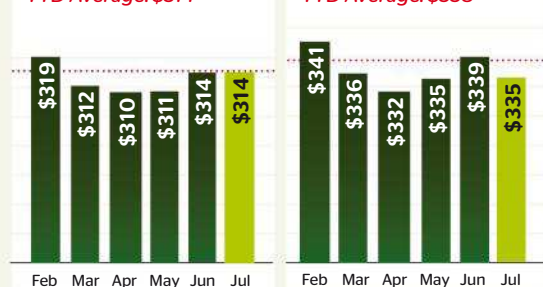
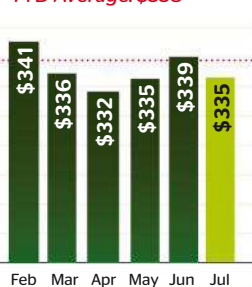
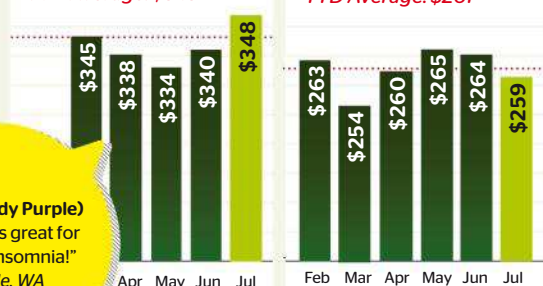
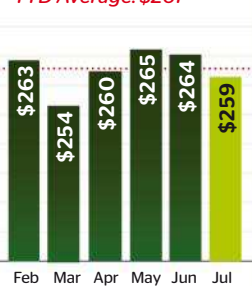
(Gorilla Jack)

"A sweet-tasting strain that mixes Gorilla Glue and Jack Herer—the best of both *sativa* worlds!"
-San Francisco, CA

MARKET ANALYSIS

Prices by the ounce

While the US Price held steady in July, finishing the month at \$314 per ounce, the rest of the index experienced some fluctuation. The Southern Index closed July \$8 above its previous month's average while the Eastern and Western indices were both down (\$4 and \$5 respectively) from their June averages. Unexpectedly, Durban Poison made the month's most submitted strains list.

US Price Index
YTD Average: \$314Eastern Index
YTD Average: \$338Southern Index
YTD Average: \$345Western Index
YTD Average: \$261

(Granddaddy Purple)

"This GDP is great for crushing insomnia!"
-Seattle, WA

TRANS HIGH MARKET QUOTATIONS

STATE	CITY	STRAIN	PRICE
ALABAMA	Huntsville	Gorilla Glue #4	\$360
ALASKA	Anchorage	Blueberry Kush	280
ARIZONA	Flagstaff Phoenix	Moby Dick Diesel	315 200
ARKANSAS	Hot Springs	Holy Grail Kush	450
CALIFORNIA	San Francisco Santa Monica	Gorilla Jack Hell's Angels OG	328 280
COLORADO	Denver	Golden Goat	300
CONNECTICUT	Middletown	Alien Kush	280
FLORIDA	Miami Palm Coast	Great White Shark God's Gift	420 360
GEORGIA	Savannah Stockbridge	OG Kush Sour Diesel	280 350
HAWAII	Honolulu	Purple Berry	300
ILLINOIS	Marion	Cantaloupe Kush	450
INDIANA	Bloomington	Trainwreck	400
KANSAS	Wichita	Pineapple Express	420
LOUISIANA	Shreveport	Birthday Cake	400
MASSACHUSETTS	Boston Chicopee	Loud Vanilla Kush	280 320
MICHIGAN	Ypsilanti	Platinum OG	280
MISSISSIPPI	Ocean Springs	Strawberry Cough	280
MISSOURI	Kansas City	Gorilla Glue	275
MONTANA	Big Sky Bozeman	Blue Dream Purple Crack	180 280
NEBRASKA	Omaha	Mendo Purps	320
NEVADA	Carson City Las Vegas	Afgoo Pineapple Express	260 300
NEW HAMPSHIRE	Merrimack	Gorilla Glue #4	360
NEW MEXICO	Taos	Durban Poison	200
NEW JERSEY	Keansburg	Gorilla Glue #4	400
NEW YORK	New York Syracuse	Durban Poison Granddaddy Purple	320 420
OHIO	Cincinnati Toledo	Headband Gorilla Glue #4	400 280
OKLAHOMA	Oklahoma City	Blue Dream	420
OREGON	Portland	Blue Dream	265
PENNSYLVANIA	Philadelphia	Gorilla Glue #4	325
RHODE ISLAND	Kingston	Platinum Kush	190
SOUTH CAROLINA	Charleston	Sour Diesel	280
TENNESSEE	Clarksville	Gorilla Glue #4	200
TEXAS	Greenville	OG Kush	420
UTAH	Salt Lake City	Sour Diesel	230
WASHINGTON	Pullman Seattle	Mango Kush Granddaddy Purple	200 315
VIRGINIA	Roanoke	Blueberry Dream	300
WISCONSIN	Green Bay Waukesha	Santa Cruz OG Lemon Haze	400 280
INTERNATIONAL			
AUSTRALIA	Wagga Wagga	AK-47	A\$400
CANADA	Toronto	Snowcap	C\$325
GREECE	Athens	Greek Kalamata	EU420

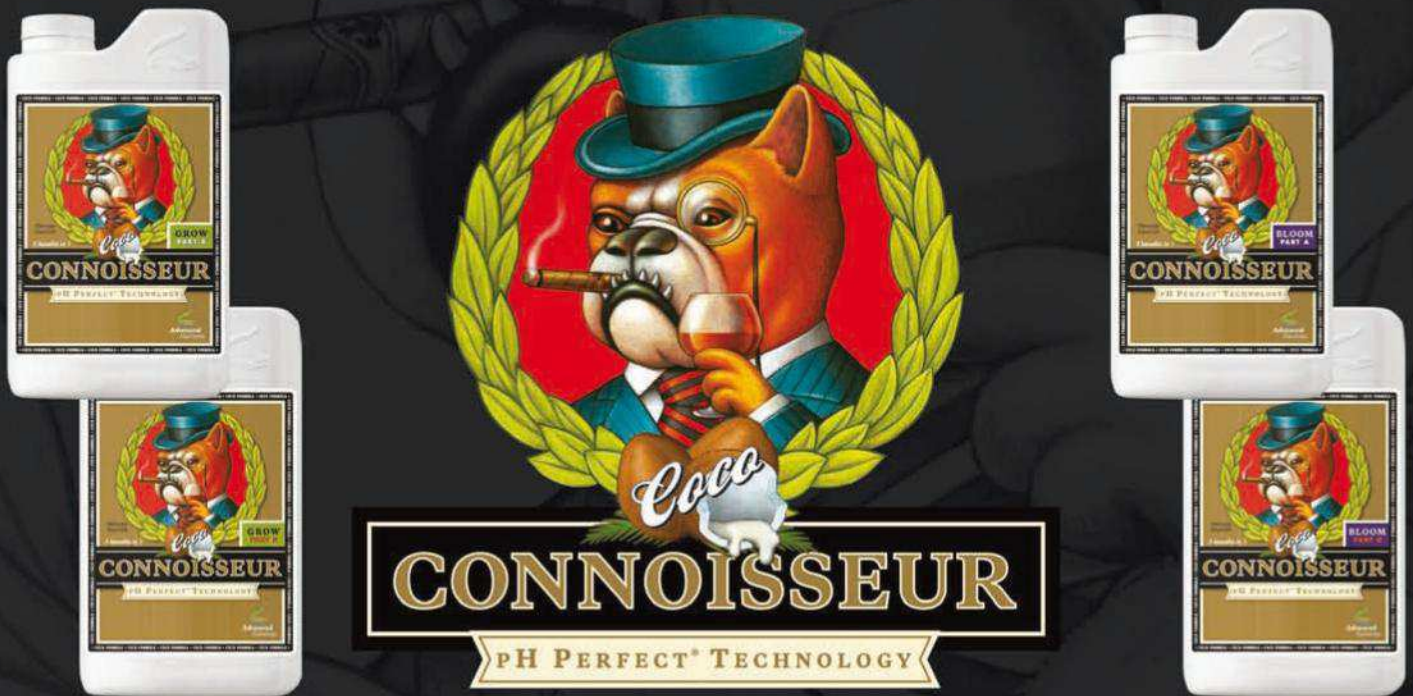
High Times wants to know what you're smoking. Submit your strain information including location and price by the ounce to thmq@hightimes.com, or tweet us (#THMQ).

(Platinum Kush)

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-Kingston, RI

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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.

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,"**

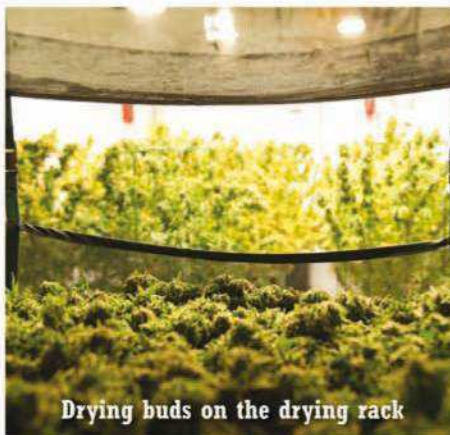
he says. "I'm running doubled-ended P.L. lighting with four Spectrum King 600-watt LED lights and doing a massive cross spectrum of light, running four 315-watt P.L. ceramic metal halides. So I'm totaling just under 4,700 watts and yielding on average, two pounds or more for every 1,000 watts of light."

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."

"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.



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.

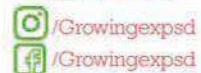
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3 SIMPLE TECHNIQUES
AND TIPS TO MAXIMIZE
INDOOR PLANT YIELDS

BIGGER YIELDS

WITH MORE THAN HALF the states in the US now allowing for either medical or recreational marijuana use, there are more cannabis cultivators than ever. Many growers are now either legally experimenting in their own home gardens, working in licensed cultivation facilities, or still bucking the system in prohibitionist states and raising clandestine crops of their own.


The result is that in both the legal and underground black markets, marijuana supply has finally exceeded demand in this country. And so in the spirit of continuing that trend—and in celebration of finally overgrowing our own backward-thinking federal government—here are the three most effective techniques for increasing plant yields and potency. Happy growing!

INCREASE ROOT MASS

Plant containers are often an afterthought for indoor growers, but their importance should not be overlooked for several reasons. Containers or plant pots are important because they house, nurture and protect perhaps the most important part of the plant—the root structure.

Root growth and health are essential elements to the overall success of a plant, as a healthy and well-developed root system is directly proportional to a plant's final size and yield. Plants typically can only grow as wide as their root structure can extend. The larger the root zone, the more the roots can extend and the larger the plant can grow above surface.

Additionally, containers provide other integral advantages for the root structure, such as water retention and drainage,



Screen-of-green (ScrOG) growing is actually a smart trellising technique that increases yields.

MADE EASY

STORY & PHOTOS
BY NICO ESCONDIDO

both of which are important factors for healthy plant development. Containers must strike an important balance between retaining moisture long enough for roots to absorb the hydration needed for biological processes and allowing for ample drainage so that the roots do not sit long in unabsorbed water. Roots that sit too long in stagnant water can develop root rot and attract pests and disease. Healthy roots are long and bright white, with little hairlike bristles that attract and absorb water and minerals.

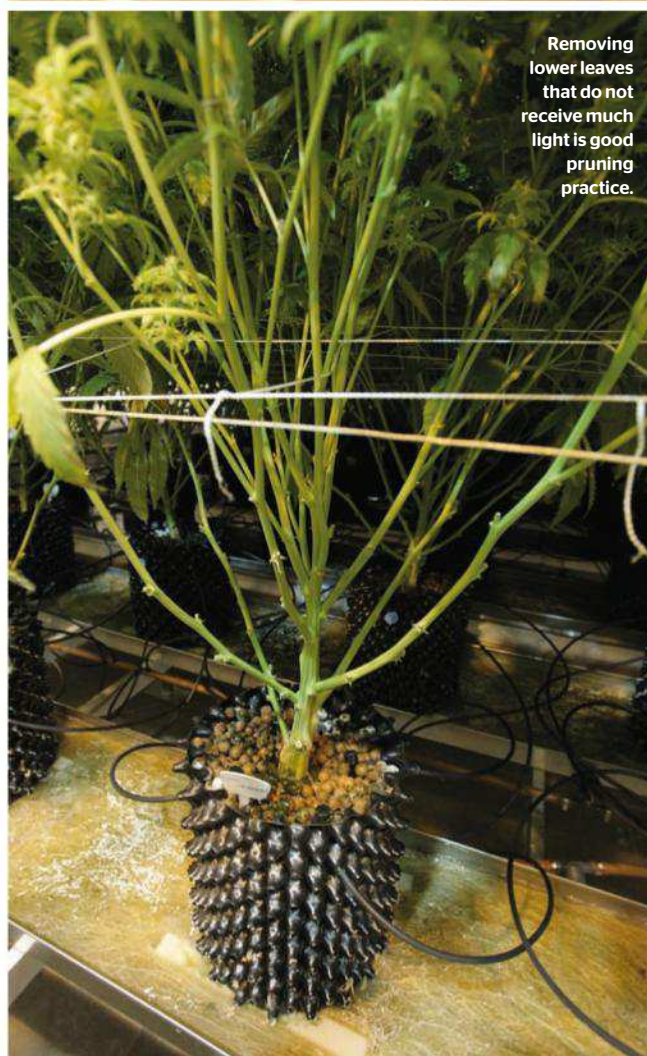
Obviously, the larger the plant container, the larger the root mass will become and thus the overall size of the plant as well. Therefore, indoor growers should carefully consider the space available in their indoor gardens and choose the appropriate containers to grow their plants to the desired size. Plant containers come in every size, shape and material imaginable. Containers

that offer maximum “breathability” are most preferable, as they allow air to better permeate the root zone. It is important for indoor growers to understand that roots breathe in oxygen (O_2) while the rest of the plant above the surface breathes in carbon dioxide (CO_2) through its leaves.

Because it’s difficult to get airflow in and around the root zone, newer developments in containers offer growers more advantages in providing air to the roots. Hardy fabric bags have become one of the most popular choices for indoor cultivators, as these “pots” are made of a strong material that can hold a lot of weight yet still allow air to enter the medium through the sides and bottom. These fabric bags range in sizes containing from one gallon to over 200 gallons of your chosen medium and can be used both indoors and outdoors.



These 12-gallon air pots are being used to grow robust mother plants with massive root systems.



Removing lower leaves that do not receive much light is good pruning practice.

SMART PRUNING TECHNIQUES

Pruning is both an art and a science. It can be done for both aesthetic reasons and to aid in plant development. The latter will be our focus here. A grower's understanding of plant botany and physiology is essential when pruning a plant, because a plant's natural response to the removal of growth is the primary purpose for deploying such techniques.

Pruning is often done in conjunction with plant training (which will be discussed in the following section) in order to maximize the effects pruning has on a plant's growth and yield. Because pruning invigorates both regrowth and new growth, it is an excellent way to increase size and add more budding sites for flowers to our cannabis plants.

Perhaps the most important concept to understand when it comes to pruning is "apical dominance." Apical dominance resides in the terminal shoot, or the top center bud (i.e., the main stem), and it directs plant growth for the top two-thirds of the plant. While the apical shoot is dominant, lateral branch growth is suppressed. Interrupting apical dominance stimulates new growth, as plant growth hormones are redirected to side shoots. With proper training, this results in several new top colas, thereby greatly increasing yield. This is the exact science behind how "topping" cannabis plants results in larger yields (see the "Top 3 Pruning Methods" sidebar for more details on how to top plants).

When it comes to pruning, timing is an important consideration—especially for cannabis plants, which flower seasonally. In nature, cannabis plants bear their fruit late in the year, during the late-summer and autumn months. Flowering occurs on plant growth that occurred much earlier in the year; therefore, pruning should take place early in the plant's life cycle. The same principles apply for indoor gardens, where the life cycle of the plants typically ranges from three to four months, depending on how long they remain in the vegetative phase.

Once seedlings or young clones have established strong root systems and have been transplanted into their permanent containers where they will be flowering, growers can start to prune plants in preparation for increasing yields. Ideally, this should be done about two weeks into the plant's vegetative stage, leaving at least another month of vegetative time for the plant to grow and develop the new and additional shoots that will result from the pruning.

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TOP 3 PRUNING METHODS

TOPPING/PINCHING OFF

Topping, or pinching off, refers to the method that addresses apical dominance, discussed earlier. To “top” a plant is to remove its top terminal shoot. This shoot is usually directly linked to, if not the same as, the main stalk of the plant (sometimes it can be an offshoot directly above the main stalk). To remove this shoot, simply run your fingers up the main stem until they are just below the top “bud,” which at this point of development will be composed of a couple of smaller leaf sets. These leaves will be barely developed and have light green color. Using pruning shears—or long fingernails if you prefer to pinch—make a cut just below the top bud and above the node (branch site) directly below it. Be sure that the shears are clean and have been properly sterilized. When making the cut, be careful to make a clean slice, leaving no residual leaf matter hanging from the shoot.



Pinching off, or topping, the top shoot can be done with fingers or trimmers.



A close-up of the finished FIM technique

FIM TECHNIQUE

The FIM technique is probably the most interesting—and effective—pruning technique deployed by growers, and it can be utilized both indoors and outside. Essentially, the FIM technique is the same as the topping technique described above, but with one small change: Instead of cutting the entire top bud off the shoot, growers only trim off about two-thirds of the leafy material at the top, leaving the bottom third intact and looking like a freshly mowed lawn.

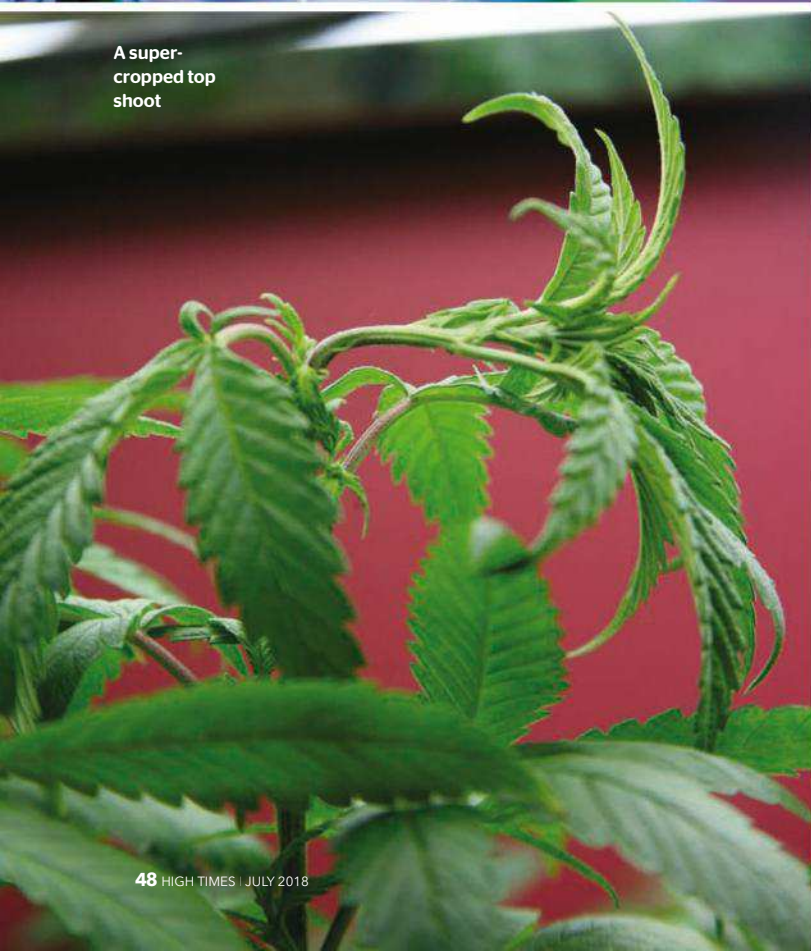
In fact, the term “FIM” stands for “Fuck, I missed,” which was apparently said when a grower was trying to simply top a plant but made the cut too high. Why the grower left the plant in such a state without correcting the mistake with a lower cut is unknown, but what is known are the resulting effects this mistake had on the plant. Whereas topping a plant generally results in one or possibly two additional sets of lower shoots growing out from below the cut, the FIM technique results in several more shoots appearing below. Sometimes there are 6 to 8 more ensuing shoots, all of which can result in additional top colas with the proper plant training.

SUPER-CROPPING

Super-cropping is a traditional technique developed in the very early days of indoor cannabis cultivation in Holland. The principles and results behind super-cropping are relatively the same as the two techniques discussed above; however, depending on how you look at it, there is either more or less plant mutilation involved.

Super-cropping simply involves the bending and twisting of branches to achieve the same effects as topping or using the FIM technique on a plant, though many growers insist that the bending of branches does not necessarily have to occur only at the top terminal shoot. Instead, the cropping of branches can occur at the lower levels of the plant as well to help encourage more vigorous growth or “bushing.” (Note: In truth, the same can be said for topping and the FIM technique, but most growers generally desire more growth at the top of plants in order to create more colas.)

To super-crop a plant, a shoot is bruised, bent and twisted in order to trigger a physiological response within the plant—the release of growth hormones in response to injury. In this scenario, a grower chooses a topside branch to roll between the thumb and index fingers. This will rotate the branch and cause it to pop, or blister, at the point of pressure. The injured branch will become weak (though you should avoid snapping it off altogether or causing it to fall limp). You should attempt to leave the branch bent at a 90-degree angle. When a branch growing vertically is bent and forced to remain horizontal, the interference in apical dominance will cause the shoots on the same axis to become stimulated by growth hormone and grow vertically, thereby creating more top shoots from the same branch.



A super-cropped top shoot

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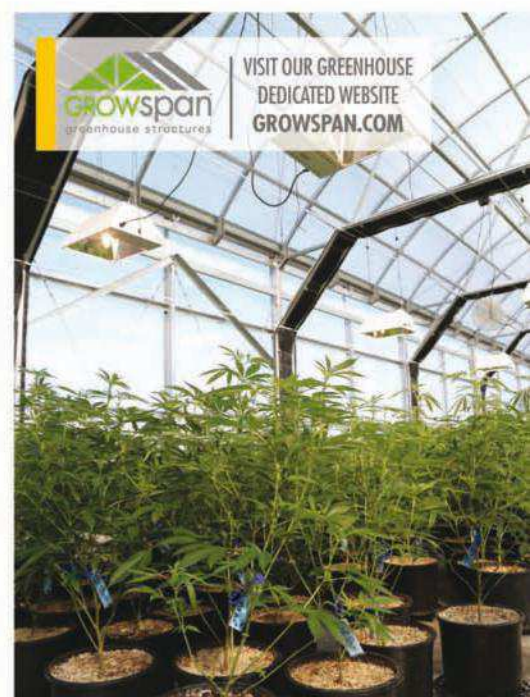
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This simple trellis net was placed over young seedlings.



A more sophisticated, multi-level trellis system

TRELLISING 101

The pruning and trellising of fruit-bearing plants such as cannabis are almost always done together in order to increase productivity and yield as well as to ease the harvesting process. Simply stated, trellising involves the training of plant limbs to grow in specific directions, while also adding a structural support system for the plant and its fruit.

Trellising can be deployed in many ways. Most commonly, growers tie plant limbs to wires, posts or walls for support. Technically speaking, a trellis system can be any system of latticework that crosses back and forth across a garden, creating multiple points of support for branches and colas.

Bamboo stakes are a common trellis post system. These stakes can be on the periphery of the garden and used to hold horizontal crossbars, or they can lean into the center, resting on one another, to be used as tie points. Sometimes the walls of an indoor garden, or simple wooden frames constructed around the garden, can serve as makeshift trellis systems, from which wires are strung across the garden and used as training and support systems.

Other types of vertical trellises might include cylindrical or cubed latticework for individual plant sites. These types of trellises are generally placed around the entire plant during the early vegetative stage, allowing the plants to develop and grow out through the structure, creating plant “towers.” When using this method, the height of the plant is kept short through a series of plant toppings as described previously. With two or three toppings over the course of the veg cycle, the plant will grow numerous lower side shoots that can develop into topside colas. These lateral top shoots are trained to grow out through the trellis and then climb up the latticework by weaving in and out of the tower.

Modern techniques for indoor growers have evolved even further, using prefabricated trellis systems and a little grower ingenuity. An example of this is the ever-popular 4-inch-square netting. Made of plastic, this netting is available in large rolls that can be unrolled easily over young vegetating gardens as a horizontal screen. The netting is usually stretched over gardens in sections and attached at the corners to posts or walls. This technique should be put into place early in a garden’s development, usually within the first two weeks of the vegetative phase, allowing for plants to grow upward through the netting. Once large enough, plants can be trained to grow horizontally and then up through a second—or even a third—layer of netting, depending on the finishing height of the plants.

Trellising is especially important in gardens that utilize the pruning techniques outlined in the previous sections of this article. As plants develop and become top-heavy due to the creation of additional top shoots and colas, the plants will not be able to support themselves properly, resulting in them expending energy that would otherwise be used in the production of buds and trichomes. Thus, good trellis systems can go a long way in increasing both the yield and potency of cannabis gardens.



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An example of crown-thinning during the last two weeks of flowering



ADVANCED PRUNING & TRELLIS STRATEGY

As discussed, both pruning and trellising not only aid plants in development and growth, but they also reward growers with increased yields and potency.

We know that pruning shoot tips (topping) to interfere with apical dominance in order to encourage lateral branching, pruning to invigorate growth during the vegetative phase and trellising to train plants

to grow a certain way are all effective ways to boost plant yields.

However, there are other technical considerations that are made during the course of regular garden maintenance that are geared toward increasing plant yields as well. For example, the standard pruning technique, which entails the removal of dead or necrotic leaves, goes a long way in helping plants increase energy reserves to be used later for flowering. Because while cannabis plants will not expend energy attempting to repair or regenerate leaves, those injured leaves will consume more energy than they produce. Removing them allows the plants to either direct energy to new growth or store energy in the root structure (and stems) as starch to be recalled later during the flowering stage.

Another pruning technique known as "crown thinning" aims to open up

the garden canopy so that there is better light penetration through the plants to their lower branches. When used in conjunction with a trellis system, the top branches can be pulled apart and better separated from each other, thus allowing light to reach the middle and lower levels of the plant. This aids the plants in capturing light energy (photons) to be used during photosynthesis, which is how plants manufacture their food and create energy.

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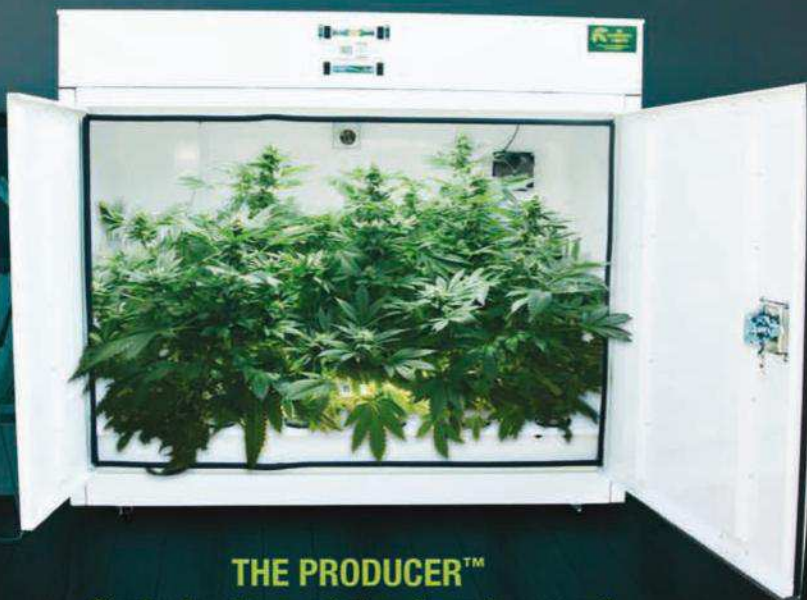
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An example of crown-raising by vigorous lower-level pruning

"CROWN RAISING" IS ANOTHER STRATEGY USED BY ADVANCED GROWERS, WHICH ENTAILS REMOVING THE ENTIRE BOTTOM THIRD OF A PLANT'S BRANCHES.

grade flowers, may take on the extreme pruning method of cutting off flowering branches entirely to increase the size and potency of the top colas. In this situation, growers will lob off entire branches on the lower two-thirds of the plant at the first signs of flowering in order to direct all energy to the top third of the plant. This will not necessarily increase yields, but it will help to increase both the size and potency of the top colas.

Conversely, "crown raising" is another strategy used by advanced growers, which entails removing the entire bottom third of a plant's branches. The goal here is to redirect more of the plant's energy to its top half, where the colas and larger fruits reside. This

helps pack on overall weight, as the top buds get heavier than the lower "popcorn" buds, which are energy suckers and do little for the marketability of your final product.

Similarly, advanced growers grooming plants for boutique buds, or for competition-

As we've seen, there are some simple yet effective techniques to improve yields for your indoor cannabis crop. By increasing root mass, pruning effectively and utilizing a trellis system, you can stimulate larger yields come harvest time. 🌿

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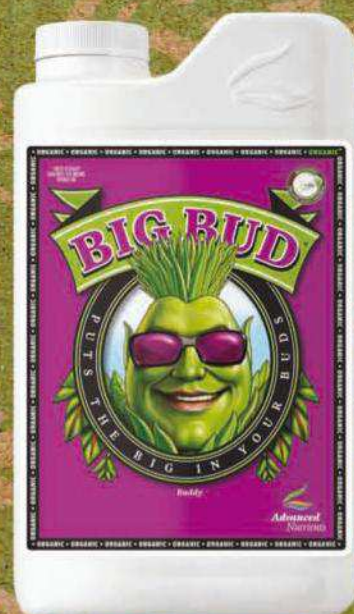


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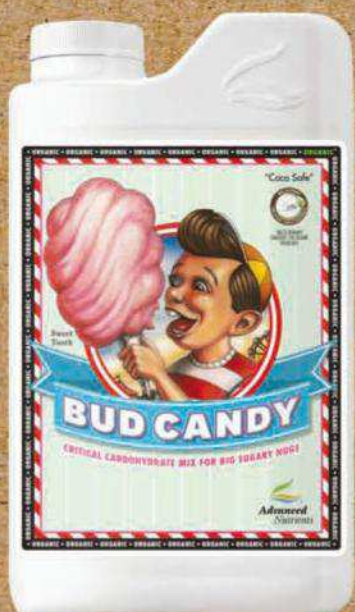


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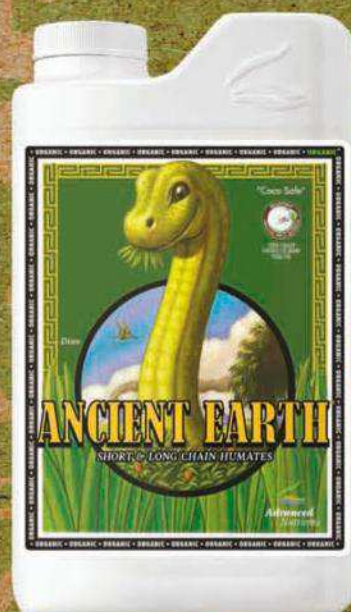


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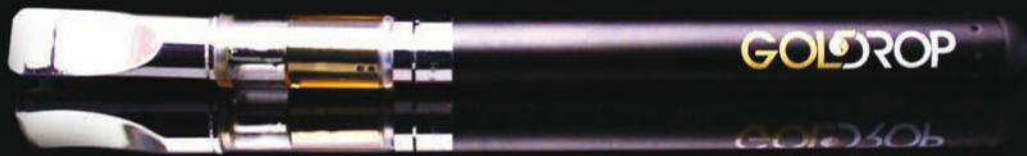
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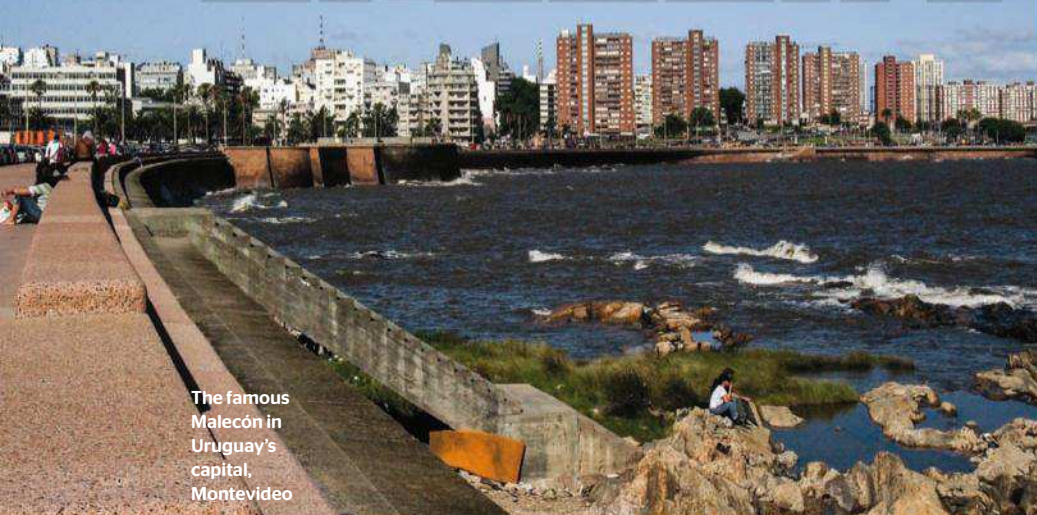
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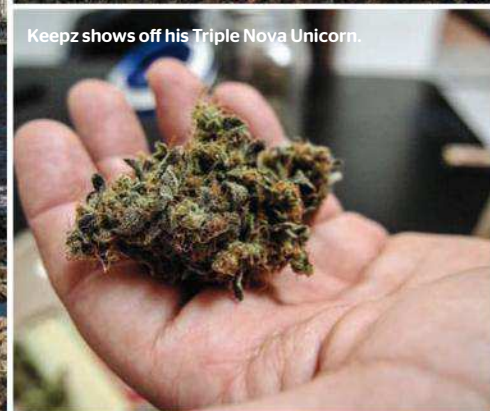
LEGAL WEED IN URUGUAY



The famous Malecón in Uruguay's capital, Montevideo



The government sells low-THC grams for \$1 USD.



Keepz shows off his Triple Nova Unicorn.

IN 2013, URUGUAY BECAME THE FIRST COUNTRY IN THE WORLD TO LEGALIZE CANNABIS. NOW THAT LEGALIZATION IS FINALLY HITTING ITS STRIDE WITH COMMERCIAL SALES THROUGH PHARMACIES AND HIGH-QUALITY CULTIVATION THROUGH CANNABIS CLUBS, *HIGH TIMES* INVESTIGATES THE SOUTH AMERICAN NATION'S LEGAL WEED SCENE.

BY NATHANIEL JANOWITZ

I ARRIVE AT 4:19 P.M., one minute early for my underground tour of Uruguay's cannabis culture in the nation's capital, Montevideo. Keepz, a professional grower and one half of Kush Bros. tours, greets me and quickly spins up a *porro*—Spanish slang for a joint.

"This is the front line against the War on Drugs. It was the first country to stand up and say, 'You know what? This isn't working.' We don't believe in the War on Drugs, and we're going to take the first step to say, 'This won't continue'—in our backyard at least," Keepz tells me as we begin the tour by smoking at his grow operation, which provides a variety of blends for one of Uruguay's cannabis clubs.

Although the legalization of cannabis by the Uruguayan government took effect in July 2017, Keepz insists that I not

use his real name. The law strictly forbids the promotion of cannabis, including the promotion of clubs and grow shops. So, even in a country where pharmacies now sell US \$1 government-grown grams, the folks at the forefront of the local marijuana movement can't advertise.

Unfortunately, as a tourist, I can't buy government weed or buds from local cannabis clubs. In fact, there is no legal way for foreigners to purchase cannabis in Uruguay yet. However, if a local decides to share or gift an outsider marijuana, foreigners can legally partake like any Uruguayan citizen.

Here's where my new friend Keepz comes in, gifting me a second *porro* of his special Triple Nova Unicorn blend. We hit the streets walking and light up again.

"I don't think it bothers people here," Keepz says as we pass the joint back and forth, winding through bodies along the sidewalk of the principle avenue of Montevideo, Julio de 18. "I think it's become normalized; the way they treat it here is the same as if they were cigarettes."

No one bats an eye as we blaze in public, passing people leaving work in suits, children coming home from school and others smoking their own *porros* nearby.

We arrive at one of the local cannabis clubs that doubles as a head shop; the young owners are already in a circle out front, passing around a joint by the curb without a care.

many people die from alcohol each day compared to weed?"

But even with the limitations of the new law, the budtender and the other employees of the shop enjoy the freedom they have as Uruguayan citizens. They show off a homebuilt resin-extraction machine, providing a demonstration that creates fine wax. They fire up rounds on a bong with a torch lighter and I'm encouraged to partake. So I take a rip of the wax and, soon after, we're back on the streets, heading toward another cannabis club.

The next club's owner claims he has the highest-quality marijuana in Uruguay,



A home-made rosin press at a local cannabis club



Keepz's legal indoor grow

There are three ways for Uruguayans over the age of 18 to consume cannabis: one, by registering with the government to buy up to 10 grams a week from 12 pharmacies across the country; two, by growing their own; or three, by becoming a member of a cannabis club like this head shop.

Cannabis clubs exist in several forms, but all you need are 15-45 people and you can create your own nonprofit organization that can dispense up to 40 grams a month to each member.

Still, the budtender at the head shop we visit wishes the laws were a bit more lenient.

"We can't do any publicity for the shop," he tells me. "Like if *High Times* rolls in like this, we can't even let you publish our name. How come alcohol brands can do publicity but not us? How

having sourced the best cannabis seeds and strains from around the world. I ask if he's tried the government cannabis.

"It's like the weed I grew the first time I ever grew," he chuckles before insisting it's still better than the skunk brick weed that proliferates in the black market, which is widely trafficked around South America and is known as *paraguayo* for its country of origin, Paraguay.

"But [government pot] is good because people can have something healthy for a really low price," the club owner says. "But also it's not competition for what people grow in the clubs because it doesn't reach high THC levels. [The government's] objective is to take out the brick weed from the streets, and I think they're accomplishing it."

The first batch of cannabis released by the Uruguayan government for sale

THE FIRST BATCH OF CANNABIS RELEASED BY THE URUGUAYAN GOVERNMENT FOR SALE IN PHARMACIES CONTAINED ONLY 2 PERCENT THC AND LATER BATCHES STILL HADN'T PASSED THE 10 PERCENT MARK BY THE END OF 2017.

in pharmacies contained only 2 percent THC, and later batches still hadn't passed the 10 percent mark by the end of 2017. However, the government has stated its plans to come out with higher-percentage strains in the future.

We leave the club and head to Plaza Independencia in front of the Torre Ejecutiva building, which houses the Uruguayan president's office. Keepz hands me the last *porro* with several half-smoked presents to save for later—legal gifts from a friend.

Hazy tours are not the only way to understand Uruguay's unique path to legalization, and perhaps no place is better to learn about it than the Montevideo Cannabis Museum, which opened in December 2016. After two years of preparation, Eduardo Blasina converted his home into the museum after receiving permission from the government. But for Blasina, the museum isn't simply a way for foreigners to learn about Uruguay's path to independence.

"I thought it was important to explain to the Uruguayan citizens that cannabis is a plant, and not necessarily a drug—a plant with multiple things to offer to humankind," Blasina says.

The museum is filled with information about the global cannabis experience with several exhibits donated by Amsterdam's Hash, Marihuana, & Hemp Museum.



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A mural of Pepe Mujica is painted on a building in Montevideo.

Blasina wasn't surprised that Uruguay, South America's second-smallest country, became the world's first nation to legalize cannabis across its territory in modern history. He points to the country's long history of social advances, including being one of the first nations in Latin America to legalize divorce and to separate the church from the state.

Uruguay's liberal standing became legendary after the 2010 election of José Mujica. A former guerrilla and member of the left-wing Tupamaros movement, which attempted to overthrow the civil-military government regime

that controlled the country at the time, Mujica spent 14 years in prison in the 1970s and '80s. During his five-year presidency, he decriminalized abortion in 2012 and legalized both same-sex marriage and cannabis in 2013.

Mujica, who is known as "Pepe," was widely considered "the world's most humble president." He famously turned down living in the presidential mansion, opting instead to remain in an aging farmhouse that he shares with his wife—Uruguay's current vice president, Lucia Topolansky—on the outskirts of Montevideo. During his presidency, he drove to

work each day in his beat-up 1987 Volkswagen Beetle and donated roughly 90 percent of his salary to help provide housing for the poor.

To truly understand the path to legalization in Uruguay, I felt it was imperative to speak with Pepe, but my attempts to contact the government (Mujica is still a sitting senator) went unanswered.

Fortunately, locals provided valuable advice to set up a meeting—just show up at his house. It takes 45 minutes by taxi to arrive, and soon I'm in the Uruguayan countryside. In the distance I see Pepe, and he waves to me. I ask the guard to tell him that I've spent the past four years living in Mexico covering the War on Drugs, and I'd like to talk to him about legalization if he has a moment. Minutes later, Pepe invites me into a shed to chat.

Wearing an old, stain-covered polo shirt, the front pocket ripped and hanging down, the 82-year-old former president engages me and displays the intelligence and charisma that allowed him to push through his monumental legislation.

"For many years, repressive laws have been used to combat drug trafficking, and the real result is that drug trafficking continues and multiplies, so then you have to ask yourself, 'What really has the greatest effect?' And we came to the conclusion that regulating the market is how we could truly combat drug trafficking," Pepe tells me.

A BRIEF INTERVIEW WITH JOSE "PEPE" MUJICA

HT: How did you approach legalization in Uruguay?

We are very aware of what happened in the '30s in the United States, when they banned alcohol. The hiding of alcohol made things much worse. So we started testing with marijuana, to create a regulated market, where we assured the consumer of this. Because if you have it clandestinely, we saw what happened in America, in Mexico, everywhere. In the end, drug trafficking is worse than the drug itself.

Do you think Uruguay will legalize other drugs?

We do not know for now. We must experiment with this [marijuana legalization], continue learning and then maybe try. What happens is that there are



Pepe Mujica

huge repressive apparatuses whose ability to exist is from the repression of drug trafficking, a complete doctrine, a business of an international nature that creates terrible pressure [to fight drugs]. Even the banks are part of this apparatus. They do not want the Drug War to stop, but it's not working either. We believe that this strategy of only fighting drugs by means of repression is failing—in the entire world, it's failing.

In Mexico, the farmers are persecuted by the government for doing the only work their families have done for generations, and they live in poverty while the traffickers live lavishly.

This is precisely why we, instead of arguing if the drug is good or bad, decided to fight their foundation. The way to fight drug trafficking is to try to break the market, quit using the drug traffickers, ruin the business.

What did you think when pharmacies began selling marijuana?

When we enabled [pharmacies] to sell, queues of consumers appeared. It means that the market is strong. If that market does not function legally, it works clandestinely. People went to the pharmacy with enthusiasm, to the point that the supply was sold-out everywhere.

Beyond smoking, people are interested in other cannabis products.

Certainly, by legalizing it, it legally allows different branches of investigation to exist—other applications of cannabis. Because, after all, we have punished a remarkable plant because it's considered a drug, and therefore we lose all other positive possibilities that exist. Like as fiber, it is great—many of the strongest fabrics were made [from] hemp.

It's nearly five years since you finished your presidency. Do you foresee running again in the next election?

No. I am 82 years old. It seems to me that another generation has to come. Yes, I still have political influence. I belong to one party, of the 50 deputies in the house, we have 25. [Political influence] reaches me with that.

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“I’ve never smoked marijuana in my life, and I have no need, but I recognize that there are a lot of people that do. Just personally, I cannot,” Mujica explains. “Still, I think it’s ridiculous that you’re persecuting a kid for smoking a marijuana cigarette.”

That type of unnecessary persecution no longer occurs in Uruguay, and Pepe hopes the country can lead by example.

After our conversation [see the sidebar for more of my talk with Pepe], I’m motivated to see more of Uruguay’s liberal spirit. While Montevideo is perhaps the most relaxed Latin American capital and the epicenter of the country’s canna-

plants that grow alongside his house. After showing me his garden, he invites me inside the home he built himself.

“We live here basically without using money. What happens here is you have to have imagination,” Cuchi explains as he picks up a piece of plastic that’s washed up on the beach. “See this—this isn’t trash. Some people think it is; to me, it’s a material.” The walls of his home are insulated with empty wine boxes and milk cartons; he’s painted them with messages like “*Cuidado planeta*”—“take care of the planet.”

Cuchi, who’s now 49, moved to Cabo Polonio 26 years ago because he “didn’t



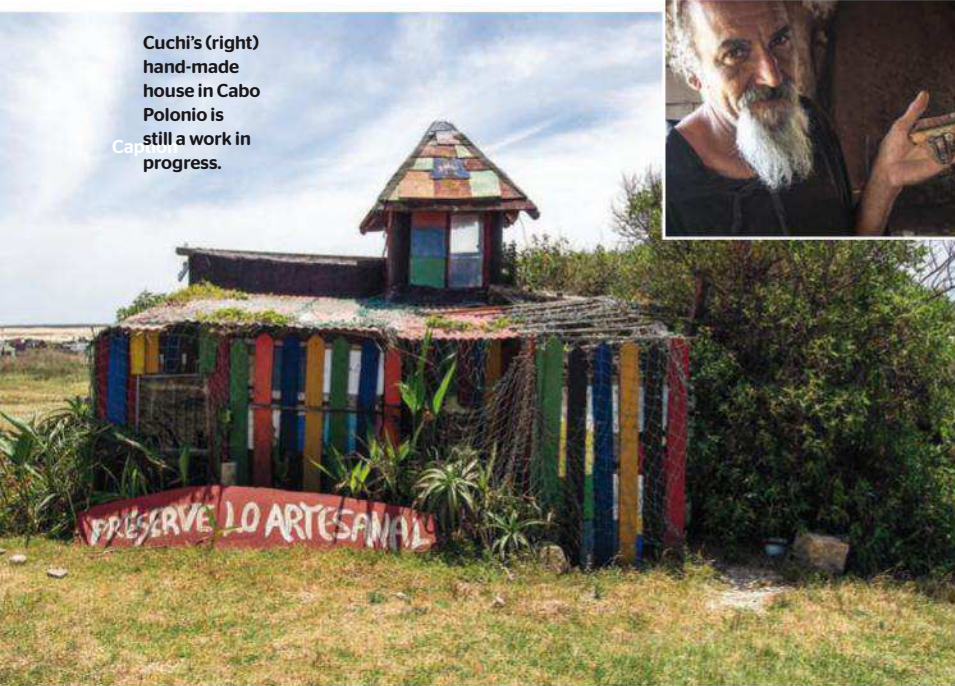
nature,” she says. In her backyard, Bea has a *temazcal*—a sweat lodge. Here she occasionally hosts purification rituals for friends and visitors. Her garden contains a plethora of herbs and plants that she uses to make cannabis soaps, creams, oils and tinctures that she sells in town. The new Uruguayan marijuana laws make no mention of the legality of these cannabis products, so the status of her creations is ambiguous. She hopes the government will soon provide clarity.

“It’s a powerful medicine that you can use in so many ways, and cannabis is a plant where you can take advantage of every part. It’s not just for smoking—you can use every part of the plant positively,” Bea says, showing off her pot plants. “Of course it should be legal to make products with the new laws.”

Another local, 58-year-old Joselo, believes Uruguay’s legalization effort is “one of the best laws that’s been done, that helps the entire country, the whole world... The government of Pepe did a lot of good things.”

That night at the Viejo Lobo hostel, backpackers from around the world gather around a blazing bonfire. I share the final unsmoked joint from Keepz’s tour with the group underneath a seemingly infinite number of stars. The next day, I return to Montevideo to meet a friend. She’s curious to learn about Uruguay’s cannabis culture, particularly after hearing a bit about what I’d experienced in my time here. We show up unannounced to the first cannabis club I’d visited days earlier and, to my surprise, find Keepz hanging out there. I mention that I’d finished my *porros* in Cabo Polonio and Keepz gifts me some more Triple Nova Unicorn.

We take our perfectly legal weed to the Plaza Independencia, outside Pepe’s old office where he used to park his VW Bug. We sit on a fountain, spin up a joint and light it. There are no problems with cops or annoyed bystanders; no one seems to pay us any mind. ✨



Cuchi’s (right) hand-made house in Cabo Polonio is still a work in progress.

bis movement, I’d heard about a reputed coastal paradise where Uruguay’s unorthodox culture flourishes—Cabo Polonio.

About 150 miles up the coast from Montevideo, a rustic off-the-grid encampment of handmade houses sits on the grassy tip of a windy peninsula. Originally a small fishing center populated by only a few families, Uruguay’s alternative culture began squatting in Cabo Polonio in the ’80s and never left.

After making the four-hour trip, I see Cabo Polonio’s true beauty for the first time. The hamlet of ramshackle homes is surrounded by the beach, except for the rocky tip where hundreds of sea lions lazily pass their days in the shadow of a lighthouse.

While walking around the seaside town, I encounter a crotchety man named Cuchi who’s inspecting the marijuana

need to use shoes here.” He’s been working on his house ever since.

Cabo Polonio doesn’t have running water, and locals playfully argue over whose well water tastes best. The only electricity is generated by windmills or solar panels, and there are no ATMs or cars and only a handful of restaurants and shops that open during the high season. Although there are roughly 400 houses in Cabo Polonio, it has just around 70 year-round residents due to harsh winds and a frigid winter climate. But during the summer months of December and January, the population booms to over a 1,000 a night between tourists and those who own summer homes.

Bea, another year-round resident, moved here 28 years ago. “It was a lost paradise truthfully, where you could live and breathe the freedom and

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THE WORLD'S

WELCOME TO AURORA CANNABIS, A CANADIAN COMPANY THAT'S REDEFINING WHAT CONSTITUTES AN EFFICIENT, HIGH-CAPACITY CANNABIS-PRODUCTION FACILITY. TAKE A TOUR OF ITS MASSIVE CULTIVATION LOCATIONS, INCLUDING A GARGANTUAN 800,000-SQUARE-FOOT GREENHOUSE, AND LEARN HOW THIS LICENSED PRODUCER CONTINUES TO EXPAND INTERNATIONALLY.

BY DANNY DANKO

Snow Dome, Aurora's version of DNA Genetics' LA Confidential, thrives in ideal growing conditions.

BIGGEST GROW





Workers inspect plants at the Aurora Mountain facility.

NORTHERN LIGHTS

Founded in 2013 and headquartered in Edmonton at the foot of the Canadian Rockies, Aurora Cannabis Inc. looks well-poised to take a sizable chunk of the multibillion-dollar legal cannabis industry both in Canada and worldwide. Spearheaded by CEO Terry Booth, the company is publicly listed (TSX: ACB) (OTCQX: ACBFF) and now has several hundred employees—an intriguing combination of business-savvy suits and cannabis-obsessed cultivators and processors.

Aurora is federally licensed through the Canadian Marihuana for Medical Purposes Regulation program to grow and sell cannabis and now has four state-of-the-art facilities throughout the country. What's interesting is that its operations are new, purpose-built constructions—specifically designed and built for cannabis growing rather than repurposed existing warehouses or retrofit buildings. The

layouts are designed for maximum efficiency, and their closed-loop HVAC systems allow them to produce clean and safe medical cannabis free of pesticides, molds or any microbial infections.

Aurora also has a policy of not utilizing cold pasteurization via cobalt-60 irradiation. Although some other licensed producers may use this radioactive process to sterilize their products, the team at Aurora prefers to preserve its terpenes from heat and its flowers from radioactivity in order to retain all of the medical potential of the crops. Although Aurora tests all its products in an on-site laboratory, Booth tells me, “We also have samples of all our cannabis sent to a Health Canada-qualified independent third-party laboratory for testing and analysis as well.” It's important to ensure the cleanest possible product, and the team at Aurora remains devoted to maintaining the quality and integrity of its output.

LIT PRODUCTS

Aurora provides several dozen strains of flowers with high THC and CBD levels, as well as buds with a variety of THC-to-CBD ratios in five- and 10-gram increments, with all products shipped using earth-friendly cornstarch packing peanuts.

The company also sells supercritical CO₂-extracted THC and CBD drops made by blending whole-plant extract with MCT (medium-chain triglyceride) oil to attain a targeted potency. Booth explains: “MCT is a healthy, colorless, odorless oil that is found naturally in coconut oil. MCT oil is broken down easily and efficiently by the body, which means that the client receives the maximum effect of our THC and CBD drops in a relatively short time frame.”

A unique product offered by Aurora, its Double-Milled Decarb capsules, is a smoke-free way to receive activated cannabinoids for



The vegetation area is lit with LEP (light-emitting plasma) and MH (metal halide) lighting. Right: A laboratory provides tissue culture specimens.

patients who choose not to smoke or vaporize their flowers or oils. Flowers are decarboxylated to fully activate cannabinoids and then powdered to produce a capsule that can be eaten directly or added to food or drinks. You can buy them filled or purchase filler and capsules to make your own at home.

All of Aurora's cannabis and cannabis-derived products are available at a flat-rate compassionate pricing of just \$6 per gram for patients in financial situations that qualify for the government-subsidized program established in 2013. Also available is a variety of vaporizers, including desktop versions and discreet vape pens.

Aurora's mobile app takes convenience a step further, allowing patients to view products in real time and order their cannabis medicines with a click of a button on their smartphones using fingerprint authorization. It'll even send push notifications the instant

that favored products are made available! Deliveries take between one and three business days depending on location, and the company is planning same-day delivery in the near future.

MOUNTAIN HIGH

Our first stop was in Alberta to visit and tour Aurora's 55,200-square-foot facility known as Aurora Mountain, nestled in beautiful Mountain View County near Calgary. Here, over 100 employees produce and process an astounding amount of cannabis in many different forms—over 10,000 kilograms per year! As I'm gearing up in head-to-toe protective garb to maintain sterility, chief cultivator John Barnet explains to me the protocol and process.

Plants are grown in pro-mix and drip-fed with a solution of nutrients mixed into fresh Canadian mountain water once per hour for 10 hours during the daytime light cycle. No pesticides of any kind are ever utilized, resulting in an integrated-pest-management system that relies heavily on beneficial insects. These carnivorous predators and nematodes attack any vegetarian bugs and their eggs in order to keep plants clean, healthy and thriving.

Aurora also avoids problems with powdery mildew using preventative measures that include meticulous quality control and employing strains with natural resistance to humidity-related issues. Barnet's background

in osteopathy inspires him to "treat the plants like people," and he's passionate about providing the right environment for them at all times. I quickly see that he and his crew cater to each strain's specific requirements, even with thousands of plants to maintain.

The propagation area housing mother plants and clones is lit with LEP (light-emitting plasma) and MH (metal halide) lighting. The advantages of being located in the pro-business province of Alberta include low tax rates and low electrical costs. Tissue-culture techniques are employed as well for efficiency and decontamination along with traditional cloning practices.

The 10 flowering rooms range in size from several hundred to several thousand plants. Each is maintained in ultra-sanitary conditions requiring clean trays, benches and floors. The individual enclosed rooms contain their own recycled air, with no fresh air brought in from outside.

Plants are harvested, trimmed, dried, packaged and shipped directly to patients. Climate-controlled vaults for storage contain packaging designed to protect the product from light, heat and humidity.



Thousands of plants fill out the trays at the 800,000-square-foot Aurora Sky facility.

SKY'S THE LIMIT

Our next stop is at an enterprise the likes of which I've never seen in all my years of visiting grow facilities. Located near the international airport at Edmonton, the Dutch-designed hybrid greenhouse known as Aurora Sky, still in the process of being built, boasts a mind-blowing 800,000 square feet! It took a helicopter ride over the site for me to truly determine the immensity of this \$100 million endeavor.

Conservatively projected to grow over 100,000 kilograms of cannabis per year, the facility employs high-tech European greenhouse agriculture technology for speed and automation. It includes a massive propagation bay, three vegetative bays that are 17,000 square feet each and 16 flowering bays that are each 35,000 square feet.

With an 8,000-plant mother room and 40,000 plants per bay, the numbers are simply mind-boggling. Add to that two massive storage vaults, multiple drying and packing rooms, space for a tissue-culture project, a hot-water storage tank and a 50-foot-deep, 102-million-gallon pond the size of 17 Olym-

pic pools, and you begin to understand the magnitude of this endeavor.

Aurora's commitment to cost-effectiveness drove the design of the greenhouse to utilize self-cleaning antireflective glass with snowmelt technology for optimal natural-light intake. The huge hot-water tank, warmed by hyper-efficient European boilers, pumps radiant heat through tubes, and an advanced HVAC design using forced air provides uniform climate control. A separate condensation system prevents humidity-related issues such as powdery mildew.

The bays are laid out with one lamp per every 25-26 square feet of footprint to act as supplemental lighting and help produce an even canopy over NFT (nutrient film technique) benching with one plant per square foot secured in rockwool medium. There's a 1-to-4 ratio of HPS (high-pressure sodium) to LED lights. The LEDs are sealed water-cooled units from the Dutch manufacturer Oreon, providing 53 percent more efficiency than HPS and an eight-year lifespan. Total power usage is 28 megawatts, and the facility can be seen from space!

Automation is key to Aurora's good manufacturing practices, as founding cultivator Chris Mayerson explains to me: "For both quality and cost-effectiveness, we seek to have as little human contact with our plants as possible to avoid contamination. Automated bench washers clean the growing areas and cranes lift up beds to move them as necessary. Robots space out our plants, and an automatic visioning system seeks out and identifies pests and diseases. We use no pesticides at all—just bio-friendly bugs."

Aurora Sky's post-production area alone is staggering in size. Fifteen drying rooms employ a cold-harvesting method that keeps the ambient temperature no higher than 9°C (48°F). Like a giant humidior, the rooms contain only filtered air and lock in terpenes and flavonoids for optimum quality.

A team of mechanical twister machines auto-trim the flowers and send them to the packing room, which can produce 50 sealed bottles per minute accurately. Air in the containers is replaced with CO₂ and nitrogen to preserve freshness almost indefinitely.

AMBITION

Blue Dream (Blueberry x Haze)

60% *sativa*/40% *indica*

20% THC

1% CBD

Flowering time: 9 weeks



HIGH TIMES
**SNOW
DOME**





TOWER

Cannatonic (G-13 Haze x MK Ultra)

50% *sativa*/50% *indica*

12% CBD

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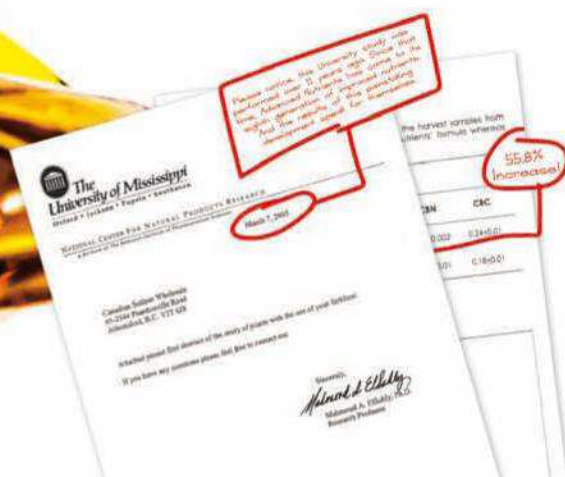
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Thor, Aurora's version of Rare Dankness's Ghost Train Haze, dries on racks.

HOME CULTIVATION

For those seeking to grow their own, Aurora recently acquired the BC Northern Lights and Urban Cultivator grow-box companies. While other licensed producers may seek to undermine and delay home-cultivation rights, Aurora sees an enticing market for personal grow equipment among the Canadian public and plans to even provide clones for sale to its customers who choose to produce their own marijuana.

CEO Booth explains: "We've always advocated for people's ability to make their own choices and are very supportive of the Supreme Court's Allard decision, which confirmed patients' rights to grow their own medical cannabis. Similarly, we believe that, after implementation of consumer legalization in Canada, individuals who choose to grow their own cannabis should have access to cultivation solutions that are in controlled environments, safe and can produce high-yielding, high-quality cannabis." Furthermore, the grow-box buyer can sample strains from Aurora before growing them in order to be sure they're cultivating the varieties they want.

BCNL and Urban Cultivator, operating for 17 and eight years, respectively, provide

state-of-the-art indoor-gardening appliances with touch-screen technology and advanced automation. They've earned a reputation as the leading grow-box brands in the world and have been encouraging and helping people to grow their own cannabis as well as micro-greens, vegetables and herbs.

Neil Belot, Aurora's chief global business development officer, says, "These transactions are an important step in our strategy to serve the home-gardening market in Canada for patients who choose to grow their own medical cannabis, and ultimately for adult consumers who choose to grow their own after Canada's federal government legalizes adult usage, which is anticipated by July 2018. For over a decade, BC Northern Lights products have been widely recognized as the gold standard for home cannabis production, and we look forward to integrating our offerings to deliver a truly unique and full-service customer experience."

"We are delighted to be part of the Aurora family," says Tarren Wolfe, co-founder of BCNL and Urban Cultivator. "This will enable us to address a much larger audience of people who have been empowered by the Allard decision to operate a home garden and are seeking access to the equipment,

genetics and educational support services to do so. In teaming up with Aurora, we will work with an industry-leading team of cannabis-branding specialists and sales and marketing professionals to bring BCNL to the next level. In addition, Aurora's licensed-producer status means the company will soon be able to provide a fully integrated package, including starter materials such as clones, offering one-stop shopping for people who choose to grow their own cannabis at home."

AURORA'S GLOW

With its commitment to quality and cost control; its fast, free and discreet shipping throughout Canada; and its newest facility projected to produce over 100,000 kilograms of cannabis per year, Aurora Cannabis Inc. looks certain to gain strength in the highly competitive marijuana-production marketplace on a global scale. Aurora's acquisitions, investments and recent expansion into supplying multiple international partners in Europe, Australia, South America and beyond will certainly change the future of cannabis cultivation and distribution worldwide. Like its namesake, the *aurora borealis*, this "electric" company seems destined to continue shining for years to come. 🌿

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Available in:
- 2 oz (59 mL)
- 4 oz (118 mL)
- 8 oz (236 mL)
- 32 oz (946 mL)
- 1 Gal (128 oz)
- 2.5 Gal (320 oz)

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SPLAAASH!!



POW!!!

Root Cleaner eliminates root-destroying pests and pathogens from soil and media.

Available in:
- 8 oz (236 mL)
- 32 oz (946 mL)
- 1 Gal (128 oz)



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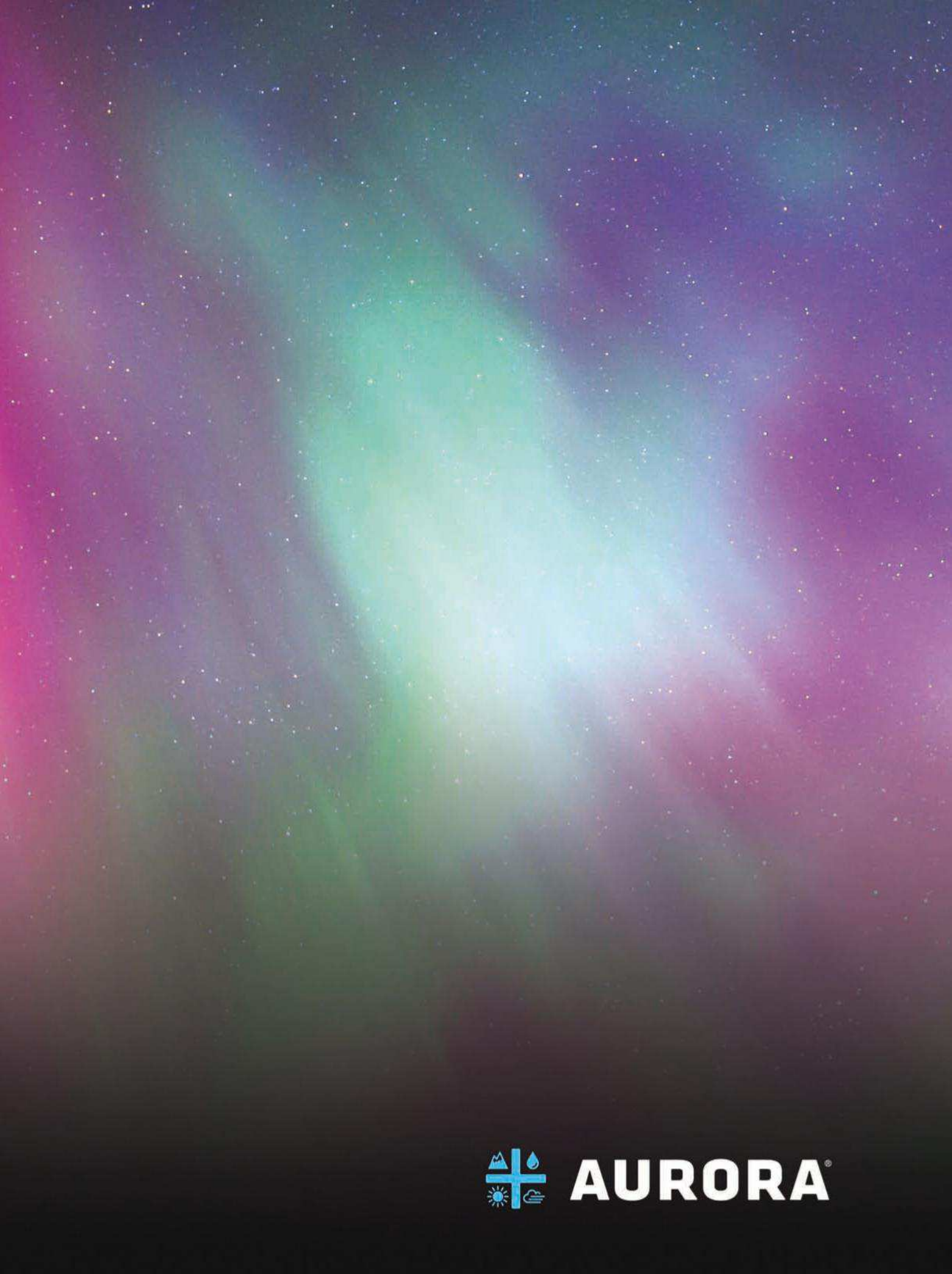
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BY STONEY TARK

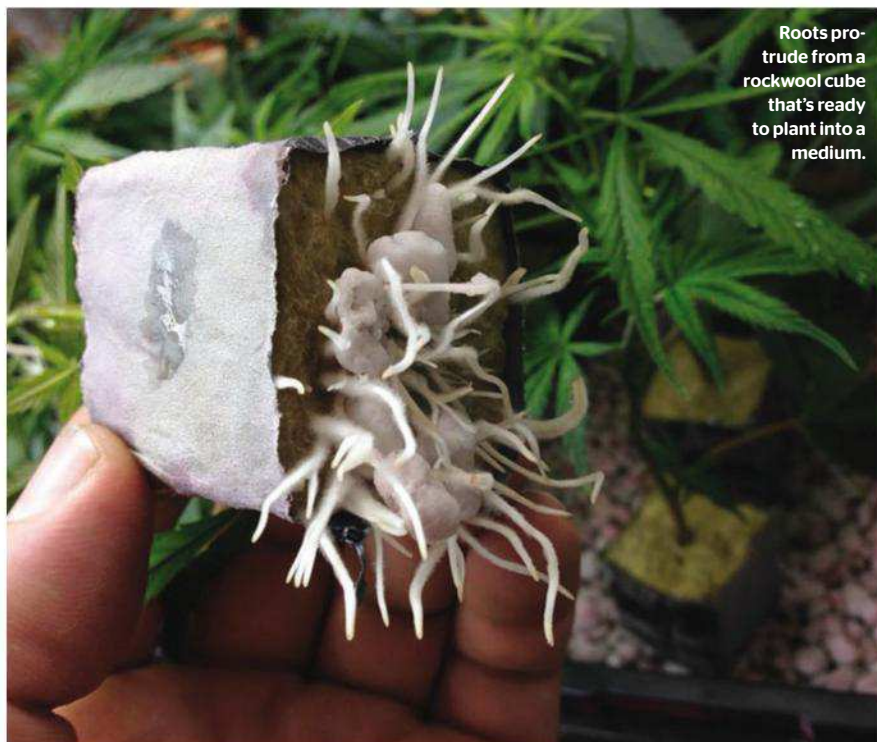


Clones can be removed before quickly making the final cut.

When is the right time to take a clone?

The right time to take a clone is when the plant is at least five weeks old from seeding and is growing multiple side branches and shoots. You will know by handling the plant shoots if they're older woody branches or soft tissue. Either of these can be cloned as long as you know what you are doing. The worst thing you can do is take a fresh shoot with inner walls that are still hollow—this usually ends up with the cutting wilting and becoming a soggy mess within minutes.

FAQ



Roots protrude from a rockwool cube that's ready to plant into a medium.

Do I need to use rooting hormone?

No, you do not need to use rooting hormone, as the plants naturally create growth hormones that encourage them to produce root cells and cease the growth of stem cells and leaves. You can always give your clone a supplemental hormone, which is often IAA (indole-3-acetic acid), the most naturally occurring plant hormone of the auxin variety. Some seaweed extracts also contain natural growth hormones that stimulate root-cell development.

What is the best medium in which to root my clones?

You can buy a range of different rooting cubes and jiffy plugs these days. The smaller cube-size versions allow roots to become air-pruned as they grow out of the medium and begin their expansion. Using coco or peat-moss jiffy plugs, Root Riot foam cubes or rockwool cubes will allow you to root successfully while maintaining the proper moisture level. My personal favorite for rooting clones are 2-inch-square coco jiffy cubes.

What temperature is best for my clones?

The temperature and humidity of your cloning area needs to be warm and wet. This is the main reason why growers experience stunted clones or rooting that can take anywhere from 21 to 35 days. If your growroom temperature is below 68°F, your clones will avoid rooting. Maintain a humidity level of 70% and a temperature of 75°F.

Why is there is fuzzy mold growing inside the propagator?

If you've left your humidity dome for several days untouched, you may notice that stagnant air and wet conditions have caused your clones to grow a furry white fungus. When you touch the plant material, it will feel soggy or mushy. This is a major setback, especially if you are depending on growing out a certain number of plants. To remediate this, remove the lid, immediately dispose of the infected clones and introduce fresh air into the propagator. You should lift the lid for 30 seconds daily to encourage the exchange of fresh air, taking care to maintain proper temperature and humidity. Cutting a quarter-size hole into the clear plastic at either end of the lid can help circulate air as well.

How big does my propagator need to be?

From my experience, the bigger the propagator, the better it is for the clones. You can easily root clones in cups and cover them with cling-wrap film and an elastic band if you must; however, using a propagator that is 12 inches tall provides plenty of room to take larger, more mature clones. Avoid using a small propagator that is 6 inches tall or less, as you'll only end up with cramped clones touching the wet sides and roof of the plastic dome.

Why does my clone have white bumps around its base?

This is the process whereby a cutting produces root cells. These first nubs are the earliest indicators that your clone is developing roots. At this stage, the clone is becoming an established, independent plant, so don't disturb these delicate primordia. After it forms a fully developed root system with fibrous root hairs, the clone will independently photosynthesize and begin taking in nutrients and growing.

When will my clones start showing roots?

This is determined by a number of variables including temperature, humidity, lighting and the overall quality of the plant. As long as your cloning room is at a humidity level of 70% and the room temperature is 75°F, you should see the first roots emerging within 7-10 days. If you are using larger clones, they will root first due to their size and maturity.



Clear domes increase humidity and rooting rates.



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Ensure there's at least two or three sets of leaves on your clones.



Rockwool cubes sit on top of large perlite chunks.



Clones can be aeroponically rooted in no medium at all.

Does it matter which part of the mother plant a clone is taken from?

Many growers swear that clones taken from the base of a plant will root first, perhaps because they were closest to the mother plant's roots. Other growers testify that cloning from the top using the mother plant's newest growth will produce the fastest-rooting clones. Cloning cannabis is a game of patience, and trying to rush the process will only frustrate you further. As long as the cuttings you take have at least one internode and some leaves, you'll have success.

Why are my rooted clones starting to wilt after taking them out of the humidity dome?

This is called the hardening-off process. Your clones have been acclimated to warm and wet conditions and now need to get used to life outside of the humidity dome. It will not take long for them to adjust, just like a fish that's been transferred into a tank of fresh water. If your clones are wilting and look like they're about to die, improper temperature or humidity is to blame. You must remember that you're mimicking the spring season. Slowly introduce them into their new environment that contains intense lighting and wind from fans.

Can I transplant the rooted clones to any grow medium now?

Once your clones are hardened off and you are happy with the way they are coming along, you should prepare the grow medium into which they'll establish themselves and grow. The roots of the clone will want to dig down as far as they can to anchor themselves firmly into the medium. Feed them very lightly at this stage and encourage more dry periods to avoid having a waterlogged medium. Roots will push out aggressively when they're looking for moisture and available nutrients.

Is there any other way to root clones?

If you find that the conventional technique isn't working, you can look at other cloning methods, such as using a bubbler or air layering. Using a bubbler entails sitting freshly cut clones in a bubbling oxygenated nutrient solution with a water temperature of 75°F. Air layering is used in bonsai-tree production and can result in some large and sturdy foot-long clones when done correctly. It's something I personally do when I want to take a large side branch and grow it as an independent clone. The amazing thing is that it's actually performed on the plant as it's growing normally. I strongly recommend you research this technique before attempting it, especially if you are new to plant biology.

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Do I really need to cut the leaf blades down?

You do not need to remove any of the leaf blades, but it does encourage the plant to cease photosynthesis and almost shut down. This is how root cells are able to form in the dark, wet conditions of the rooting cube. Many growers simply cut a healthy clone and then, once it has rooted, allow it to grow with all its leaves intact.

It's been 14 days and still no roots. Am I doing something wrong?

Most likely you've messed up one of the basics and now your pristine clones are back to square one. If you remove the clone and look at it closely, you may see that there's no root development. In fact, there might be just a soggy decaying tip where a healthy wooden stem once sat. If this is the case, then learn from your mistake and apply root hormone, change to a fresh new medium and make sure your temperature and humidity are at the proper levels.

How many clones can I take off a mother plant before it's excessive?

It may be called the mother plant, but she needs nurturing too. You should care for the mother plant and raise her to produce as many healthy clones while also pruning her to fit in your space. You shouldn't take too many clones at once, as you will eventually be left with a large woody stem with few shoots remaining. You also should consider using a new mother plant after multiple generations of cloning have taken place.

What are the top tips for cloning?

One of my personal favorite techniques is to double dip. This involves taking a clone and wetting the bottom inch with water, then dipping the wet part of the cutting in rooting-hormone powder. Once the powder has fully stuck to the wet part, you can now dip it into a rooting gel to seal that rooting powder in and provide a double dose of natural growth hormone.

Good luck getting 100% success rates on your clones and becoming the farmer you've always wanted to be! 🌱

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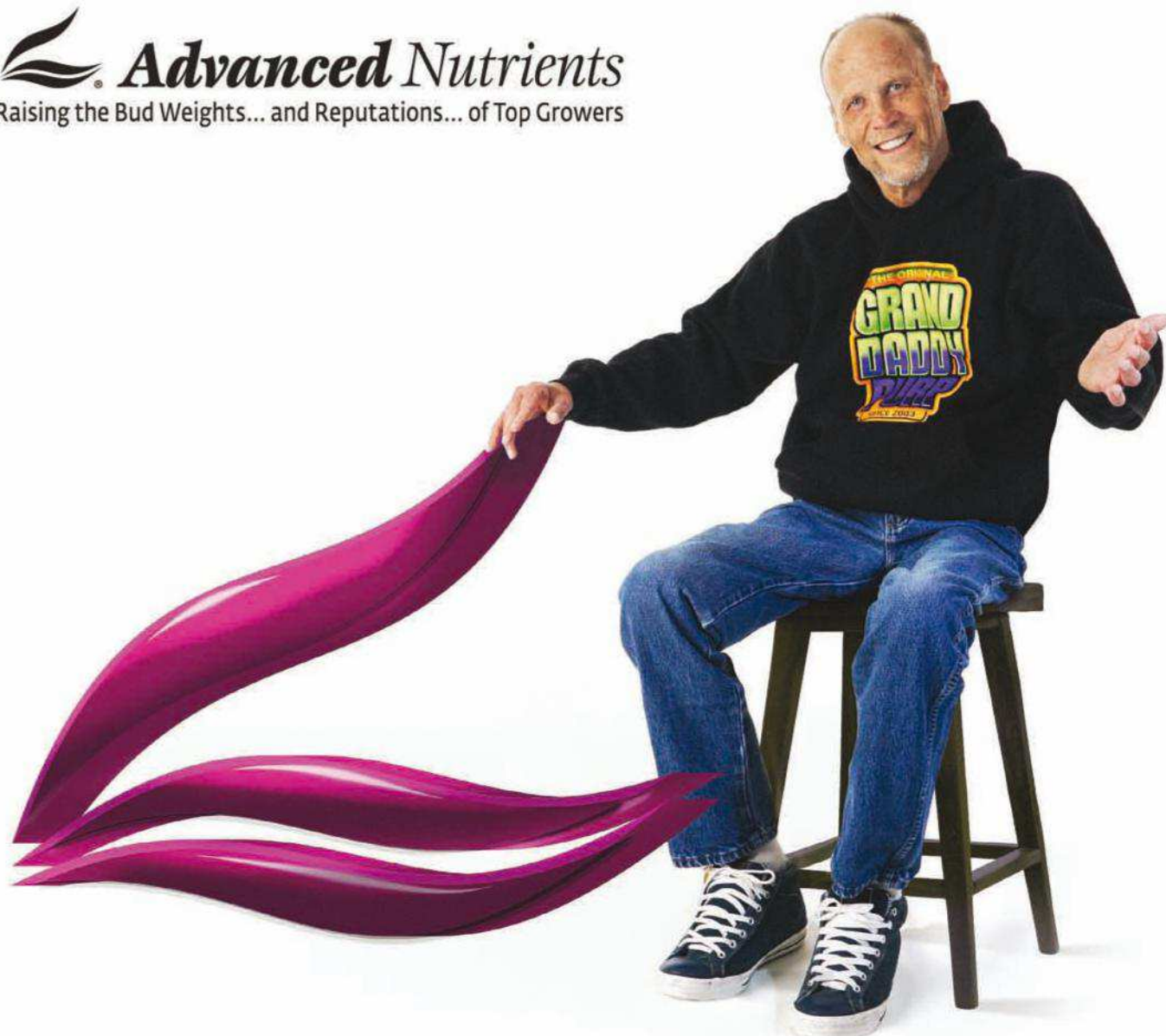


Dipping cut ends in rooting hormone protects delicate plant tissue while encouraging root production.

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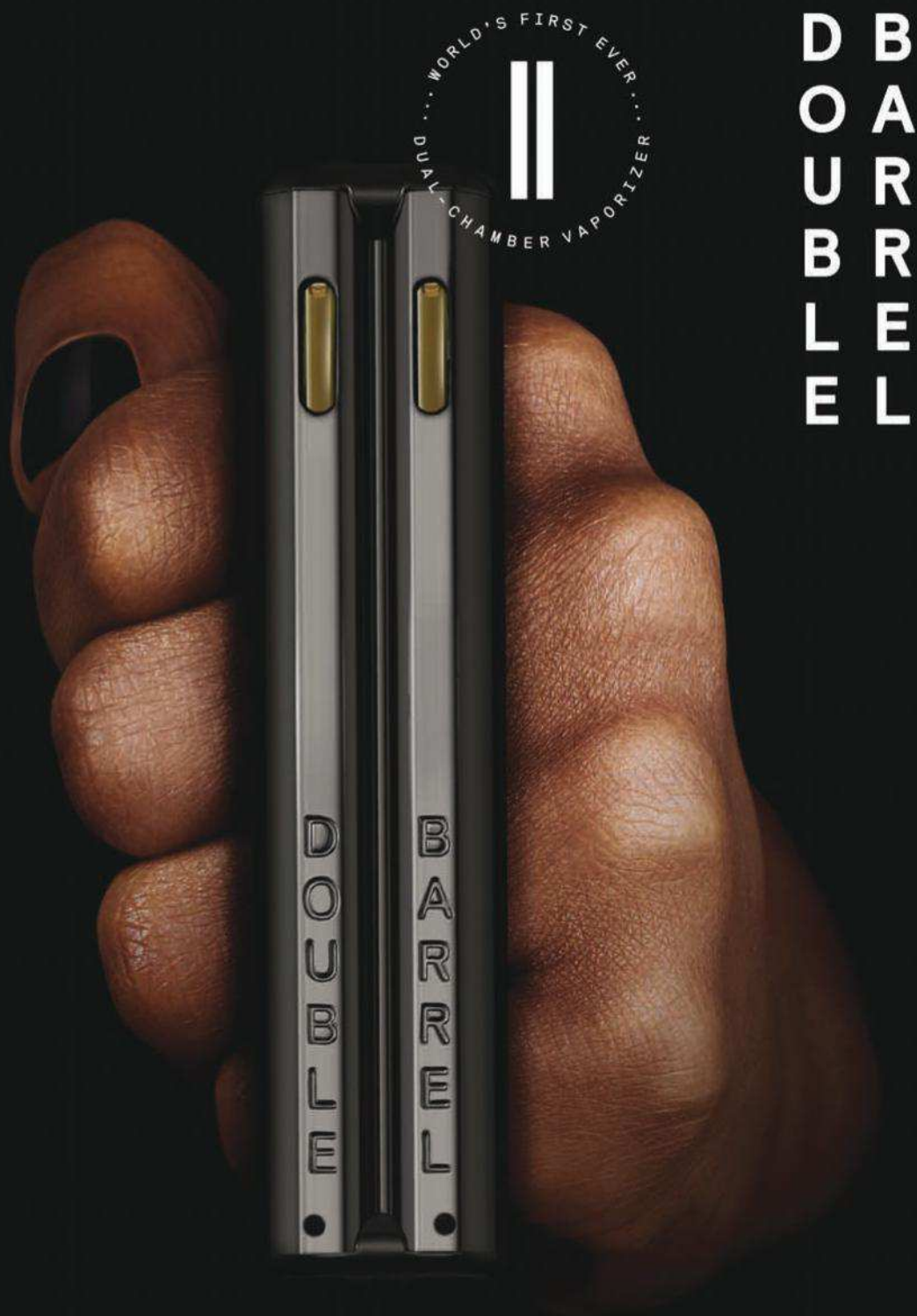


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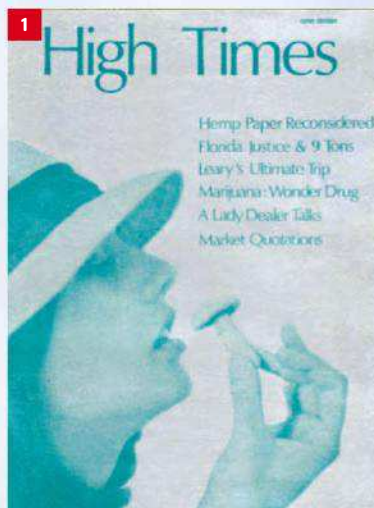
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1. The first issue of *High Times* from 1974 featuring a mushroom-eating goddess.
2. Fire-eaters spark up at the *High Times* Women of Weed event in Los Angeles.
3. Our May 2003 cover featuring Oscar-winning actress Frances McDormand.
4. Attendees take in a performance at the first-ever *HT WOW* event.
5. Musician Jaira Burns performs at *WOW*.



HIGH HOSTS

INSIDE THE FIRST-EVER *HIGH TIMES* WOMEN OF WEED EVENT

LET ME TELL YOU A SECRET. The first issue of *High Times* featured a female goddess on the cover eating a mushroom. It's true. From our first art director to our longest-tenured publisher, *High Times* magazine boasts a rich history of strong female leadership.

For the past 44 years, we have collaborated with activists, cultivators and tastemakers in the cannabis space. Many of these OGs are indomitable women. It is this breed of female that inspired the formation of the *High Times* Women's Council and its inaugural *High Times* Women of Weed (WOW) event in Los Angeles.

Officially dubbed "An Evening With OG Women," the event also served as a benefit for the Freedom Grow organization—the brainchild of super-OGs Dr. Dina and Stephanie Landa that helps inmates imprisoned for nonviolent cannabis offenses.

The event was held at the Nexus Social Lounge in downtown Los Angeles on February 28. Upon entry, partygoers were greeted by photographers, pulsing music by DJ Bliss and live performances by Lil Debbie and Jaira Burns. There was an overwhelmingly positive energy in the room.

The WOW bash attracted a bevy of glitterati women—and men—from every sphere within the cannabis world. There were growers, entrepreneurs and business owners, of course. But there were also writers, artists, bloggers and vloggers, fashion designers and musicians. The guest list ran the gamut of women in the industry. And best of all, it



6. WOW organizer Jackee Stang and the Hash Queen of Amsterdam Mila Jansen

7. Cultivation expert Kyle Kushman and wife Susie

8. Lil Debbie takes the stage.

9. Jason Pinsky and guests outside of WOW

10. WOW sponsor Select was well-represented.

11. KINGPEN brought plenty of pre-rolls.

12. Claire Campolo, Rihanna Cooper, Ann-Marie Hoang at the High Times Women of Weed event

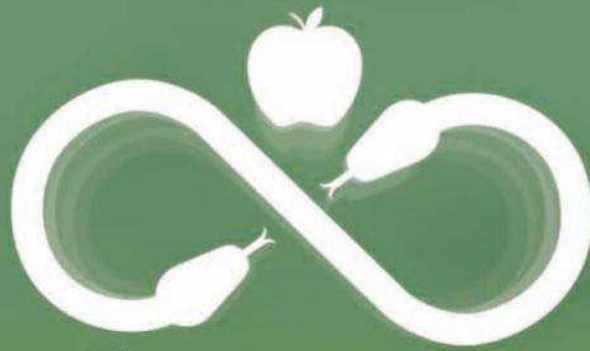
13. Harlee Case, Jade Daniels and Alice Moon get together for our photographer before heading into WOW.

14. Wolfie Memes' Kush Queen Cevon Ivy snaps a selfie at WOW.

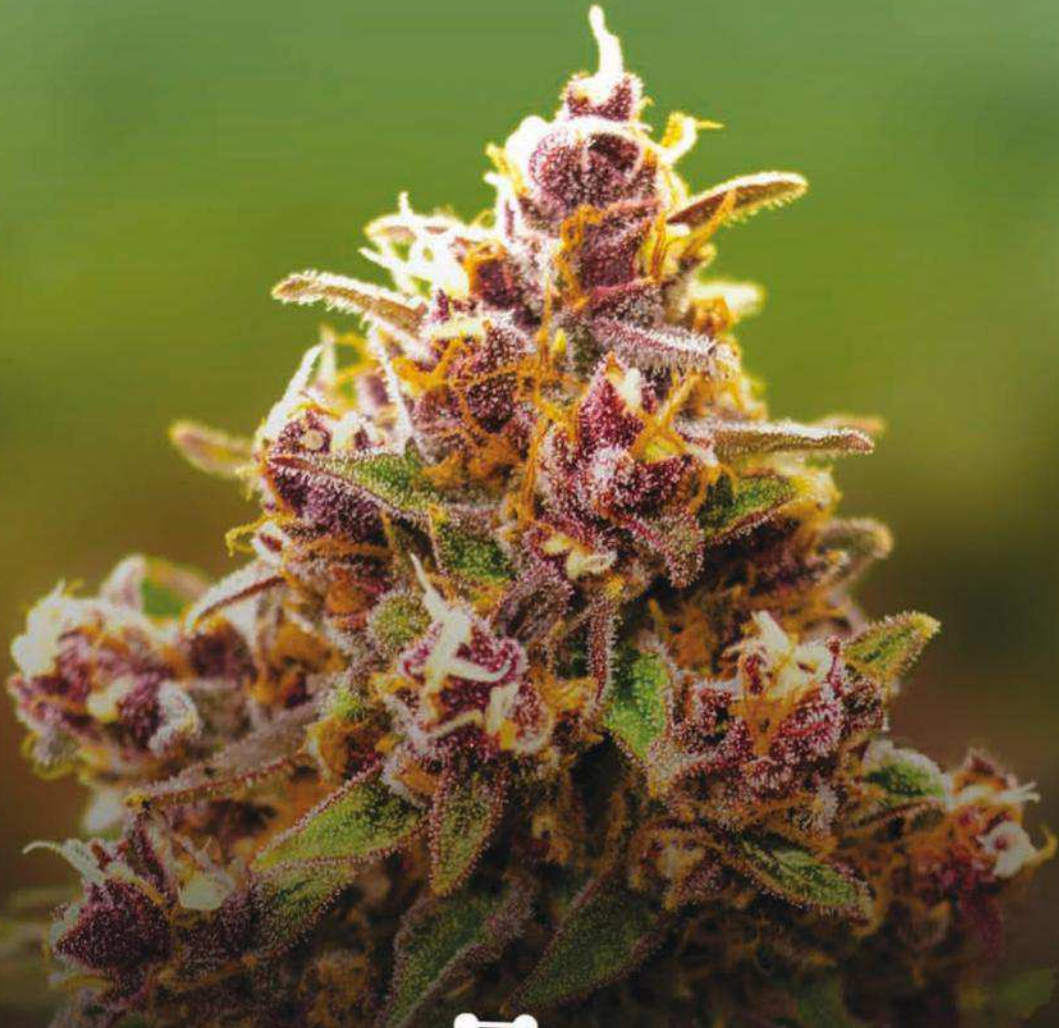
seemed that everyone there was eager to meet and mingle with everyone else. In the cannabis industry, women are starting to lead the way. And the vast majority want to help and empower other women to stake their claim.

In the event space, cutting-edge brands like Kush Bottles, KINGPEN, Select and GCS Pharmaceuticals Inc. showed off their wares. Partygoers enjoyed award-winning medicated and non-medicated cuisine, Honey Pot's famous tea-party bar, a high-design bong wall, fire dancing, plant alchemy with Lizzy Jeff, one-of-a-kind temporary art tattoos, CBD cotton candy... There was a lot to celebrate.

Everyone who attended the *High Times* Women of Weed event would agree: The party knocked it out of the park. The *HT* Women's Council can take most of the credit, but we need to acknowledge the activists and lawmakers who never stopped pushing for policy change, as well as the voters who made legalization in California a reality. Make no mistake about it: This and all future WOW events honor the hard work and dedication of those women whose shoulders we all stand on today. *Chloe Harper Gold & Jackee Stang*



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TOTAL THC: 17-20%

TOTAL ACTIVE CANNABINOIDS: 18-22%

THCa:	16-21%	Total CBD:	0-1%
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Pathogens: **Pass**

Fungus: **Pass**

Mold: **Pass**

Pesticides: **Pass**



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Our estate grown Forbidden Fruit is a nicely balanced indica dominant cross between Cherry Pie and Tangie with mid-levels of THC. From clone to harvest this beautiful strain stands out with its deep purple hues contrasting sharply against wiry orange hairs. Strong citral scents permeate the buds, releasing a refreshing aroma in the air, while the taste is crisp and nuanced, with tropical undertones and hints of pine. If you're looking to relax Forbidden Fruit will gently send your body into a state of bliss, complimented by spurts of euphoria inherited from its Tangie ancestry.



1. *Super Troopers* star Jay Chandrasekhar co-hosts the awards show.
2. The Dispensary Owner honorees accept their awards onstage.
3. HT CEO Adam Levin welcomes the crowd.
4. Comedian Jeff Ross roasts volunteers from the audience.
5. HT100 honoree Cameron Forni with his wife Lauren
6. Berner and B-Real perform tracks from their *Prohibition* collaboration.
7. BigMike of Advanced Nutrients addresses the audience.
8. HT100 honorees Berner and B-Real
9. Maya Elizabeth from Whoopi & Maya
10. Donnie Anderson of Western Caregivers, Jerett Wasserman of West Coast Cure and Don from DNA Genetics take in the scene.
11. Danny Danko mugs for laughs.

HT 100 HONORING THE 100 MOST INFLUENTIAL PEOPLE IN CANNABIS

THE BIGGEST NAMES in the cannabis world converged at Exchange LA in downtown Los Angeles on March 1. As a line of eager attendees formed at the venue's entrance, a palpable excitement filled the early-evening air. The night before, *High Times* hosted its first-ever event celebrating women in the cannabis space. This night, *HT* brought pot superstars like Advanced Nutrients' BigMike, Select CEO Cameron Forni, AHHS Collective's Dr. Dina and the King of Cannabis himself, Arjan Roskam, together to celebrate the 100 most influential people in cannabis.

While *High Times* has been hosting events for over 30 years, the *HT* 100 Awards Show was unlike anything we've done before. Our list of the 100 most influential people in cannabis was featured in the May 2018 issue of *HT*, and as that issue hit the newsstands we were welcoming the honorees live and in person to a gala in the country's cannabis capital.

The *High Times* 100 Awards Show was hosted by Broken Lizard founding member and *Super Troopers* star Jay Chandrasekhar and *HT*'s own senior cultivation editor, Danny Danko—with *HT* editor-in-chief Mike Gianakos handling the announcing. *High Times* CEO Adam Levin got things started, welcoming the evening's honorees and

attendees before giving way to comedian Jeff Ross, who roasted wary volunteers from the stoned crowd.

Honorees were brought up to the stage by category (Dispensary Owners, Product Makers, Cultivators, Extract Artists, Activists, Celebrities, Sports Figures, Politicians, Scientists, Businesspeople, Influencers, Media Members and Promoters) to address the audience. Many gave heartfelt speeches about their work in cannabis, the people who inspired them and the patients they've been fortunate enough to help. Chandrasekhar and Danko deftly kept the event flowing, interacting with award winners and riffing on the cannabis space.

After the awards were all handed out, attendees were treated to a performance by HT100 honorees Berner and B-Real.

The first-ever *High Times* 100 Awards Show was a huge success thanks to our incredible honorees, attendees and sponsors—Advanced Nutrients, Select, Aurora, Kush Bottles, Futurolo and Canna-Hub. Best of all, it's just the start of things to come as the movers and shakers in the cannabis world continue to make their presence felt. *Mike Hughes*



PATIENTS

Sifting through the changing landscape of medical marijuana laws in your state can become overwhelming. MarijuanaDoctors.com is here to help.

Our site is designed to serve patients and physicians alike, providing information about state legislation information, practices nearby, and dispensaries in your city for patients and comprehensive outreach services for physicians to connect with patients in the area.

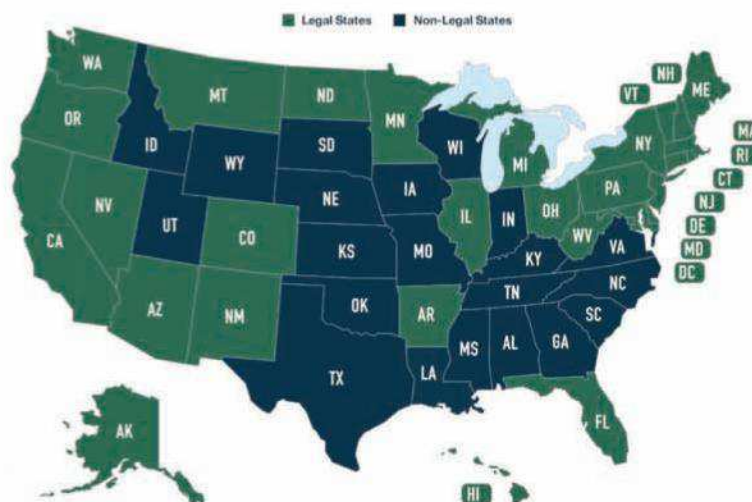
Your Journey with MARIJUANADOCTORS.COM

Patients can start by checking our database of legal and non-legal states to learn about medical marijuana laws in their states. Our state database includes information about qualifying for medicinal cannabis and how to complete the registration process.

For patients with limited mobility, we have information about telemedicine services in qualifying states -- which helps bring care right into the patient's home.

Find a QUALIFIED PHYSICIAN

Once the registration requirements are known for each state, patients can check out our list of physicians certified to recommend medical marijuana. Not only can patients search for physicians that are nearby, but they can also view reviews and ratings for physicians to get a feel for a practice before making an appointment. We've made it easy for patients to pick the right physician -- including practice information, office hours, and pre-visit requirements. Patients can schedule their appointment online right from the comfort of their home. A recommendation from a qualified physician in our database helps patients obtain the legitimate medical documentation they need in order to start the registration process for a medical marijuana card in their state.



Fill Your Recommendation CLOSE TO HOME

After patients have completed the registration process and obtained their medical marijuana card, MarijuanaDoctors.com can help them find a dispensary to fill their recommendation. Not only do we constantly update our list of dispensaries in legal states, but we have our finger to pulse of non-legal states with changing legislature and are first on the scene when dispensaries open in these states.

Patients can find rating and review information about local dispensaries to help them find the best budtender for their needs. Soon our team will be integrating ordering functionality so that patients can order directly from dispensaries, making it even easier to get the medical marijuana they need to treat their qualifying conditions.

The Nation's #1 Medical Marijuana Network



Marijuana Doctors: One-Stop Portal

If you're a medical marijuana patient or doctor, finding the resources and dispensaries you need can be difficult.

If you're a medical marijuana certified physician, MarijuanaDoctors.com has the resources to connect you with thousands of patients every month.

PHYSICIANS

Our subscription services help us optimize your profile to help draw more patients to your practice. We are constantly adding services to help physicians connect with patients in this digital age.

Digital Appointment Assistant PRACTICE MANAGER

We are happy to offer a paperless HIPAA Compliance Check-In System for physicians registered on our site. Practice Manager, the new electronic check-in system, will process forms and instantly store files into the EMR. The system will make processing patient paperwork easier, leaving physicians and practice managers just to review notes and schedule follow ups. The check-in system will also have functionality to set up reminders for patients about scheduling follow-up appointments through the Marijuana Doctors site, text, or email. The system will also give patients the opportunity to rate the practice and their experience, helping boost the practice's credibility with great reviews and testimonials.

At Your Fingertips TELEMEDICINE

Our new registration and digital signature automation will technically streamline workflow for practices using telemedicine. Doctors can connect with telehealth patients by simply clicking a few buttons in their Practice Manager. Once a doctor connects with a patient through Practice Manager, patients have the ability to see when doctors are available for a live chat about their medical marijuana treatment options. Doctors have the ability to use MarijuanaDoctors.com to have patients fill out telehealth forms, process payments, receive medical records, schedule a HIPAA compliant virtual appointment, add notes, finalize appointments, and schedule follow-ups to boost patient retention. This system is the most

seamless way to manage your practice's patients and reach out to new patients by connecting with the tens of thousands of unique visitors that use MarijuanaDoctors.com every day to understand medical marijuana.



New Functionality BUDTENDERS & DISPENSARY OWNERS

Catering even further to the medical marijuana industry, MD also provides marketing solutions for producers, dispensaries and cannabis clinics. Once a patient has received a medical marijuana recommendation and the physician has registered the patient on the state's department of health website, patients can now request an appointment with local dispensaries using our network.

MarijuanaDoctors.com gives producers the

ability to vertically integrate within their market, understanding that patients using medical marijuana to treat debilitating and chronic conditions hold a lifetime value as customers of a dispensary.

As with physicians, producers now have the ability to create profiles optimized for their location and benefit from the patient funnel that is generated by our network's skillfully developed infrastructure.

Producers will now share the

automated-functionality of scheduling patient appointments, and have access to the telehealth portal by which they may consult with patients online, instead of in-person. Furthermore, producers may also choose to become featured advertisers, opting for advanced placement in the state and city static listings, which always come up first in the search results.

ABOUT



Marijuana Doctors seeks to educate patients in states where medical marijuana is legal. Our goal is to be one-stop resource for

patients to have their medical marijuana needs met in one location. In order to best serve our patients, we will provide information about medical marijuana laws, availability of physicians in patients' areas, on-demand access to physicians and pharmacists,

information about dispensing options, delivery services, ancillary products, easy online ordering, and automated product ordering. As we continue to expand our patient resources, we are excited to offer 360-view tours of featured dispensaries, the cultivation process, the manufacturing process, and products. Our patients are able to do everything—from research to ordering to reordering—from the comfort of their homes.

As a MSO, Marijuana Doctors can facilitate these services on behalf of medical organizations with medical marijuana licenses in qualifying states. We have created security checks and balances to ensure that deliveries and sales can only be obtained legally, taking the pressure off our patients. As your go-to resource for marijuana, we will keep adding the information you need to make receiving the medical marijuana you need to treat your qualifying condition as easy as a click.

SAVE THE CHLOROPHYLL



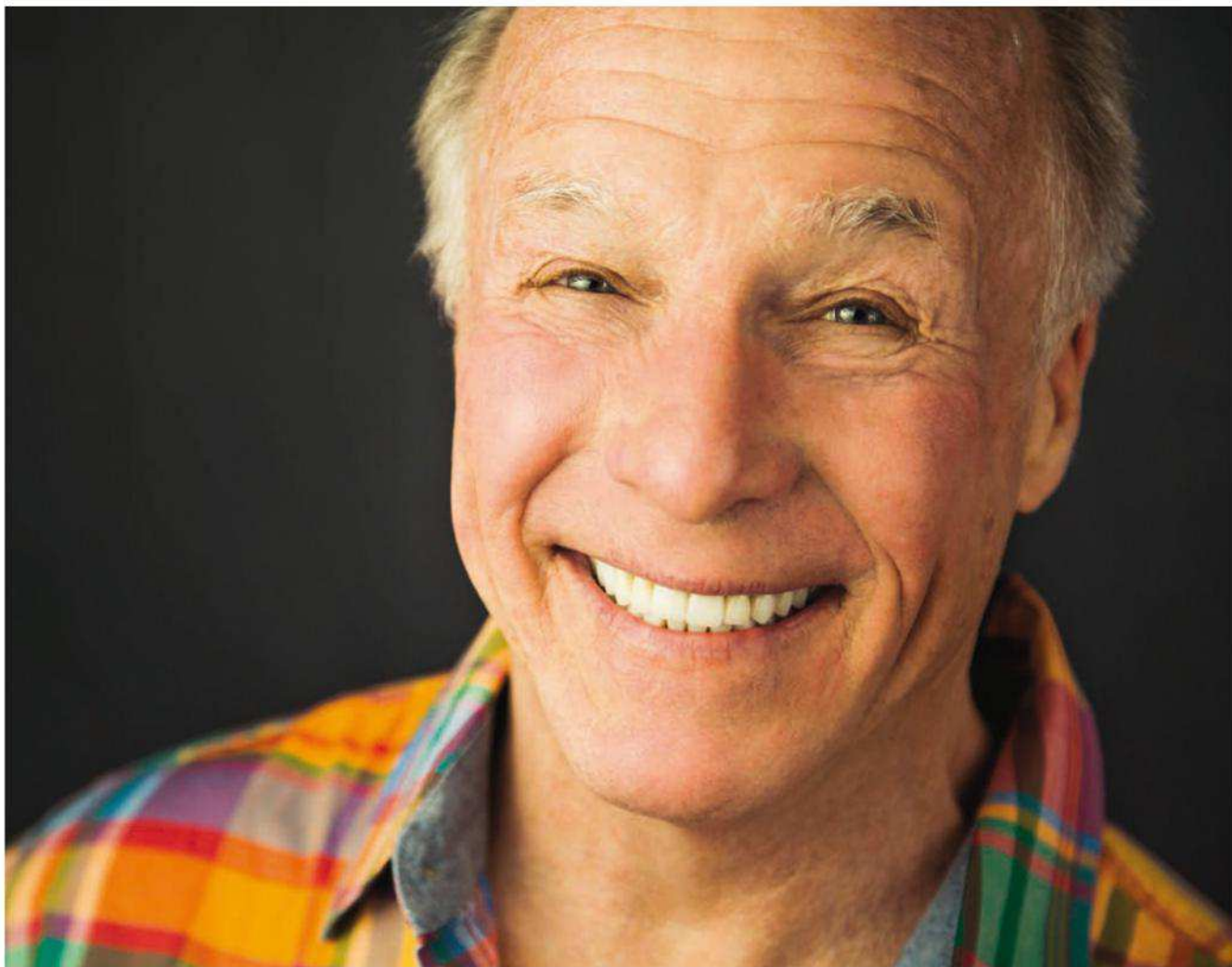
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BY MIKE GIANAKOS

JACKIE MARTLING

THE HIGHTIMES INTERVIEW

JACKIE MARTLING MAKES A LIVING AS A COMEDIAN, BUT HE'S NOT MUCH OF A FAN OF COMEDY. MARTLING LIKES JOKES—THE DIRTIER THE BETTER—BECAUSE HIS GOAL IS TO ELICIT A VISCERAL REACTION THAT HE LIKENS TO A GUT PUNCH. HE'S BEEN HONING HIS CRAFT FOR NEARLY 40 YEARS, 18 OF WHICH WERE SPENT AS THE HEAD WRITER FOR *THE HOWARD STERN SHOW*, AND HIS REPERTOIRE IS AWE-INSPIRING. HIS "STUMP THE JOKE MAN" BIT, IN WHICH HE'S GIVEN THE SETUP OF A JOKE AND INEVITABLY KNOWS THE PUNCHLINE FROM MEMORY, IS A REMARKABLE FEAT TO WITNESS. NOW IN HIS 70s, MARTLING IS A LONGTIME SUPPORTER OF CANNABIS, WHICH ASSISTED HIM IN QUITTING ALCOHOL IN THE WAKE OF HIS DEPARTURE FROM THE STERN SHOW IN 2001. SEVENTEEN YEARS LATER, MARTLING CONTINUES TOURING THE COUNTRY AS A STAND-UP AND ADDING JOKES TO HIS IMPRESSIVE REPERTOIRE. WE CAUGHT UP WITH HIM IN BETWEEN GIGS IN NEW YORK CITY.

When did you first know you were a comedian?

Funny you should ask that. To this day, any time I'm telling someone I'm a comedian, I fully expect a tap on the shoulder and then to hear in my ear, "Oh no, you're not." Hey, I'm insecure now, but how long can it last? Actually, I'm not a comedian, I'm a joke teller. The first big laugh I got was with a not-quite-off-color joke I told while emceeing the East Norwich, Long Island, Cub Scout Pack 253 Blue & Gold Dinner in 1958 at age 10. And I was relatively sober.

You're known for your encyclopedic knowledge of jokes. How did you develop that?

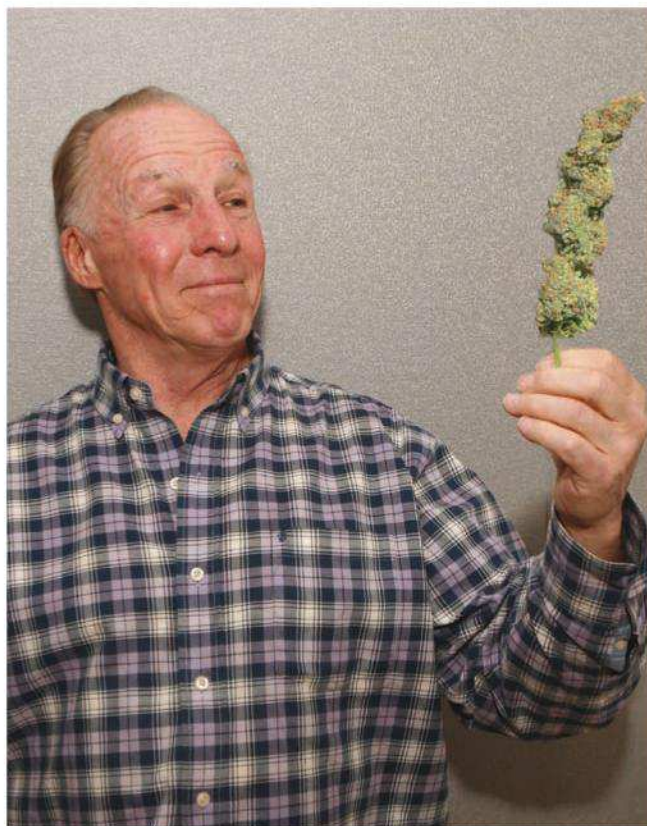
I realized when I was very young how much I enjoyed telling and hearing jokes. I bought joke books and voraciously read anything with jokes in it. But mainly I listened and then listened some more. It seems like the jokes stuck in my head from the onset.

Eventually I was the last guy standing—and drinking—at every bar, party, you name it. I tell a joke, you tell a joke, I tell three jokes, someone else tells a joke, I tell seven jokes... I wasn't out to accomplish anything, there was no Machiavellian plan, I just like jokes.

I graduated from Michigan State University as a mechanical engineer in 1971 and used my diploma to roll pot. Getting a regular job was so out of the question, I can't remember ever even having any conversations about that concept with myself, let alone anybody else, *ever*.

I never set out to be a comedian. But in January 1979, I transitioned from performing as a guitar player who told jokes to a comedian who played the guitar. And it worked from day one. I never looked back.

I realize that was a very long-winded answer. But the devil's in the details. If you



WHEN I'M STANDING THERE TELLING YOU A JOKE, THE BEST POSSIBLE OUTCOME FOR ME IS YOU REACTING LIKE I JUST PUNCHED YOU IN THE STOMACH. REALLY.

think you'd enjoy reading my full story, please close this magazine and go buy my book, *The Joke Man: Bow to Stern*. *High Times* won't mind, because you already bought or stole their magazine.

What is it about jokes that appeals to you, as opposed to the conversational style of stand-up?

For the most part, jokes—regular “a crocodile and a rabbi go into a bar” jokes, with very specific punchlines—get bigger and more explosive laughs. And that's what I've been in it for from the start: laughs. I had no aspiration to be a comedian—didn't want to tell people about my life—I just wanted to make them laugh as hard as I could. So often somebody will say, “Why dirty jokes?” Because that's what gets

guffaws and screams. Laughter comes from the release of tension, and sex or poop simply introduce much more tension than complaining about airplane food.

Johnny Carson would do a seven-minute monologue, telling jokes about the weather, the president, current events, and then at the end he'd occasionally tell a very borderline dick joke, and the entire audience would *lose* it. Human nature.

When I'm standing there telling you a joke, the best possible outcome for me is you reacting like I just punched you in the stomach. Really.

For example: The marriage counselor says, “I think we should begin with something you have in common.” The husband says, “Neither of us likes to suck cock.”

Does pot play a role in your joke writing? Is it any part of your creative process?

Pot has never had any role in my comedy. I only went onstage stoned once—as a comedian—and never did it again. It does, however, have a role in everything else I do.

The weed these days is a bit more potent than it was when I first imbibed back in the late '60s. I sat on the bus with Willie Nelson last week, and he hands me his electronic pipe and it was Willie's Reserve and I had a hit, two hits. Then we went out—Willie had a sold-out show at the House of Blues—and [my friend and I are] in the back corner... It was pleasant as hell, but I was out of my mind from two hits. And I'm saying, we're here and he's onstage, but the three of us are sharing a head.

Yeah, he's a trooper. He'll play for hours.

I love him.

When did you get into cannabis?

I smoked my first joint in 1967, sophomore year of college, listening to *Surrealistic Pillow*, an LP by a great new group, Jefferson Airplane. When I tell people I never smoked pot until I got to college, they can't believe it. But back then, it wasn't, how old were you when you first got high? It was more like, where were you in 1967? Because, to a lot of us baby boomers, pot was like the VCR and the computer—one minute it didn't exist, and then it was *everywhere*.

From the onset, I was the guy on the *Stern* show promoting weed. And I've always let it be known how proud I am to be associated with *High Times*.

There've been times in my life where I stopped smoking pot for a day, a week, a year... just because things come and go and supply and demand. I was never a wake-and-bake guy, but I really enjoy pot. And it's not doing anybody any harm. We all know that.



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I DID A SHOW IN DENVER, AND THIS GUY CAME TO THE SHOW AND HE GAVE ME SOMETHING I'D NEVER SEEN BEFORE. HE GAVE ME A BIG SLAB OF HASH BUT IT WAS GREEN. AND HE SAID IT WAS CALLED KIEF? HOLY CHRIST... YOU PUT A LITTLE SPRINKLE OF THAT ON ANYTHING AND YOU GO TO THE MOON.

You travel all over the country doing comedy. Who do you think has the best pot?

The truth about that is, I come into a town and do a show, so it depends on who ends up being my connection that night. There's always people in town that want to have the best pot—and they're the people that come up to me and say, "Try this, Joke Man!" And you never know. I can be in the middle of nowhere and some little old lady will come up and hand me a joint, and I'll smoke it and I won't be able to move.

For the most part, I've always been handed great stuff. I did a show in Denver, and this guy came to the show and he gave me something I'd never seen before. He gave me a big slab of hash but it was green. And he said it was called kief? Holy Christ. And I flew home with it—I don't know how. But you put a little sprinkle of that on anything and you go to the moon.

Who were your favorite comedians growing up?

I loved Red Skelton because he enjoyed himself so damn much. My mother used

to say she loved to watch me watch *The Red Skelton Show*. Red has to be at least partly responsible for me incessantly laughing during my act. There's two things you don't do if you're a comedian: You don't tell old jokes, and you don't laugh at your own jokes. That's *all* I do.

I also loved Redd Foxx, Henny Youngman, Rodney Dangerfield... the joke guys. Not to beat it to death any more than I have, but I'm a joke fan, as opposed to a comedy fan.

Who do you admire most now?

As far as the comics nowadays, I think maybe I'm not as tuned-in as I should be. The guy I like the most is Chris Rock.

How'd you get involved with *The Howard Stern Show*?

The short version is on someone's suggestion I sent my comedy albums to Howard, he liked them and he called and invited me to sit in on the show in February 1983. And I stayed for eighteen years.

The long version is one of the best chapters in my book, *The Joke Man: Bow to Stern*.



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DRUG PROHIBITION. HARMLESS?

facts the anti-Drug War

DAREgeneration.com

You were with Howard for almost two decades, so I'm sure there's a lot to pick from. But could you tell us about your favorite Stern experience?

I've of course been asked this a zillion times, and to this day I have no answer. All those years of passing Howard a line and 10 seconds later millions of people laughing out loud at what you just wrote sets a pretty high bar for peripheral stuff to make a dent.

The Madison Square Garden premiere of *Private Parts* is way up there, not to mention three days on a film set. I still have trouble wrapping my mind around the fact that we broadcast live from Abbey Road Studios for a week. And of course, beating *Saturday Night Live* in the ratings was surreal.

Toward the end of your time with Stern, a lot was made of your use of alcohol. How bad was it and how did you overcome it?

My drinking had never really escalated—ever since high school it had been fairly heavy. But I never missed the show because of it. Mainly it had just been going on way too long. So after I left the show in 2001, knowing I'd have a lot of free time and could easily disappear into the abyss, I stopped. People tell me, "Oh, you're not sober because you still smoke pot." And I'm like, "Go screw yourself."

The show had a field day with my thirst. But truth be told, if anybody ever drank as much as they claimed I did, they'd be in a jar somewhere.

In the '70s, you set up a phone line where people could call in and get a joke. Now, four decades later, you're using Twitter in a similar way, providing jokes daily at 4:20.

My joke line—"Use Your Finger! (516) 922-WINE!"—is

PEOPLE TELL ME, "OH, YOU'RE NOT SOBER BECAUSE YOU STILL SMOKE POT." AND I'M LIKE, "GO SCREW YOURSELF."

coming up on 40 uninterrupted years. Call it right now!

Yeah, nowadays in addition to the phone line, I tweet jokes every day at 4:20 p.m., which I'm sure I don't have to tell your readers is International Marijuana Time. Please follow me on Twitter, @JackieMartling.

But I started the joke line in January 1979 to promote the very first Long Island comedy shows that were produced by me and Richie Minervini. The tales of my dial-a-joke are endless and are well-documented in my book. [Laughs]

Please, tell us about your book.

If you insist. I'd been working on my autobiography for decades. I had enough stories to fill two books, so beware the sequel.

I let it all hang out, where I started, how I wound up with Howard, what we did and then what happened at the end. I wanted to get my version out there, you know? It's roughly one-third about my pre-radio-show life and comedy, and the remaining two-thirds document the direct trail to Howard and much of the wonderful stuff that ensued.

Each chapter title starts with a year, so it's a timeline of all of our lives—"1997: Paying Rodney With Jokes"... Everyone tells me that whenever they're reading the book they trip off into their own lives. To order the book, just go to jackiethejokeman.com.

The foreword is by Artie Lange, and it's available in hardcover, Kindle and as an Audible audio book—Artie reads his foreword for the audio version. ✱

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Send your cannabis cultivation questions to [@deardanko](#) or [deardanko@hightimes.com](#).

SUBJECT: **Female Pre-Flowers**

FROM: **Vasco De Ganja**

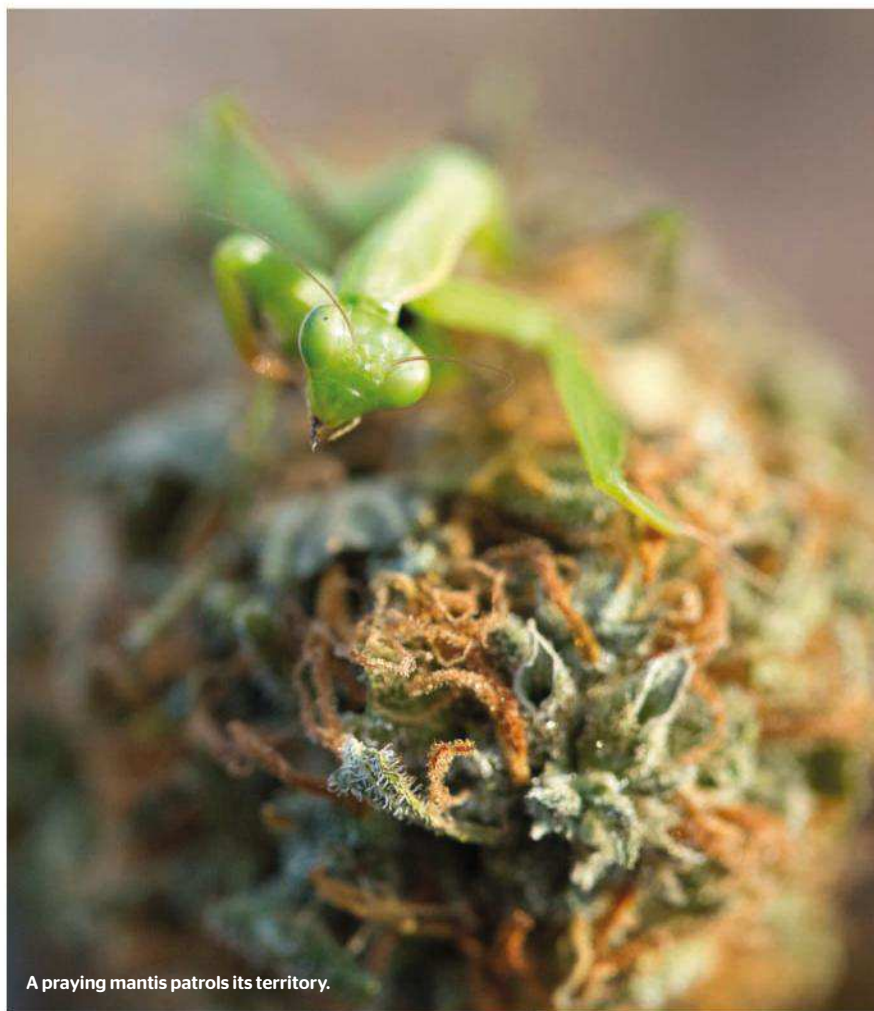
🌿 How can I tell what the sex of my plant will be before the flowering stage has begun?

Dear Vasco,
You need to examine the node where the leaves meet the stems and look for the pre-flowers. Male pre-flowers look like tiny spikes with balls on the end, and female pre-flowers look like tiny teardrop-shaped pods with white hairs sticking out.

Female pre-flowers emerge from nodes.



Danko Tip: Use a light meter to measure whether you're getting the minimum 6,000 lumens per square foot at the canopy level.



A praying mantis patrols its territory.

SUBJECT: **Praying Mantis**
FROM: **Bugging Out in Butte**

🐛 A friend of mine told me that having a praying mantis in the growroom can help kill harmful bugs. Is this true?

Dear BOB,
Indeed, carnivorous praying mantises (or mantids) love to eat many of the insects that plague our ganja gardens, and they are one of nature's most voracious garden protectors and a great organic alternative to chemical pesticides. Pests like aphids, white flies, and spider mites and their eggs make hearty meals for these predators. You can purchase mantis eggs online and have them delivered as pods containing up to 150 or more babies that will eventually hatch in warm weather or in your warm growroom. Once they've eaten their fill, they'll want more food, so you'll need to either feed them more bugs or send them on their way. It's quite

fun to watch them attack the vegetarian pests!

SUBJECT: **Two Plants, One Pot**
FROM: **CG**

🐛 I'm a beginner grower and I stupidly put two plants too close together in a midsize pot. I knew it was time to transfer them to a larger pot, and when I did so the roots were tangled. I tried to untangle them without harming them, but it just couldn't be done. I knew that if I kept on messing with them I would make them really sick. They are now slightly in shock, but they don't seem to be goners yet. Anyways, is it okay that the roots are tangled? Also, what can I do to bring them back up to health? I appreciate your time, man.

Dear CG,
Planting more than one cannabis plant in the same container is ill-advised and

less than ideal. As you mentioned, the roots become tangled, and they will also compete for nutrients in your medium while the plants up top will also compete for light. This will result in significantly smaller yields than if the plants were in their own pots and not crowded together. At this point, I wouldn't recommend separating them due to the stress that it can inevitably cause. Chalk it up to a lesson learned and remember in the future to "keep 'em separated."

SUBJECT: **Drain to Waste**
FROM: **David H.**

🐛 I've been growing hydroponically using a flood-and-drain system for some time and would love to see some info on drain-to-waste systems. Are they more or less efficient? What are the reasons that some growers choose to run nutrients through only once?

Dear David,
Hydroponic systems can either utilize the recirculation of nutrient solution, such as in your flood-and-drain unit, or drain to waste for watering purposes. The difference is that the first method waters your roots over and over with the same liquid, and the second method only uses the liquid once before it's discarded. Both techniques each have their own benefits as well as some drawbacks.

Recirculating systems such as the flood-and-drain method you've been using simplify the watering process by reusing nutrient solution over and over for 1 to 2 weeks before being replaced. The pH level and the amount of nutrients (parts-per-million, or PPM) will vary and change as the plants use up water and food. Reservoirs must be replenished with fresh water and nutrients and be monitored at all times for variations in conditions.

The advantage of using a drain-to-waste system is that it prevents the spread of diseases, pathogens and root rot, and it negates the typical pH fluctuations of recirculating hydroponic systems. Drain-to-waste systems work best in gardens with a few plants in large containers rather than in gardens with many smaller plants bunched together. Even though it sounds like it's inefficient (partly because of the word "waste" in its



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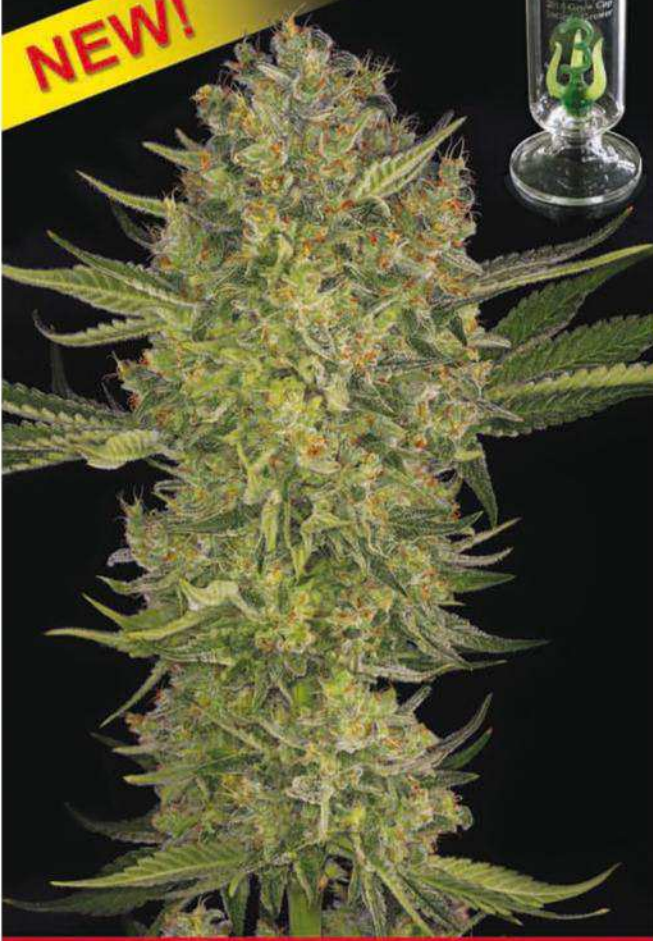

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DEAR DANKO

Danko Tip: Always check pH levels after you've added all the nutrients to your liquid plant-food solution.

name), this type of system can actually end up costing less due to the level of control the grower has over the feeding process. If you use only a little more than the plants need, the actual "waste" is minimal in a well-dialed-in system.



SUBJECT: **Harvest Time**

FROM: **Zach's Dad**

🌱 I have a plant that's about 2 feet tall. It started flowering early for some reason, but it's budding beautifully at this point. It's been raised strictly outside and it's my first time trying to grow anything. My question is: How will I know when it's the right time to harvest? Right now, there are about 25-30% red hairs. Is it too soon?

Dear ZD,

The amount or percentage of red hairs is not an accurate way to judge the proper time to harvest your plants. The best thing you can do is to get a magnification device such as a loupe or microscope that will give you a closer look at the actual trichomes on your buds.

Typically referred to as "crystals," trichomes are actually glands filled with essential oils made up of cannabinoids such as THC, CBD and CBN, as well as flavinoids and terpenes. They look a little bit like clear little mushrooms with a stalk and a bulbous head. These gland heads can be separated and pressed together to make hashish.

As harvest time approaches, the gland heads will turn from clear to cloudy white, and then eventually amber as they begin to mature beyond ripeness. If you harvest when some of the gland heads are still clear, you'll get a more uplifting high. If you wait until most are amber, the effects will be more lethargic. It really comes down to personal preference, but most people prefer them when they're cloudy—that's when the THC levels are at their highest with no degradation.

SUBJECT: **Hybrid Vigor**

FROM: **Coinspinner**

🌱 I have a question about breeding cannabis. Does the term "hybrid vigor" imply that we've bred out this strength from repeated backcrossing and the resulting loss of the second gene copy? I believe this is like the concept of "purebred" dogs, in that to get a true breeding strain you must cleave off the second copy by breeding back to a parent.



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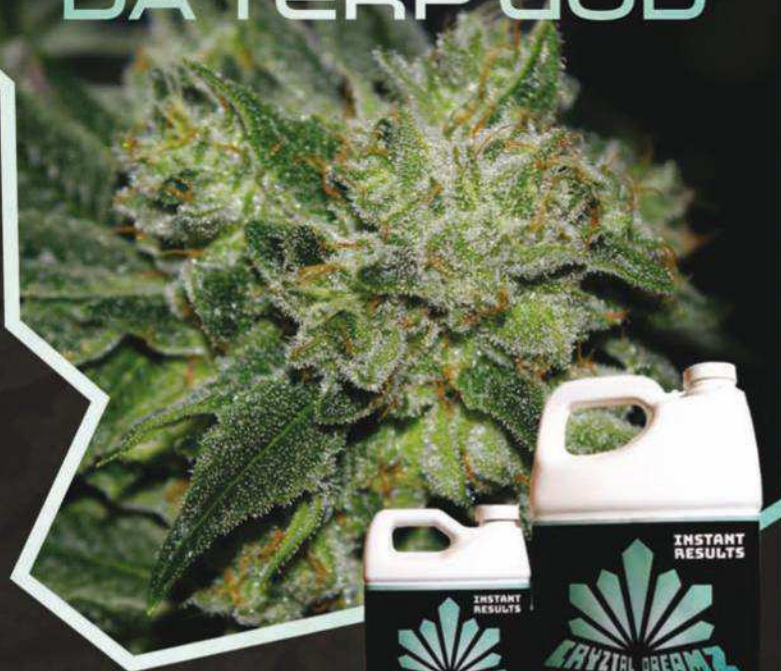
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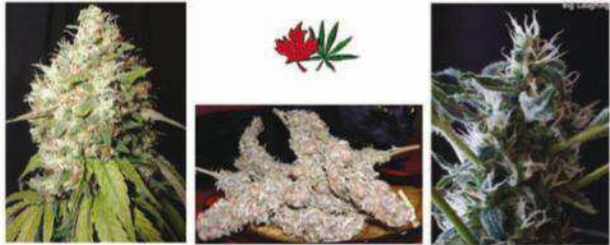
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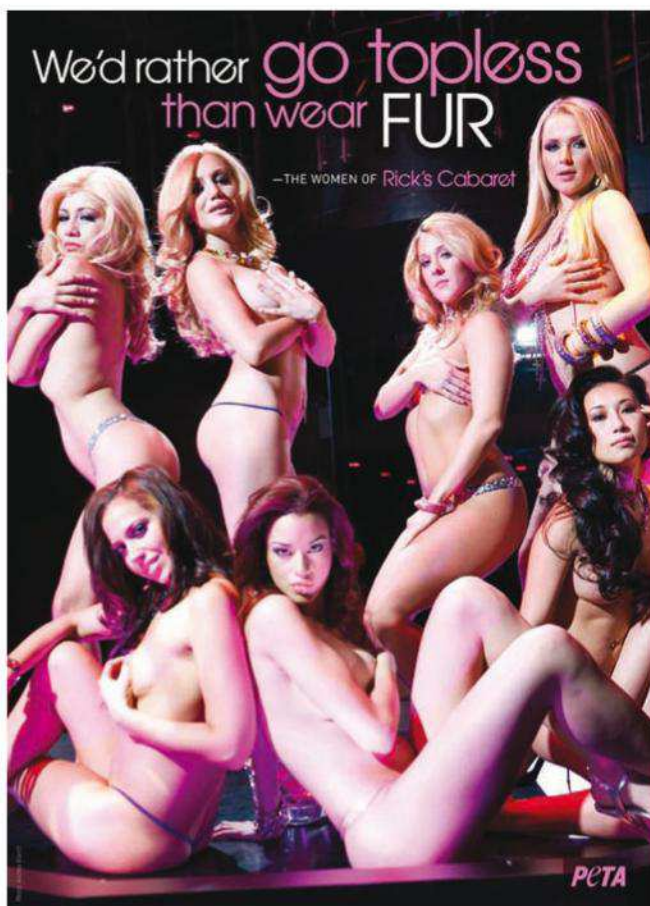
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DEAR DANKO

Danko Tip: Dead leaves and plant debris on floors are a breeding ground for pests. Keep all growroom surfaces clean at all times.

Dear Coinspinner,

Hybrid vigor is the result of crossing two unlike strains, such as a *sativa* from Africa and an *indica* from India. Also referred to as the "F1 cross," the seeds from this pairing will perform with more gusto than either of their parents. The F2 and further crosses will not result in hybrid vigor—only the first filial generation will benefit from the vitality and strength of growth produced. The best seed breeders sell F1 crosses with hybrid vigor as these make the best mother plants for future clone gardens.

Growers wishing to take advantage of hybrid vigor on their own would benefit from reading up on breeding theory, terms and techniques. Two great books to begin with are Robert Connell Clarke's *Marijuana Botany: An Advanced Study: The Propagation and Breeding of Distinctive Cannabis* and Greg Green's *The Cannabis Breeder's Bible: The Definitive Guide to Marijuana Genetics, Cannabis Botany and Creating Strains for the Seed Market*.

The second breeding technique you're referring to is called back-crossing, wherein a particular strain is "crossed back" to its parent or even its grandparents. This is done in order to stabilize genetics when you're growing out large populations and choosing wisely for desirable traits. Each subsequent generation should be more and more consistent in producing plants with the qualities you desire whether they are potency, flavor, odor, yield or bud structure.

SUBJECT: **Light Leaks**

FROM: **Jordan C.**

🌱 I have a closet grow box and two of my plants turned hermaphrodite on me. I asked some people and they all told me that light somehow must have gotten into my box. I believe them because the two plants affected were closest to the door. My question is: If such a small amount of light can do this to a closet grow, how do people keep their outdoor plants from turning hermaphrodite when there's a full moon or bright stars? I'm going to grow a couple plants outside and would like to know if I need to cover them at night!

Dear Jordan,

It is true that light leaks can cause female plants to become hermaphrodites and exhibit male flowers, potentially seeding your whole crop with practically useless beans instead of sinsemilla ("without seeds" in Spanish) buds. If the plants receive strong light during their "night" cycle, when the lights are supposed to be off, they react with shock and the resulting stress can manifest itself in hermaphroditic tendencies. A small amount of dim light is usually insufficient to cause this reaction and it tends to happen more often when bright light interrupts the dark cycle.

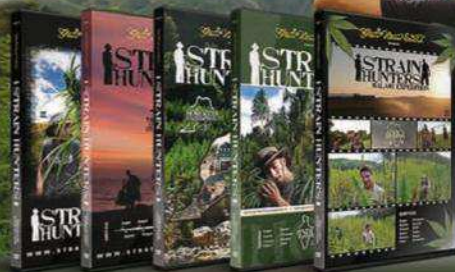
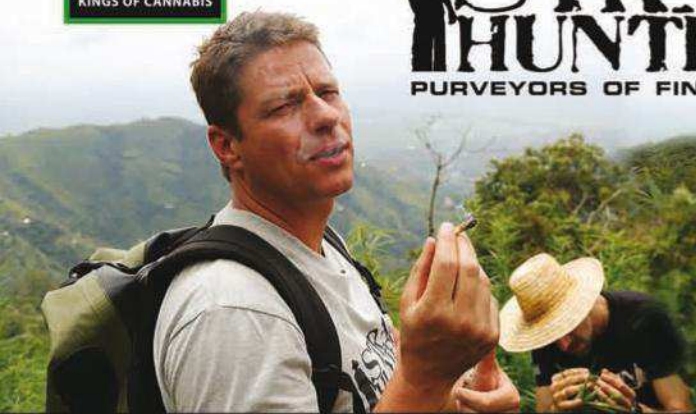
Outdoors, the natural night cycle includes light from the moon and bright stars that does not affect the plants because they're not bright or shocking enough by themselves. Only a street light or motion-detector light could really disrupt the outdoor dark cycle, as plants are accustomed to withstand small and dull amounts of natural outdoor light throughout the night. Avoid planting near artificial sources of light, but don't worry about the naturally occurring glow of the moon and stars. 🌿

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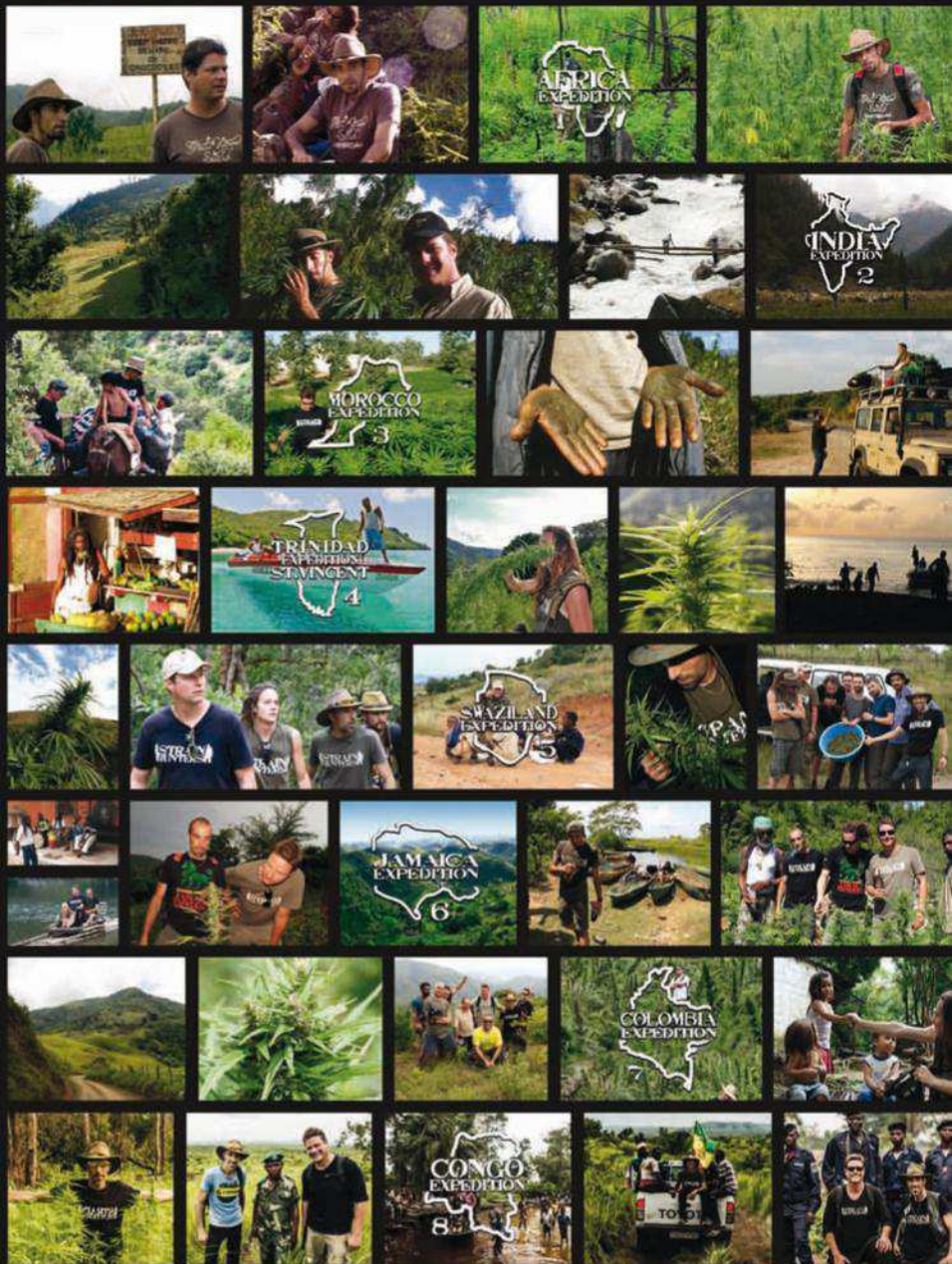
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The Franco Loja Foundation was set up by friends and family of Franco Loja, in order to collect money from donations and sales so that we can make sure that Franco's children have a secure financial future.

† Franco, the Strain Hunter
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4 MOISTURE BEATER

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questhydro.com

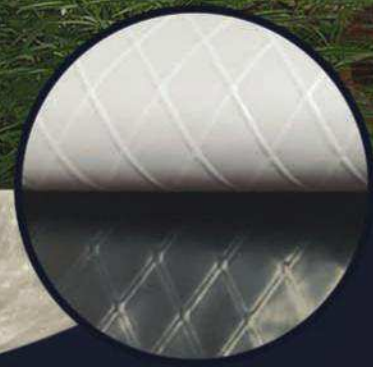
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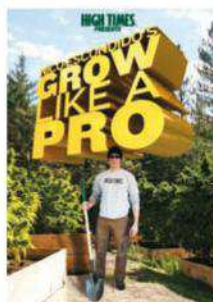
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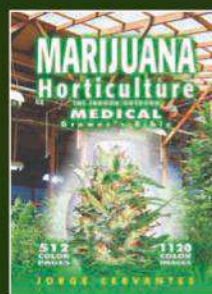


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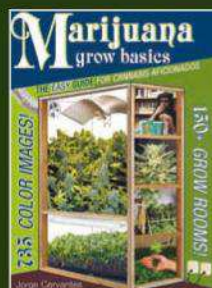
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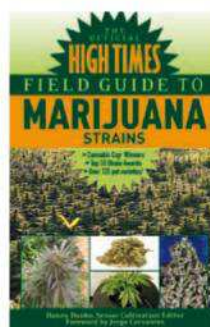


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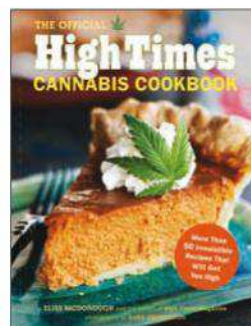


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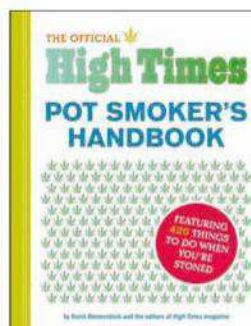
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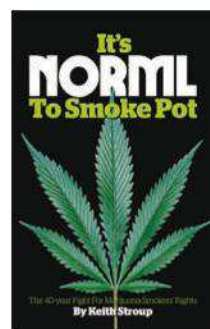
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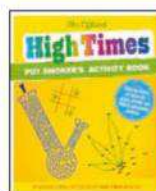
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BAKED BRIE & CHUTNEY BITES

SIMPLE AND ELEGANT CANNABIS-INFUSED APPETIZERS MAKE FOR SOPHISTICATED MUNCHIES. BY ELISE MCDONOUGH

WITH DECADES OF experience cooking with the herb, Chef Ricky Flickenger teaches eager students how to precisely infuse cannabis into delicious gourmet cuisine with little to no grassy taste. Working in Seattle with legal access to high-quality cannabis ingredients, Flickenger prefers using kief as the active ingredient for his easy, tasty THC treats. Kief is an ideal culinary ingredient because it can be used like many other spices and it melts right into the infusion, requiring no straining.

Advising students to quickly activate kief by toasting it for just 7-10 minutes in a 300°F oven, Flickenger uses a high temperature combined with a short cooking time to decarboxylate the cannabis, unlike other techniques, transforming THCA into THC. He then whisks the kief into melted butter over low heat until it's dissolved, then removes the mixture from the heat immediately.

Formerly the pastry chef at Trophy Cupcakes, Flickenger currently conducts cannabis cooking classes and at-home parties through his Mortar 'n Pestle company, although clients must provide their own herb due to Washington State's laws. Check out his educational resources, including a series of "Baked" videos and interactive online recipes (mortarnp.com), as well as a forthcoming cookbook titled *Cannabis and the Art of Infusion*.

Using frozen phyllo as a secret weapon, this recipe for Baked Brie & Chutney Bites looks impressive, tastes sweet and savory, and is microdosed at just eight milligrams of THC, although your results may vary depending on the potency of your kief.

Make these for your next party and treat your guests to some tasty THC! ✨

INGREDIENTS

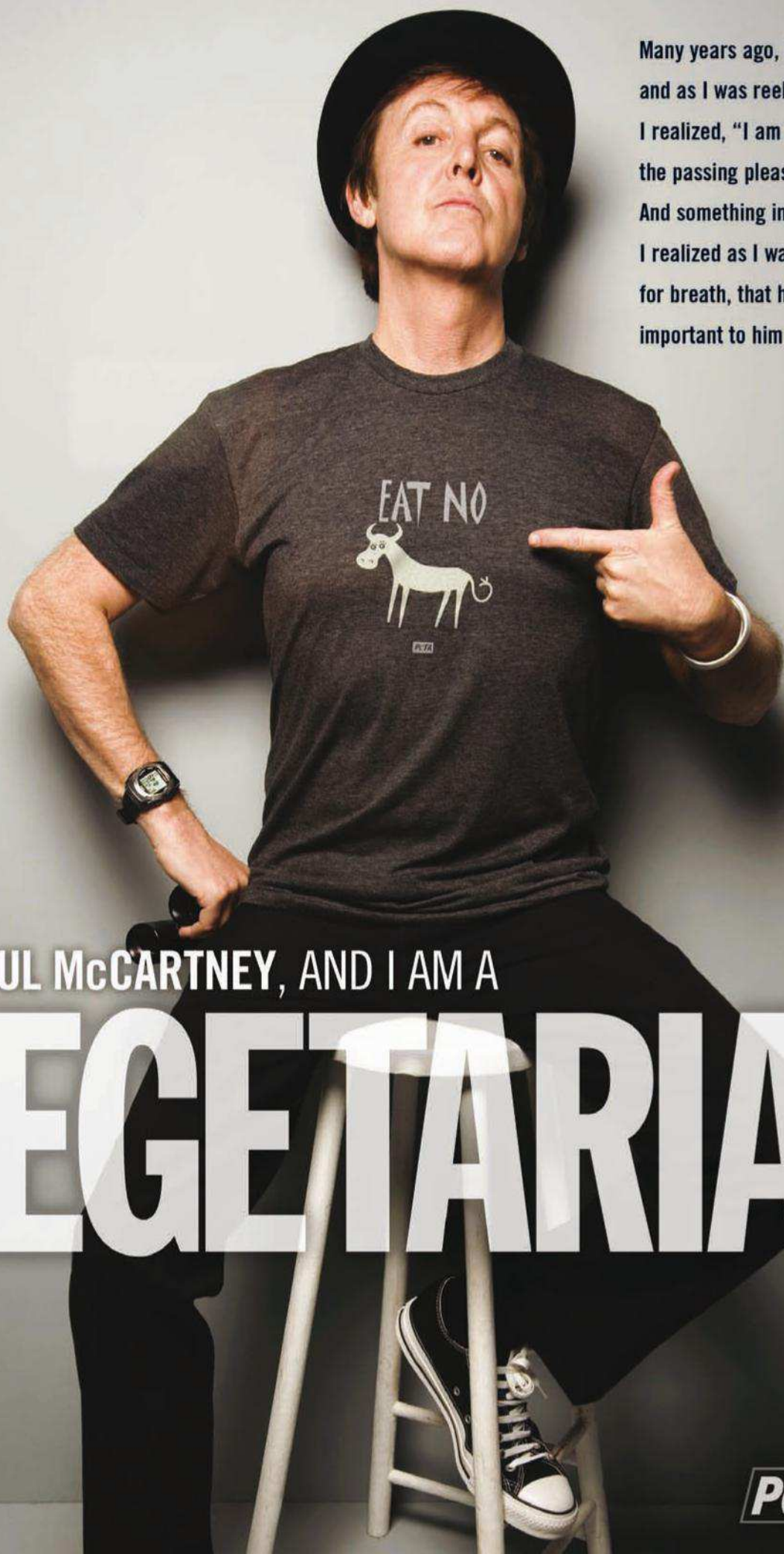
15 frozen phyllo cups
7 oz. Brie cheese
(you'll have some left over)
4 tbsp. cannabis-infused butter, unsalted and melted
2½ tbsp. store-bought ginger-mango chutney
Chopped fresh parsley for garnishing

DIRECTIONS

Preheat oven to 425°F and arrange the phyllo cups on a baking sheet. Fill each cup with a small chunk of Brie that's big enough to fit the cup, about a half-inch cube. The rind is completely edible, so there is no need to cut it off. Bake four to five minutes, just until the cheese is melted. Brush a little butter inside of each cheese-filled cup.

Add half a teaspoon of chutney to the top of each cup, then sprinkle with some parsley. These taste great served warm or at room temperature.

Many years ago, I was fishing,
and as I was reeling in the poor fish,
I realized, "I am killing him—all for
the passing pleasure it brings me."
And something inside me clicked.
I realized as I watched him fight
for breath, that his life was as
important to him as mine is to me.



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Contact us to learn more:

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- Jeffrey A. Warsh
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FIBROMYALGIA, POT BREATHALYZERS
AND SHEN NUNG.

Got a question for Dr. Mitch? Email him at 420research@gmail.com.

What's the best strain for treating
fibromyalgia?

Bar Epstein

Hey Bar,
Alas, although recent work in Israel confirms that medical cannabis does help the pain, fatigue and mood problems associated with fibromyalgia, we still don't have any published data comparing strains.

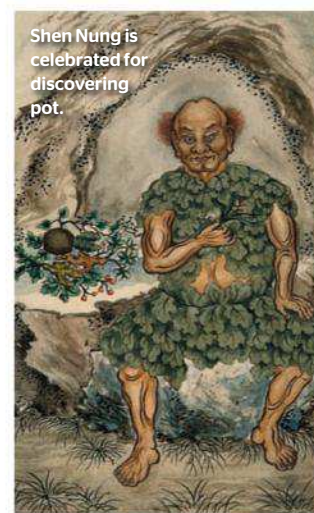
What's the word on the breath
test for driving under the influ-
ence of cannabis?

Sal Iva

Hi Sal,
Despite alleged improve-
ments in saliva, blood, urine
and skin tests, the amount of
THC in people's systems is not
a good predictor of driving
ability because everyone's
tolerance is so different.
Motor-skill tests akin to the
standard roadside sobriety
checks for alcohol are much
fairer. Anybody who can
walk that straight line (and
remember how many steps to
take!), follow a cop's moving
finger without a head turn
and stand on one foot for 30
seconds without cracking up
laughing is probably able to
drive. Those who can't, even if
it's because of fatigue, antihis-
tamines or prescription drugs,
probably shouldn't be behind
the wheel.

My friend who studies East
Asia says that Shen Nung, the
emperor of China who discov-
ered marijuana in 2737 BC, isn't
real. Say it ain't so!

Kris Kringle



Shen Nung is
celebrated for
discovering
pot.

Greetings Mr. Kringle,
There really wasn't a single
country known as China
back then, but stories about a
grand king who experimented
with all the medical herbs are
quite popular. So he's as real
as Zeus or Paul Bunyan, and
we should honor his legacy in
a very special way!

I saw a study that showed that
youth who used cannabis on the
street were less likely to shoot up,
so why not give homeless kids
free joints?

Art Dodger

Hello Art,
Data from Canada did show
that street youth who were
fans of the plant were less
likely to inject stimulants, but
I'd prefer to help them find
a place to live, get back in
school or find jobs. 🌿

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

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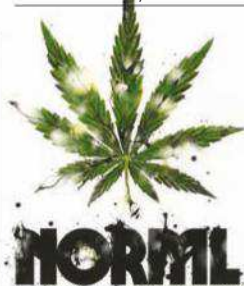
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A PATH FORWARD

COLORADO LAWMAKERS NORMALIZE CANNABIS WITH THE FORMATION OF A STATEWIDE POLICY CAUCUS.

Kevin Mahmalji is NORML Outreach Director. Visit norml.org.



COLORADO LAWMAKERS ARE well into their fifth legislative session since enacting the retail sale of adult-use marijuana in 2012, and the need to coordinate the various policy discussions around the issue has never been greater. Since Colorado voters approved recreational cannabis, there have been ongoing debates surrounding various aspects of the law and its impact—such as how best to address the question of social consumption, product testing and the use of medical cannabis on public campuses. To best address these issues, state lawmakers have formed the first-ever statewide Cannabis Caucus.

Modeled off of the success that we have seen in the establishment of the federal Congressional Cannabis Caucus, it was imperative to create avenues for policy to be discussed and developed at the state level with consumers in mind.

At the federal level, with the support of NORML and other allies, what used to be a few lawmakers and their staffers having passing conversations and the occasional private meeting to discuss cannabis policy is now a robust group that holds regular briefings exploring the issues most adversely affecting individuals. In the first three months of

BY CREATING A FORMALIZED STRUCTURE, WE KNEW IT WOULD MAKE IT EASIER FOR CONSTITUENTS AND ADVOCATES TO LEVERAGE OUR INFLUENCE IN A MUCH MORE CONSTRUCTIVE WAY.

2018, there have been six meetings or policy briefings on Capitol Hill regarding pending efforts to end prohibition and address collateral consequences such as employment rights, veterans' health care and fair hiring practices.

With the end of marijuana prohibition and the implementation of a robust tax-and-regulate program in Colorado, it's imperative to consider the various areas of public policy that have been affected and how they interact with consumers and constituents. From job creation and law-enforcement priorities to public education and health care, Colorado's newly formed Cannabis Caucus will help facilitate discussions among lawmakers regarding how best to address these important matters.

How did this happen? Well, we asked for it.

I personally became involved, floating

the idea to several Colorado lawmakers over the last year. However, it wasn't until I met with State Representative Dan Pabon's office that things started to take shape. From there, Representative Pabon's staffers facilitated internal conversations among lawmakers about the possibility of establishing the new caucus, and Denver NORML and I focused our time on recruiting new members and providing educational materials.

By creating a formalized structure, we knew it would make it easier for constituents and advocates to leverage our influence in a much more constructive way. By streamlining a system where we can present policy ideas to address existing problems, as well as having many lawmakers engaged at once, it would make the burden of persuasion that much lighter.

For the first meeting of Colorado's newly formed Cannabis Caucus, the focus was on a variety of issues, including leadership of the new caucus; Colorado's thriving marijuana industry; the many policy discussions around taxation, regulation and enforcement; and the ongoing need for consumer advocacy.

We at NORML understand the need for state-level elected leaders to create incubators for thoughtful debate and policy discussions. That's why we're pleased to support the first action taken by Colorado's Cannabis Caucus: a letter addressed to members of Colorado's congressional delegation urging legislative action to prevent US Attorney General Jeff Sessions from interfering with state-sanctioned marijuana programs. The effort attracted the support of 33 Democratic members of Colorado's General Assembly.

We already have a number of state legislatures throughout the nation looking to follow Colorado's lead and establish their own working groups. Through this process, we are taking yet another crucial step in building the foundation to responsibly end prohibition in a fashion that will smoothly translate in a pro-consumer and pro-civil-liberties manner.

Join us. 🌿

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PROHIBITION?**



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COMPLIANCE IS THE KEY TO LONGEVITY

Scott Holtby Is A Freelance Writer With A Pulse On Cannabis Industries.

Over the last few years, we have seen an unprecedented push towards greater legalization of cannabis in a number of key markets, most notably in the U.S. and Canada. Unlike Canadian markets, pushed forward through federal support, U.S. legalization efforts have been driven by state legislation. This has led to a worry that the legal cannabis industry is in a "wild west" phase, crying out for greater regulation and enforcement.

Despite strong public support and a powerful movement of entrepreneurs and activists in key states like California and

Colorado, there remains heavy pushback from much of the public. For cannabis to fully integrate into the mainstream of American life, clearer rules and stronger enforcement surely will be necessary. In particular, this will likely be a key part of the inevitable federal legalization of cannabis. State governments from both sides of the political spectrum in the United States are leaning consistently in favor of greater cannabis legalization. This is a common theme from both Americans concerned with freedom from government control, to Americans concerned about unevenly-

enforced drug laws that unfairly target minorities.

This consensus is steadily increasing day-by-day, but the final hurdle will involve skeptics concerned about public health and child safety.

In order to satisfy the demands of a concerned public that represents a large portion of the American population, it is inevitable that cannabis will see greater enforcement. This includes a long list of possible regulations. An example could be a law restricting dispensaries from operating within a given distance of a school or daycare.

Or a law capping the total volume of cannabis a customer can buy in a given timeframe.

Businesses currently operating legally at the state level need to be ready for a shift in cannabis regulation. So far, the Federal Government has stayed largely outside of legal cannabis at the state level, but there has never been a clear sign this would be the case forever. Should the Federal Government take a strong stance on cannabis, companies need to be ready to meet the scrutiny and necessary commitments that likely would be needed.

Companies already operating at a level of compliance and transparency are on the right track to ensuring their practices will fall in line with any eventual mandate set out by the Federal Government to regulate the cultivation, sale and distribution of cannabis.

Industry actors like *Alternate Health Corp.* (OTCQB:AHGIF) recognize this need to be prepared and are building compliance and transparency directly into their products and services. Companies also need to be prepared as governments and political parties change and electoral whims get passed into law. They need to recognize that regulators will have a wide range of flexibility on how they choose to enforce their mandate.

Therefore, cannabis companies need to prepare for government changes and protect themselves from risks in the future. And for investors, the key to longevity will be embracing the regulations of the marketplace.

AlternateHealth.com

Women In Cannabis



Gia Morón

Executive VP, Women Grow

►► Any advice for emerging female entrepreneurs in the Cannabis Industry?

Come prepared to work hard. This is a unique space that is writing the rules as we grow - Most people entering are expecting the same support and guidelines as other industries, but the industry is not there yet, so if you have the expertise, bring it, because it is needed. This is a wonderful opportunity to be a part of an industry, where you can contribute to building. Come with an open mind and flexible shoes ready to pivot at any moment. This

is an exciting time to work with thought leaders and game changers. Ladies, network constantly, join cannabis member organizations where for profit or not profit. Those circles are important. Stay up to day on the news in the industry, subscribe to magazines like High Times and most importantly find a mentor in this space. Create a circle of contacts you can build relationships with.

Lastly, begin to learn the businesses in this industry. It will help guide you in the direction you will want to land.

►► What is the biggest trend in the cannabis space right now?

It depends on location. What jumps out most are the ancillary services coming to market. These businesses are coming up with creative solutions to support businesses and consumers. From convenience to luxury services whether door to door service to 420 friendly mobile vehicles for safe and easy consumption I am seeing more family owned businesses entering this space; Old school practices meets legal industry. More college students

Continued ...►►



NEW OPPORTUNITIES ARISE IN CANNABIS COMPLIANCE

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

The shift to legalized medicinal and recreational marijuana is underway in many states and this process is opening up new opportunities in regulation and compliance. Public concerns about age verification, child-proof packaging and impaired driving in particular are capturing the attention of businesses and the public alike.

Although the issue of impaired driving is nothing new, legal cannabis is pushing this debate to the forefront of the public conversation. More attention has been placed on how to monitor, test and control cannabis to ensure no one operates a vehicle under the influence.

Concepts affiliated with controlled substance legislation, like road side testing, childproof packaging, and age verification already have obvious precedents in other markets.

Alcohol, tobacco and prescription medications have long-established guidelines and regulations in place.

The cannabis industry is adapting these models to address public concern, but each model must be redesigned to fit this unique industry. Packaging must address deterioration of the product; age verification online will have to be addressed and a new technology for roadside testing will need to be developed to close all the existing gaps in compliance.

A system that provides a fool-proof method of age verification, especially online, is needed to address the concerns regulators have of cannabis falling into the hands of underage consumers.

That's why companies like *Alternate Health Corp.* (OTCQB:AHGIF) have a built-in application for age verification through their *CanaPass* Compliance Blockchain System that ensures the person who places and receives the order is of legal age.

Like many medications, a child-proof container for cannabis is another step towards safety. However, there are other considerations to be taken into account

that are specific to cannabis in terms of packaging and maintaining the quality of the product within. Over time, the deterioration of an organic compound like cannabis must be considered in packaging. Companies like *eBottles.com* and *Kush Bottles* are already moving into this space, developing custom products for the legal cannabis industry.

There is no technology that mirrors a breathalyzer for detecting cannabis impairment. This concerns regulators and has sparked a race among companies to develop the technology and become the standard in this space. *Hound Labs*, for example has developed a handheld device similar to a breathalyzer that has reached the stage of clinical trials.

In the regulated legal cannabis market, compliance will be key. Companies that are working with governments and regulators to ensure that cannabis is always consumed in a safe and legal manner are the ones that will survive in this industry.

AlternateHealth.com

are looking at cannabis as a serious career path where they can build the next solution. I see rising trends in cannabis-infused feminine products. Women in general are interested to learn how such products could support needs from chronic pain to intimacy accessories. This is a big deal for women of a certain age seeking for solutions as their bodies are changing. Anyone in the cannabis, intimacy and feminine-product space are geniuses, addressing a large pool looking to support them.

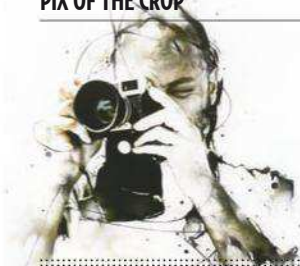
►► **How is Women Grow adapting to rapid industry fluctuations?**

When the company first launched the focus was female entrepreneurs. In the beginning the company grew fast and we scaled back. Also there was a shift we were beginning to see more female professionals less interested in launching a business, but instead wanted to work for a business in a leadership capacity. Our goal is to remain tapped into both the women business owners and c-suite professionals, along with advocacy leaders.

Our roles are important and must remain connected. We are eager to work with women at all levels of their careers. Those who are familiar with the Women Grow

model know we have markets (formerly known as "chapters") across the country and Canada. We are preparing for growth again but at gradual pace. We are currently making changes to our Market Leaders program. Our goal is to increase education to keep up with industry growth, connect with the next generation of women leaders who are currently exploring this industry - tapping the graduate level scholars for education and opportunities in cannabis and some other soon-to-be-announced projects. *Women Grow* is preparing for its greater footprint in the market now. We see a bright future for our company.

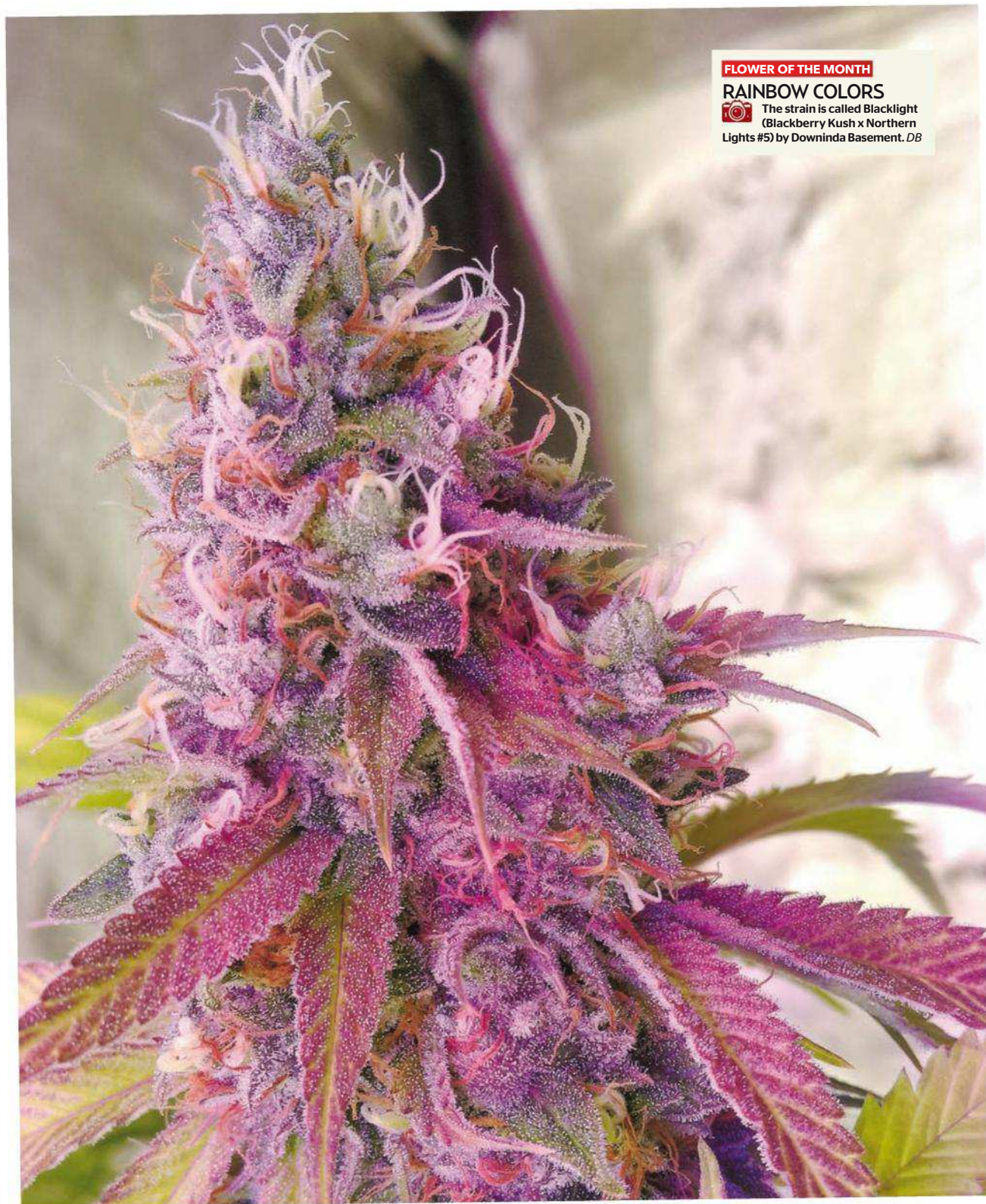
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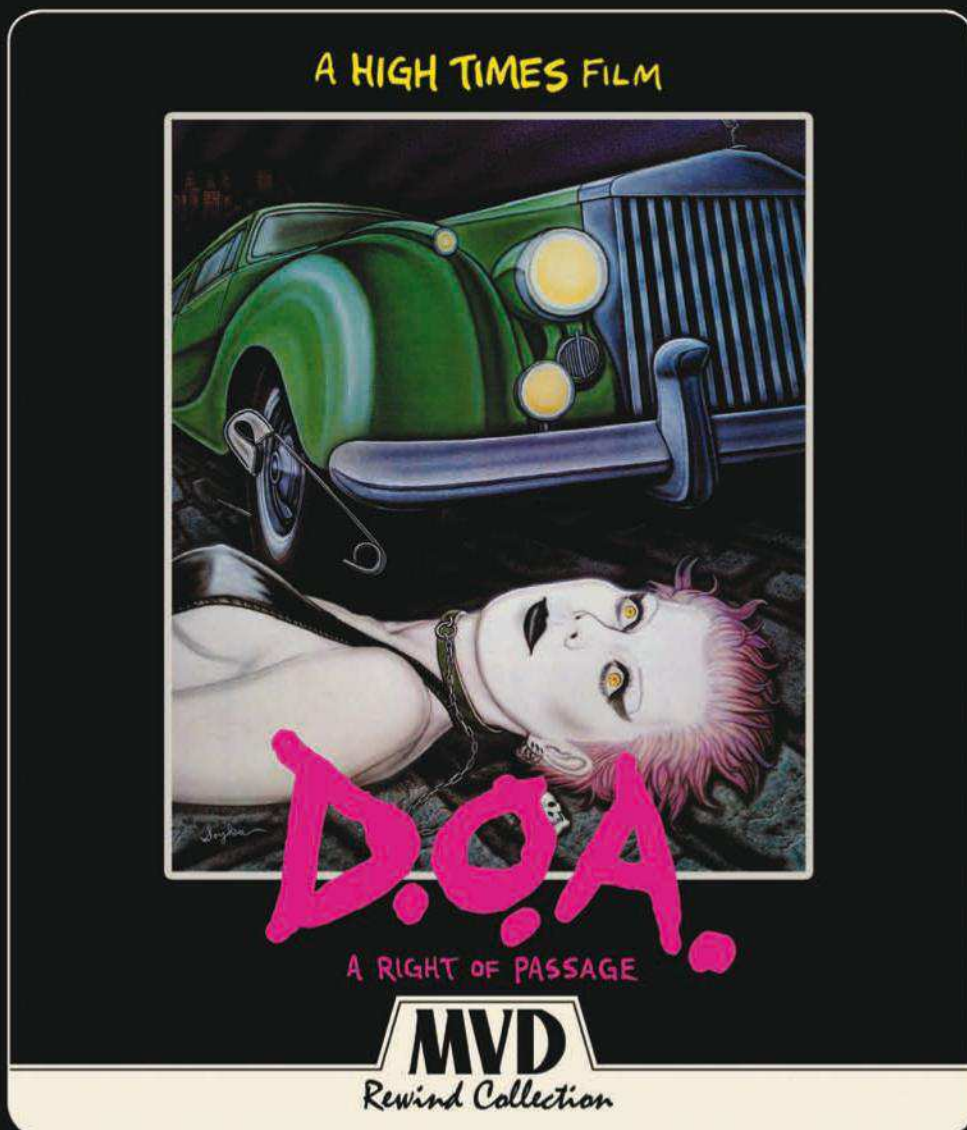
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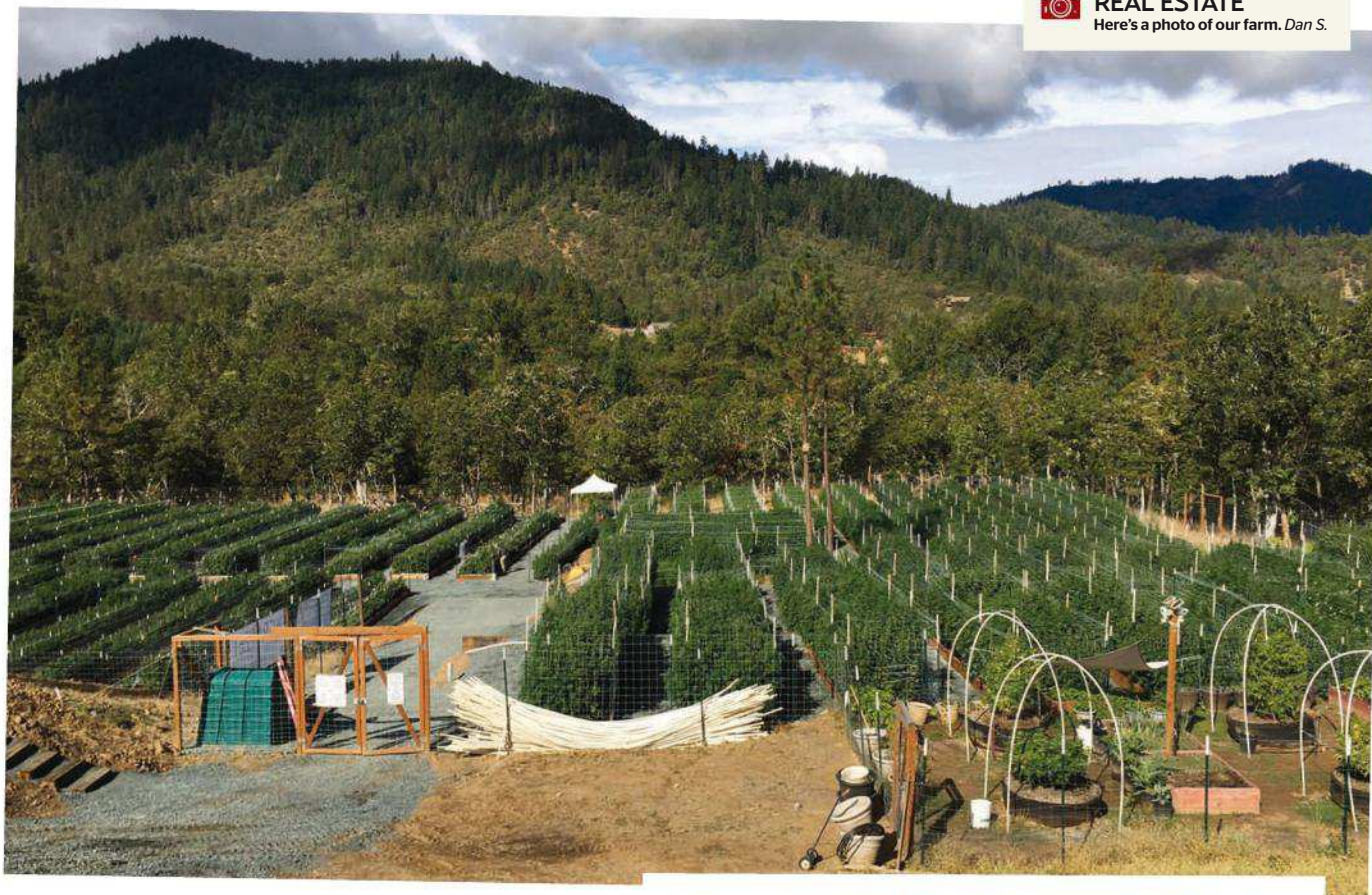
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GROW OF THE MONTH



REAL ESTATE

Here's a photo of our farm. Dan S.

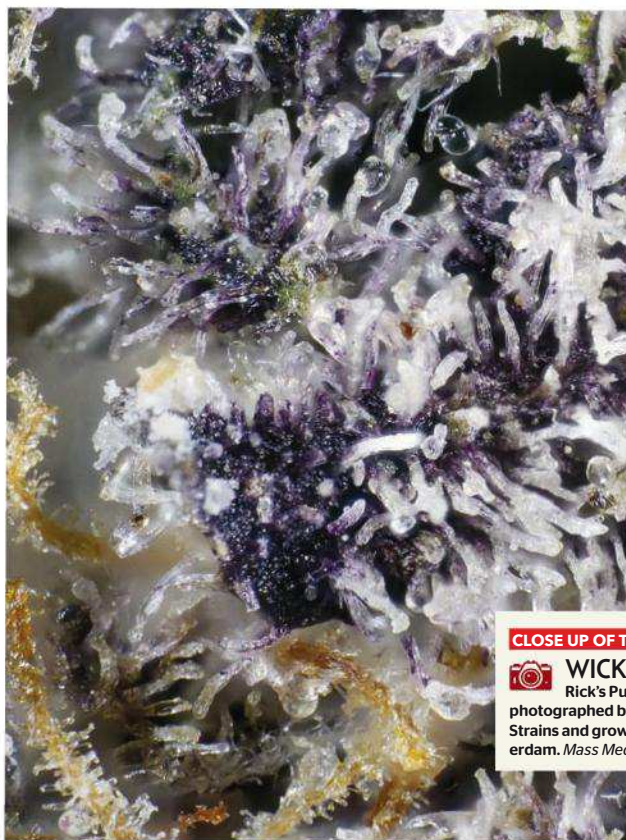


COLA OF THE MONTH

TOP OF THE PUFFIN



I'm a photographer based in Portland, OR. The name of the strain is Salmon River OG. Thank you to Stone Creek Farms for letting me photograph their amazing flower. Also, shout out to my dog Bentley. Dylan Kotecki



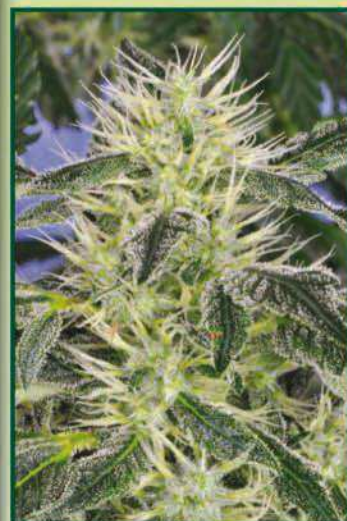
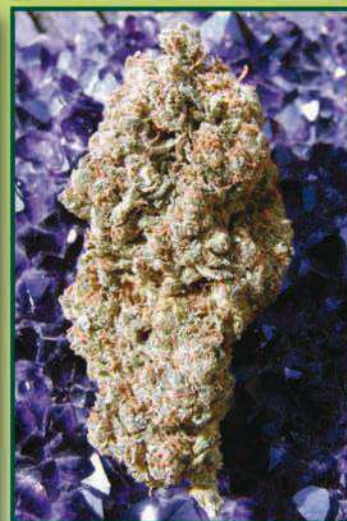
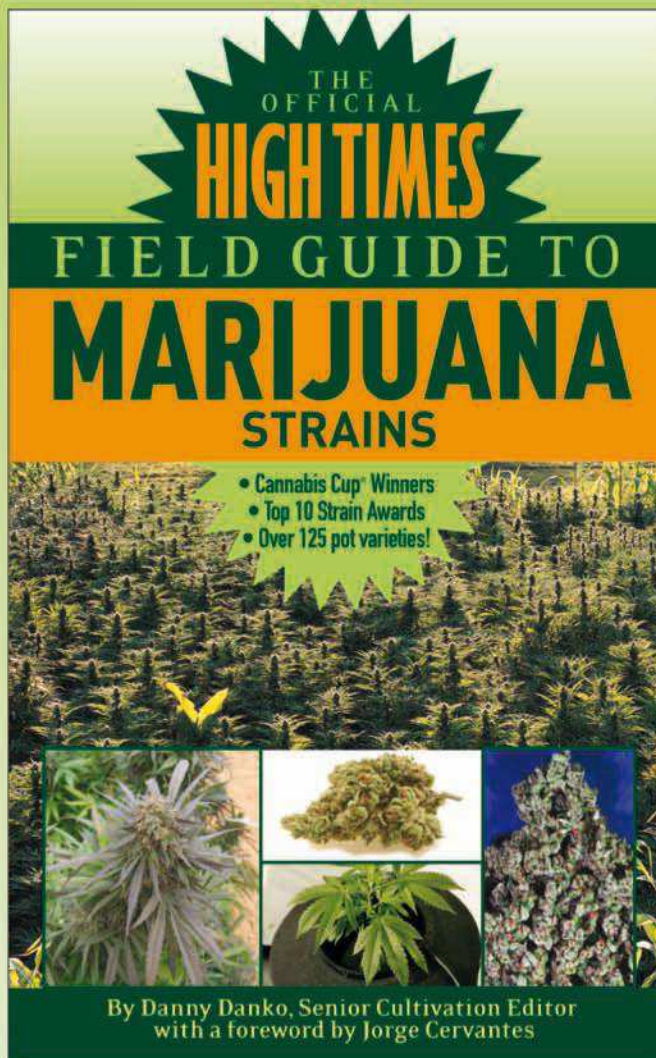
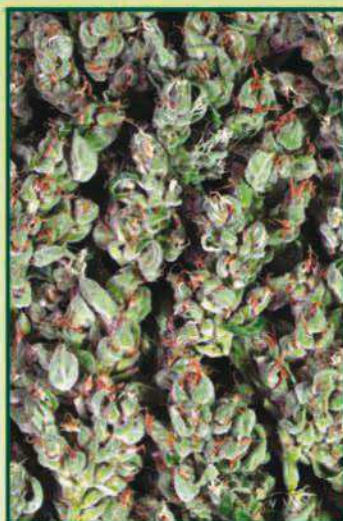
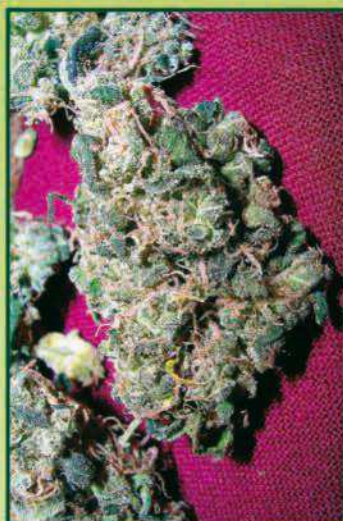
CLOSE UP OF THE MONTH



WICKED DARK

Rick's Pupil bred and photographed by Mass Medical Strains and grown by Eastcoast-erdam. Mass Medical Strains

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DOPE RIDER

DOPE RIDER, DILLY AND MJ ARE TAKING THE NIGHT AIR OUTSIDE HIS RAMSHACKLE ABOVE.

I SEE THAT THIS YEAR, AS USUAL, WILD BILL DIDN'T INVITE US TO HIS FOURTH OF JULY PARTY.

HE'S ALWAYS AFRAID YOU'LL "ONE-UP" HIM.

I BET THEY'RE HAVING PIZZA, AND S'MORES.

HIS CONCERNS ARE WELL GROUNDED. SUCH RANK INHOSPITALITY DEMANDS A RESPONSE!

REALLY? TACTICAL NUKES?

NAH, I'M JUST LOOKING FOR SOMETHING IN THE GLOVE COMPARTMENT.

HERE IT IS--A BOTTLE ROCKET I PUT TOGETHER.

ADD A LITTLE ALASKAN THUNDER FUCK...

AND IT'S GOOD TO GO.

LIFT OFF!

I KNOW, YOU'RE THINKING "NARCISSISTIC," BUT IT'S AN IRONIC, SELF-AWARE NARCISSISM.

I SEE CAKE.

IF YOU SAY SO, YOUR HIGHNESS.

I WANT REAL CAKE, NOT FIREWORKS CAKE.

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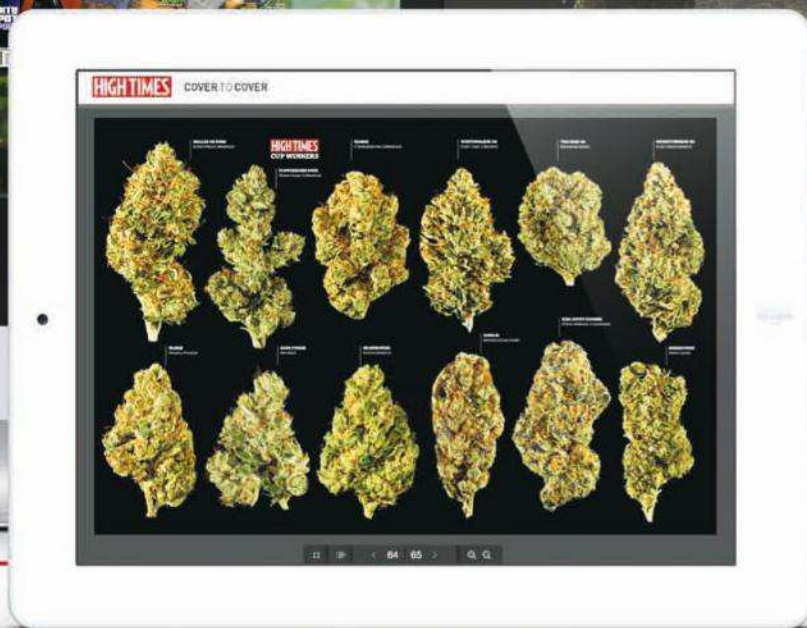
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Christopher M. Glew

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www.GlewKimLaw.com

Bruce M. Margolin

Director of LA NORML
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KANSAS

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Barrett Law Firm, P.A.
280 N. Court
Colby, KS 67701
Phone: (785) 460-0188
Fax: (785) 460-9817
Jbarrett@st-tel.net

Christopher A. Rohr

Law Office of Christopher A.
Rohr, P.A.
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Cell: (785) 269-7699
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MICHIGAN

Matthew R. Abel

Attorney at Law
Cannabis Counsel®, P.L.C.
Lawyers Who Roll The Right Way
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Columbia, MO 65201
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DanViets@justice.com
Former president of MO Assoc.
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NEW HAMPSHIRE

Sven Wiberg

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Mark@edwardstrenkle.com
www.Edwardstrenkle.com
Lifetime Member of NORML,
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State Criminal Law, Lifetime
member of National Association of
Criminal Defense Lawyers and 33
years of practice.

OHIO

Daniel M. Margolis

The Law Office of Daniel M.
Margolis, LLC
1360 West 9th Street, Ste #200
Cleveland, OH 44113
Dan@burningriverlaw.com
www.DanMargolis.com
NORML Legal Committee
Member. Criminal Defense and
Education Law/Student Defense
Attorney. Former Cuyahoga
County Prosecutor with 20+ Years
of Experience.

OKLAHOMA

L. Justin Lowe, P.C.

3133 N.W. 63rd Street
Oklahoma City,
OK 73116
Phone: (405) 848-7777
Fax: (405) 767-0529
Justin@justinlowepc.com

Chad Moody

217 North Harvey Street
Suite 104,
Oklahoma City, OK, 73102
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Fax: (405) 231-0233
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Joshua C. Gibbs

Reynolds Defense Firm
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Fax: (401) 490-7874
MKelly@ksrplaw.com
www.KSRPLaw.com

SOUTH CAROLINA

Robert E. Ianuario, M.B.A., J.D.

Attorney & Counselor
204 Lavenia Ave,
Greenville, SC, 29601
Phone: (864) 255-9988
Fax: (866) 212-3249
www.SC420attorney.com
Member of Norml Legal
Committee, Member of National
College for DUI Defense

TEXAS

Blackburn & Brown L.L.P.

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Fax: (806) 350-7716
Info@blackburnbrownlaw.com
www.BlackburnBrownLaw.com

Greg Gladden

3017 Houston Ave.
Houston, TX 77009-6734
Phone: (713) 880-0333
Gladden@airmail.net

Gerald Goldstein

2900 Tower Life Bldg.
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How Select became the best-selling cannabis brand on the West Coast

Photography: Tyler Lyon

In 2015, from our home base in Portland, Oregon, Select Oil launched with our flagship product – a sturdy and reliable vaporizer pen made with an organic cotton wick, and filled with clean, flavorful cannabis oil. We got our start by identifying and solving a problem – our founder wanted to help a friend with chronic health issues enjoy the benefits of cannabis, without burning his throat with harsh smoke.

Today we've expanded from Oregon, to California and Nevada. We're laser focused on our mission to provide customers with the cleanest, most flavorful cannabis oil, using the safest delivery methods available.

Because of that, Select is now the best-selling cannabis brand on the West Coast. Here is what you should know about the Select brand:

We make oil – We pride ourselves on producing solvent-free and pesticide-free cannabis oil with the highest quality possible. Our attention to detail ensures a consistently pure and potent product.

We're known for our Select Elite vaporizer line and exceptional cartridge and battery technology –

Select cartridges utilizes the most innovative hardware available for vaporizing cannabis and hemp oils. Our organic cotton wick is unbleached, allowing the fiber structure to cleanly wick viscous oil. The ceramic core technology means longer, smoother, stronger puffs that won't scorch the oil or the wick. Our pressure-fit, tamper-proof mouthpiece helps protect pets and children, while creating a tight seal for the oil in the cartridge to prevent leaking or malfunction.

We're here because we truly believe in what we do. We are dedicated to destigmatizing cannabis consumption, while at the same time educating customers about the plant and its many benefits. We maintain a desire to shift perspectives on cannabis, and tirelessly commit our efforts to normalize the image that's associated with cannabis use, by making products that are easy-to-use, discreet, safe and innovative. Find us in California, Oregon & Nevada dispensaries, or online at SelectOil.com.

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