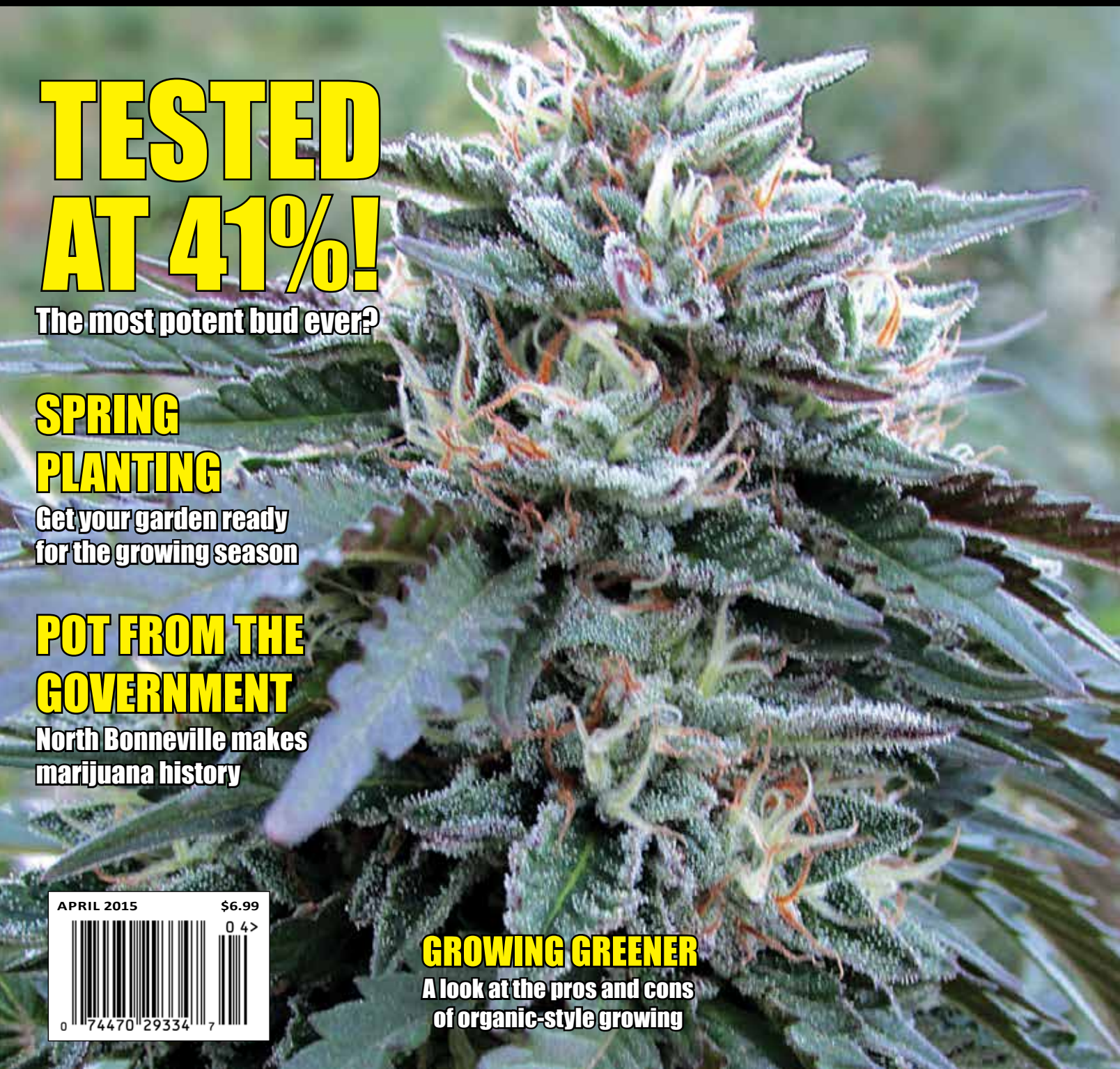
WWW.MARIJUANAVENTURE.COM

VOLUME 2 / ISSUE 4

MARIJUANA VENTURE

THE JOURNAL OF PROFESSIONAL CANNABIS GROWERS AND RETAILERS



TESTED AT 41%!

The most potent bud ever?

SPRING PLANTING

Get your garden ready for the growing season

POT FROM THE GOVERNMENT

North Bonneville makes marijuana history

GROWING GREENER

A look at the pros and cons of organic-style growing

APRIL 2015 $6.99

04>

0 74470 29334 7

POWERBOX®

GROW ROOM ELECTRICAL EXPERTS

Welcome to Powerbox®. We supply the elite grower with cutting-edge electrical equipment that is vital to every indoor operation. Our products are designed and manufactured in California, to provide horticultural professionals with equipment that increases yields and efficiency, while protecting lives and property. **We are honored to support the fearless growers who work so hard every day to ensure successful harvests!**

POWERBOX®
LIGHTING CONTROLLERS

POWERBOX FLIPBOX®
LIGHT SWITCHING MODULES

POWERBOX GROLITE™
ALUMINUM REFLECTORS

POWERBOX® HD-1000W
ELECTRONIC BALLASTS

Products for professional growers of all sizes. Learn more by visiting our website.

HD-1000W

THE ALL NEW ELECTRONIC BALLAST FROM POWERBOX®

Years of research, design, and testing have resulted in the **BEST** electronic ballast available. The **ALL NEW** Powerbox® HD-1000W has all of the best features you need, with none of the gimmicky features you don't.

- Ignition Management, Staggered Startup, and Soft Start
- Powers standard **and** new double-ended HID bulbs
- Dual Voltage 120/240, includes both cordsets
- Adjustable to 400W, 600W, 1000W, and 1100W
- Completely sealed design - No fans - Silent operation
- Enlarged heat sinks with micro fins to dissipate heat
- Most stable output of any electronic ballast tested

Legendary Powerbox® Quality!

Guaranteed Compatibility With All Powerbox® Products!

Intertek

SEND **US** A PICTURE OF YOUR POWERBOX GEAR IN ACTION AND WE'LL SEND **YOU** A FREE T-SHIRT!

POWERBOX®

Magazine continues to expand readership, scope

This issue features several interesting new ads, stories

Every month for a little more than a year, we've published **Marijuana Venture** as a strictly-business, highly-focused monthly magazine for the rapidly-changing and exciting world of the legal marijuana industry.

In that time, we've gone from being an eight-page, black-and-white newsletter that only covered Washington State to a 116-page glossy magazine that's spreading all across the county. While the majority of our readers are located in Washington, Colorado and Oregon, we've steadily been adding readers in Alaska, New Mexico, Arizona, Montana and California.

I BELIEVE ALL BUSINESSES SHOULD OPERATE ON A LEVEL PLAYING FIELD...

This month we expand beyond the Rockies into the Midwest, and welcome Illinois and its state-regulated marijuana businesses as monthly recipients of the best publication in the industry.

I often get asked why we're different from the dozens of other marijuana/cannabis publications. I have a couple answers to that. First and foremost, we are not outspoken advocates of marijuana use.

While we support the legalization of cannabis, and feel its use by adults should simply be an issue of freedom ("If one person can choose to have a glass of wine, why can't someone else have a toke of pot?"), we leave advocacy and stories related to consumption for others who are better informed than us on that subject.

Second, we are a business magazine for the licensed, regulated professional business community. As such, we do not target the unregulated medical community or anyone else that falls into the gray and black markets of untaxed, unregulated cannabis.

I believe all businesses should operate on a level playing field, and those that do so without paying their fair share of the tax burden are simply operating in a way that takes advantage of those of us who do. Call me old-fashioned if you like, but I really do believe that the American system of capitalism is a good one, and that we all thrive when we all pay our fair share.

On another note, you'll see some interesting new advertisers this month that expand the magazine beyond that of a traditional pot culture publication. We have an ad for a winery, one for a float tank experience (which is very cool — I tried it), a company that sells armored security vehicles, and another for a high-tech instrument that growers, processors or retailers can use to accurately test potency of their own marijuana.

As I mentioned above, our focus is business, and will stay that way. However, once in a while we see or hear of something that is newsworthy even if it's not strictly a business story. I think the story on the Buddy Boy Farm strain that tested at 41% THC fits into that category.

When I first about heard it, I said "no way."

However, when I talked to Steve Walser at Buddy Boy Farm, and then looked at the test results from the lab, I started to believe. At first glance, it seems like an unbelievable number — 41% THC! — and maybe it is. But then again, it might simply be something analogous to the phenomenon of 7- and 8-foot-tall humans. While rare, we know it does occur from time to time.

GREG JAMES
PUBLISHER

MARIJUANA VENTURE

PUBLISHER
GREG JAMES
Greg@MarijuanaVenture.com

EDITOR
GARRETT RUDOLPH
Editor@MarijuanaVenture.com

SALES MANAGER
LISA SMITH
Lisa@MarijuanaVenture.com

STAFF WRITERS
CHRIS BAYLEY
PATRICK WAGNER

CONTRIBUTORS

Joy Beckerman	Matt Goldberg
Michele Brooke	Christen McCurdy
Shawn DeNae	Colette Thomas
Andrew C. DeWeese	Steve Walser
Calvin E. Eib	Jana Weltzin
Steven P. Fuhr	Jerry Whiting

MARIJUANA VENTURE VOL. 2, ISSUE 4
Marijuana Venture (ISSN #2376-0710) is published monthly by MJ Directions LLC. PO Box 1419, Renton, WA, 98057. Phone: (425)281-1348. Website: www.marijuanaventure.com. Copyright 2015 by Marijuana Venture. All rights reserved. Reprinting, in whole or in part, is expressly forbidden without written permission from the publisher.

ADVERTISING
For advertising rates, call (425)281-1348 or email Greg@MarijuanaVenture.com.

SUBSCRIPTION SERVICES
For subscription services, please call (425)281-1348, visit www.marijuanaventure.com or email Editor@MarijuanaVenture.com. For change of address, please include the old address and new address, along with an address label from a recent issue, if possible. Please allow up to three weeks for address to be changed. If an address is not updated when the magazine is mailed, we are not responsible for delivery of your magazine. If the Post Office alerts us that your magazine is undeliverable, we will suspend our subscription until a correct address is received.

Marijuana Venture assumes no responsibility for any claims or representations contained in the magazine or in any advertisement. All materials contained are for educational purposes and intended for the legal marijuana business where allowed by state law. Marijuana Venture does not encourage the illegal use of any of the products contained within.

P.L. LIGHT SYSTEMS

THE LIGHTING KNOWLEDGE COMPANY

illuminated by USHIO

The Global Market Leader in Commercial Horticulture Lighting Introduces the NXT2!

Why the P.L. Commercial Grade Light System is the Best for Your Facility:

- **Industry Leading Reflector Designs:**
  - *The "Beta" is the deepest penetrating reflector*
    - *Enables light to reach the leaves in the lower levels of the crop enabling them to make a larger contribution to the photosynthesis process*
  - *The "Alpha" is the most efficient reflector*
  - *P.L. reflectors degrade at <1% per year*
- **Minimal Maintenance:**
  - *P.L. reflectors are easy to remove and clean which optimizes reflectivity*
- **P.L. Light Systems is the Global Leader in Horticultural Lighting Since 1977**
  - *Facilitates the use of 20% less equipment as compared to using traditional eballast systems*
- **Complimentary Customized Light Plans**
  - *Professionally engineered in conjunction with P.L.*
  - *Guaranteed light levels (measured in µmol)*
- **Utilizes the USHIO Super High Pressure Sodium Double Ended Lamp**
  - *High red and blue spectral rations for excellent photosynthesis efficiency*
  - *Economic - long average life, high lumen output, high efficacy*

urban-gro, LLC is the exclusive segment distributor for P.L. Light Systems and the official distributor of Narva® Grow Lamps

urban-gro

YOUR SOURCE FOR PROFESSIONAL GROW LIGHT SYSTEMS

sales@urban-gro.com Ph. 720.390.3880 urban-gro.com

The End-to-End Solution for Cannabis Production and Processing Technologies.

NEW MaiaGrow: Field-tested, Premium Cannabis Nutrient

Enterprise

- Greenhouse Design/Build
- Systems Integration

Products

- Industrial Equipment
- Supplies

Software

- Automation
- Business Intelligence

With over 60 years of combined cannabis industry experience, TRiQ customizes solutions and technologies to ensure our clients' success.

TRiQ

Worldwide Exclusive Supplier Network:

PRIVA

CERTHON Greenhouse solutions

BRINKMAN

Call us today for a needs assessment.

541-223-5911

www.triqsystems.com

Headquarters: 742 SE Glenwood Drive Bend, OR 97702 (appt only)

TABLE OF CONTENTS

Above: North Bonneville Mayor Don Stevens speaks during the ceremonial opening of The Cannabis Corner, the first government-owned marijuana retailer. See the full story on Page 32.

About the cover: Buddy Boy Farm had a sample of God's Gift test at more than 41% THC-A last fall. See story beginning on Page 66.

FEATURES

26 | Living the Dream
Five people from different fields of the industry talk about what's on their mind

32 | North Bonneville
Small town in Washington makes waves as first government-owned cannabis retailer

42 | Prepare for Spring
Grow expert Chris Bayley provides reminders for the upcoming season

50 | Organic Style
Cannabis can't be organic, but it doesn't mean it can't be grown that way

58 | Greenhouse Shade
Some regions may need to protect plants from getting too much sun and heat

60 | Cultivation Show
National Cannabis Industry Association hosts symposium for growers

62 | Grow Technology
Recent developments in the cannabis market spur excitment for the future

66 | Potency Examined
Eastern Washington grower produces some mind-blowing test results

80 | Legal Pages
Controversy brewing in Colorado and Oregon, plus information on filing taxes

90 | Clear the Air
In some states, growers need to file permits with environmental agencies

GUEST COLUMNS

94 | Joy Beckerman
98 | Vicki Christopherson
101 | Jerry Whiting
102 | Colette Thomas
104 | Shawn DeNae

OPINIONS

2 | Message from the Publisher
110 | Letter from the Editor

Events: At least nine industry shows slated for mid-April

April 14-15: From the organizers of the famed BIG Industry Show, **Horticulture 360** is scheduled for its first show April 14-15 in Denver. Organizers plan to make it an annual event and claim it is the only trade show of its kind dedicated to growers.

"Far from being just a cannabis growing event, it takes a 360 degree approach to horticulture, aimed at everyone from personal growers to commercial businesses to farmers," the Horticulture 360 website says.

The event will feature a wide range of products and vendors to situate Horticulture 360 as one of the leading business-to-business events in the nation.

Hoods, lights, nutrients, soils, books and a vast array of other items will be available, as well as a special focus on supporting businesses to improve their hemp growing.

The event is not open to the public. It is for business professionals only.

More information: http://www.horticulture360.com.

April 17-19: You'll have to be a busy traveler if you want to hit all the **Hempcon** shows scheduled for 2015. The next event of the series will be April 17-19 at the San Francisco Cow Palace.

Subsequent Hempcon events will be May 15-17 at Cashman Center in Las Vegas, May 29-31 and Aug. 21-23 at the Washington State Fairgrounds in Puyallup, Washington, Oct. 9-11 at the Denver Merchandise Mart and Nov. 6-8 at the National Orange Show (NOS) in San Bernardino, California.

The shows will feature hundreds of exhibitors, competitions and seminars.

More information: hempcon.com.

April 19: DOPE Magazine will be hosting its annual **DOPE Cup** on April 19 at the Chateau Event Center in Tukwila, Washington. This will be the fourth annual cannabis competition and vendor show put on by the magazine.

According to organizers, this year's event is expected to surpass the 700 attendees that went to the 2014 version.

More information: www.dopemagazine.com.

April 18-19: The Secret Cup takes a different approach to the different cannabis competitions across the nation, putting its focus on the hash-maker. The event mixes vendors and competition, with the next event being set for April 18-19 in Santa Cruz, California.

Other stops on the Secret Cup schedule (exact dates and locations to be determined) include Oregon, Northern California, Rhode Island, Colorado, Las Vegas and Los Angeles.

More information: www.thesecretcup.com.

April 18-20: Perhaps no cannabis-related event draws more interest than when High Times puts on its annual **Cannabis Cups**, headlined by the Denver event during 4/20 weekend. In addition to the usual festivities, competitions, vendors and entertainment, this year's extravaganza will also include a performance by Snoop Dogg at a venue that has yet to be announced.

This year's event has been expanded to three days, following the record-setting 2014 cup that drew more than 37,000 attendees to the Denver Mart, which will be the site of the Cannabis Cup once again in 2015.

More information: www.cannabiscup.com.

April 20: The inaugural Portland Startup Summit brought Silicon Valley to the Rose City, but the encore will focus on local businesses, including the craft beer and cannabis industries.

The Portland Startup Summit 2.0 will be from 11 a.m. to 7 p.m. at Holocene in Portland.

According to organizers, it is a conference that "constructs and deconstructs, the future of the Portland startup scene. Whether it's by focusing on the social good, excelling in unusual industries, or being bootstrapped by design, Portland startups do things differently."

Subjects will include the business of beer, public relations, starting a business without investors and the future of food. However, those in the cannabis industry will likely be most interested in the section titled "Puff, Puff, Pivot: The Marijuana Revolution."

Following Oregon's vote to legalize recreational cannabis, marijuana is Portland's newest growth industry, organizers said.

"This panel brings together advocates and entrepreneurs to discuss why green is the new gold."

More information: www.eventbrite.com.

April 20-22: The Marijuana Investor Summit 2015 takes a deeper look into the legalized cannabis markets for people that are in the marijuana business, are planning a new business, want to invest or operate a company that supports the industry.

>> CONTINUED ON PAGE 9

The National Cannabis Industry Association's cultivation symposium featured dozens of speakers at the three-day event in March. For more on the symposium, see Page 60.

We have over 20 i-502 surveillance systems approved and operating!

Would you like to have a guaranteed compliant security camera system and an easy plug and play installation?

Then call us now to get started on your security camera system design.

45 Days of Recorded Video GUARANTEED

All Systems Preconfigured for Plug and Play Installation

Know You're Compliant BEFORE Spending a Penny!

Our Customers Save an Average of 25% Over Competing Bids

Get Compliant Now...

& Leave Room to Grow!

We Supply 3D Renderings of All Camera Angles

Outdoor grow operation camera spec

Quarantine camera view

Outdoor grow design

Visit Us Online or Call Us Now

www.i502CCTV.com 1-800-287-2817

TROUBLE GETTING THESE TWO TO COME TOGETHER?

LET US HELP

U.S. Cannabis Management understands that operating a cannabis business is not an easy task. It is our mission to provide our clients with services that make their professional life easier to manage, while providing exceptional value. We provide services to successful business owners and to struggling business owners trying to find their way within the industry. Let U.S. Cannabis Management be your guiding light through this field of green

Retail Management Solutions

Producers & Processors

Marketing & Promotions

Tommy Chong Endorsed Distribution

EST. US 2014
CANNABIS
MANAGEMENT SERVICES INC.

INFO@USCANNABIS.US — 206.906.9778

<< CONTINUED FROM PAGE 6

There will be seminars and a pre-conference, half-day boot camp that will all be taught by industry experts spanning the realm of investors and successful entrepreneurs.

The event will be at the Crown Plaza Hotel in Denver.

In addition to the educational aspect of the show, there will also be plenty of opportunities to network, with a full trade show, cocktail parties, special events and multiple chances to collaborate with other individuals in the cannabis trade.

The Marijuana Investor Summit could be where you find your next investor, or your next investment opportunity.

More information: www.marijuanainvestorsummit.com.

April 22: Christian Hageseth, the founder of Green Man Cannabis, will be speaking about **Big Weed: An Entrepreneur's High-Stakes Adventures in the Budding Legal Marijuana Business** at The Commonwealth Club in San Francisco.

Hageseth is "the face of the legal marijuana revolution," according to event organizers. The author of "Big Weed" is an entrepreneur and father of three who worked in the white-collar professional world for 20 years before opening his first dispensary. Now, Green Man Cannabis is one of the fastest-growing marijuana companies in the country. Hageseth will discuss how he got into the business, the big corporate interests that are eager to do the same, and the full impact he believes legal marijuana will have on American life.

More information: www.commonwealthclub.org.

April 28-30: The National Cannabis Industry Association will host its **Policy Symposium and Member Lobby Days** in Washington, D.C.

"Without a strong political machine driving legal reforms across the country, there would be no cannabis industry," the association says.

This conference focuses on the latest efforts to reform state and federal marijuana laws. The event will be held alongside NCIA's lobby days, and will feature both panel discussions as well as an interactive workshop teaching you how to lobby for cannabis reform.

More information: thecannabisindustry.org.

May 15-17: The Alaska Cannabis Classic is the first stop on a tour of three trade shows and cannabis competitions that will feature events in Tacoma, Washington and Portland, Oregon later in the year.

The three-day kick-off event at the Dena'aina Center in Anchorage will include vendors, product demonstrations, informative seminars, hemp fashion show, live music and networking opportunities.

The competition will feature locally-produced cannabis products with an awards show to follow.

The Tacoma event will be July 18-19, while the Portland event is set for Sept. 19-20.

More information: nwcannabisclassic.com.

May 19-21: The Marijuana Business Conference and Expo will hit Chicago for a three-day, business-only event that is expected to have more than 125 exhibitors and 70 expert speakers, including dispensary owners, private equity leaders and top lawyers. With Illinois recently joining other states that have legalized medical marijuana, there will also be a "marijuana business crash course" — a workshop for new business owners in the cannabis industry.

Consumers and the general public are not invited to Marijuana Business Conferences.

More information: mmjbusinessdaily.com/conference.

June 18-19: The International Cannabis Association will host the second **Cannabis World Congress and Business Exposition** at the Javits Center in New York.

The event will bring entrepreneurs, business professionals and lawmakers together with cannabis industry veterans at the largest marijuana-related business show on the East Coast. Organizers are planning to have more than 150 exhibitors and 50 speakers at the two-day event, geared to help aspiring entrepreneurs understand what it takes to succeed in this rapidly growing industry.

Speakers will include Ryan Hurley, a partner at Rose Law Group, Andy Joseph, president of Apeks Supercritical, Dean Guske, a CPA with more than 30 years of experience, and Avis Bulbulyan, executive director of Bulbulyan Consulting Group.

More information: internationalcannabisassociation.com.

June 29-July 1: More than 2,000 attendees are expected at the second **National Cannabis Business Summit and Expo** starting at the end of June. The event, hosted by the National Cannabis Industry Association, will be held at the Denver Convention Center.

Topics will include infused products, cultivation management, policy and regulation, emerging trends and more.

The show is expected to have more than 100 exhibitors, 70 speakers, 55 educational sessions and 10 hands-on workshops.

More information: thecannabisindustry.org.

Aug. 15-16: Hempfest weekend in Seattle just got a whole lot busier with the introduction of the **Hempfest Business Show** at the Seattle Center Exhibition Hall.

This inaugural event is about creating an environment where Washington's flourishing medical and recreational cannabis industries can flourish and mature.

It will run concurrently with Seattle Hempfest, which will be taking place just minutes away. Vendors will display the latest in cultivation equipment, packaging, marketing, web design, insurance, nutrients and more.

More information: www.hempfest.org.

Dec. 4-5: Mark your calendar for **The Rush Is On**, a business seminar, trade show and competition scheduled for Anchorage, Alaska this winter. The event will be at the Dena'ina Convention Center.

Seminar topics include cannabis cultivation, tourism, "pot economics" and discussions on testing and lab results.

More information: therushison.com.

Which shows have you attended?

With so many cannabis-related shows each month, it's hard to know which ones are worth attending, and which ones are busts. We're interested in hearing your thoughts. Email letters to the editor or calendar submissions to Editor@MarijuanaVenture.com.

Jason Goff (right) of High End Market Place answers a customer's questions during the store's opening day.

High End Market Place

Community involvement key for Vancouver retailer

By Garrett Rudolph

VANCOUVER, Wash. — High End Market Place is a far cry different than most retail stores that are located in shopping districts. For one thing, it looks a lot more like your neighbor's house than a place where you can legally buy marijuana.

Being in a commercially-zoned house gives the retail store warm, nostalgic feeling that should be perfect for hosting a series of art- and cannabis-related community events in the near future, co-owner Morgan Hutchinson said.

These upcoming Sunday Sessions will feature a variety demonstrations and performances by local musicians, painters, poets, glass blowers, chefs and more, providing both education and entertainment to the store's patrons.

"We're going to try to get as many people in from the community, because we really want to be a place here that people can go to showcase their work," Hutchinson said. "And I think marijuana goes hand-in-hand with a lot of those things."

Nearby Portland, Oregon — where High End Market Place draws about 30% of its business — has always been known for its vibrant culture, but just across the Columbia River, Vancouver is enjoying a revitalization of its art community.

Hutchinson and partner Gareth Kautz were having a hard time finding a space for their store, when they discovered the neighborhood on Broadway Street. They decided to go door to door down that street looking for people that were either looking to sell, willing to lease out a section of a building, or were getting close to retiring. They found the latter in the woman who owned An Shen Wellness Clinic.

Company: High End Market Place
Location: Vancouver, Washington
Employees: 10
Top vendors: "We have eight producers and we love all of them. The reason we're working with each of them is that we like their products, we like them, we like their system."
Most popular products: Edibles are popular; Agent Orange has been the highest selling strain so far; and $40 eighth-ounces have been "flying off the shelves."

However, despite its ambiance, High End Market Place does face a little bit of a different challenge compared to being located in a more traditional shopping district, which might see a great deal more cars pass by. But, there's a surprising amount of foot traffic because it's in the middle of a neighborhood, Hutchinson said.

"A lot of people coming in are in the neighborhood," Hutchinson said. "So there are a lot of people telling their neighbors and friends."

Here Comes

BUDDY BOY FARM

Your BEST Buds

Experience

Long term certified organic farming + medical grow background with legendary phenotypes.

Flexibility

Extensive innovative branded product line.
Private label & co-branding available.

Quality & Consistency

Indoor & outdoor growers
constant supply of extreme THC.

Relentless customer service | Regular weekly delivery & special delivery options.

.3 gm Bowl to Go | 1 gm to 1 oz Big Bud Packs | "Blaster" (Glass Packed All Bud) Dube | Concentrates | Wax | Shatter | Kief

COMING SOON: •"The Rocket" Vape Pens •"Rocket Fuel" Replacement Cartridges •Salves •Lotions • Hash

FOR ORDERING INFORMATION Ph: 509 796 3601 | email: buddyboyfarms@yahoo.com | website: buddyboyfarm.com

The Euflora stores are known for their clean, open atmosphere. Photo by Adam Larkey Photography.

Company: Euflora
Location: Two stores in Aurora, Colorado and one in Denver
Employees: 50
Top vendors: O.Pen Vape, Incredibles
Most popular products: Edibles in Denver and flower in Aurora

Will your business be next?
Interested in having your business profiled in Marijuana Venture? Each month, magazine staff will feature different growers, retailers and specialty businesses in a short profile section. For more information, or to pitch a company to be featured, send an email to Editor@MarijuanaVenture.com.

Euflora

Colorado retail chain draws comparisons to tech stores

By Patrick Wagner

DENVER — Euflora has often been called the Apple Store of cannabis because of its open atmosphere, tech-driven retail and modern allure. The chain of retail locations now includes two storefronts in Aurora, Colorado and one inside Denver's 16th Street Mall.

Euflora co-owner Jamie Perino never set out to become the first retailer to break into the swanky downtown tourist market, but her investment inadvertently lead to her becoming one of the most prolific marijuana merchants in the state. For Perino, the marijuana business was just a side investment while the housing market recovered from its 2007 crash.

"I spent a lot of time spinning my wheels in the building industry after the market crash in 2007," Perino explained. It was a Perino's business partner who convinced her to invest in the cannabis industry.

"It was actually my intention never to do this full time. I was planning to keep working in the building industry and do this as a part-time gig, but then it turned into more than full time," she said.

After deciding to venture into the new industry, Perino made headlines for being the first retailer to open her doors to the masses of foot traffic that flow through Denver's city center — a feat she attributes to sheer perseverance. But those headlines changed once the doors opened to show that Euflora wasn't the typical, single file, wait-and-pay retailer that had been opening all over the city.

The Apple Store comparison is immediately apt when looking inside any of the Euflora locations; clean tabletops adorned with glowing tablets and jars of cannabis fill the room while staff roam the floor looking to answer questions. Customers can walk into the airy, 6,000-square-foot Denver location and wander from table to table looking, smelling and reading about the products without worrying about the next person in line.

"It set us apart, especially for the tourist industry," Perino said. "A lot of times you get people who are unfamiliar with the products and they're nervous or scared and when they come in through our doors and it's bright and it's airy and there's music playing, you feel more like you're going shopping than going to buy marijuana."

THC LAW FIRM LLC

CALL (253) 301-3439

THC Law Firm has represented **more than ninety** I-502 businesses across Washington state.

Marijuana law is what we do!

Our Services Include:

- In-House Counsel
- Step-by-Step Licensing Package
- On-Site Full Compliance Audit
- Drafting I-502 Documents
- Fighting Moratoriums
- Liquor Control Board Appeals
- Lawsuits Against the LCB

Chris Crew, *Attorney at Law*

- *Lead Counsel for the Marijuana League*
- *Lead Speaker for Marijuana Workshops*

LAKEWOOD LOCATION
3815 100th Street SW • Suite 2B
Lakewood, WA 98499

RAYMOND LOCATION
310 Commercial Street
Raymond, WA 98577

CALL TODAY
for experienced
marijuana legal advice
(253) 301-3439
www.THCLawFirm.com

A look at one of Fairwinds' commercial kitchens and several of its most popular products (inset).

Fairwinds Manufacturing

Focus on technology leads to creative line of products

By Garrett Rudolph

VANCOUVER, Wash. — Not only does Fairwinds Manufacturing create some of the most unique cannabis-related products on the market, but its approach to utilizing technology and cutting-edge equipment also sets it apart from other companies.

Fairwinds owner James Hull said he jumped at the opportunity to build a business that tied everything he's learned through a lifetime of working with plants and technology. By trade, he's a mechanical engineer, but his upbringing and family background helped him become a self-taught horticulturist.

"The idea that I could design and build a legal cannabis cultivation and processing facility with state of the art and unrivaled technology blew my mind and really got my 'Type-A' blood pumping," Hull said.

Consumers might recognize Fairwinds for its vape cartridges, coconut oil-based tinctures and cannabis-infused coffees that come in either pod form or individual bags of ground joe. But those that are interested in the production aspect of the industry are probably more intrigued by the Tier 2 producer/processor's facility.

It features computer monitored and controlled systems throughout the building. The electrical system designed in-house allows for control of the entire facility either locally or remotely through a PC, tablet or cell phone. That includes the lights, nutrient delivery system, CO_2 supplementation, heating and cooling, dehumidification system, water treatment and air purification. It's also set up to send alarm notifications via text messages anytime something goes wrong.

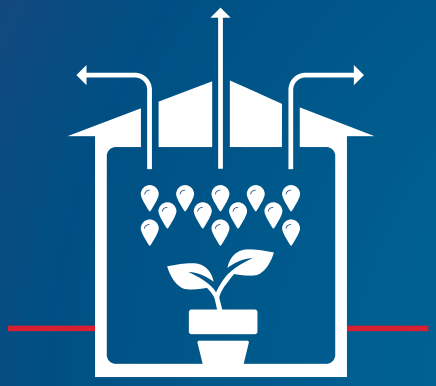
Fairwinds puts two certified commercial kitchens to good use, as well as multiple high-volume extraction machines. Other features include multiple isolated, sealed grow rooms built to ISO 7 clean room standards, zero VOC paint on all surfaces and extensive HPEA and carbon filtration systems.

"Typically as technology increases, so does quality, repeatability, consistency and efficiency," Hull said of his approach. "This will become a very competitive market and the ability to produce the highest-quality product at the lowest price will be imperative to survival," he said.

Hull has taken a similar approach with Fairwinds' 10 employees, bringing in people with unique skill sets to handle the growing, extractions and product development. Among his staff are employees with degrees in horticulture, botany, bio-chemistry, chemistry and micro-biology.

Company: Fairwinds Manufacturing
Location: Vancouver, Washington
Employees: 10
Size: Indoor Tier 2

Building a Grow?



24-Hour Dehumidification

Lower Build-Out Investment

Reduce Power Consumption

Reduce Climate Control Costs in Indoor Gardens.

Climate control systems from Surna provide a more cost-effective and energy efficient way to cool your indoor garden. With 24-hour dehumidification, a lower build-out investment than A/C and reduced power consumption, Surna creates a faster path to profitability.

Intelligent. Efficient. Reliable.

303.993.5271 | info@surna.com | surna.com
1780 55th St Suite A, Boulder, CO 80301
@surnainc

SURNA

Dirt M.D.

After 30 years of serving markets in Southeast Asia, Ocean Agro has expanded to the United States to introduce Dirt M.D. to the U.S. farming community. Dirt M.D. is a formulated humic product designed to improve plant health and yield by increasing nutrient uptake and efficiency.

It is marketed and distributed by Ocean Agro, which has an office in Daly City, California, with warehouse centers located to serve growers across the country.

"What's really great about our product in the marijuana market is that we have been able to validate it in more established, lower margin agricultural production systems that are highly cost sensitive," Director of Operations Kaushal Parikh said. "Operating at larger scales in conventional agriculture has allowed us to scale up to delivering large-scale packaging at pricing that works for even the lowest value crop. Ultimately, we see a trend toward larger grows that have focused on managing costs, and Dirt M.D. is well-positioned to service these commercial-scale customers."

Dirt M.D.'s extraction process creates ammonium humate, which is more reactive than similar products on the market and lets consumers do more with less, Parikh said. Additionally, it includes micronutrient complexes, stabilizers for optimizing performance in drip and recirculating systems, and surfactants for improving foliar applications. Dirt M.D. is highly flexible. It can be applied as a soil drench, foliar sprays, drip fertigation, hydroponic feeding and with compost teas. It contains both humic and fulvic compounds sourced from oxidized lignite.

Dirt M.D. has been designed to improve plant health and yield. It has previously been used for growing a wide variety of plants, including strawberries and grapes.

The proof of the product is in organic sales growth, Parikh said. Through sample-focused promotions, the product has been able to generate a solid following in California, he said. Dirt M.D. is sold for use with a wide variety of agricultural crops including strawberries, grapes, onions, rice and alfalfa.

Dirt M.D. does not use any animal-based ingredients or heavy metal contaminants; even soil bacteria can grow in it organically. Additionally, it includes natural plant sugars to feed the soil life.

Through its extensive manufacturing capacity in India, Dirt M.D. is able to service any size customer while passing along the advantages of scale and labor saving through Ocean Agro.

More information: DirtMD.com.

Grasshopper Extractor

The Grasshopper Extractor is helping to change the cannabis concentrate market by producing kief economically and fast.

One advantage of the Grasshopper is that nothing is wasted from the plant, resulting in all-natural, chemical-free kief. The extractor uses a 400-watt, 1/3-horsepower motor and dry ice to churn out concentrates that can be used for a variety of products.

This gives producer/processors the option of using kief in their extraction machines rather than straight plant material.

By using kief, processors are starting with a higher concentration of trichomes to ultimately produce a cleaner and more potent product. Kief can also be mixed in edibles without the time it takes to make butter.

Grasshopper claims its extractor can fully process up to a pound of dried plant material in as little as 15 minutes with yields of up to 25%.

The Grasshopper's extraction chamber uses 149-micron screens, with the option to customize by adding extra sets of screens to keep the production moving smooth and quickly.

Some cannabis entrepreneurs may choose to use the optional 100- and 74-micron screens to create top-notch extracts.

The machine is designed to be long-lasting and easy to use, with a series of rubber straps that make attaching screens easy and effortless. The Grasshopper is also easy to clean — no solvents, special cleaners or lubricants are required. It was developed to be environmentally friendly, as well.

It is manufactured in Southern Oregon.

More information: www.grasshopperextractor.com.

Business partners Stacy Page and Eric Sfragidas display their Grasshopper Extractors to cannabis industry professionals at a recent trade show.

TraceWeed

After a successful beta period with multiple producer/processor operations around Washington, Seattle-based Dauntless Software has officially launched its TraceWeed service for I-502 businesses.

TraceWeed gives producers and processors a new option to fulfill seed-to-sale traceability requirements, in addition to a host of extra features including detailed reporting, clone management, plant tracking and harvest functions.

"We've taken a lot of the time and headache out of traceability while keeping our pricing affordable," Dauntless CEO Clark Musser said.

TraceWeed tracks plants, inventory, and storage locations using a combination of desktops and smartphones equipped with Dauntless' patent-pending TapNTrace technology. Customers tag their plants with PVC cards encoded with a near-field communication (NFC) chip, the same technology that is behind many of the cutting-edge mobile payment systems, such as Apple Pay. Similar tags and stickers are used to mark locations within the grow operations. Each PVC plant tag can be reused up to 10,000 times.

The PVC tags used for plants are impervious to grow-room or outdoor conditions; all-weather stickers can be printed with strain details and other pertinent information using an optional portable Bluetooth printer. TraceWeed does not require proprietary hardware.

"We love how TraceWeed is mobile so you don't always have to go to your computer to get things entered," said Susan Strickland, co-owner of Happy Wayz Edibles in Spokane, Washington. Strickland was one of TraceWeed's beta customers.

Dauntless used feedback from TraceWeed's beta customers to make improvements to the product's functionality, and the company will continue to adapt TraceWeed to its customers' needs, Musser said. Customers who use the TraceWeed software will automatically get updates as they are rolled out, at no additional charge.

"The sky is the limit around what we want to offer for future versions of TraceWeed," Musser said. "Our key goal is to help make it simple to run an I-502 business in order to allow our partners to focus on creating and selling great products.

Dauntless plans to expand into other states with legal recreational or medical marijuana markets, Musser said.

More information: traceweed.com.

G8 LED

Since being developed by a group of electrical engineers turned indoor growers in 2008, G8 LED has been a mainstay of indoor cultivation, thanks in part to its consistent attention to customer feedback.

The company said G8 LED has been able to focus on redesigning and innovating LED technology based on customer feedback, allowing it to bypass the early hurdles some LED grow lights have faced. G8 LED's philosophy is that if something does not work well for the customer, it will not work well for the long-term success of the company either.

The LED panels come in six different variations starting with the 240-watt, full spectrum model for veg and flower and ranging up to the 900-watt, full-spectrum model, also for veg and flower. Other products include 450- and 600-watt models and the 90-watt, all-red flowering boost.

The G8 LED 900-watt, full-spectrum model.

Soon after the Los Angeles-based company was founded, G8 LED partnered with online retailer Dormgrow.com to offer products direct to customers. The partnership has allowed G8 LED to focus its efforts on manufacturing and design, while the website manages the retail and wholesale arenas, the company said. The website also hosts a variety of guides, lessons and video tutorials to help growers better understand the products, avoid simple missteps and get the best return on their investments.

While the biggest advantage of using LED lights is the notably smaller carbon footprint, compared to high-intensity discharge bulbs, growers will need to make some adjustments in their techniques, the company said. One of the biggest mistakes people make with LEDs is overwatering, the company said. Since the LEDs have a smaller heat output, there is less evaporation and a less-frequent watering schedule should be followed, the company said.

G8 LED recently received a Significant Technological Achievements in Secretive Horticulture Award (STASH) from High Times. The iconic culture magazine awarded G8 LED as one of the best light manufacturers in the industry due to its design and growing capability.

More information: www.dormgrow.com.

THE ULTIMATE MACHINE

GreenBroz Inc
TAKE THE WORK OUT OF TRIM TIME

A machine that produces quality the way you do.

GreenBroz Standard
Dry Trimmer
$4900

2 LBS.

GENTLE

processes any strain without damage to your product

12 LBS.

5 MINUTES

QUICK

easy in, easy out, quick cleanup, no assembly required

10 MINUTES

25 WATTS

QUIET

uses minimal power and is quiet enough to run without ear protection

40 WATTS

GreenBroz Commercial
Dry Trimmer
$9800

844-DRY-TRIM

PROTECTING PURITY AND POTENCY SINCE 2012

www.greenbroz.com

Aroma Canna-Pods & E-Pods

Will Smith has been creating plastic display cases and retail fixtures for more than three decades. The most recent product from Smith's Bud Bar Displays could represent the future of retail cannabis.

The Aroma Canna-Pod and Aroma E-Pod are some of the highest-quality sniff jars on the market, specifically designed for compliance with Washington's Initiative 502. Both styles of display pods allow potential customers to examine and smell buds so they can feel confident in the product they're purchasing. They feature aroma holes with reusable silicone plugs that come in a variety of colors to make it easier to identify different strains and categories.

The top of the pods also feature built-in magnifying glasses, so shoppers can get an up-close look at all those beautiful flowers and tempting trichomes.

Both pods can display up to a half-ounce of buds. They measure 3.5 inches in diameter and 2 inches tall. The

All of Bud Bar Displays' products are made from certified food grade materials.

While the Canna-Pod is a standalone sniff jar, the E-Pod has a built-in body that incorporates a sign holder that can be used to display each product's test results, information about the producer and more.

In addition to the E-Pods and Canna-Pods, Bud Bar Displays manufacturers a variety of other storage and display products.

More information: www.budbardisplays.com

Above: Bud Bar Displays' Aroma E-Pod. At far left: The Canna-Pod.

The CoolJarz 3301 CRSi

CoolJarz 3301 CRSi

Earthwise Packaging has recently released its latest product for storing cannabis extracts, the CoolJarz 3301 CRSi.

These small extract jars are ideal for packaging less than two grams of any sticky, cannabis extract product. They feature hard outer bodies with soft, high-temperature silicone linings inside. Labels can be applied to any of the surfaces on the outside of the jar, and they come at a price of less than 50 cents apiece.

They are all child-resistant and certified to ASTM D3475 standards. The inner jar will not fall out of the hard, outer container. The jars features a truly airtight, silicone-lined, hinged inner cap and a threaded outer cap. It's ideal for hygroscopic, moisture-absorbing shatter products. The outer jar is made from 100% pure polypropylene, BPA-free, FDA-certified plastic.

The jars are all manufactured at the Earthwise Packaging factory, located in Irvine, California.

More information: 714-602-2169.

FLYING SKULL
PLANT PRODUCTS

Nuke em
World's Most Advanced
Insecticide & Fungicide

- Kills Broad, Russet, Cyclamen and Spider Mites
- Kills Powdery Mildew, Mold and Yeast
- Can be used throughout including day of and after harvest
- Spray low dose for weekly maintenance
- Won't slow plant growth (No oil, No soap, No detergent)
- No harmful residue
- May reduce worker's comp or insurance claims

OMRI LISTED
For Organic Use

FLYING SKULL Z7 Part 1
PLANT PRODUCTS

Z7
Enzyme Cleanser

- World's Most Advanced Enzyme Cleanser
- Great for Soil and all Hydro Systems
- Super High Customer Satisfaction Rate
- Eliminates Bio-film and inanimate slime
- Answer to problem root zones
- Creates proper osmotic conditions
- Concentrated – Super Economical

FLYING SKULL Z7 Part 2
PLANT PRODUCTS

Thanks for all of your help. You keep me lookin' good in the grow rooms.
Tony Renzulli - Grow Room Manager - Farmtek.com

FLYING SKULL PLANT PRODUCTS

FOR MORE INFORMATION
VISIT WWW.FLYINGSKULL.NET
(888) 770-8808

Gnat Nix

Growstone has recently expanded its product line to include a chemical-free top dressing to control fungus gnat infestations.

Growstone's Gnat Nix is made from 100% recycled glass that creates a barrier against pesky gnats in several ways.

First, Gnat Nix creates a physical barrier that limits larvae mobility. The top dressing limits the ability of larvae to crawl up on the surface, pupate and emerge as adults that would continue to reproduce. Using Gnat Nix right after plants are transplanted into permanent growing containers will significantly reduce larvae survival chances. Trapped in Gnat Nix, larvae end up dying before they become adults.

Second, the dry and inhospitable conditions created by Gnat Nix limit egg survival. The dry and rough surface of the top dressing creates inhospitable conditions that negatively affect survival rates for fungus gnat eggs. It also reduces the appeal for females to lay their eggs on the surface. When growing conditions promote fungus gnat population growth, applying Gnat Nix as a top dressing can prevent future problems – as the fewer eggs laid by adults females have a significantly lower chance of survival. Gnat Nix has been quickly adopted in both gardening and professional markets.

Gnat nix is non-toxic and chemical-free. It is also effective in dry or moist conditions and can be used indoors or outdoors. It's a way to reduce plant damage with one single application without using pesticides.

More information: www.growstone.com.

Growstone
Gnat Nix being used as a top dressing.

Tetratrak

A new website is making it easier for those in Washington's regulated cannabis industry to keep tabs on the competition and trends in the marketplace. The launch of tetratrak.com gives people an easy and convenient way to collect thousands of pages of business information.

Want to know what producer/processor brought in the most sales revenue for the month of March? What price are retailers paying wholesale?

Want to know who the top 10 retailers are in the state? Or the average cost per gram at retailers in a particular county?

All this information and more is available through Tetratrak. The site includes breakdowns of all licensed producers, processors and retailers based on pricing, revenue, regional information and violation reports.

But Tetratrak president Brian Yauger said he has plans to add significantly more content to the site within the next 90-180 days.

"Right now, our website is a skeleton," Yauger said. "That's our starting point."

Yauger wants to add details like yield, how fast products sell, price comparisons based on potency and strain information.

"That data is out there, so it's only a matter of time," he said.

The site is designed to provide business information to I-502 businesses, venture capitalists, vendors and the media. Customers of the subscription-based service can quickly see how each company in the state ranks in comparison to other businesses, as well as monthly increases or declines in sales.

Yauger, who teamed up with attorney Bryan Guy to develop the company, said plans are in place to expand the system to include Oregon and Alaska once they get their programs implemented.

"Many of the recreational marijuana companies are looking for a quick and easy way to access information about the industry," Yauger said. "Tetratrak.com equips companies with the most definitive data, insights and perspectives to make tactical and strategic business decisions."

Yauger said he wants to keep the price point fairly low, starting at $39 per month, to avoid pricing out smaller companies.

"We understand that everybody in this business, from the top-selling producer to the guy who just came online, is a start-up," he said.

More information: www.tetratrak.com.

WE HEARD YOU, SEE?
CannaSol is now offering clear, uv-protected bags.
We think you'll like what you see.
Call 509.557.7893 or visit CannaSol.net to learn
more about our strains and pricing.
CannaSol
FARMS
PREMIUM SUNGROWN

SRI INSTRUMENTS

Laboratory testing can be an important facet for growers and processors to better understand the plants they are growing and the different techniques and methods they are trying.

For businesses that are churning out commercial quantities of marijuana on a regular basis, it might not be feasible or cost effective to send samples to labs in the middle of a grow cycle or to test more product per harvest than the state requires.

SRI Instruments, a company based in California, has developed a possible solution for those in the cannabis industry that need to keep a close eye on test results without spending hundreds of thousands of dollars on equipment and complex training.

SRI manufactures several gas chromatographs that can analyze cannabis samples and produce potency results in as little as 30 minutes. These machines are similar to the equipment used by the DEA and other state and federal laboratories to measure cannabis potency, terpene and cannabinoid profiles and even residual solvents in concentrates.

After the initial investment of about $12,000, each test costs about 15 cents, and the process is relatively simple, requiring only a few hours of training.

The test requires one-tenth of a gram of cannabis flower or concentrate to be measured out and placed in a small bottle. The bottle is then filled with denatured alcohol, which extracts the cannabinoids. The bottle is placed in a heated tray which is the part of the gas chromatograph. The heat ensures that all the cannabinoids dissolve in the alcohol.

After about 20 minutes, a small amount of the alcohol extract is injected into the machine with a syringe. After about 10 minutes, the results appear on the screen of a laptop, tablet or desktop computer that's connected to the gas chromatograph with a USB cable.

The machine is also small enough to be portable. It can sit easily on a counter or the tailgate of a truck to be used indoors or out.

In most states, SRI gas chromatographs cannot be used as a substitute for state-mandated laboratory testing, but they can be helpful to make quick in-house tests during the production process.

More information: www.srigc.com.

gleam law PLLC

entrepreneurs. cannabis advocates. political pioneers. **attorneys.**

613 19th Ave E, Ste. 202
Seattle, WA 98112
seattle (206) 319-5296
portland (503) 445-8574
www.gleamlaw.com

PELCO
by Schneider Electric

Financing Options Available

MJBA MARIJUANA BUSINESS ASSOCIATION

B&S² BUILDING & SECURITY SOLUTIONS

- Building & Security Solutions can handle all of your Surveillance and Security needs.
- Customer service is our top priority. Serving clients in Washington and Oregon.
- Comprehensive walk-through with complete camera placement drawing at no charge!

We guarantee compliance with LCB regulations.

info@buildingsecuritysolutions.com 360-870-7011 www.buildingsecuritysolutions.com

Living the DREAM

Marijuana Venture sought out a group of professionals to tell the trials and tribulations of everyday life in the legal marijuana industry.

7 Leaf Collective

Mike Warren

Salem, Ore.

Dispensary

Our dispensary has provided me with the opportunity to connect with a diverse set of patients. It has been an unexpected joy to be able to share a common ground through cannabis with others who I may have never known outside of the dispensary.

One patient in particular comes to mind. He's a baby boomer and one of a handful of deaf community patients we serve on a regular basis. Despite our initial communication challenges, we have improvised ways to have rich, enjoyable conversations.

Our common language is cannabis. It has been a breeze to develop a non-verbal shorthand with this deaf patient because we both are fluent in cannabis lingo. Despite our mostly silent, pantomimed exchanges, I always feel like I've had a robust and hearty conversation when he leaves our shop and I always look forward to his visits.

These positive encounters reinforce my belief that the shared knowledge between cannabis patients, caregivers and others in the industry transcends our differences. It's a bond that cuts across political, social, physical and even generational lines. We all share the same stigma. We all understand the etiquette. We all have memories associated with this plant. We all openly share our knowledge and techniques used to consume this plant. It's like 70 years of speakeasies that can now openly share their bar notes. These open exchanges of cannabis ideas are bound to lead to a renaissance of growing and extraction techniques in Oregon over the next decade that will improve the health of our entire community.

The entryway of 7 Leaf Collective features photos of famous individuals like Louie Armstrong, Bruce Lee, Kareem Abdul Jabbar, Steve Jobs, John Lennon and Bob Dylan.

On the other side of the coin, these dispensary experiences can sometimes feel bittersweet, especially when we read the news. There is a stark contrast between how the media covers the cannabis industry and the day-to-day reality inside our dispensary.

It saddens me that I'm not able to share our dispensary experiences with those community members who are causing such suffering because of their apathy toward cannabis. The genie is out of the bong. It is time to discuss cannabis fearlessly so that the stigma can be eradicated and we can more easily share wisdom that may benefit us all.

Mike Warren is the owner of 7 Leaf Collective, a state-licensed dispensary in Salem, Oregon. It can be found online at www.7leaforegon.com.

CLEARCHOICE
CANNABIS
IT'S
THAT TIME AGAIN
420
253.444.5444
8001 S. HOSMER ST. SUITE B | TACOMA, WA 98408
WWW.FINDCLEARCHOICE.COM
THIS PRODUCT HAS INTOXICATING EFFECTS AND MAY BE HABIT FORMING. MARIJUANA CAN IMPAIR CONCENTRATION, COORDINATION, AND JUDGMENT. DO NOT OPERATE A VEHICLE OR MACHINERY UNDER THE INFLUENCE OF THIS DRUG. THERE MAY BE HEALTH RISKS ASSOCIATED WITH CONSUMPTION OF THIS PRODUCT. FOR USE ONLY BY ADULTS 21 AND OLDER. KEEP OUT OF THE REACH OF CHILDREN.

Trail Blazin' Productions

Danielle Rosellison
Bellingham, Wash.
Tier 2 Producer/Processor

"We have no problems, only solutions."

This has quickly become our motto over the last 17 months. It was either that or crumble in self-pity and devastation.

I won't bore you with the hundreds of fires that we have encountered; just the highlights, which I'm sure everyone can relate to.

We general contracted the build-out ourselves. For the record, small residential remodels were the extent of our contracting history. So a non-flammable, steel, commercial construction was a large undertaking! We special-ordered two pieces to make our lives easier: the main beams with pre-fabricated tabs at 16 inches apart. About halfway through construction we noticed the floor joists were obviously not perpendicular. Turns out, not all the tabs were 16 inches apart. The VP of the beam fabricating company flew out to look at the construction. Indeed, it was definitely a flaw in their product. "This has never happened before," he assured us.

Great, glad we could be the first.

Timing is everything. We ordered the lights knowing it would take five weeks for delivery. Clones were cut and nurtured. At 4:45 p.m. on Day 35, we called, curious where our lights were. "Let me check on that for you. Hmmm ... it says here that your lights are in the warehouse. In Kentucky."

Kentucky?!

"It says here they have been there for several weeks. For some reason they just haven't shipped yet. This has never happened before." There it was again. "It will take two weeks for delivery. Would you like me to ship them now?" Yes, we would like you to ship them now.

We also ordered custom bags. We were going for hemp colored. The custom bags arrived late Thanksgiving Day, delivered to our home by the rep. We were so excited! It was like Christmas had come early. We tore open the boxes, threw aside the wrapping and … saw nothing but pink. Sixteen-thousand bags that were pink. Inhale calm ... exhale smile. Do you know what the rep said? You guessed it. "This has never happened before."

In the beginning, every hurdle was like a knife to the heart — forces trying to tear apart our dream. Now, with our motto in mind, we roll our eyes, laugh every time something goes wrong, and start working on how to fix it.

Because it's not about if something is going to go wrong; it's about, when something goes wrong, and how we choose to deal with it.

Danielle Rosellison is one of the co-owners of Trail Blazin' Productions, a licensed producer/processor in Bellingham, Washington.

Recreational Marijuana Management

Colette Thomas
Advisor

As February has come and gone, I am amazed at all of the projects that have been transpiring since CannaCon in Seattle.

It's refreshing to know that after a year and a half of being enrolled at the "University of I-502," I am still able to bring value to the industry.

There are more applicants and licensees that require assistance now than I could ever imagine. I have conquered several milestones with my clients and I am always eager to take on new challenges.

One of these challenges was being asked by Chris Crew, of THC Law Firm, to testify as an expert witness in an administrative hearing. It was between the Washington State Liquor Control Board and a retail applicant who was disqualified prior to the lottery, due to a DocuSign error. Imagine that! If you have ever dealt with DocuSign, you probably already know the system is sporadically flawed. Sometimes it works perfectly, and other times important documents are not received.

The same uneasiness and fear of the unknown set in. Just like it did in the days leading up to the retail lottery, or before our first final inspection for a retail store, or the first retail grand opening. It was a bit awkward and uncomfortable, not knowing what to expect. I had spent the last 18 months dedicating my entire being to assisting I-502 applicants, before fighting against the Liquor Control Board in a court of law for a complete stranger. When asked if I was being paid for my services, I said yes, but said I would have done it for free. The judge did not make a ruling on the case from the bench, but we are anticipating a victory.

I passionately believe the system is flawed for several valid reasons. Many applicants were disqualified, without merit. The Liquor Control Board should take ownership for this and accommodate accordingly.

Colette Thomas is an advisor for Recreational Marijuana Management, which provides consulting services for I-502 retailers on licensing and compliance.

INDOOR TROPICS

Central Washington's #1 Supplier of Growing Equipment

BEST PRICES GUARANTEED!

ALL MAJOR BRANDS OF:

FERTILIZER SOIL LIGHTING HVAC

SERVICES FOR YOUR SUCCESS:

CONSULTING BULK SIZES DELIVERY

GROW WITH THE PROS!

3 LOCATIONS IN CENTRAL WASHINGTON

Cashmere
Open 7 Days a Week!
5930 Sunburst Lane
509-470-7782

Ellensburg
Open Mon–Sat
801 N. Prospect
509-933-4441

Omak
Open Tues–Thurs
18 E. Apple Ave.
509-670-3816

www.IndoorTropics.com

CHECK US OUT ON FACEBOOK

The Stig

Anonymous

Eastern Washington

Pending Tier 3 Producer

Spring is fast approaching. I've heard about several quick-flowering strains like Juicy Fruit, Pineapple Kush and Bubblegum that I want to investigate this year. My goal is to create a wall of beautiful, flowering, outdoor marijuana that is easy to harvest.

To that end, my plan is to plant the same way a farmer who grows corn would: straight rows of plants all roughly the same size for easy harvesting.

I'm also going to investigate the use of power trimmers and any other farm equipment that will reduce my cost of production and at the same time, increase my efficiency. My belief is that the production of marijuana is going to rapidly evolve into a commodity business in which those who are able to do it with the lowest production costs will thrive, and those stuck in the "old ways" will not. The "American way" rewards those who innovate, and punishes those who are stuck in the past.

The Stig currently has an application pending for an outdoor, Tier 3 production license in Eastern Washington. He writes under an assumed name to protect his anonymity.

Brooke Law Group

Michele Brooke

Pasadena, Calif.

Attorney

The American Herbal Products Association (AHPA) Cannabis Committee met March 5 at the Natural Food Expo in Anaheim, California. The APHA is a national trade association in the natural products industry, and the Cannabis Committee promotes and propagates responsible commerce and regulation of marijuana.

One significant contribution the AHPA has made in furtherance of these goals has been to craft comprehensive guidance in the form of sample regulations to regulatory bodies who may not understand the nuances of cultivation, how to run a dispensary, details on laboratory testing, and best practices for the production of cannabis-infused edible products.

Working collaboratively, members of the Cannabis Committee, all of whom are deeply entrenched in the industry, have crafted these regulations to be instituted in whole, or in part, by any government regulatory body. Use of the AHPA proposed regulations are now being considered in about a dozen states. The APHA has offered these regulatory guidelines to any state or regulatory agency free of charge.

At the March meeting, the AHPA Cannabis Committee discussed two important issues. First was the issue of making medical claims or "cure claims" on marijuana product labels or in advertising. Second, we discussed California's Proposition 65 warning requirements.

The issue of making medical claims related to marijuana or marijuana-infused products is one that concerns false advertisement and that certain kinds of claims could open people up to potential lawsuits.

We are all very excited about the health benefits that are being discovered in relation to medical marijuana, particularly with the discovery of CBD; but more research needs to be done before anyone should make absolute medical claims. These kinds of claims are discouraged at this point.

Proposition 65 is the Safe Drinking Water and Toxic Enforcement Act of 1986, a California law passed by voter initiative. The main goals of Proposition 65 are to protect Californians from chemicals known to cause cancer, birth defects or other reproductive harm. In the case of marijuana, the state of California has determined the smoke from burned marijuana causes cancer. Marijuana has been on the list of harmful substances since June 2009. Proposition 65 requires California dispensaries, with a certain number of employees, to post appropriate signage in the dispensary so the patients are given proper advance warning before their exposure to smoke.

Some dispensaries have been targeted by lawyers who want to take advantage of the general ignorance of this law by dispensary owners and managers, and to sue them in order to collect the steep fines that may be sanctioned against the unaware.

If you are not from California, you should check to see if your state has a similar law. If you are from California, you should check with your attorney to ensure compliance with Proposition 65.

Michele Brooke is an attorney in California, who practices civil litigation and civil cannabis law. Her firm can be found at www.brookelawgroup.com.

GROWERS SUPPLY IS YOUR PREFERRED
SOLUTION FOR ALL YOUR **GROWING NEEDS**

Energy-efficient designs. Growing solutions designed for you.
Custom or turnkey hydroponic and aquaponic systems. Grow anywhere.
Convenient one-stop shop for greenhouses, accessories, controls and more.

7-YEAR FINANCING
ZERO DOWN, NO INTEREST & PAYMENTS
- FOR UP TO ONE FULL YEAR -
Some restrictions apply

G8 LED™

GROW GREEN
with G8LED™ Technology
Full Spectrum Grow Lights for Healthy Growth & Maximum Yield

G8-90RR Red
Flower Booster $159

G8-240 Veg / Flower
Coverage 6+ Sq. Feet
110 / 240V - 1.2/0.7Amp
$309

G8-450 Veg / Flower
Coverage 12+ Sq. Feet
110 / 240V - 2.2/1.0Amp
$599

call for catalog 888.771.GROW
www.DormGrow.com
Become a G8LED™ Authorized Store at www.G8LED.com

Marijuana City

Story and photos by Garrett Rudolph

With marijuana increasingly being legalized for recreational use, an ever-evolving list of momentous events are being etched into cannabis history.

The first states to legalize marijuana. The first retail sales. The first licensed producer. The first licensed edible manufacturer. The Pacific Northwest recently witnessed another big first in the cannabis industry — the first municipally-owned marijuana retail store opened its doors to the public March 8.

Located along the southern border of Washington State, The Cannabis Corner is operated by the North Bonneville Public Development Authority, a municipal corporation that was set up specifically to manage the retail operation.

Profits from the store do not feed directly into the city's general fund, but the store's revenue can be used to fund city projects in the form of grants. It could be a much-needed source of revenue for a town that has less than 1,000 residents, no retail sector to speak of and has been teetering on the edge of bankruptcy for years.

Consultant John Spencer, who orchestrated the business model for The Cannabis Corner, described the city of North Bonneville as being "so destitute that we have resorted to selling drugs to stay alive."

The conversation began in the fall of 2013, nearly a year after the passage of Initiative 502, and officially came to fruition on March 7, 2015, when Mayor Don Stevens made the first legal purchase of marijuana in Skamania County history — four grams of various dried flowers for $60.

OPPOSITION

Not everybody is going to be thrilled about the opening of The Cannabis Corner.

There's a definite question about the reach of government authority, and whether or not a municipality should insert itself into private enterprise.

The PDA designation also gives The Cannabis Corner an advantage that no other marijuana retailer in the state can match — exemption from federal income tax. The potentially devastating effects of IRC 280E — a massive concern for nearly everybody in the cannabis industry — have no impact on The Cannabis Corner.

"It's not a level playing field — and I love it," Spencer acknowledged.

Because of a significantly lower tax obligation, The Cannabis Corner can sell products at a lower price, while maintaining higher margins than other stores, Spencer said.

The advantages also extend to the store's four full-time and seven part-time employees, who are eligible for "platinum level" health care benefits, Washington's public employees retirement system (PERS) and other government employee benefits, PDA board president Tim Dudley said.

Dudley said the concept was to hire top-notch employees and avoid turnover by offering decent wages and excellent benefit packages.

Employees of the store work for the PDA, not the city.

Each employee did have to pass a pre-employment drug screening, although a positive test for cannabis would not have disqualified them from employment Spencer said.

"I was quite upset, actually, when the store manager came up totally clear on marijuana," he added.

Hiring Robyn Legun as the store manager was a key piece of the store's infrastructure, Spencer said.

"It was vitally important that we hired a good store manager who knew both retail and marijuana."

>> CONTINUED ON PAGE 34

VUBER

FUN. DISCREET. GUARANTEED.

Wholesale pricing for retailers

Already available in retail stores throughout Washington, including Green-Theory, Cannabis City, New Vansterdam, Uncle Ike's and Rainier Recreational

Check out our full line of vape pens and accessories, including the popular Comet, Atlas and Cosmos

206-582-2899

sales@vubertechnologies

www.vubertechnologies.com

Store employees scramble to make last-minute preparations, while Mayor Don Stevens (below) speaks with a television reporter.

<< CONTINUED FROM PAGE 32

Legun has quite a bit of authority to run the store as needed and make most purchases without needing to get approval from the PDA board, Dudley said.

"We tried to find somebody who had a good retail background, and knew something about the product as well," he said. "We were really looking for somebody had a stronger retail background than somebody who had pot knowledge."

The North Bonneville PDA was one of three lottery winners in Skamania County, but it appears the other two applicants have stopped pursuing their licenses, at least for now, Spencer said.

However, the North Bonneville PDA nearly missed its opportunity to open a store.

Originally, the Washington State Liquor Control Board slotted two retail stores for Skamania County.

When the lottery was held, the PDA's application was initially ruled ineligible. Further investigation revealed that ruling to be incorrect, and the county's allotment was increased to three retail stores.

BUCKING THE SMALL-TOWN TREND

Ultimately, the story of The Cannabis Corner is one of creativity, adaptation and innovation, more than anything else. At a time when most small towns took a small-minded approach to change, North Bonneville embraced the opportunity.

After Washington voters approved I-502, cities and counties all across the state tackled the question of how they would respond. Many imposed outright bans. Others implemented moratoriums to buy more time.

Bolstered by local voters' support of I-502 at nearly 54% (and similar support county-wide), the North Bonneville City Council took a vastly different approach. During a fall 2013 meeting, council mem-

>> CONTINUED ON PAGE 36

greenbits

Point of Sale Designed for Marijuana Retailers

Technology that powers the cannabis industry

Chosen by over 35% of all i502 retailers

Call 877.420.7628

SAVE $500 ON SET UP

www.greenbits.com

COMPLIANCE YOU CAN BANK ON.

Janefour20 is a complete cash management solution for medical and recreational marijuana retailers.

SIMPLE. SAFE. SECURE.

MEET JANE AT THE FOLLOWING EVENTS:

4/20-22 Marijuana Investor Summit | Denver, CO
5/19-21 MJ Business Expo | Chicago, IL
6/17-19 Cannabis World Congress & Business Expo | NY, NY
6/29-7/1 NCIA Business Summit | Denver, CO

JANE FOUR20 sell smarter.

844-JANE420 (844-526-3420)
sales@janefour20.com | www.janefour20.com

John Spencer (left) and PDA board president Tim Dudley (right) speak with local journalist Philip Watness during the store's opening.

<< CONTINUED FROM PAGE 34

ber Charles Pace suggested the city open its own retail store.

The initial reaction was one of silence, as those in attendance pondered the possibility.

"We were taken by surprise because nobody else had considered it," Stevens said. "But it made sense right from the start."

By operating its own marijuana retail store, the city could maintain more control than if it were owned privately — another premise that is sure to make small-government proponents cringe.

"We could sit back and hope for the best or grab the bull by the horns and control our destiny to a certain extent," Stevens said. "That's what we've been able to do."

Stevens has been a vocal supporter of the industry.

He's embraced the concept so much that in addition to being the store's first paying customer, he's ordered custom license plates that read MJ MAYOR.

As soon as the thought of a city-owned retail store came about, the majority of the five-person council saw the positives outweighing the negatives, Stevens said.

Eventually, that brought Spencer — who had left his position as North Bonneville city administer several months earlier — back into the fold.

THE FUTURE

After leaving his position with the city, Spencer and his sister had launched Pulse Consulting, which primarily dealt with the health care industry, initially.

Spencer's background included 15 years of working in government, primarily in the finance sector. The recent years he'd spent trying to keep North Bonneville afloat financially were exhausting, but the opening of The Cannabis Corner presented a unique opportunity.

Spencer was tasked with establishing the PDA and setting up the business plans. He penciled out financial projections that the store could effectively raise the city's revenue by 20-70%.

"In my worst nightmares, this PDA will earn $150,000," during its first year of operation, Spencer said. That's a significant source of income for a town that has an annual operating budget of about $600,000.

"There's definitely that excitement that if this works, it could save the city," Spencer said.

Spencer said he generated his pro forma based on the basic assumption that the store would draw customers only from Skamania County residents and traffic along Highway 14. It's currently the only marijuana retail store for about a 70-mile

>> CONTINUED ON PAGE 38

DON'T CRUSH YOUR BUDS.

CRUSH THE COMPETITION.

KEEP YOUR PRODUCT FRESHER, LONGER.

1-800-227-3769

We have specialized exclusively in vacuum packers / sealers since 1984. We are a complete center with repairs, supplies and sales of both home-style vacuum sealers and commercial industrial vacuum packers.

VACUPACK™

www.vacupack.com

*Our site features 128-bit SSL encryption and we are using one of the top registrars in the world. Rest assured the site is secure.

Premium lighting for premium growers.

We've gotten the green light from green thumbs across the globe. Illumitex's NeoSol™ DS offers far superior performance to HID, induction and flourescent lighting. With 25% more delivered light, 15% faster growth, 10% higher yield and 1 year ROI, your plants and your pockets will thank you. Contact us today to maximize your growth potential.

Illumitex®
Focused Lighting Solutions

512.279.5020 // illumitex.com

HYDROFARM

<< CONTINUED FROM PAGE 36

stretch between the handful of shops in Vancouver and Margie's Pot Shop in Bingen.

Spencer's numbers indicate the store will be successful. But the city has put a lot of faith in him. It didn't seek out another independent analysis of the revenue projections.

Dudley, an accountant by trade, said he tends be conservative by nature, but feels confident about the financial projections.

"We're pretty confident that we will more than exceed the numbers we have set," Dudley said.

During the store's first week of operation, sales averaged about $2,200 a day — well below initial projections — according to a story in The Washington Post.

Although Spencer remains optimistic, he said his professional training leads him to be "terrified."

"Remembering that I'm a finance guy, my role is to continually scream doom and gloom so the elected officials won't try to spend more money than they have," he said.

Spending money it doesn't have is exactly what the city did to open The Cannabis Corner. The city provided a $15,000 loan for the start-up expenses, then borrowed about $235,000 from private, non-equity investors.

The financial structure of the PDA initially created a challenge for the Washington State Liquor Control Board, which had to do background checks on all five board members, all five financiers and all their spouses.

The PDA used some of the loan money to immediately pay back the start-up loan from the city. Now, its focus is to pay off as much of the outstanding debt as fast as humanly possible Spencer said.

Once the initial loan from the city was paid off, most of the PDA's detractors disappeared, Stevens said.

Spencer points out that his one great fear regarding the success of the store is the future of the Oregon market.

"We may well be a success, but if a store opens up across the river five minutes away and their tax burden is one-quarter what ours is, we're dead," Spencer said. "We may well survive, but we'll be surviving off just the local people."

As of now, Spencer is the only person who has created a business model and launched a municipally-owned and operated marijuana retail store. It's a model he plans on shopping around to other cities facing financial dire straits.

Shortly after The Cannabis Corner opened, and significantly reduced Spencer's direct involvement with the PDA, he was making plans to visit Oregon for the Liquor Control Commission's series of listening sessions.

As for North Bonneville, Stevens hopes to see more state-licensed marijuana businesses set up in town. He's hoping some producer/processors may join the fray and bring desperately needed jobs to Skamania County. He said half the county's residents leave the county for work. There is some property that would be perfect for a grow operation, said Stevens. However, it's owned by the local port authority and federal prohibition makes officials leery of leasing to marijuana businesses.

That's just one more reason President Obama needs to reschedule cannabis immediately, Stevens said.

Think outside the bag

On crowded store shelves, your packaging must break through the clutter and make a great first impression with a potential customer. DCG ONE works with our clients to create specialty packaging that protects the integrity of their brand while delivering great product visibility.

CUSTOM PACKAGING MANUFATURING
HIGH QUALITY OFFSET & DIGITAL PRINTING
CAD & GRAPHIC DESIGN
FOIL STAMPING & LABELS
PROMOTIONAL MERCHANDISE

DCG ONE

Linda Kepper • 206.829.2516 • linda.kepper@dcgone.com
DCG ONE • 4700 9th Ave NW, Seattle, WA 98107 • dcgone.com

More info @ www.cch2o.com

PROVEN PRODUCTION SYSTEM

DESIGNED FOR COMMERCIAL GROWERS

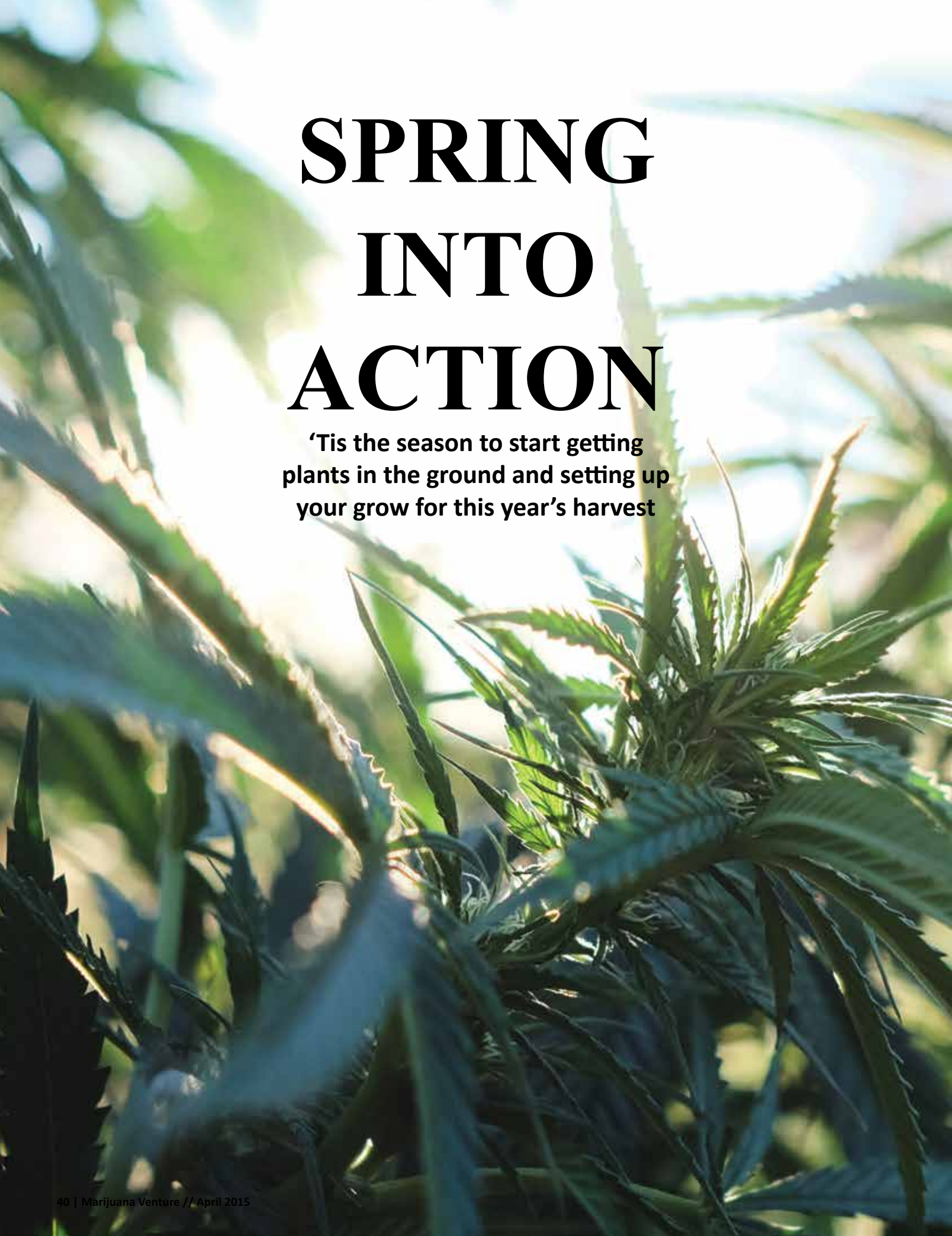
CURRENT CULTURE H2O®

- We're a manufacturer of high performance cultivation systems and premium plant nutrients used at commercial grow facilities throughout North America.
- Our patented **Under Current®** water culture systems are considered by many to be the world's most productive and efficient method for plant cultivation. When used in conjunction with our **Cultured Solutions®** nutrients, Current Culture H2O offers commercial growers a **Proven Production System**.
- Let our industry experts provide you with the tools and techniques necessary to optimize yields and increase your profitability. For more information on facility design, system recommendations or general questions, contact our **CCH2O Commercial Division** at 559-266-4769 ex.3 or commercial@cch2o.com

GREENHOUSE GRADE SINCE 2006

CULTURED SOLUTIONS

CULTIVATING HYDROPONIC EVOLUTION



SPRING INTO ACTION

'Tis the season to start getting plants in the ground and setting up your grow for this year's harvest

Tomorrow's success begins now

Make a point of keeping up with preventive maintainance to ensure a plentiful crop

By Chris Bayley

Even though we're on the precipice of spring, it's easy to imagine this year's crop of plants swaying back and forth by the wind's gentle persuasion. Fortunately, the reality of this dream is just around the corner, but there's plenty of work to do as the growing season begins.

Now is the time to think about preventative measures that are necessary to avoid sub-par crops and crop failures. Preventative measures begin at germination, and must be continued during day-to-day operation and through harvest time. This is especially important for licensed growers still in the design phase who are setting the stage for future success.

This is also the time of the year to talk about maintenance, setting up crop schedules and turning outdoor dirt into black gold by utilizing soil-building programs.

GROWING PAINS

There's a famous Benjamin Franklin quote that says "an ounce of prevention is worth a pound of cure." The theme of prevention has been a regular subject in the pages of this magazine. The reason for such unrelenting repetitiveness is to hammer home how important prevention is for the success of your operation.

No producers will intentionally take steps that will lead to their business' demise, but that's potentially what can happen by overlooking preventative maintenance. As if it weren't already tough enough to get — and keep — a producer's license in Washington State, be prepared to hand over more than 40% of your earnings via taxes. This means margins are already razor-thin. And here's another reality check: Those growing pains are compounded when battling pest and pathogen outbreaks. For the producers who are battling an infectious pest or pathogen, they can figure a revenue loss of at least 5%. This means that between taxes and pest management, producers are watching at least half of their earnings float right out the door, and this doesn't even include operating expenses.

These issues are most relevant to green-

>> CONTINUED ON PAGE 44

groco™ proudly offers

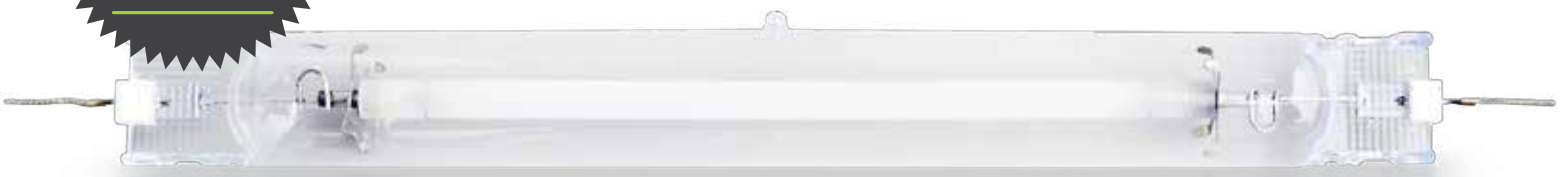
HORTIGRO™

as bright as Ushio

as powerful as Hortilux

HALF THE PRICE!

1 YEAR WARRANTY



Ultra High Output double-ended HPS

We also offer:

Ballasts
HVAC
Hoods
Bulbs
Soil
Nutrients
Consulting

groco

Commercial Marijuana Gardening Equipment and Supplies

PHONE: 425.998.7212 EMAIL: sales@grocosupply.com

www.grocosupply.com

<< CONTINUED FROM PAGE 42

house and indoor growers. Luckily for outdoor growers, the majority of these factors are mitigated through the checks and balances of the outdoor growing environment.

POINTS OF PREVENTION

Here's a breakdown of preventative measures to follow when designing and operating a cannabis production facility.

Facility design: Every facility should be designed first and foremost with prevention in mind. All entry points to the facility need to be viewed as potential portals for pests and pathogens. This includes all the fresh-air intakes, exhaust outtakes, windows, garage doors and walk-through entry doors. Wherever air is coming in and out the facility, it needs to be filtered, and the intake air needs to be UV sterilized.

All vehicle and employee access points need to be built utilizing airlocks that separate the two environments. Airlocks aren't very preventative unless sterilization and pressurization are utilized. Remember, all the natural checks and balances that help the outdoor grower combat pests and pathogens goes right out the window when growing indoors.

With measures put in place to prevent the invasion, other methods like in-room, recirculating, sterilizing filter boxes need to be utilized. Depending on your HVAC system, you may be able to take care of this via the air handling unit. For those of you running closed-loop systems, every room should have independent filtering and sterilizing systems.

Perhaps the most critical application though is in the drying and curing rooms. Plant material is most susceptible to pathogenic attack at this stage, and there's no such thing as redundant prevention here.

Defining facility curtilage: Here is the definition of curtilage via Webster's Dictionary: "A piece of ground (as a yard or courtyard) within the fence surrounding the house."

This term technically and lawfully represents a scenario where a physical barrier has been placed a reasonable distance from the home, making it obvious that the space between the home and the barrier are considered private-use space. Many homeowners have lost self-defense cases based on the fact that they didn't reasonably show the space immediately around their home as private-use space, or rather, a space that clearly defines a reasonable expectation of privacy.

This may not have any direct lawful benefit to a business — cannabis or otherwise — but here's the takeaway from this: If you expect local law enforcement or the state to support you, then protecting the general populace and yourself through a designated curtilage area should go a long way in winning over the most staunch anti-cannabis opponents. Prevent your facility from being an easy target, while simultaneously protecting yourself with the necessary privacy.

Employees and guests: As the manger of a production facility, it will be up to you to have every employee follow the correct protocol when entering and leaving the facility. Every production facility should have an employee handbook that describes its policies and procedures in full, and it should be read and signed by all employees. The biggest concern, no matter who's entering the facility, is whether or not they are carrying a potential threat.

As far as employees go, hopefully they understand the importance of being conscientious when it comes to cleanliness before entering the facility. Just remember, being jumped on by Fido or inadvertently brushing up against outdoor plant material could dramatically increase your odds of becoming a carrier for pests and pathogens.

This same facet applies for all state inspectors, law enforcement, consultants, contractors and guests. It's quite a conundrum as far as state inspectors go. For the sake of efficiency, state inspectors probably try to hit as many production facilities as possible within any particular route. The downside to this, as they weave in and out of facilities, is that they're likely to become a conduit for hitchhiking pests. At the minimum, producers should keep disposable booties on hand so it's convenient for inspectors to slip them on before entering the facility.

For those producers who want to capitalize on tourism, consider viewing portals or designated walk-through rooms because every tour that comes through could be a roll of the dice.

Genetics: For producers who don't already have their genetics and have to outsource them, there are two options — take your chances by purchasing clones or begin from seed. Most experts would advise beginning from seed. There are too many producers who are battling spider mites and powdery mildew in vain. It's difficult to watch producers getting stuck in the constant loop of pest eradication. The unfortunate thing about buying clones from a third party is that it's impossible to know what's flowing through a plant's vascular system, or what might sit invisibly on a leaf's surface. For these reasons, it's worth the time to find high-quality seeds, and scratch that future headache off your list.

Crop scheduling: Consistent crop scheduling is important for both the indoor and outdoor grower. With crop scheduling, it's important to begin by penciling the year out on paper. Having a bird's eye view really allows you to visualize the sequential steps you'll take in order to stay on top of that schedule. Whether you're harvesting one crop a year or a dozen, always start with the harvest date and work backward. Using an eight-week flowering strain, and Aug. 3 as the target harvest date, here's what a basic crop schedule would look like:

April 27	**Clone**	**2 weeks**
May 11	**Plant**	**4 weeks**
June 8	**Florescence Induction**	**8 weeks**
Aug. 3	**Harvest**	

This is a basic outline, and there are limitless iterations of this schedule. Sometimes cloning takes longer than expected. Maybe there are various transplanting stages, or depending on the size of your plants prior to flowering, the growth stage could last from one week to four months. Once the crop schedule is understood, growers have the ability to forecast their harvest dates as far into the future as they want. Doing so provides an itinerary to follow, which, in turn, keeps responsibilities as focused and efficient as possible.

Crop schedules will look considerably different for indoor and outdoor growers. For Indoor growers, harvests can be timed from every day to once a month, while outdoor growers, at least in the Northwest, get to focus on one crop. The exception to this is greenhouse growers who can capitalize on the best of both worlds.

Scheduling possibilities for greenhouse growers are extensive. First, it should be noted that hoop houses and greenhouses are completely different growing systems. Hoop houses are not considered greenhouses, but rather season extenders, because they offer very little environmental control. They're not typically designed to

>> CONTINUED ON PAGE 46

Take the guesswork out of watering!

Individually senses & waters each plant separately
Save time, water, nutrients & costs
Systems from 1 plant to 30,000
Higher yields & quality

Blumats.com
info@blumats.com
303-998-1323

Blumat SYSTEMS

FREE SHIPPING

The Twister T2 Trimmer. Trim More. Faster.

The Twister is the world's fastest leaf trimmer, equipped with the industry's most powerful vacuum along with proprietary blade geometry to deliver the closest cut possible without damaging your product.

The New Twister T4 Trimmer is Here

Trimming sucks. But it doesn't have to. The new Twister T4 transforms the game by using advanced, patent-pending trimming technology to do the work for you. It makes your life easier and your pockets fatter.

And remember: Machines don't need lunch.

TrimBud.com
Trimming Equipment Sales and Rentals. We'll beat any price.

TRY BEFORE YOU BUY

New showroom in Monroe, WA
Visit www.trimbud.com
RENT IT

425-998-7724 | www.trimbud.com

FDA-Approved Conveyor
The biggest thing to happen to trimming since the Twister. The new conveyors will change the way you harvest forever.

TWISTER Premier Dealer

TrimBud.com is owned and operated by NWGS LLC. Authorized Twister dealer.

<< CONTINUED FROM PAGE 44

be used with light deprivation systems, and are more difficult in terms of sealing out pests. View hoop houses as a tool to prevent fall rains and frost from hitting your crops. This means that growing in hoop houses isn't much different than growing outdoors as far as crop scheduling is concerned. On the other hand, producers who use true light-dep greenhouses can flower cannabis year-round, just like indoor growers, while leaving a lighter carbon footprint and a lower monthly electricity bill.

SPRINGTIME MAINTENANCE

Any buildings with filter housings that pass through an exterior wall need to be inspected inside and out. Establish a filter housing maintenance checklist that includes air leaks, torn insulation, UV bulb damage and filters. The same routine goes for all openings in the building's envelope. These openings (windows, doors, air intakes and exhaust ports) need to be examined for possible damage, and repaired or resealed if necessary. Look at the mechanical entry points such as water and electrical outlets.

Always keep a safe distance from power lines and transformers, and if anything seems out of place, call your local utility district or electric company immediately. If you have any outdoor water storage tanks, propane tanks, frost control systems, outdoor irrigation lines, weather stations, communication equipment, surveillance and security systems, etc. — everything needs to be inspected regularly.

If there's any dirty work that needs to be done, this is the time. Perhaps it's expanding the canopy footprint, rebuilding and re-graveling driveways, reseeding your lawn area or the grass strips between planting rows. Any water-related projects like new irrigation lines, upgrading water or sewer needs, or any well work should be done before things heat up and heavy demand sets in.

Greenhouse growers need to follow the same inspection routine on all entry points. Check for structural damage along with making sure the greenhouse covering material is intact. Repair or replace any damaged material. If you have a glass or polycarbonate material that can withstand pressure, don't be afraid to wash it down.

>> CONTINUED ON PAGE 48

NEXTAIR™

Multi-Zone Gas Heat Pump

Marijuana Cultivation with Natural Gas—because Electricity is too expensive

- Low operating cost (high efficiency & use of natural gas).
- Efficiently cools grow lights and plant environments
- Exceptional quality and reliability
- No HVAC related electrical infrastructure upgrades required
- Electric costs reduced by over 80% in summer compared to conventional HVAC units

INTELLI CHOICE ENERGY™

COMFORT AND EFFICIENCY...RESPONSIBLY ENGINEERED

844-261-0600 | www.iceghp.com | info@iceghp.com

<< CONTINUED FROM PAGE 44

Cheaper plastics fall prey to the sun's intense rays fairly quickly. If using plastics, familiarize yourself with the material's strength during the installation process. New plastics are very resilient and quite tough. However, if the plastic is gets to the point where it's brittle, a fracturing process tends to spread very fast, potentially leaving your crops exposed and vulnerable.

SOIL-BUILDING PROGRAMS

In-ground, sun-grown cannabis is as good as it gets, with the only real competition being in-ground, greenhouse-grown cannabis. Either way, what makes it the best is that nature got her way. The plant was cultivated under conditions in which it was blueprinted to perform. This means that the plant was powered by the sun while being sustained via the soil food web (SFW). There are very few places where the soil is registering the perfect pH level, along with balanced bio-available nutrients. The reason for undertaking a soil-building program is to continually improve your planting site's fertility from one season to the next.

Regardless of your growing experience, producers who are planting directly in the ground would benefit from working with a soil scientist, such as the folks at Eco Paradigm out of Eastern Washington. Phillip Small and Richard Freeman are soil scientists who have decades of experience that can knock your learning curve out of the park.

Why do you need soil scientists? Cost savings. It can take several seasons to fully optimize a grow site, and hiring an expert can take the guesswork out the whole program. In turn, you get optimized plant production, as opposed to making a mistake that diminishes crop yield and your bottom line.

The whole program begins by taking soil and water samples, to look at the pH along with nutrient level and balance, and the analyses become the blueprints from which the soil-building program begins. You need to have a complete understanding of chemistry and soil biology in order to interpret the analysis and move forward with the proper amendments. Once the analysis is interpreted, the soil-building program can proceed. Generally the best time to commence the program is immediately after the fall harvest. In doing this, the applied amendments have all winter to get worked over by the microbial life. By spring the nutrients have had time to balance out and become more bio-available.

Beginning in early spring, a second soil analysis can be done to see how all the nutrients and pH have balanced. From this point forward, ongoing seasonal testing, reapplied amendments, compost teas, mulches, nitrogen fixing cover crops, top dressings and plant tissue analysis are but some of the components used within soil building programs. If the soil in your outdoor planting site is low quality, then it's advisable to bring in a commercially-mixed soil designed for cannabis.

Remember, stay focused and let it grow.

Chris Bayley owns and operates a cannabis consulting company called Hortistructure, Inc. He can be contacted at cbayley@hortistructure.net.

Hydrobuilder

complete garden center

Commercial Cultivation Supplies From Seed to Harvest

Hydroponic Systems

Bulk Nutrients & Grow Media

Modern Lighting Solutions

Harvest Equipment

Current Culture H2O | California Lightworks | Gavita Professional Lighting Holland | PowerBox | Twister

Why grow your business with us?

Commercial Discounts

We offer competitive pricing on all major cultivation brands and special volume discounts for large orders.

Fast & Friendly Service

Chat with one of our dedicated account reps to facilitate your purchasing and be confident that every order will be double-checked for accuracy and product compatibility.

Minimal Shipping Time

With our network of over 15 warehouses throughout the United States we are able to ship from the closest location to our customers, cutting down on transit time. Most orders ship within 24 hours and deliver in 2 – 3 days!

Financing and Consulting Available

Expanding your operation can be a daunting task. We are here to help plan out your grow space to fit your budget and business goals.

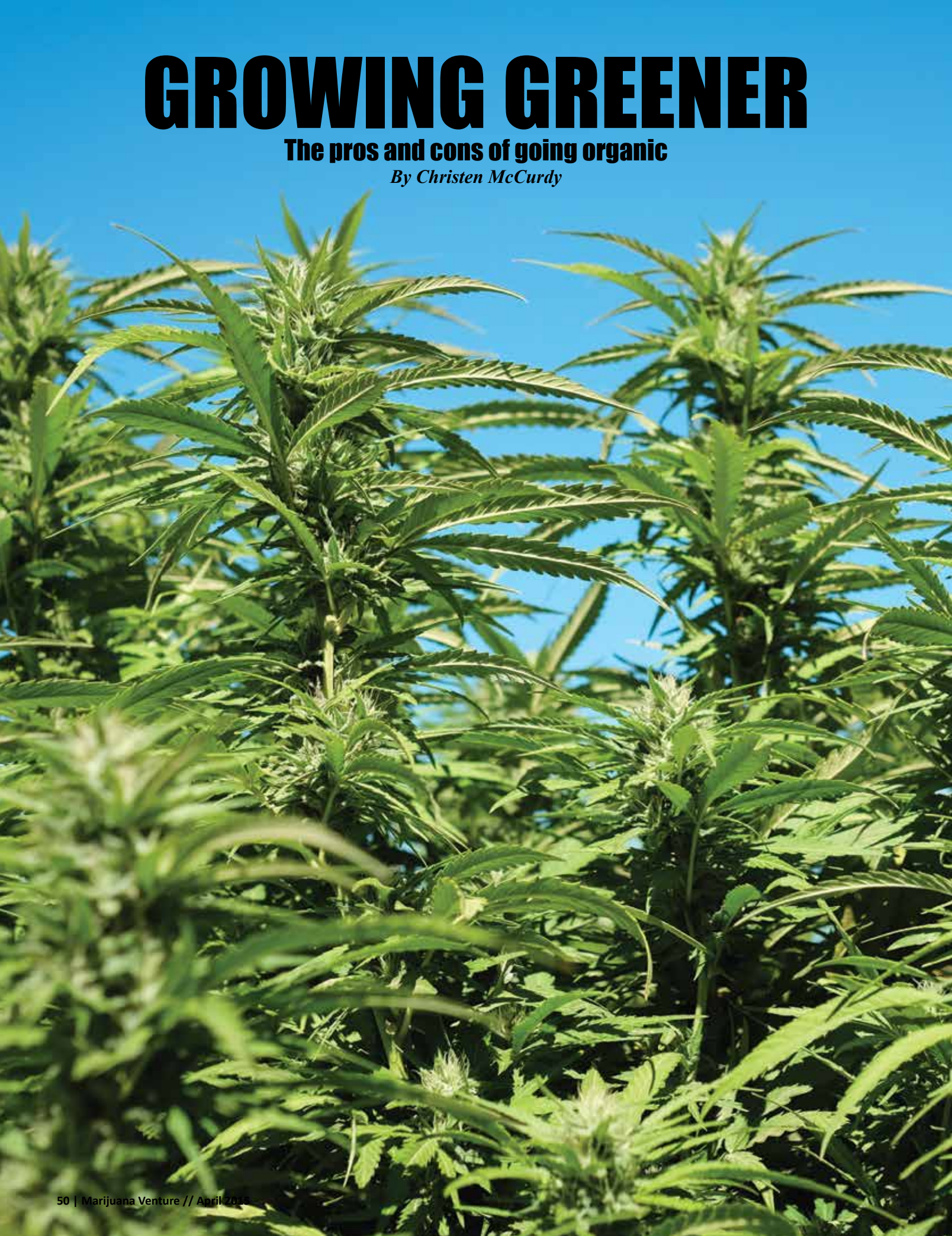
Commercial Discounts • Exclusive Products • Dedicated Account Reps
Fast Shipping and Easy Returns • Commercial Financing Available

pro@hydrobuilder.com | www.hydrobuilder.com | 888-815-9763

GROWING GREENER

The pros and cons of going organic

By Christen McCurdy



SUPPLYING GREENHOUSES & GREENHOUSE SYSTEMS
to WASHINGTON GROWERS for 19 YEARS

Let us Design and Build your Greenhouse.

Structures, Systems, Lights, Black Out & Retention Curtains, Benches, Automatic Controls

800.256.0021
sales@hortservicesinc.com
hortservicesinc.com

GROW MORE
BY WASTING LESS

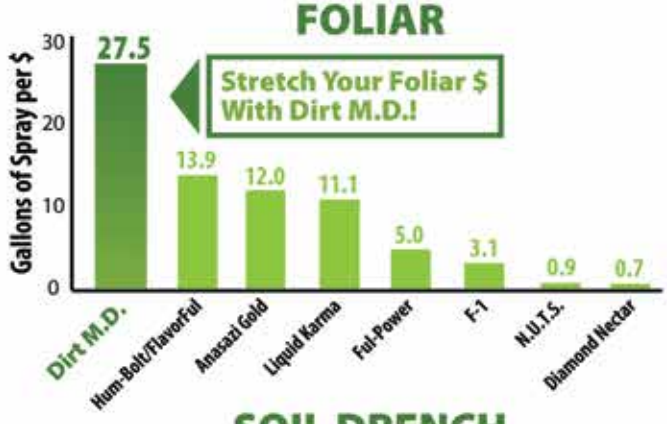
Nutrient waste can be a major profit killer.

How to prevent nutrient waste?

Humic products like Dirt M.D. bind to your high value nutrients to prevent leaching and lockout. Improving nutrient use efficiency is a guaranteed way to **stay in the green**.

Why choose Dirt M.D.?

Dirt M.D.'s highly reactive formulation of **ammonium humates and fulvates** allow growers to get the most drench/spray for every dollar spent.



Information for these figures were generated by collecting the retail prices for bulk packaging and printed application rates for several humic or fulvic acid products.

STOP THE WASTE, CALL THE DOCTOR!

OCEAN AGRO LLC

650-265-6013

DirtMD@oceanagro.com

www.dirtmd.com

Bulk Pricing Available

While a growing number of consumers and growers appreciate the concept of organically-produced cannabis, right now the legal industry occupies a gray area when it comes to verification. Because cannabis remains illegal federally, the United States Department of Agriculture has said it won't certify operations as organic.

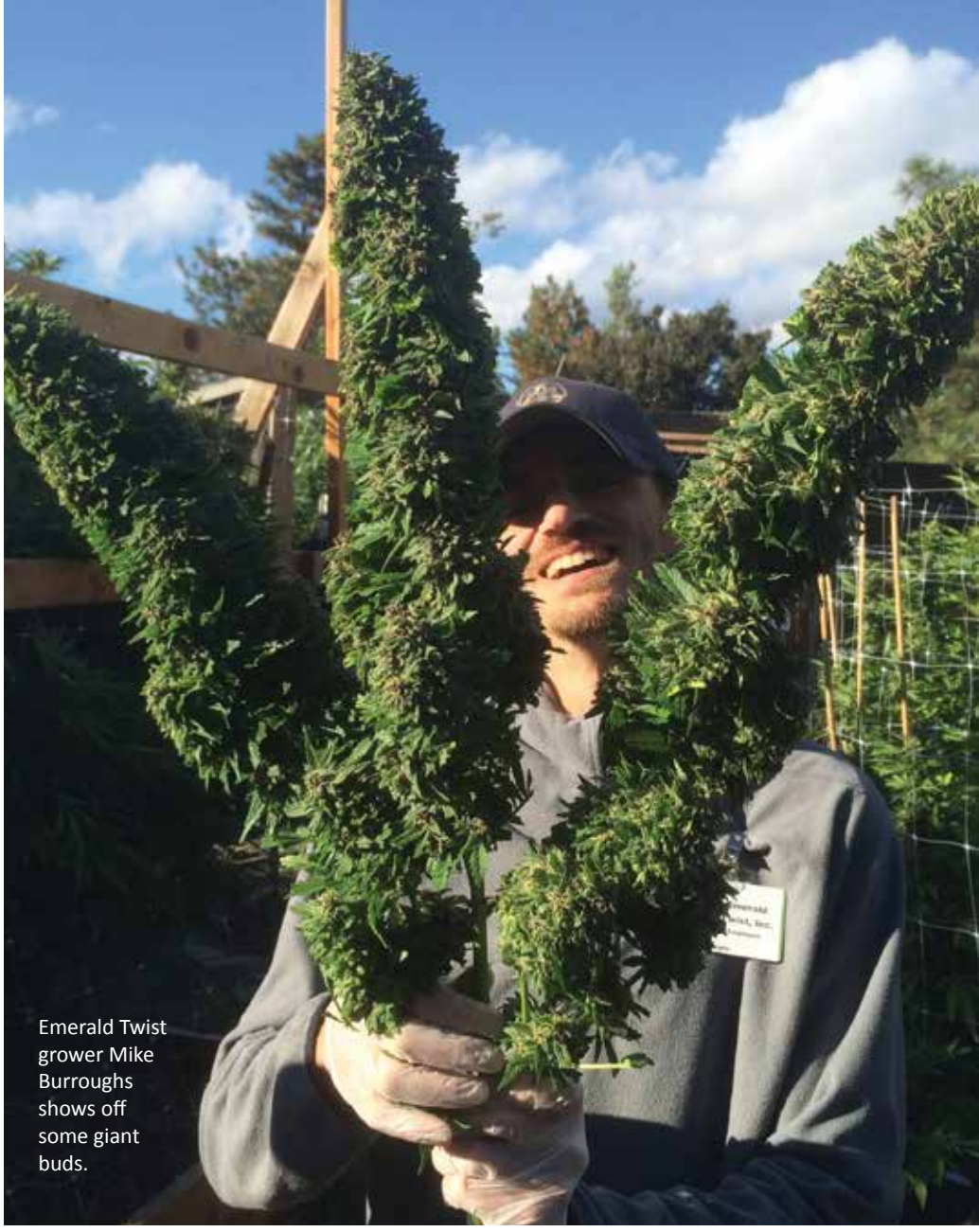
But two private companies — Clean Green Certified, and more recently, Certified Kind — have been created to offer their own inspection services and certify legal growers. Both use principles derived from existing USDA and other organic standards.

David Rice, proprietor of Sun Grown, the first state-licensed grow operation to receive Certified Kind approval in Washington, said he decided to use organic methods out of concern for "the triple bottom line" — that is, out of consideration for the social and environmental impacts, as well as the economic aspect. Rice said growing with organic methods offers growers the potential to increase their market value while also doing right by the environment, and — over time at least — reducing their own overhead.

"The very word sustainable cuts both ways," Rice said. "It's about the long term. You don't have to repurchase new things all the time."

Chris Van Hook, the founder of Clean Green Certified, said in 2003, when he was working as a USDA organic inspector for Globalculture, medical growers in California started approaching him about getting organic certification. Clean Green's certification criteria are based primarily on the USDA organic standard, though some aspects are derived from international organic standards.

He noted that the USDA is not just refusing to certify cannabis, but is ignoring the industry in general. It hasn't been fining producers — who, in the food world, can pay fines of up to $11,000 — for mislabeling a product with "organic" on the label.



Emerald Twist grower Mike Burroughs shows off some giant buds.

"In this unregulated industry, anybody can say they're anything," Van Hook said.

In Washington, more than 60 of the businesses that applied for I-502 licenses used some variation of the word "organic" in their trade name. Van Hook also suggested that even growers who don't want to brand themselves as organic should pay attention to organic standards, as he believes some growers use pesticides that aren't currently legal for food products.

"People have been using sprays that are not legal for cannabis and would absolutely not be using for any other agricultural crop. As it becomes federally legal that process will be done away with," he said. Those growers who are using illegal sprays will have to race to keep up with regulations should the crop be federally legalized and regulated.

Andrew Black, the founder of Certified Kind, which started certifying cannabis operations in 2014, also has a background in certifying organic fruit and vegetable farms. He also works for Oregon Tilth, which has been certifying organic food growers since 1984.

Black has primarily worked with growers on the West Coast and has certified two farms, with another two in process. Van Hook estimates he has certified an average of 70 operations per year in 10 years in California, Oregon and Washington.

Emerald Twist was the first grower, under Washington's Initiative 502, to receive Clean Green Certification. Jerry Lapora, spokesman for Emerald Twist, said the process was relatively straight-forward, since the grow operation already placed a high emphasis on organic methods. But he cautioned growers to research some of the

>> CONTINUED ON PAGE 54

Emerald Twist's Jack Herer.

<< CONTINUED FROM PAGE 53

products they use carefully: some products commonly available in grow stores use words like "organic" and "natural" in their branding, but are actually synthetic. Growers should seek out products with USDA or Organic Materials Review Institute stamps on the label, he said.

Getting one of the existing certifications generally costs anywhere from $1,800 to $2,200. The timing from application to certification can take as little as a week and as much as six to eight weeks, depending on whether there are issues that need to be addressed. In addition to making sure the grow operation uses organic processes, both Clean Green and Certified Kind check work areas to ensure they're clean and sanitary, similar to protocols for a restaurant or food-handling facility, since the product may be ingested.

About 91% of grow operations pass their inspections right away, Van Hook said. The most common problems among those that don't pass are failed soil tests or using mislabeled fertilizers or pesticides.

Certified Kind's criteria also include a social justice component involving fair treatment of workers, including a clean, safe and pesticide-free production environment. Certified Kind growers must also allow workers to engage in collective bargaining.

David Rice in his Sun Grown greenhouse.

"We don't want to recreate a bad system," Black said.

Organic fruits and vegetables fetch high-

>> CONTINUED ON PAGE 56

The Armored Group, LLC

Armored cash in transit (CIT) vehicles on multiple van, truck, and passenger car chassis.

New and used vehicles, including bank styled vehicles, in stock and ready to go.

With three decades of armoring experience, a 144,000 sq. ft. armoring plant in Michigan, and sales offices across the USA, TAG is capable of meeting your asset protection needs.

Don Clarke | Armored Vehicle Specialist | +1-817-455-6026 | don@armoredcars.com

<< CONTINUED FROM PAGE 54

er prices at grocery stores and farmers' markets — but it's hard to say whether that's actually true for cannabis.

Maz Momeni, chief learning officer of the Cannabis Commodities Exchange, which tracks price fluctuations in the cannabis market, didn't have data on how many legal cannabis products brand themselves as organic, but estimated they make up a tiny portion of the marketplace. Similarly, organic foods account for only about 4% of foods sold in the U.S. according to the U.S.D.A., although about 75% of grocery stores carry some organic food items.

Growers themselves differ about whether certification — or the presence of a label that claims the product inside is "organic" — can fetch a higher price or increase profit margins.

Jim Murphy, of TJ's Gardens, a medical grow operation based in Washington, has been using organic methods since he started his operation. TJ's Gardens was certified through Clean Green about a year ago.

"We're making medicine. There's no better way to make medicine than organically," Murphy said. "Why would you bring chemicals into a sick person's world? We're not going to do it."

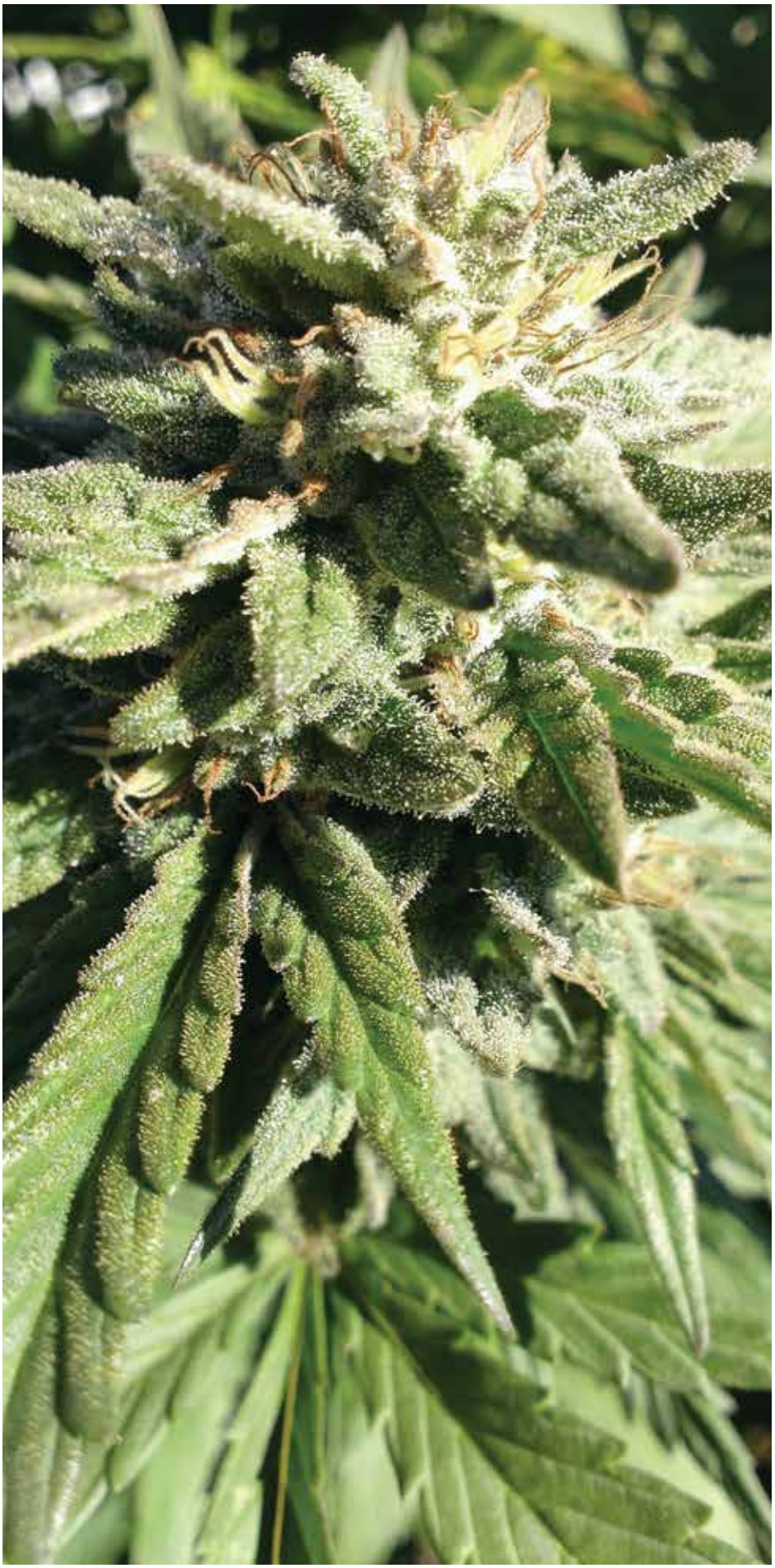
Clark Tippin, executive director of the Organic Cannabis Growers Society, said there's a higher learning curve to using organic gardening methods in general, and that the time, intuition and attention involved aren't easy to package and sell. He also noted that conventional, non-organic methods, such as hydroponics, can be expensive as well. The society features about 280 members, whom Tippin advises on organic growing methods.

"I'm trying to find the easy way to be organic," Tippin said. "I'm an intuitive gardener and that's not necessarily the easy way."

Lapora said growers who want to focus on organic methods should be prepared to spend more for organic fertilizers and pesticides, and expect a higher rate of crop loss, since organic growers use gentler methods to contain insect infestation.

Murphy added that traditional growers who want to shift to organic, or people who want to start grow operations and are interested in organic methods, should be prepared to spend more money up front.

"If money's your only purpose then you should grow with chemicals," Murphy said. "That's without question."



Forever Flowering Greenhouses has been leading the Light Deprivation industry since 2006.

FFG offers greenhouses that meet or exceed NGMA standards from sizes to fit your backyard grow to fully compliant acreage size structures. FFG also offers greenhouse and light deprivation fabrics for designing your own system. Recognized as the Leaders in Light Dep FFG offers consultations to custom design for your individualized needs. Contact us to get your project done right the first time.

888-784-4687 or 530-273-5483
lightdep.com
info@foreverflowering.net
IG-foreverfloweringgreenhouses

FAIRWINDS

FAIR WINDS MFG

THE CHOICE FOR INNOVATION, DEDICATION, QUALITY & SUPPORT

WHY CHOOSE FAIRWINDS:

- Vancouver, WA indoor grow & process facility
- ISO7 clean, closed-environment grow rooms
- HEPA filtration and advanced air purification
- Multiple high-production extraction machines
- 2 Laboratory grade certified MIE kitchens
- Tissue culture & genetics laboratory
- Retailer education, sales & support system
- Extremely competitive, sustainable prices
- High End equipment and paraphernalia at distributor prices for retailers

FAIRWINDS PRODUCTS:

- Custom products for retailer exclusivity
- Liquid and tablet tinctures (natural, berry, citrus, Fireball Blast)
- Extensive selection of premium vape cartridges with superior, proprietary formula
- Infused coffee bean series
- Concentrates & capsules
- CBD & THC products for converging customer base

sales@ FairwindsManufacturing.com • 360.314.2783

Warning: This product has intoxicating effects and may be habit forming. Marijuana can impair concentration, coordination, and judgement. Do not operate a vehicle or machinery under the influence of this drug. There may be health risks associated with consumption of this product. For use only by adults 21 and older. Keep out of the reach of children.

Greenhouses in New Mexico maintained by the U.S. Department of Energy.

Shading your greenhouse

Scorching weather may force growers to shield their plants

By Patrick Wagner

For greenhouse growers in certain regions, there might be times of the year when limiting the temperature and light for sensitive crops could be paramount to success.

Published research by greenhouse expert Erik Runkle, associate professor of horticulture at Michigan State University, outlines different methods of shading a commercial greenhouse.

The potential for year-round growing, even for northern growers in the winter, is one of the major advantages of greenhouses. But that benefit could do more damage at certain times of the year. To prevent plants from overheating or being subjected to overly intense lighting conditions, shading could be the best option and easiest solution to implement. The temperature and lighting requirements of each plant and each region will determine if and when shading might be needed.

The two primary methods of shading a greenhouse are with a curtain or by using a shading compound that can be applied directly to the windows.

Shading compounds, which can be found at most gardening stores, will keep out excess heat because they retain reflective qualities and will reduce the light that enters the greenhouse. The advantage of using a shading compound is immediately apparent to the person holding the checkbook — it's cheap.

The downside, however, to using a compound on your windows is that it never stops working, even when you don't need it. The time required to apply, then remove shading compound can be significant. It often comes in different levels of adhesion for seasonal shading, year-round shading or a permanent change. It also should be mentioned that shading compounds disintegrate over time and the percentage of shade created by the compound slowly decreases.

Although considerably more expensive, retractable shading curtains or black-out cloths can provide a much more controlled environment when trying to regulate how much light reaches your crops. Using retractable curtains on the inside of your greenhouse can easily rectify problems of excess light, and depending on the quality of the material, the investment will last for several years. However, unlike shading compound, the light is reflected outward, but heat is still allowed in. Growers using shading curtains inside their greenhouse may need to pay closer attention to the heat or address that issue with a cooling system.

The shading curtains can also be installed on the outside of the greenhouse, or even going so far as installing a dual curtain system comprised of an open-weave curtain to control light and a solid curtain to control the amount of heat that enters or leaves the greenhouse.

Both shading compounds and retractable curtains will protect your greenhouse from potential harm from overexposure. Retractable curtains may be more expensive but they control light to a better degree and during the winter months they can simply remain holstered until the following spring or summer.

On the other hand, shading compounds can provide an inexpensive solution to excessive sunlight but will need to be manually removed for the low-light winter months.

Your Voice in Olympia

The Washington CannaBusiness Association is a professional organization comprised of **I-502** licensed cannabis producers, processors, and retailers representing Washington's regulated cannabis industry.

Our mission is to advocate for our members with state and local governments, and to promote our industry's commitment to a safe, quality-controlled system for the entire cannabis marketplace.

Together, we can build a vibrant cannabis industry.

Join us. WaCannaBusiness.com

CORE MEMBERS

Agrijuana, Camas
BMF, Raymond
botanicaSEATTLE, Seattle
Cannabis Central, Ellensberg
Clarity Farms, Fife
Db3, Seattle
Ellensburg Apothecary, Ellensberg
Every Bright Green, Seattle
Gabriel, Bellevue
Green America, Kelso
Green Theory, Bellevue
GrowState, Spokane
HempZen Enterprises, Woodinville
JDC NW, Seattle
Lester Farms, Woodinville
Mello Times, Seattle
Monkey Grass Farms, Wenatchee
New Vansterdam, Vancouver
Nine Point Growth Industries, Bremerton
Okanagan Natural Farms, Tonasket
Patriot Meds, Raymond
Peninsula Cannabis, Port Angeles
PolygenixTHC, Seattle
Right Patch WA, Seattle
Rio Nine Eleven, Raymond
Royale Leisure, Seattle
S & K Greengoods, Lakewood
Sea of Green Farms, Seattle
Torch NW, Tacoma
The Werc Shop, Bellevue
World Organics, Seattle
World of Weed, Tacoma
Uncle Ike's, Seattle

ASSOCIATE MEMBERS

EcoGrow Lighting, Camas
Fortune Management Group, Tacoma
Vuber Technologies, Seattle
High Minded Concepts, Federal Way

© 2015 Washington CannaBusiness Association. All rights reserved.

NCIA Executive Director Aaron Smith takes the podium to kick off the third and final day of symposiums.

Time to talk cultivation

Industry leaders meet in Seattle for growers seminar

By Patrick Wagner

The Cultivation Management Symposium brought together a wide range of sectors from the cannabis industry for a whirlwind of group workshops, tours and 23 educational seminars in Seattle on March 16-18.

The event, hosted by the National Cannabis Industry Association, featured both broad talking points like the current direction of cannabis cultivation and integrating technology into growing, to more specific points like strain creation and waste management.

The range of topics varied as much as the speakers presenting them, but many had similar underlying messages for their audiences.

"If you're going to take away anything from this conference, it is to plan," Karl Keich, executive director of Canna Consulting Group, said. "It's imperative in this industry that you have a roadmap to success."

Keich's statements were echoed throughout the seminars, where an overall combination of tech and planning began to form during each of the presentations. The whole of the speakers seemed to agree that although simply being compliant with each state's governing agency will keep the state from shutting your business down, success will be earned by those who coordinate the state requirements to support their business plans.

As Noah Stokes, founder of CannaGuard Security explained during his shared symposium, Securing Your Grow, that the marriage between tech and cultivation isn't enough in most cases. Stokes went far enough to say that technology itself is ineffective — it takes a sensible application of tech for it to become a factor in a business model.

"We like to use technology for operational purposes as well as security," Stokes said. "We believe that if you design your security system appropriately and you educate you staff and your vendors and anybody else that comes in contact with you facility, then the chances that you will really be needing it for security reasons drastically decreases."

Amy Poinsett, co-founder and CEO of MJ Freeway explained that the new technology does not undermine the know-how of experienced cultivators.

"Technology simply can't replace the years of experience and the deep knowledge of a master grower," Poinsett said. "But what it can do is put tools in the hands of a master grower to help clearly and objectively track results and environmental factors overtime and across surfaces."

Grow More. Use Less.

Save significantly with the EcoGrow Power Rail!

A 30,000 square-foot cannabis production facility in Battle Ground is currently growing amazing product, from veg to flower, with more than 3500 EcoGrow Power Rails™. Expending less than 30% of the electricity of traditional HIS/HPS lighting, our client will be making less of an impact on the environment while making more of a profit.

Why EcoGrow?

- ◊ Uses less than 30% of the energy as compared with traditional lighting.
- ◊ Little heat created, saving significantly on HVAC costs.
- ◊ Pucks have more than 50,000 hours of life (nearly 11 years) with almost zero degradation.
- ◊ Three-year warranty on driver, pucks and rail.
- ◊ Up to 70% in rebates and we handle all of the paperwork.
- ◊ Assistance for all your lighting needs, including building design and layout.
- ◊ Produces highest quality product, with THC levels, taste and aroma second to none.

Lighting costs to grow a gram

Traditional HID Lighting: $0.42
EcoGrow Power Rail™: $0.06

Grams per watt

Traditional HID Lighting: 0.42
EcoGrow Power Rail™: 1.56

Savings (Tier 3 facility)

$1.5 million in first three years
$2.5 million in first five years

Financing available, including interest only option for first six months as you harvest your first crop!

We believe our product is the perfect solution for cannabis growing. Please let us partner in your operation.

Contact Bradey Day · 360.350.9138 · bradeyd@ecogrowlighting.com

www.ecogrowlighting.com

EcoGrow™ Lighting Systems · 4600 NW Camas Meadows Drive Suite 210 · Camas WA 98607 · 360.567.1923

Rooftop-mounted chillers made by Surna.

Innovations in grow-room tech

Commercial cannabis producers can benefit from modern cooling and insulation products

By Steven P. Fuhr

Most growers know the basic formula for a winning crop. Start with solid genetics, add a proven feeding, pest management and watering schedule, wrap all it all up in a carefully-controlled environment from beginning to end, and you will consistently produce high-quality product. However, the reality of executing these deceptively simple steps is complex, and on a commercial scale, it can also be extremely expensive to accomplish.

A grower can start with the best strains on earth, feed them top-of-line nutrients, and use only the purest spring water, but if your environmental controls aren't dialed in perfectly, your crop is destined for costly failure. Fortunately, recent innovations in building systems are providing some noteworthy environmental solutions for large-scale grow operations.

Controlling an indoor agricultural environment falls into a few main areas. Insulating your "envelope" prevents heat transfer, but it can also reduce unwanted outdoor pathogens and spikes in moisture levels.

INSULATING YOUR "ENVELOPE" PREVENTS HEAT TRANSFER, BUT IT CAN ALSO REDUCE UNWANTED OUTDOOR PATHOGENS AND SPIKES IN MOISTURE LEVELS.

There are hundreds of great articles on this subject, in addition to volumes upon volumes of International Building Code (IBC), but after two years of obsessively searching for the ultimate materials to set up a cannabis production building, the answer may have been found in the most unlikely of possibilities: Soy.

Insulating a building's envelope is often required by the Washington State Energy Conservation Code and IBC, with some exceptions for agricultural buildings like greenhouses. In the end, most counties will require insulation for occupied commercial structures. This is a little different for every area based on average weather, but for most of people, walls need to be at least R-21 and ceilings R-38. Recent bids to completely cover both ceilings and floors of a new, 5,000-square-foot building to that level were between $25,000 and $50,000, so there's a wide range of options — most of which would be the wrong choice for high-moisture grow rooms. This is where soy and some new innovations come in.

Everybody has heard the stories of people growing in metal buildings that rain inside, and we know that doesn't work, but I will never forget when I first walked in a grow that had fiberglass insulation on the walls and ceiling. The black mold was evident everywhere, and the stained surface was obviously un-washable. However, the real shocker was in the ceilings. As the

>> CONTINUED ON PAGE 64

GROW BETTER. GROW PRO.

(BULK SIZES AVAILABLE)

"Our mission is to develop products that allow our customers to grow the best cannabis in the world... ...anything less is unacceptable."

- ✓ Operates the industry's only R&D facility dedicated to developing cannabis input products; based in Denver, CO.
- ✓ Products are developed and tested specifically on cannabis in our R&D facility.
- ✓ Natural based inputs designed to increase yield, potency and overall quality.

RX GREEN SOLUTIONS
Grow Better. Grow Pro.

www.grow-better.com | info@rxgreensolutions.com | 603.769.3450

<< CONTINUED FROM PAGE 62

fiberglass absorbed moisture, large bags of retained water would form — periodically bursting over the plants and lights below as they got too heavy. Rodents and insects often made spaces to nest in these fibers too. Many other common insulators do the same or worse, like plastic-based, open-cell foam and pure cellulose (wood) fiber. The solution we found is a closed-cell spray foam from BASF that is impervious to moisture, mold, mildew, insects and rodents.

Because the base is sugar and soy beans, it is certified food grade, and it's so strong, it increases tensile strength of walls by up to 200%. Best of all, at R-7 per inch, it's a thin, light structural load on walls. To meet one-hour fire wall code requirements, you can either sheetrock over the top or spray a special one-hour fire retardant paint over the foam.

This spray-on fire retardant is expensive, but if you don't have the load strength in your building to handle the weight of sheetrock, you may find it's much cheaper than structurally retrofitting your whole building.

The final result of this foam is an airtight, moisture-proof envelopment that is perfect for indoor agriculture.

One final note about this foam insulation: There are only a few companies in the Pacific Northwest that have the expensive truck-mounted system required to spray it on, and a couple are gaining a solid reputation for specializing in grow-room jobs. I try not to promote specific companies publicly, so if you want to know the contractor we chose, send me an email and I will forward their contact information. Two of the four Washington contractors I called firmly said they will not do "pot" farms, so I suggest being up front with your intended use when you put this out to bid. Keep in mind I get no compensation for referring anyone to any sources. I make these offers to help others purely so our industry as a whole can thrive.

Once the envelope has been insulated and sealed, it's time to regulate the temperature inside. The goal is to keep your room cool when the lights are on, warm when they aren't, with moisture levels consistently in check.

The key is consistency, with the gold standard being plus or minus 2 degrees on your desired temperature levels at all times, and plus or minus 2% on moisture levels, with no peaks or valleys. Many old-school growers cobbled together venting systems to do this, but that never works in rooms with more than a half dozen lights, or in moist climates. More enlightened growers invest in traditional air conditioners, which work well, but even standard HVAC systems bring their own set of problems.

First and foremost, traditional HVAC is expensive. For our 5,000-square-foot grow, we had HVAC bids as high as $180,000, with the average being around $100,000. Secondly, condensing air and cooling it is extremely inefficient and power hungry, which means it's costly to run. If you think HID lights suck a lot of juice, go take a look at the power use on your HVAC air-chillers. The reason is that with standard HVAC you're either taking air from the outside and making it cooler, or cooling the inside air with a closed-loop system. From a thermodynamic standpoint, water transfers heat five times more efficiently than air. As a result, water-cooling towers are the way many large commercial buildings go; however, standard water-cooled systems often use evaporative water-cooling towers that do not work well in damp climates. Not to mention evaporative water-cooling towers tend to start at $200,000 for a small system, and the cost goes up from there — way up.

MUCH LIKE THE INSULATION COMPANIES, IT'S WORTH MENTIONING THAT OF FOUR DIFFERENT PROCESS-COOLING CONTRACTORS, HALF SAID THEY WOULD NOT DO BUSINESS WITH A CANNABIS GROW.

There is a new system now that one could go so far as to say is designed just for high-humidity, high-temperature environments, but it's not HVAC. It's process cooling. More accurately, it's an old technology with a new application, and it has been engineered specifically to work in high-temperature/high-humidity rooms. The principle of this new application is simple — take the heat out of the room before it heats the air.

This means no air ducts, no filtering air from the outside, no burnt-out mini-split motors covered in resin. If it's done right, not only do you get a system that costs two-thirds what traditional HVAC costs, it's much less expensive to run and maintain. Best of all, you end up with a truly sealed grow room that is less likely to inhale problems or exhale smells.

This system uses air handlers that have water lines running to them with chilled water. The warmed water is sent to chillers outside the building that can either passively and more economically dump the heat when it's below 45 degrees outside, or actively cool it with standard condensers. No evaporative cooling takes place, so it works well in damp or cold climates, and because you are cooling water instead of air, the whole system is five times more efficient to run. This same system can even be linked to hydro-nutrient tanks to cool root water. Cooler roots lets you keep room temps higher while keeping root rot and aphids at bay. Interestingly, the company we chose just developed a new, commercial-grade, water-cooled hood that takes 60% of the heat out at the light, which will be available this spring.

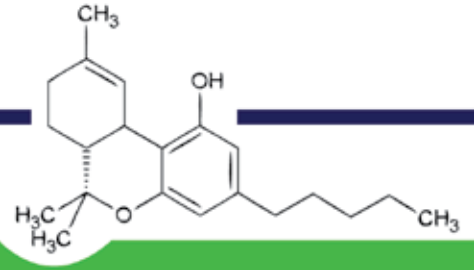
Much like the insulation companies, it's worth mentioning that of four different process-cooling contractors, half said they would not do business with a cannabis grow. As frustrating as that can be, these companies do make the bid process a whole lot easier.

No matter what systems you go with in the end, I can say for certain you want to start by doing your homework on the different products before choosing one.

Then make 100% sure it meets the requirements of your local building department and fire inspector. Finally, hire a contractor that understands the special challenges of our industry, and is willing to work on a cannabis farm.

Steven P. Fuhr is a managing member of AgroPack LLC. He can be contacted with questions at AgroPackWA@gmail.com.

CannaSafe
analytics



Eastern Washington's Premier Testing Lab

- CannaSafe Analytics is the nation's first **ISO/IEC 17025:2005** accredited cannabis testing lab.
- Certified, **I-502 compliant** testing services.
- Serving the Washington, California and Nevada markets for both recreational and medical marijuana.
- All CannaSafe team members are trained academic scientists and have a **combined 50 years** of laboratory experience.
- Good laboratory practices, real science and **accurate, affordable** results.
- **The only lab** in Eastern Washington providing terpene fingerprinting and water activity.
- **Three-day** (72-hour) average turn-around time from drop-off.
- Free **courier service** in Eastern Washington.

sarah@csalabs.com | 509.332.7343 | www.csalabs.com

Bud Bar
DISPLAYS
Commercial Fixtures

budbardisplays.com
916 • 858 • 2000

New!
Aroma Holes with Silicone Plug Seals for Compliance & Security

The Way Cannabis Is Sold©

The most potent bud ever?

Test results suggest Steve Walser's sample of God's Gift is the most potent cannabis ever tested, but the full story is much more complicated

By Garrett Rudolph

I know many of our readers picked up this issue of Marijuana Venture and did a double-take at the cover. Reactions probably included shock, disbelief, curiosity, jealousy, excitement and maybe everything in between.

Before we go any further, allow me to provide some of the back story on "the most potent bud ever" and why, after much internal debate and a lot of phone calls, we decided to publish a story — submitted by the grower — on a cannabis sample that tested at 41.7% THC-A.

In early March, we received an editorial submission from Steve Walser, grower and owner of Buddy Bar Farm, located in Ford, Washington.

We knew he had been researching and working on a story about laboratory testing for quite some time before submitting the story, but the interesting thing was what drove him to do some fairly exhaustive research.

In early October, Walser received some eye-popping test results from Anatek Labs in Spokane. His God's Gift strain, submitted to the lab on Oct. 10, 2014 had been tested at 41.7% THC-A and 36.6% total THC (other cannabinoids measured at less than 0.1%).

Walser fully admits he was skeptical when he heard the result. Anatek lab manager Kathy Sattler also admits to being skeptical, but she told Marijuana Venture that that particular sample was re-extracted and retested multiple times, and the machines were recalibrated to make sure they were correct.

She stands by the result, even in the face of negativity from other testing labs and producers.

"I know that a lot of people are saying that Anatek's getting so much higher (results) than anybody else," Sattler said. "So we've been looking at why we're getting higher."

She said her lab is following proper procedures step by step. Samples are dried for 24 hours at 35 degrees Celsius. Then they get ground to a fine powder by hand with a mortar and pestle, before being extracted with isopropyl alcohol, weighed and tested.

She said her studies have shown that buds that are ground to a fine powder do test higher than those that are not ground to the same level.

"We're not doing anything we're not supposed to do," she said of grinding samples into a fine powder.

In addition to Sattler, we spoke with a variety of other people involved in testing, growing and other facets of the cannabis industry. One of the common responses we heard was that a number that high is impossible.

Aaron Stancik, science director at CannaSafe Analytics called it "an outlandish number."

He said the highest potency his lab has seen is about 28%.

Several people acknowledged that 40% THC buds are possible, but outliers in any testing circumstance should draw red flags.

There are plenty of accusations flying around Washington about producers attempting to game the system by dipping buds in hash oil or rolling them in kief. The same accusations are shot at testing labs, as if they are handing out higher numbers to gain more clients.

But where is the proof?

Sattler said Anatek's cannabis sector only makes up a miniscule portion of the business, which focuses primarily on environmental testing and water quality.

"That portion of the business (cannabis) is less than 1% of our total business. People come to me and say, 'You have an interest to get higher results to get more business.' I could put a sign on my door that says, 'No more cannabis,' today and we would still be in business. I don't care if people get high results."

She said the credibility of providing accurate information is more important the broad scope of Anatek than it is to make a money grab for extra cannabis clients.

In some cases, Anatek has sent out samples to other labs to double-check results. Sometimes the result comes back the same and other times it has come back lower from the other lab, Sattler said.

In the case of Walser's controversial sample, there wasn't enough left to send out to other labs after retesting it several times, Sattler said.

As far as producers "spiking" their own samples, Sattler said she doesn't think that's common. Each sample is thoroughly inspected visually, she said, for any abnormalities or foreign matter. If hash oil were to be added to the samples, she said it would be noticeable when the lab technician attempted to grind it into a fine powder.

We knew that Sattler and Anatek would stand by their test results, and that Walser would stand by his product.

We also knew that every other testing lab and producer would cry foul.

But it's one person's word against another, at least until a better system for testing can be implemented. If nothing else, this story shows the potential for significant discrepancy between one lab and another, and highlights the need for more defined regulations.

When we heard of a flower testing at higher than 40%, we were initially skeptical, and frankly, we remain skeptical.

We didn't decide to publish Steve Walser's story because we were ignorant of the debate it would ignite. We publish his story because we look forward to that debate. Ultimately, we will be a voice that helps move this industry forward, rather than enabling it to stand still.

Garrett Rudolph is the editor of Marijuana Venture. He can be reached by emailing Editor@MarijuanaVenture.com.

Steve Walser (right) and business partner DJ Parker.

Potency in the Era of Mass Testing

Abnormally high test result sends Washington grower on a hunt for more information

By Steve Walser | Photos courtesy Buddy Boy Farm

There is a lot of confusion and a number of misconceptions about what mandated potency testing can tell us about the cannabis being sold in Washington's retail stores. Although I am not a scientist, I am a long-time, large-scale organic farmer who has, over the years, learned how to (mostly) separate fact from fiction when it comes to agricultural testing.

I am a believer in large amounts of data that can shed light on obscure facts, so I hope that sharing a little of what I have discovered during the last few months will help us all understand this new industry better.

My interest in testing arose in early October. While we were harvesting and curing our first large outdoor crop at Buddy Boy Farm, we received a test result showing 41.7% THC-A. I was astounded, and, at first, quite skeptical that this could be true.

We had already seen some test results higher than 30%, but I figured that somehow, somewhere a mistake had been made to give a result that high. After all, even Cannabis Cup winners were *only* showing values of 26-28%.

The desire to understand these high results led me on a three-month investigation and a brought me to a few interesting realizations.

THE LABS

At Buddy Boy Farm we use four different labs for testing. We do this for various reasons including cost, pickup schedule and local convenience. We don't use any of them because we think they give better results than others. In fact, we have found that variance from plant to plant, strain to strain, and even bud to bud seems to overwhelm any difference we see from lab to lab.

I WAS ASTOUNDED, AND, AT FIRST, QUITE SKEPTICAL THAT THIS COULD BE TRUE.

My first stop after digesting the result was Anatek Labs in Spokane, where this particular sample was tested. Anatek is

>> CONTINUED ON PAGE 70

OBC NORTHWEST, INC.

Nursery & Greenhouse Supplies

Everything you need to grow!

- Shade Cloth/ Privacy Screen
- Fans
- Soil Mixes

Greenhouses

Quonset, Semi-Quonset, and Gutter Connected models also available.

	PRICE
30' x 96' Semi-Gable Greenhouse (bows 2 3/8" x 13G 4' on center, 6' side wall)	$10,365.89

Double layer 6 mil film, springlock, endwall frame with 8 mm double wall polycarbonate. Two 4' wide swing doors.

EARTHPOTS® LIVE HEALTHY · PLANT HEALTHY
Manufactured by OBC Northwest Inc. Canby, OR

Call 800-477-4744 or visit obcnw.com

1076 SW Berg Parkway, Canby, Oregon 97013

Licensed & Bonded
- License #127055 (OR)
- OBCNO1 H022CR (WA)

GSB GARVEY SCHUBERT BARER

502
Business Group

18TH FLOOR
1191 SECOND AVENUE
SEATTLE, WA 98101
P. 206.464.3939
www.gsblaw.com

Sophisticated & Strategic Legal Counsel for the Emerging 502 Industry.

Legal Services

Financing
Business
Real Estate
Healthcare
Employment
Regulatory Compliance
Federal/State & Local Tax
Intellectual Property & Technology

Harold E. Snow, Jr. Email: **hsnow@gsblaw.com** Tel: **206.816.1418**
Scott G. Warner Email: **sgwarner@gsblaw.com** Tel: **206.816.1319**

Services Limited to Washington State

<< CONTINUED FROM PAGE 68

somewhat unique among state-certified cannabis testing labs because it is an established environmental testing lab that added cannabis to an already deeply-experienced testing background. Anatek is independently certified by National Environmental Laboratory Accreditation Conference NELAC, which is a nationally-recognized, third-party certifier that tests labs on procedures and accuracy.

Such third-party testing is a requirement of many governmental organizations if one wants to use the results from the lab.

In any case, when I relayed my skepticism about the high test results to lab director Kathy Sattler, she confessed she was also skeptical when the results first came in.

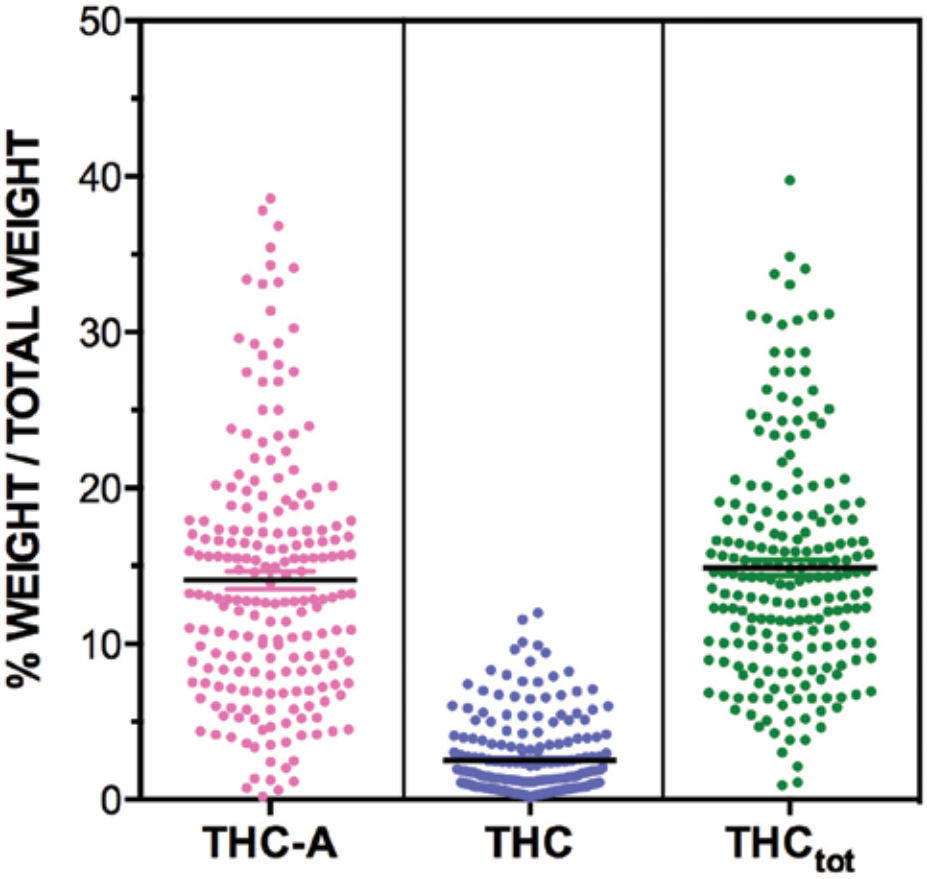
So she had her lab technician retest the sample. When that result proved consistent with the initial finding, she ordered a new calibration standard for her Agilent Technologies 1260 Infinity HPLC machine that Anatek uses. The machine was recalibrated and the sample was retested. The result was the same.

The lab took another extraction from the sample and retested it several more times. All results were consistent with the first measurement. After all this testing I asked her for her confidence level about the result. She said she was 100% confident about the test result.

An interesting side note is that while I was looking into all this I engaged in an online discussion with a lab owner who took the position that any results higher than 30% were the either the result of error or malfeasance on the part of the lab issuing the results. The discussion continued until eight of the 15 samples we sent to his lab that week registered higher than 30%. I guess he must have had a change of heart after that.

DIGGING DEEPER

I didn't doubt Kathy Sattler's sincerity or methodology, but I still thought there had to be a mistake somewhere. I didn't believe such high results could be produced by a cannabis plant no matter how well grown. I looked for an expert to talk to. To that end, I found Dr. Jonathan Page, an adjunct professor of botany at the University of British Columbia. He is the scientist who led the first team in the world to sequence the cannabis genome.



A chart from "Analysis of Cannabis Seizures in NSW, Australia: Cannabis Potency and Cannabinoid Profile," which was published on the scientific journal PLOS One, showing the plot of tests for THC-A values referenced in this story.

I thought, "Here is a world-renowned expert who might be able to explain this seemingly anomalous result."

Dr. Page patiently heard me out as I explained my journey to that point, with the retesting, recalibration, re-extraction and the final, consistently high test result Anatek had found. After I finished, he drew a deep breath and proceeded to explain that if I had brought my result to him three or four years ago he would have agreed that something was amiss. At that point, he too had believed that 27-28% was the maximum potential for tested THC in cannabis. After all, up to that time that was all anybody had seen. He then told me about a study out of New South Wales, Australia that was funded by the Australian government and had been published several years ago in the well-regarded, peer-reviewed, scientific journal PLOS ONE. This study changed his mind about the potential for the cannabis plant to produce high THC levels. The study was based on 218 samples seized by New South Wales police. It found a wide distribution of THC levels with the high being a tested THC-A level of 39.8%.

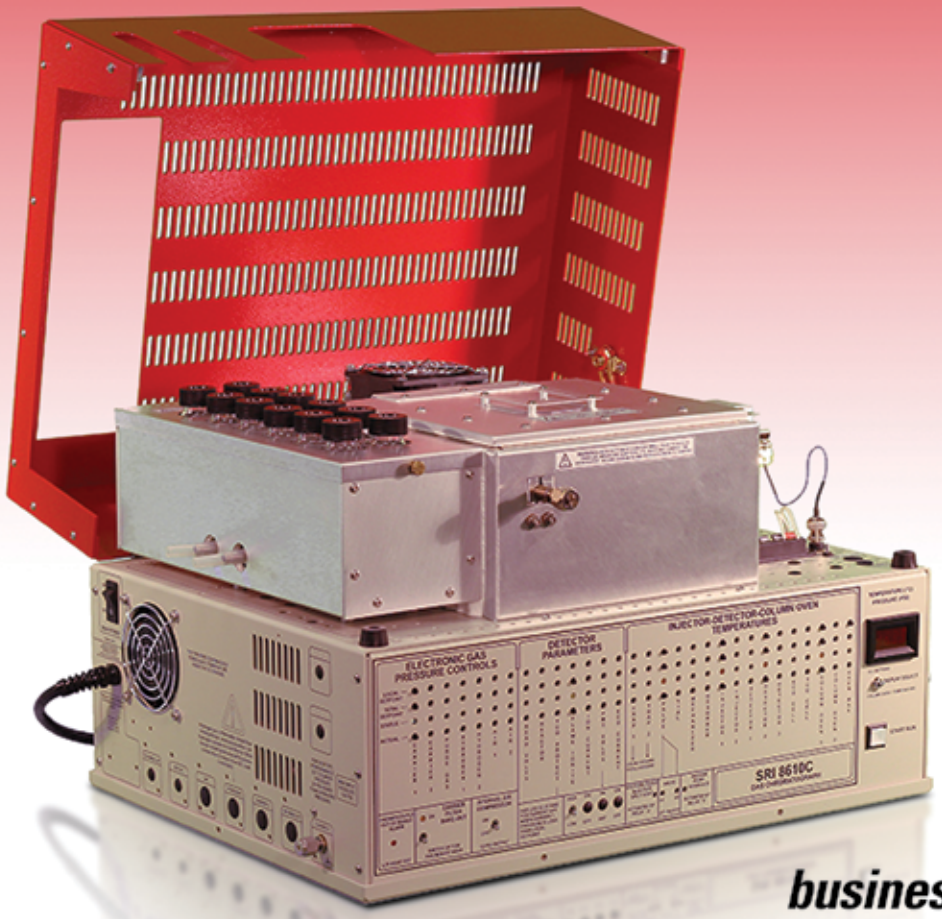
THIS STUDY CHANGED HIS MIND ABOUT THE POTENTIAL FOR THE CANNABIS PLANT TO PRODUCE HIGH THC LEVELS.

Dr. Page had met the scientists involved personally and felt their methodology and data were rigorous. Based on this research, he now believes that, although rare, the cannabis plant is capable of the levels we are seeing. He no longer found it implausible to believe such results and given the retesting and recalibration protocols fol-

>> CONTINUED ON PAGE 72

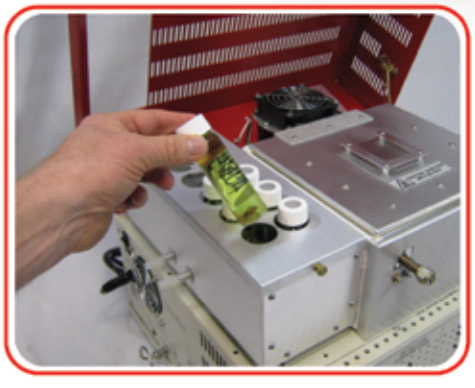
Test your own product for THC and CBD content!

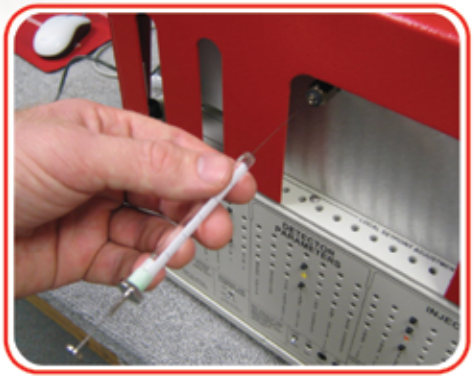
The SRI gas chromatograph is the same type of equipment used by the DEA and most testing labs to test marijuana samples for THC and CBD, as well as other cannabinoids, terpenes, residual solvents and more.



- Cost of a professional machine is around $12,000
- Test your own product to verify lab results.
- Costs less than a dollar to do the test and takes as little as 30 minutes.
- Simple enough that most people can operate one with only a few hours of training.
- Can be used indoor or outdoor. Simple to set-up and operate.

If you're serious about the marijuana business, having your own gas chromatograph testing equipment is a must!





Call: 310-214-5092
Email: sales@srigc.com

SRI

SRI Instruments
20720 Earl St. - Torrance CA, 90503

<< CONTINUED FROM PAGE 70

lowed by Anatek, he found no reason to doubt the result.

Page 70 features a chart I have reproduced showing THC-A values found in this study that I think sheds valuable light on this still developing story.

I also filed a Freedom of Information Act request with the Washington State Liquor Control Board and subsequently received a database of all I-502 test results through mid-December 2014. Upon analysis of the data and information from both Washington and Australia, I found the following:

- Total number of flower tests in the Australian sample: 218.
- Average THC-A in Australia flower: 15.02%.
- Mean of New South Wales tests: 14.7%.
- Total number of flower tests in Washington: 5991.
- Average THC-A of all Washington flower tests: 16.89%.
- Mean of Washington tests: 17%.
- Total number of flower tests at Buddy Boy Farm: 200.

>> CONTINUED ON PAGE 74

New! I-502 Compliant Policies at Lower Rates

Premier Dispensary Insurance

A Division of Premier Southwest Insurance Group

America's Marijuana Business Insurance Experts

1-855-507-2622

www.PremierDispensaryInsurance.com

TRUST YOUR INVESTMENT TO THE INDUSTRY EXPERTS.

North Coast Electric Indoor AgriBusiness provides turnkey solutions to maximize your volume and profitability.

· HID Lights · Lighting Design Assistance
· Climate Control · LED Lights · CO2 Supplementation
· Fluorescent Lights · Electrical · Electrical Code Compliance

A Full Line Electrical Distributor ... Family Owned & Operated Since 1913

NORTH COAST ELECTRIC COMPANY

For more information, Contact:
Cobey Woodall
Indoor Agri-Business Specialist
206-305-0253 | cwoodall@ncelec.com

www.northcoastelectric.com

LightingScience

Lighting Scientifically Created for Your Plants

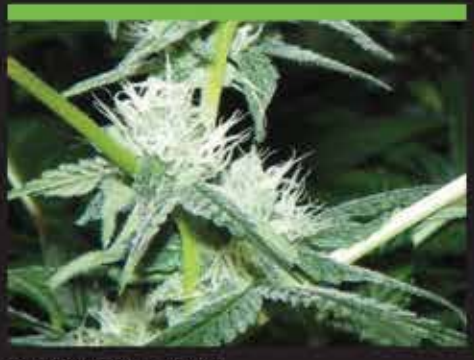
Lighting Science Group's VividGro LED grow fixture was designed by a NASA photobiologist and top lighting engineers. It specifically provides cannabis the lighting it needs for maximum yield.

- Even PAR across the canopy
- Color spectrum tuned for cannabis growth
- 40% energy savings
- Qualifies for utility rebates (where applicable)

VividGro has been tested by universities and experienced cannabis growers. Every test showed higher yield and comparable THC and CBD levels.*

Financing options available

DENVER, CO
- 24% avg increase in dry bud yield while using 47% less electricity
- Increased yield resulted in $54,681 additional revenue
- 1.76 gpw



SPOKANE, WA
- 27% increase in finished product yield, 47% less energy consumed, 48% increase in conversion efficiency
- 1.70 gpw

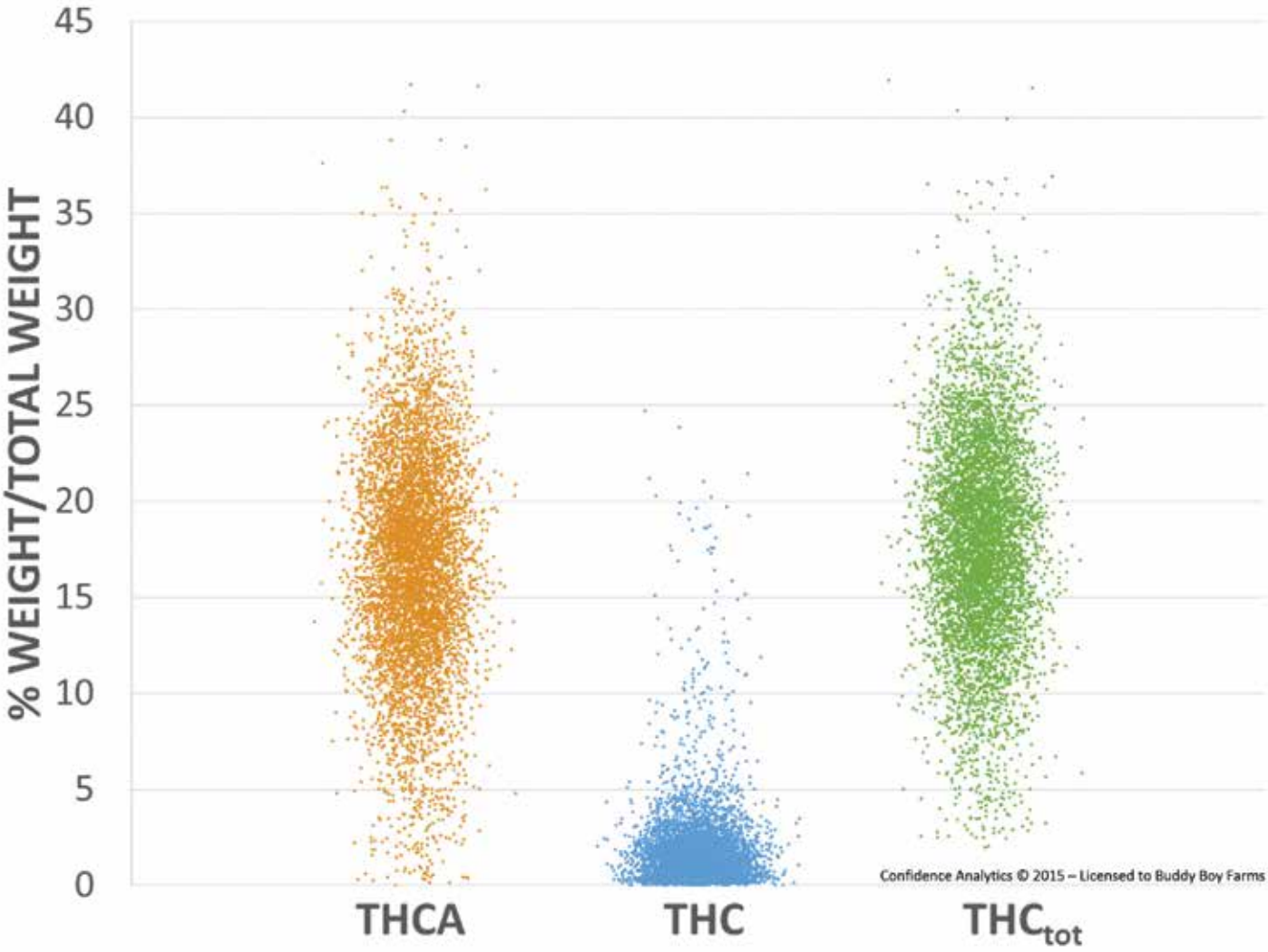
DENVER, CO
- 13% increase in finished product yield, 40% less energy consumed, and 58% increase in conversion efficiency

FOREVER GREEN has years of experience assessing businesses' electrical consumption and creating energy-efficient lighting solutions specific to our clients' needs. Please contact us for your custom ROI analysis on lighting up your grow, and for detailed specifications on the light fixtures.

*For more detailed case studies please visit www.forevergreenindoors.com

forever green indoors
horticultural technology solutions

www.forevergreenindoors.com
800-630-7345 | lighting@forevergreenindoors.com



This chart shows data from all the test results from state-licensed producers in Washington through about December 2014. The information was based on data that was acquired through a Freedom of Information Act request. Steve Walser's calculation shows the Washington State mean to be exactly 17% — about 2.3 percentage points higher than that of the samples from New South Wales, Australia. Walser's test result that showed his God's Gift strain to measure out at 41.7% THC-A was 2 points higher than the highest test from the Australian study published on PLOS One.

<< CONTINUED FROM PAGE 72

• Average THC-A of all Buddy Boy Farm flower: 22.71%.

• Mean of Buddy Boy Farm tests 22.3%.

Due to the way the results are reported I have no way to separate indoor from outdoor results in the state data. However, in our case, as well as in the case of several other large growers who graciously shared their data, I found Eastern Washington outdoor grows to outperform indoor operations in THC-A concentrations, at least for this past year. This was an extraordinary growing year in Washington and the results are limited, but it should put to rest the misconception that indoor grown cannabis is higher in THC than well-grown outdoor. Time will tell, but the opposite may prove to be true.

MOVING FORWARD

There have been reports of high-THC bud being purchased and retested, sometimes yielding lower results. Of course, no one talks about it if a sample yields the same or a higher result.

This has caused people to doubt the original test results. I have asked a number of people to produce such retests, but so far, no one has been able or willing to do so. What I have been able to do is analyze our own test results by strain and plant and I have found amazing variability even under exactly the same growing condition.

For example, we grew more than 400 plants of the God's Gift strain outdoors this year. They all had the same cultural techniques with no significant difference in fertility, watering, training, genetics or harvest date. Even with all these similarities, we saw large variance in the 63 test results we received from this strain with THC-A levels ranging from 13.4% to 41.7% with an average value across all tests of 21.98%.

We had only seven samples less than 18%, while 17 tested at higher than 25% THC-A.

We can see from this that even under very similar conditions the amount of variability of some strains is quite great, which leads one to conclude that it would not be at all unusual for two random samples taken from the same five-pound lot to test very differently.

Thus my conclusion is that the utility

>> CONTINUED ON PAGE 76

Let us build the garden of your dreams.

HORTISTRUCTURE, INC.

CONSULTING – DESIGN – BUILD

SERVING ALL LEGAL CANNABIS STATES

- Build proprietary strains via breeding
- Strain selection and procurement
- Representing retailers in product selection
- Access to top HVAC, electrical and security contractors

509.710.2820 • cbayley@hortistructure.net

Chris Bayley, from Hortistructure, Inc., is a contributing writer for Marijuana Venture.

ELEMENTAL GARDENER

PRODUCTION AND PROCESSING SOLUTIONS
CENTER LOCATED IN TONASKET, WA

- Water and soil testing
- Packaging and scales
- Specializing in organic growing methods

509.486.2300 • Craig@growingelemental.com

Oregon is the future of CANNABIS

The Hughes Companies – Industry Knowledge and Legal Expertise

HUGHESCOMPANIES

CANNABIS LAW EXPERT

CALL TODAY

(888) 878-9108

Contact us to obtain your **FREE** assessment
from an Oregon lawyer

www.TheHughesCompanies.com

Contact@TheHughesCompanies.com

<< CONTINUED FROM PAGE 74

of testing another random sample from a lot to confirm the original test result is virtually nil. At the same time, it doesn't mean that testing is of no use. My personal belief is that if every bud from a five-pound lot were tested separately, we would likely get hundreds of different results and perhaps with a wide variance.

It is likely that they would tend to cluster around a mean just as we see in the scatter plots on Page 74. If we are really interested in giving the end user the most useful information, one idea would be to determine an average of all tests for a particular strain, or for the entire grow, then use that number for all retail cannabis sold by that grower during the year.

The average could be updated each month or season as new results were averaged into the old and a new grower average was determined. While no one bud or package might conform to the average, it would give the customer a better view of the likely strength of the product they were actually going to use. In our grow, I have found that some strains seem to exhibit less variability. Some showed

>> CONTINUED ON PAGE 78

LABEL YOUR PRODUCT
Compliant • Fast • Distinctive
• We Know Your Requirements
• Fast!!! — Small & Large Quantities
• Complete Solutions — Laser/Inkjet, Full Color, Rolls & more...
• Instant Online Quote & Order
www.MaverickLabel.Com/mv2
mj@MaverickLabel.Com
800-537-8816
MAVERICK Label.Com

WANTED

WHOLESALE I-502 CONCENTRATES

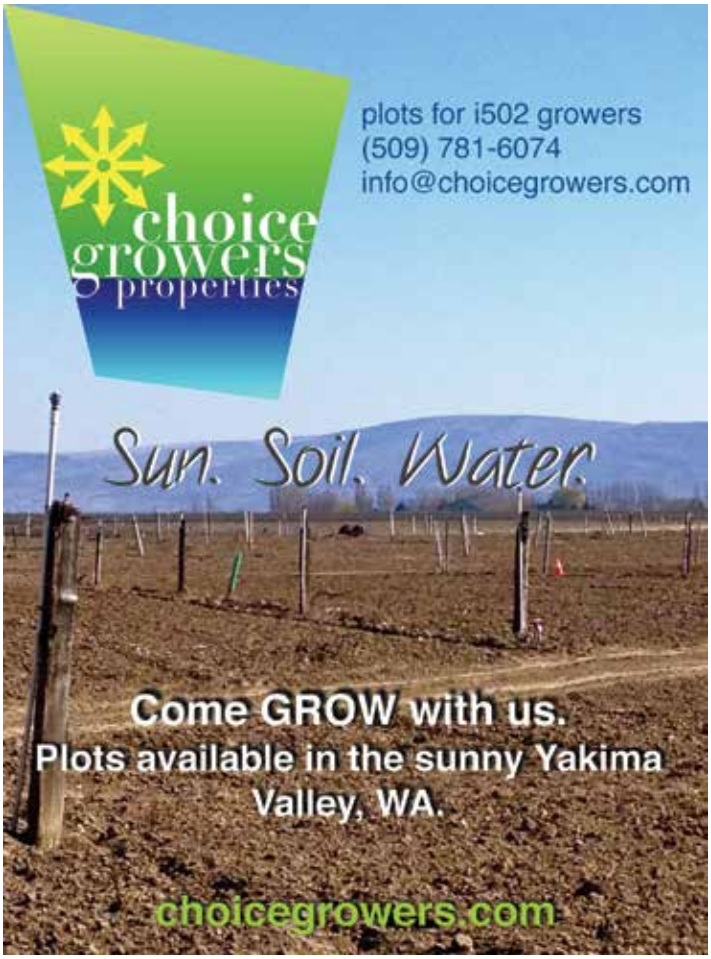
Licensed I-502 Processor seeking wholesale concentrates for infused products.

CO2 is best, Solvent or ethanol extracts also fine.

Regular purchases, 100-gram minimums. Best prices paid.

Also seeking high-CBD plant material.

Email:
teloshydrogardens@gmail.com



<< CONTINUED FROM PAGE 76

a THC-A variance of only half, or less, than that of our God's Gift strain over many samples. Other strains may exhibit less variability, but we will need a larger number of results to say this with any confidence. One thing a high test result may show is what capability the particular strain has of producing THC-A. A higher test would confirm that at least some of that lot should have a powerful effect.

My last question was "Why haven't we seen such high results before with all the years of growing cannabis?"

If one thinks about the level of testing being required by Washington State and the high amount of variability we are seeing in the test results, I believe the very high results being seen in Washington are a function of two things.

No one has ever tested on the scale Washington requires. There have now been more than 6,000 tests performed so far in Washington State — an unprecedented number in scope and granularity. Testing in Washington State certainly exceeds that done in any other state, giving us a level of data not seen before. It would be expected that with such a high degree of testing, a wider range of results would be seen.

An aerial view of the outdoor portion of Buddy Boy Farm, located in Ford, Washington.

The second factor is that this is the first time growers have been able to be completely open about their operations. No longer are outdoor grows forced to operate in marginal areas. We can now grow in the valleys rather than hiding in the hills.

We can provide all the care this amazing plant can use and I believe the conjunction of much better growing conditions and mass testing are opening up our ability to understand the astounding potential of the cannabis plant and how well suited it is to our state.

Growing conditions here are almost perfect for many crops and Washington State currently holds world records in quality and yield for apples, potatoes, hops and wheat, along with several additional berry and fruit crop record holders. Given what we have seen so far, perhaps we can now add cannabis to the list of world records.

The one thing I do know for sure is that Cannabis is a marvelous plant to grow and that over the next number of years, she has many secrets yet to reveal. It's an amazing time to be a grower so I want to thank everybody who voted in favor of I-502 for giving us this opportunity.

Steve Walser is the owner and head grower of Buddy Boy Farm, a state-licensed producer/processor in Eastern Washington.

We will not be undersold

502 ENTERPRISE

for all your growing needs

Your best source for grow & processing equipment at wholesale prices!

Lighting & Ballast	• **All major brands available including:** Sun System, Gavita, Hortilux, SolisTek, Lumatek and Galaxy.
Soil & Nutrients	• **High quality nutrient lines including:** Botanicare, Foxfarm, General Hydoponics, Cutting Edge, Raw, Advanced Nutrients & more. • **Largest soil selections including:** organic soils and pest and disease solutions.
Equipment	• **Commerical trimmers:** Zoom Double Barrel, Twister, Centurion & more. • **Extraction & processing equipment:** CO2 and Butane extraction equipment • **Grow room control & Nutrient delivery systems:** Growtronix and Iponic controllers • **CO2 supplementation:** Titan controls Water, Air filtration & purification
Clones and Seeds	• We have 502 compliant partnerships with elite genetic companies that offer the most sought after strains in the market place.
Facility Security	• Safes, Video surveillance

I-502 commercial grower discounts

Design • Consulting • Cultivation • Processing
Retail and Business expansion support.

360-356-6649 • sales@502-enterprise.com • 502-Enterprise.com

Anti-cannabis activists allege RICO violations

Will Colorado-based recreational stores prevail in lawsuit?

By Michele Brooke

On Feb. 19, Phillis and Michael Reilly and Safe Streets Alliance filed two lawsuits in federal court. The first lawsuit was primarily against recreational marijuana businesses in Colorado, as well as the people who allowed the businesses to exist in the state; the second lawsuit was against a hotel called New Vision Hotels Two, which apparently runs a hotel tailoring services to recreational marijuana tourists. Recreational marijuana sales were targeted, but not the medical marijuana businesses, because medical marijuana laws do not conflict with federal law where there is an exception for medical relief under state laws.

The alleged legal violations are that since marijuana is a Schedule I drug under the Controlled Substances Act of 1970, and since federal law trumps state laws, the recreational marijuana businesses are illegal as a matter of law. The other alleged violation relates to a crime under the Racketeer Influenced and Criminal Organizations Act (commonly known as RICO).

Traditionally, racketeering crimes involve white collar crime or crimes by notorious gangsters or members of organized crime. Racketeering is usually associated with illegal business activity such as illicit gambling rings, loan sharking or transportation of stolen goods. In the day, gangsters who profited from alcohol prohibition by boot-legging would have been guilty of racketeering activity.

The RICO criminal statute (Title 18 U.S.C.A. §1961) describes the extensive crimes included in the full definition of racketeering, but starts by defining racketeering as "any act or threat involving murder, kidnapping, gambling, arson, robbery, bribery, extortion, dealing in obscene matter, or dealing in a controlled substance or listed chemical (as defined in section 102 of the Controlled Substances Act), which is chargeable under State law…"

The main complaint of the plaintiff in this case is primarily that the defendants are engaged in illegal drug trade in violation of the Controlled Substances Act.

In addition, the complaints include all the same unsubstantiated rhetoric we have come to expect from those who object to cannabis use: devaluation of property values, alleged nuisance claims, crime rates, the smell, marijuana shop owners being bad neighbors, etc.

It is going to be a rough ride for the defendants named in this lawsuit. It is very serious. The potential liability, potential treble (triple) damages, awarding of attorney fees and/or loss of business could be devastating. But the plaintiffs will have to prove the elements of each alleged offense.

Here, I have doubts any jury will find these good people involved in organized crime or money laundering as it is traditionally known. This is going to be one of those uphill battles we face as a nation when the law and the trends of society are in deep conflict. We are seeing similar conflict, for example, right now with immigration laws.

Do we have a large number of illegal immigrants in our country who inadvertently or intentionally stayed long enough to become engrained in our societies (and becoming our friends and neighbors)? Are they in violation of federal laws? Yes. Should we deport them all?

Issues like these make us scratch our heads and wonder why timely progress in the federal government is such a rarity.

The fact is that the federal government has permitted a violation of federal laws in both instances. The federal government has even made accommodations, such as the "love letter" of Valentine's Day 2014, permitting banks to work with cannabis businesses, or the defunding of the DEA late last year, allowing four states to enact recreational laws. The federal government is aware that the Controlled Substances Act needs to be changed to reschedule marijuana, or remove it from the act altogether.

I expect to see many law firms and interested groups filing friend-of-the-court briefs if this matter is appealed at some point — which seems likely. Friend-of-the-court briefs (also known by their fancy legal term, amici curiae) are where someone, usually a group that is interested in the outcome of the case, but is not a plaintiff or defendant, offers information or a legal opinion that is relevant, but has not been requested by any of the parties to assist the court. These briefs attempt to ensure that the broad legal effects of a court decision will not depend solely on the parties directly involved in the case. For example, the NORML lawyers might put together a friend-of-the-court brief to assist the court to see their legal reasoning on an issue.

It may get all the way to the Supreme Court, which could be a good thing. There may be enough of a push to prevail there. That could take years. However, in the meantime, a lot of money is being generated in anticipation of recreational marijuana, not only in Colorado, but all over the United States. Businesses and serious entrepreneurs are positioning themselves to grab their share of the pie, and this case will not get in their way.

I do not anticipate the momentum will stop because of this case. Some might pull back, but I expect they will be the exception, as millions of Americans are interested in the continued success of the marijuana industry.

In the meantime, whatever we can do to support our comrades in Colorado, we should do it. Will they prevail? I am cautiously optimistic.

Michele Brooke is an attorney in California who practices civil litigation and civil cannabis law (www.brookelawgroup). She is a member of Americans For Safe Access, NORML and the American Herbal Products Association, Cannabis Committee.

ANCHORAGE · TACOMA · PORTLAND

NW CANNABIS CLASSIC

2015 INAUGURAL EVENT

PRESENTED BY ALASKA HYDRO GARDENS

ANCHORAGE, ALASKA

MAY 15-17

TRADE FAIR, COMPETITION & EDUCATIONAL EVENT

- VENDORS
- VAPOR LOUNGE
- MUSIC
- CLASSES
- AWARDS
- DEMOS

ALASKA'S FIRST OF ITS KIND

YOU GOTTA BE THERE!

(907) 331-0506

WWW.NWCANNABISCLASSIC.COM

VENDOR & SPONSOR OPPORTUNITIES AVAILABLE

VENDOR BOOTHS STARTING AT $1500 | SPONSORSHIPS STARTING AT $5,000

Presented by AK HYDRO GARDENS

ALASKA CANNABIS INSTITUTE

Leafly

ANCHORAGE PRESS

MARIJUANA VENTURE

ALASKA

Determining independent contractors from employees

When do you need to file a Form 1099 for taxes?

By Andrew C. DeWeese & Calvin E. Eib

Whenever your business contracts with another business or individual, it's worth considering how the IRS views the arrangement and your reporting requirements associated with making payments to that business or individual.

The IRS considers an independent contractor to be self-employed and subject to self-employment taxes, whereas an employee is subject to withholding and reporting for income taxes, Social Security and Medicare. Thus, even though you may not have an employer-employee relationship with your favorite cannabis farmer, you may still have an IRS reporting obligation for payments you make to that business.

INDEPENDENT CONTRACTORS

Individuals who are in an independent trade, business or profession in which they offer their services to the general public are generally independent contractors. If your dispensary business hires or contracts with a cannabis farmer to grow and provide product, then you need determine specifically the nature of that business-to-business relationship for federal tax reporting purposes.

An individual is an independent contractor if you have the right to control or direct only the result of the work and not how that result will be obtained. However, an individual will usually be considered an employee if you have the legal right to control the details of how the services are performed — that is, not just what will be done, but how it will be done.

This determination is based on all the relevant facts and circumstances. It's important to consider the entire relationship, analyze the degree or extent of your right to direct and control, and to document three important factors.

• **Behavioral:** Your company's control or right to control what the worker does and how the worker does his or her job.

• **Financial:** Your company's control or right to control business aspects of the worker's job, such as how the worker is paid, whether expenses are reimbursed, who provides tools/supplies, etc.

• **Type of Relationship:** Factors including a written contract or employee benefits, such as pension plan, insurance, vacation pay, etc., whether the relationship is continual and whether the work performed a key aspect of your business.

For example, assume a medical cannabis dispensary has an agreement with a farmer to supply certain types of product, in certain amounts and of a particular quality. The cannabis farmer determines when and where to do the growing, what farming tools and equipment will be used, the number of workers to hire to assist with the work, which worker will perform specific tasks, and generally retains the right to determine the details of the farming work in order to supply the cannabis.

Given these facts, it is likely that the cannabis farmer is an independent contractor. But it is important to look at all the facts since there isn't a set number of factors that makes the cannabis farmer an employee or an independent contractor. The keys are to look at the entire relationship, consider the degree or extent of the right to direct and control, and to document each of the factors used in coming up with your determination.

If you made payments totaling $600 or more to an independent contractor during the year in the course of your trade or business then you must report those payments to the IRS, and send a copy to the person or business you paid. These reportable expenditures include payments for services performed, as well as any associated materials provided.

PAYMENT EXCEPTIONS

Certain payments you make in the course of your trade or business are not required to be reported to the IRS. These include:

• Payments for merchandise (when no service is included in the purchase; but when services and merchandise are purchased together, err on the side of caution and report);

Payments made to a corporation (including an LLC that is treated as a C or S corporation);

• Payments made using a credit card or payment card and certain other types of payments, including third-party network transactions (which must be reported on Form 1099-K by the payment settlement entity);

• Payments for rent if it is paid to a real estate agent.

If you expect to pay a business more than $600 then you should have them fill out a Form W-9, which will provide you with their Tax ID Number, business structure (sole proprietor, C corporation, etc.) and their address.

DEADLINES AND PENALTIES

Form 1099 must be filed by the end of February with the IRS. If the form is filed late, incorrectly (such as a missing or incorrect tax identification number for the person/company you paid) or not filed at all, then you may be subject to penalties and/or an audit of your reporting practices.

If the 1099 is late-filed between March 1 and March 31, the penalty is $30 for each failure, up to a maximum penalty of $250,000 per year. This penalty is capped at an annual total of $75,000 for "small businesses," which are defined as a businesses having average annual gross receipts of $5 million or less over the three most recent tax years (or for the period the business was in existence, if shorter).

If the 1099 is late-filed between April 1 and July 31, then the penalty is $60 per failure (maximum penalty $500,000 per

>> CONTINUED ON PAGE 84

THE HEMPFEST BUSINESS SHOW

DURING SEATTLE HEMPFEST

SATURDAY & SUNDAY | AUGUST

08.15.15
08.16.15

HEMPFEST IS A BRAND YOU CAN TRUST!

WE ARE WASHINGTON'S OLDEST CANNABIS BUSINESS
LET OUR 24 YEAR OLD BRAND WORK FOR YOU!

HEMPFEST BUSINESS IS ABOUT CREATING AN ENVIRONMENT IN WHICH THE CANNABIS INDUSTRY FLOURISHES & MATURES. RUNNING CONCURRENT WITH SEATTLE HEMPFEST, TAKING PLACE MINUTES AWAY, HEMPFEST BUSINESS WILL CONNECT BUSINESS OWNERS WITH THE SUPPLIERS OF THE PRODUCTS AND SERVICES THEY NEED.

@ SEATTLE CENTER EXHIBITION HALL

SPONSOR, VENDING, & ATTENDEE REGISTRATION AT *WWW.HEMPFEST.ORG*

THE HEMPFEST BUSINESS MIXER IS SATURDAY 8/15 FROM 8 PM - MIDNIGHT IN SEATTLE'S ICONIC SPACE NEEDLE'S SKYLINE LEVEL. TICKETS ON SALE AT WWW.HEMPFEST.ORG

<< CONTINUED FROM PAGE 82

year or $200,000 for small businesses).

If the 1099 is late filed after Aug. 1, then the penalty is $100 per failure penalty (maximum penalty $1.5 million per year or $500,000 for a small business).

If the 1099 is not filed at all, such that the IRS determines it was "intentionally disregarded," then the penalty is $250 per failure (with an IRS audit likely imminent).

1099 RECIPIENTS

Anyone who receives a 1099 should take care to include that information on their tax return.

The IRS matches the 1099 it received from the payor with the item that should appear on the payee/independent contractor's tax return via the payee's tax identification number.

In order to help ensure that businesses receive 1099s and any other IRS-related correspondence, beginning Jan. 1, 2014, the IRS began requiring that any entity with an employer identification number must report to the IRS a change to its business address, business location or "responsible party" (such as its principle officer or managing partner, etc.) via Form 8822-B.

CONCLUSION

Whenever you contract out with another business or individual, it's worth considering the nature of that relationship, how the IRS views the arrangement, and to set up the proper IRS reporting for payments that you will make to that business or individual.

It will save you time in the long run and help avoid a highly preventable IRS audit of your reporting practices.

Andrew DeWeese and Calvin Eib are partners in the Oregon Cannabis Law Group in Portland, Oregon.

DeWeese handles cases in state and federal court, and represents and advises cannabis business clients on state law compliance issues and federal tax planning and disputes.

Eib is licensed to practice law in Oregon and Illinois. He has a master of laws degree in taxation from the University of Miami and more than 19 years of experience practicing in the areas of state and federal tax matters and business regulation, including representing and advising corporate clients on tax compliance and litigation.

Viridian STAFFING

Fortune 100 Recruiters for the Cannabis Industry
Medical Marijuana, Commercial Cannabis & Industrial Hemp

Serving:
- Producers/Processors
- Dispensaries/Retailers
- Brands & Manufacturers
- Technologies & Labs
- Research & Development
- Ancillary Businesses

Services:
- Temporary & Direct Placements
- Executive Search
- Contractors & Consultants
- HR Consulting & Workforce Planning
- Recruitment Process Outplacement
- Outsourced HR Services

(800) 961-6527

www.ViridianStaffing.com

PERFECT, READY-TO-GO OUTDOOR OPERATION

For sale: Ownership of the business holding two Tier 3 producer/processor applications with plans and preliminary approval from the Washington State Liquor Control Board. Ready for build-out and final inspection. Includes 300 acres in sunny Okanogan County. The property is already fenced and includes a 1.5-acre section with 8-foot security fencing. The land is at 2,800 feet elevation and has plenty of water, southern exposure, nearby power and privacy. It is a perfect location for an outdoor grow. Location is west of Tonasket, Washington, and well removed from other outdoor grows (minimizing the risk of cross pollination and pathogens).

$500,000 for everything. **Contact: Greg@Topics-Ent.com**

Cities, counties outline attack plan on Measure 91

Local jurisdictions want more authority over marijuana laws

By Matt Goldberg

In an eight-page legal memo, the League of Oregon Cities and the Association of Oregon Counties previewed the litigation strategy they will use to seek greater control for local jurisdictions under Oregon's recreational marijuana law if the Legislature does not write such additional controls into the law this session.

As passed, and as commonly understood, Oregon's Measure 91 only allows marijuana to be taxed at the state level and only allows counties and cities to ban marijuana businesses outright through a local option submitted to the will of the voters.

However, the lawyers for Oregon's cities and counties argue that the actual text of the initiative, especially when viewed in light of cases addressing similar issues under state liquor laws, permits local governments to tax, regulate — and even ban — recreational marijuana businesses.

The cities and counties argue that Measure 91's text is not evidence of a specific enough intent to preclude local governments from regulating marijuana beyond the requirements of the measure. Because Measure 91 does not state, for example, that a local election is the "only" way for a city or county to opt out of recreational marijuana, the cities and counties argue that they retain local authority to ban businesses.

This argument is somewhat disingenuous, though. The cities and counties referenced a footnote statement in the voters' pamphlet that a local election was, in fact, the "only" way for a city or county to opt out.

If successful, the argument is also dangerous because it could open the door to a possible multiplicity of rules and regulations on the local level, treating the forthcoming rules from the Oregon Liquor Control Commission not as a regulatory standard across local jurisdictions but as a regulatory floor on which local jurisdictions can establish their own unique rules and requirements.

THE CITIES AND COUNTIES ARGUE THAT MEASURE 91'S TEXT IS NOT EVIDENCE OF A SPECIFIC ENOUGH INTENT TO PRECLUDE LOCAL GOVERNMENTS FROM REGULATING MARIJUANA...

In light of this shot across the bow by Oregon's cities and counties, it is likely that the Legislature will take some action by way of amending the statute to allow for some greater degree of local control.

While doing so would seem to go against the will of the voters, the Legislature faces a Catch 22: either cave to the pressure now and amend the law to give local governments more control, or move forward with the law as written, knowing that the cities and counties will tie the new law up in litigation for much of its early life.

Matt Goldberg advises cannabis businesses throughout the Pacific Northwest at Cannabis Lawyers NW, LLC (www.cannabislawyersnw.com). He can be found on Twitter at @Cannabis_Lawyer.

The AMAZING...

GRASSHOPPER EXTRACTOR

Dry Ice Resin Extractor. Get up to a 25% yield in only 15 minutes!

"The absolute BEST way to extract resin from your plants!" - OCC Newspaper.

Easy to use, fast, and effective!

For more info and a video go to: grasshopperextractor.com

The ONLY nationally recognized third-party certification for cannabis

cleangreencert.com

Clean Green CERTIFIED

Responsible Agriculture ™

Look for this logo at your favorite outlet!

If your growers or handlers aren't certified, ask them,

"Why not?"

(541) 288-8211
(707) 218-1069

cleangreencert.com ✉ ask@cleangreencert.com

Certified I-502 Testing · Regulatory Consulting · Product Development · Contract Research

Process Improvement · Traceability Counseling · Strain Authentication · I-502 Compliant Labeling

The Werc Shop™

More Than Just A "Testing Lab"

Cannabaceutical™ Facts

Blue Dream

YOUR LOGO HERE

Lot ID: 1195-7266-0202-8890

Tested On: July 10, 2014

UBI: 0853583985

Sum of Cannabinoids	24.71	%	Sum of Top Terpenes	24.7	mg/g
Δ⁹-THC Max:	17.11	%	Myrcene	10.7	mg/g
Δ⁹-THCA	18.90	%	β-Caryophyllene	5.8	mg/g
Δ⁹-THC	0.53	%	α-Pinene	3.8	mg/g
CBD Max:	7.60	%	β-Pinene	1.2	mg/g
CBDA	8.12	%	Linalool	1.2	mg/g
CBD	0.48	%	Terpinolene	1.0	mg/g
CBN	ND	%	(+)-Limonene	1.0	mg/g
Microbiological Screen	PASS		Residual Solvent Screen	Not Tested	

Erby-WA@thewercshop.com

Call Us: 855.734.6640 · www.TheWercShop.com

Path to success involves navigating legal obstacles

To be seen as a valid, legitimate industry, treat it as such

By Jana Weltzin

The cannabis industry continues to emerge and evolve, proving it's not just a passing fad, but a valid and legitimate economic force. However, many of its key players struggle to comprehend the extensive industry rules and requirements, which are further complicated by the fact that those regulations vary greatly on a state-by-state basis.

Adding increased confusion to the journey is the systematic process of applying for and obtaining the proper licenses, permits and zoning approvals. Through my experience as a lawyer representing individuals and entities seeking to enter the cannabis industry in Alaska and Arizona, I have an understanding and appreciation for the steps necessary to overcome the routine roadblocks which often mean the difference between success and failure.

Understanding the nuances of the licensing application process, as well as the zoning laws, are key concepts that any cannabis entrepreneur must grasp. The administrative and licensing process can be frustrating, costly and competitive. For lawyers advising their clients, it means having the knowledge, experience and ability to advise with regards to zoning and land use requirements, business/corporate structure, finance, administrative law and procedure, as well as the ever-changing regulations of the cannabis industry (packaging, labeling, testing, potency, dosing, security, transportation, record keeping, fire and safety codes, to name just a few).

Therefore, serious entrepreneurs must be aware of these complexities, liabilities and potential pitfalls. They must also form relationships with knowledgeable professionals who have the ability to navigate the various mine fields, provide the necessary advice, as well as mitigate the unknown adversities which tend to reveal themselves later in the process.

It's also important for cannabis entrepreneurs to recognize that a great deal of misinformation, myths and negative stereotypes continue to exist and plague the cannabis industry. As such, in addition to navigating the various legal and business issues and complexities, cannabis entrepreneurs must also be dedicated to communicating with their local government and community, providing opportunities for education, information and outreach. Those who have found success in the industry achieved it by positive interaction with neighbors, law enforcement and local government, breaking down those preconceived notions and building support and trust.

Cannabis entrepreneurs must also recognize there are significant regulatory hurdles which must be addressed, such as compliance, business licensing, tax matters and other necessary permits. Each process may require interaction and compliance with various local and state regulatory agencies, each of whom have their own set of standards. The biggest mistake cannabis entrepreneurs often make is attempting to navigate all these arenas on their own. In many of these areas of the law, you are not awarded any second chances.

Regardless of whether you're facing a meritorious application process or a lottery system, it is imperative that you are able and willing to expend the necessary financial resources and time to ensure you have a quality application that doesn't just meet the requirements of the system, but exceeds them. Like any other emerging industry, as time continues, those who made the necessary commitments (time, money, research, etc.) are the ones who will have the greatest chance at long-term success. Therefore, to look good from the get-go, it's important to make sure that you don't jump the gun.

You must assume that your social media, websites and any press releases are going to be parts of your application, either directly or indirectly. In some states, it is absolutely imperative that you do not undertake black market cannabis activities prior to licensing. This could be a surefire way to disqualify you and may also make you the subject of a criminal investigation. If you want to be recognized and treated as a valid, legitimate business, you have to form, operate and manage a valid, legitimate business.

Although critics of the cannabis industry point to a long list of illogical fears and inaccurate statistics to support their positions, merely shouting back at them will never sway their beliefs. We first have to establish, consistently, that not only will we follow the rules and regulations imposed on us, but that we want rules and regulations that will legitimize the industry. This industry is new and evolving, so we don't know definitively what regulations will stand the test of time. However, to protect and ensure the legitimacy and longevity of the industry, we must be a part of the process of establishing policy and rules.

We must be taken seriously and invited to the table when the time to talk presents itself. The invitation will only come to those who have taken the time to connect with their neighbors, their zoning board members, fire and police departments, etc. To be taken seriously, you cannot merely remain an outsider while navigating an invasive licensing process. You must act with purpose, rebrand when necessary, and find the right representation to guide you through the process.

Real change for the industry will come from those who establish themselves as the model applicants, who then become industry leaders, and in time, gain the invaluable respect and trust from authorities, making those business owners a permanent fixture in this multi-million dollar market.

Jana Weltzin is a member of Rose Law Group's medical marijuana and zoning/land use departments. She was born and raised in Fairbanks, Alaska and advises clients in the cannabis industry in Arizona and Alaska. Rose Law Group assists its clients with business structure, finance and contractual structure, compliance with applicable state and local laws, zoning approval and use permits, site selection, and product regulations.

Connecting Cannabis Industry Professionals

Monthly Networking Events
Mastermind with like minded business pioneers

Our first event is in Bellingham
Friday April 24th 7:00 p.m.-9:00 p.m.
Please R.S.V.P for location www.thcplexus.com

Recreation & Medicinal
Producers Processors Shop Owners
Managers Employees
Supply and Service Companies

If you are involved in the cannabis industry, or you would like to be, attend and enjoy guest speakers, organized networking, build business relationships and get to know the other professionals in the industry.

THC Plexus
www.thcplexus.com

Our mission is to create long term relationships built on honesty, integrity and success.

NOT JUST POT

46 years experience solving a wide variety of legal problems in administrative, state and federal courts, including appeals.

LAW OFFICE OF
JEFFREY STEINBORN

206-622-5117
js@surlaw.com
www.steinbornlaw.com

awakening | first float $39

They're called Floatation tanks, Isolation tanks, Sensory deprivation tanks - and they're incredible. You have stress - floating in a float tank will help deal with it. Email or give us a call.

guru@floatseattle.com | 206-673-5132
floatseattle.com

CLEAR THE AIR

In some areas, odors are regulated by the same agencies that oversee pollution, like the smoke coming from this sawmill in a 1941 photo from the Library of Congress archives.

Cannabis odors can be considered pollution

By Christen McCurdy

The skunky odor of marijuana might smell like money and good times to those in the cannabis industry, but there are some people that consider it pollution.

Since 1968, Washington State has been requiring businesses that may create air pollution — including the emission of strong odors — to get air quality permits.

"People say why do I need a permit? I'm not making pollution, I'm just growing a plant," said Carole Cenci, senior engineer with the Puget Sound Clean Air Agency, which issues air quality permits for businesses in King, Snohomish, Pierce and Kitsap counties. "The reality is, this type of product does create odor, and not everybody thinks it smells good."

Washington State specifically identifies smell as an air contaminant in the Washington State Clean Air Act, Cenci said.

Mark Salley, a spokesman for the Colorado Department of Public Health and Environment, said agricultural activities — including cannabis grow operations — are exempt from the state's odor regulations. He said it's "highly unlikely" a retail operation would produce enough odor to be considered a nuisance, though some municipalities may have more specific requirements about odor control. He added that Colorado's laws pertaining to odor control don't make a value judgment about what types of odors can be considered offensive.

PEOPLE SAY WHY DO I NEED A PERMIT? I'M NOT MAKING POLLUTION, I'M JUST GROWING A PLANT.

There are 10 different clean air agencies that handle different jurisdictions throughout Washington (see the sidebar on Page 92).

"If you're going to grow or process marijuana, you need an air quality per-

>> CONTINUED ON PAGE 92

<< CONTINUED FROM PAGE 91

mit, before you buy equipment, before you even design your system," Cenci said.

Once a business has filed an initial permit application, Cenci said, they'll hear back from the agency within a couple of weeks. Depending on the operation's size and specifics, it can take anywhere from a few weeks to several months for PSCAA to grant full approval for the permit application.

Cenci said about 10 growing operations in her jurisdiction have applied for air quality permits. The first applications began rolling in last summer. PSCAA has already approved most, although one large operation's permit is still pending, Cenci said.

"We have contacted all of the growers on the Liquor Control Board approved list or the pending list (in the Puget Sound Area). There are permits that are not issued but are pending. We haven't heard from a whole lot of them, but we want to continue to get the word out," Cenci said.

Washington State's initial filing fee for a permit is $1,150. As PSCAA processes applications, there may be additional fees that so far have ranged from $1,200 to $6,000. Growers need to pay those fees in full before they can get permits.

Vendors who specialize in clean-air filtration have worked closely with the cannabis industry to help mitigate odor for several years at grow operations and dispensaries nationwide, as well as in Canada.

"We've been around for about 30 years and the marijuana business is new to us," said Robert Goodfellow, vice president of marketing at Dynamic Air Quality Solutions in Arkansas. While the $10 million company features an array of clients including hospitals, big airports and schools, it's never busier at a trade show than when it sets up a booth at a cannabis-related event.

Most of Dynamic's clients need to filter pollutants in the air surrounding a facility — such as jet fuel at airports or lingering exhaust from helipads at hospitals — but also works with businesses that want to filter indoor odors such as cigarette smoke.

Goodfellow said most grow operations in Dynamic's client base use packaged rooftop units that detect carbon dioxide, as well as volatile organic compounds, and use a carbon matrix system to filter contaminants, including mold spores.

AIR POLLUTION JURISDICTIONS

Olympic Region Clean Air Agency
Clallam, Grays, Harbor, Jefferson, Mason, Pacific, Thurston counties
Phone: 360-539-7610
Website: www.orcaa.org

Department of Ecology
Northwest Regional Office
San Juan County
Phone: 425-649-7000

Northwest Clean Air Agency
Island, Skagit, Whatcom counties
Phone: 360-428-1620
Website: www.nwcleanair.org

Puget Sound Clean Air Agency
King, Kitsap, Pierce, Snohomish counties
Phone: 206-343-8800
Website: www.pscleanair.org

Southwest Clean Air Agency
Clark, Cowlitz, Lewis, Skamania, Wahkiakum counties
Phone: 360-574-3058
Website: www.swcleanair.org

Department of Ecology
Central Regional Office
Chelan, Douglas, Kittitas, Klickitat, Okanogan counties
Phone: 509-575-2490

Yakima Regional Clean Air Agency
Yakima County
Phone: 509-574-1410
Website: www.yakimacleanair.org

Department of Ecology
Eastern Regional Office
Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, Whitman counties
Phone: 509-329-3400

Spokane Regional Clean Air Agency
Spokane County
Phone: 509-477-4727
Website: www.spokanecleanair.org

Benton Clean Air Agency
Benton County
Phone: 509-783-6198
Website: www.bcaa.net

Vaportek, a Wisconsin-based company that manufactures a wide range of odor-eliminating products, works with clients in real estate, fire and flood restoration, health care and hospice, as well as cannabis growers. It markets a variety of standalone products to grow operations, making different recommendations based on the size of the facility. Vaportek's media coordinator, Sunny Christensen-Schneider, said customers can buy directly through Vaportek's website or through stores and vendors that target small hydroponics growers.

"How Vaportek is different from the other guys is we use essential oils," Christensen-Schneider said. Vaportek's filters wick odors out of the air, and also come at a lower price point than carbon filter systems, she said.

Steve Van Slyke, manager of compliance for Puget Sound Clean Air Agency, emphasized the need for growers to work closely with officials early in the planning stages to avoid complaints and penalties for non-compliance.

"The goal is to be in compliance with the appropriate air quality regulations so there is clean air and residents are not burdened by nuisance odors or other air quality impacts," Van Slyke said.

The agency will investigate operations once an air quality complaint has been made. So far, it has issued 10 tickets to grow operations for operating without a clean air permit. But the agency would rather work with growers before reaching that point, since investigating complaints is time- and labor-intensive, Van Slyke said. The first ticket is a warning, but growers who fail to respond may face financial penalties, he said.

"We have several tools available to assist with getting businesses into compliance, including written warnings, notices of violation and civil penalties," said Della Kostelnik Juarez, communications specialist for Puget Sound Clean Air Agency. "If a business receives one of these enforcement actions, they have several opportunities to discuss their specific circumstances to us, and we will review any information they provide."

Cenci said most of the growers she contacts are just hearing about the agency for the first time and are unfamiliar with the regulations. She and her colleagues attempt to head off problems early, and encourage growers to contact PSCAA before the agency contacts them.

Don't Let Odor Nuisance Ordinances Affect Your Business!

VAPORTEK®

Optimum 4000™
Treats 20,000 ft³
Residential/commercial space

Heavy-Duty Standalone™
Treats 20,000 ft³
Industrial/commercial cartridge

Vapor Shark®
Treats 10-50,000 ft³
Industrial space

- **No Ozone & No Chemicals**
- **Moisture** Free
- **Safe & Botanical**
- **American** Made

Pioneering simple solutions for tough odors naturally since 1979

Vaportek's environmentally preferable technology is available in a variety of delivery systems. Originally developed for use in cancer wards, our unique, safe technology has successfully serviced many markets faced with organic odors for the past 36 years, including hydroponic and marijuana markets. Our internationally renowned dry vapor systems utilize natural essential oils to eliminate smells, not mask. Use our proven technology in grow room and on smoke odors alike, and replace carbon filters, ionizers, gels, sprays, etc. with our economical systems. Try us risk free today!

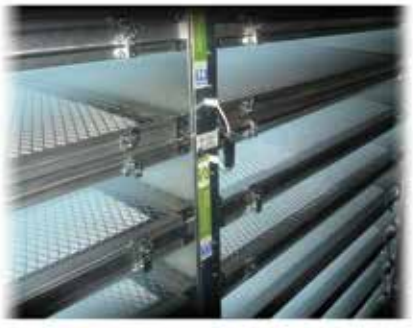
100% GUARANTEE SATISFACTION 100% GUARANTEE

Visit us at **www.Vaportek.com**

GROW GREEN

HIGH EFFICIENCY

odor, VOC and particle filtration
WITHOUT THE HIGH COSTS
of energy and maintenance.



Dynamic V8 Air Cleaning System

Dynamic Activated Carbon Matrix

For removing VOCs and ultrafine particles from indoor air and outdoor ventilation ai and for mitigating odors from exhaust

Dynamic Air Quality Solutions
The Science of Clean Air.

Dynamic Air Quality Solutions
PO Box 1258 • Princeton, NJ 08542
(800) 578-7873 • www.DynamicAQS.com

Hemp legislation hit by maddening roadblocks

Political gamesmanship stalls Washington's momentum

By Joy Beckerman

How excited I was to write an article this month about the basics of industrial hemp farming. After all, we've been confident in Washington that the state Legislature would pass an industrial hemp bill this session; therefore, we must be prepared for the great liberation of the world's most sustainable, versatile and valuable seed. Well, just as I was sitting down to write a cultivation primer, a wrench was thrown into the wheel of hemp legislation momentum. As this issue goes to print, two competing bills in the Legislature are being paralyzed by the Washington State Department of Agriculture, political gamesmanship and, potentially, special interests.

Currently, the state Attorney General's opinion is that Washington has only legalized marijuana, and that industrial hemp cultivation remains unlawful because the Legislature has never passed laws specific to industrial hemp.

The state Department of Agriculture parrots this opinion in its consistent refusals to issue research permits to potential hemp farmers, under Section 7606 of the federal Farm Bill of 2014. A common response from the state Department of Agriculture is: "According to our conversations with the State Attorney General's Office, cultivation of industrial hemp has not been legalized in Washington State."

These would-be hemp farmers are surprised and disappointed to learn that Section 7606 of the Farm Bill only pertains to states where industrial hemp is legal. Apparently, only marijuana can be lawfully grown here in Washington.

To set the proper framework for describing this conundrum, it's first best to ensure understanding of the distinct differences between the two Cannabis sativa species, marijuana (the drug type) and industrial hemp (the oilseed and fiber type). Marijuana is a high-resin crop generally planted about four feet apart for its medicine or narcotic-rich leaves and buds. Industrial hemp is a low-resin crop generally planted about four inches apart for its versatile stalk and seed. There are many legal arguments to be made that industrial hemp has been, at minimum, de facto legalized here and that this hullaballoo is entirely unnecessary and ridiculous. The Washington chapter of the ACLU, the Hemp Industries Association, and multiple lawyers and professionals across Washington share the formal legal opinion that industrial hemp cultivation is already legal. The argument is based on language from both Washington State and the federal government.

Washington's Uniform Controlled Substances Act specifically defines marijuana as all parts of the cannabis plant "with a THC concentration greater than 0.3 percent…" and the federal government has defined industrial hemp as all parts of the cannabis plant "with a (THC) concentration of not more than 0.3 percent."

Yet, the state Attorney General's Office maintains that industrial hemp cultivation is unlawful in Washington. Here we sit.

Despite unanimous support to pass hemp legislation in both the House and Senate this session until nearly the last week in February, the Department of Agriculture is now complaining that the state can't afford to administer a hemp farming program, and the House Appropriations Committee is stalling a vote on Rep. Matt Shea's HB 1552. Meanwhile, the House Commerce & Gaming Committee is stalling a vote on Sen. Brian Hatfield's SB 5012 (granted, five of those nine committee members are co-sponsors of Rep. Shea's bill).

Now the Appropriations Committee and the Department of Agriculture are asking for economic data that doesn't exist (i.e. current U.S. production costs and profit margins) in order to prove hemp's worthiness as a Washington crop.

I'm not sure what more any department of agriculture or Legislature needs to know about the value of industrial hemp as an agricultural commodity other than what they been shown over and over again by common sense proponents of this crop. The United States is the largest importer of industrial hemp materials and products in the world.

THERE ARE MANY LEGAL ARGUMENTS TO BE MADE THAT INDUSTRIAL HEMP HAS BEEN, AT MINIMUM, DE FACTO LEGALIZED HERE AND THAT THIS HULLABALLOO IS ENTIRELY UNNECESSARY AND RIDICULOUS.

The Congressional Research Service's report, "Hemp as an Agricultural Commodity," states that U.S. retail sales of hemp-based products in 2013 totaled more than $580 million. Of that, the value of hemp-based food, supplements and body care sales (all of which are derived from the hemp seed) totaled $184 million. It also reports that more than 25,000 products can be made from various parts of the hemp plant. The U.S. is importing 90% of the hemp seed oil and hemp seed for human consumption being harvested in Canada, due to hemp's unique and nutritional profile.

For heaven's sake, the largest employer in the town of Blaine, Washington is Nature's Path, which produces the largest hemp seed food line in the entire nation — waffles, cereal, granola bars, etc. — every single one of which is produced with the prized, nutritious hemp seed grown in Canada.

Upon my last inventory of the PCC Natural Markets in Edmonds, Washington, the store carried no less than 96 hemp-based food, supplement and body care products — all sourced from Canada. And no special processing or seed oil pressing equipment is necessary to harvest and press hemp

>> CONTINUED ON PAGE 97

FIRST IN PACKAGING

CAPTIVATE YOUR BRAND

SPECIALIZES IN CUSTOM PRINTED BAGS
MEETS ALL 502 REQUIREMENTS
WORK WITH AN INDUSTRY EXPERT

FAST TURNAROUND

408-813-2715

Cannabispkg.com

HELP WANTED

Sales reps wanted for Marijuana Venture. Earn cash in your spare time working in the exciting and fast-growing legal marijuana world.

We are seeking sales reps for territories all over the United States.

Send resumes to: Carlene@MJ-Directions.com, or mail to: MJ Directions, PO Box 1419, Renton, WA 98057.

EcoGreen
Industries LLC

(888) 612-3207
(530) 378-4443

Online orders welcome at
www.EcoGreenIndustries.net

99.9% Purity

Pricing 30# Cylinder Size

N-butane	(R600)	$150.00
N-propane	(R290)	$150.00
Isobutane	(R600a)	$150.00
70% R600 / 30% R290 Blend		$150.00

Pricing 50# Cylinder Size

N-butane	(R600)	$240.00
N-propane	(R290)	$240.00
Isobutane	(R600a)	$240.00
70% R600 / 30% R290 Blend		$240.00

Coming Soon: Explosion proof recovery pumps designed for R600 and R290

WHO'S WATCHING YOUR HARD-EARNED CASH?

KEEP CASH SAFE.

Security Safe & Lock in Bellevue has been in business for decades and is one of the most trusted names in the industry.

From small closet sized safes to vault dimensions, we can handle you needs.

- Fast turn-around.
- Guaranteed products.
- All the major manufacturers.
- Delivery and installation.
- Complete lock and security systems.

10502 Main Street
Bellevue, WA 98004

425-454-6969 WWW.SECURITY-SAFE.COM

<< CONTINUED FROM PAGE 94

seeds. Our Washington farmers can harvest hemp seeds with careful use of modern day combines, and hemp seed's valuable oil can be pressed from the same presses used for canola. Even the roots of the hemp plant can garner $200 an acre from the body care market (industrial hemp roots contain valuable, non-cannabinoid healing properties located nowhere else in the plant).

Remaining optimistic that somehow common sense will rein in the Legislature this session, let's examine the differences between the two competing bills. Sen. Hatfield's bill, SB 5012, may seem a Utopian dream on its face, in that it is curiously brief and includes no regulation. But the reality of SB 5012 is that it leaves all rule-making in the hands of the Department of Agriculture, which will almost certainly over-regulate this safe, non-drug crop and over-charge our farmers.

Rep. Shea's bill, HB 1552, deliberately includes and excludes very specific items that are necessary for Washington farmers and a successful hemp industry. The comparison chart provided here demonstrates the five largest points of difference between the two current hemp bills. It's more critical than ever to contact your Legislators and let them know that you insist on the passage of HB 1552 in this current session.

WA State Hemp Bills Comparison Chart	HB 1552	SB 5012
De-schedules industrial hemp from the WA Controlled Substances Act (*i.e.* removes industrial hemp so that it is no longer considered to be a "controlled substance" under State law)	Yes	NO
Excludes THCA (tetrahydrocannabinolic acid) from the bill's definition of "THC concentration" (testing industrial hemp for THCA is not based in science and could result in costly false THC testing results of farmers' crops)	Yes	NO
Directs the WA Dept. of Agriculture to address and coordinate with the Liquor Control Board concerning the prevention of cross-pollination between industrial hemp and marijuana; and doubles down by also directing the LCB to coordinate with the WSDA on this issue.	Yes	NO
Includes the minimal but necessary regulations (along with subsequent amendments requested by the WSDA) required for WA State to create a viable path for success and competition in what are now sophisticated markets in a world where hemp cultivation is still regulated elsewhere (*e.g.* particularly in countries from which pedigreed seeds of desired industrial hemp cultivars/varieties are sourced)	Yes	NO
Protects WA farmers and businesses from unnecessary overregulation and State intrusion	Yes	NO

Joy Beckerman is the president of Hemp Ace International and president of the Washington chapter of the Hemp Industries Association.

Redefining cannabis stereotypes

Green-Theory manager Tera Martin is one of the people changing the stigma of marijuana

By Vicki Christopherson

Momentum to legalize cannabis is building across the country. Washington, D.C., our nation's capital, is one of the latest to engage in building the foundation for a safe environment where consumers and cannabis businesses enjoy the mutual benefits of a legal marketplace.

Washington State is well on its way. Following the recent passage of the Cannabis Patient Protection Act from the state Senate to the House Health Care and Wellness Committee, we are one step closer to ensuring safe, quality-controlled products for all consumers in Washington.

By the time you read these words, the legislation may have moved further within the legislative process and the system envisaged by Initiative 502 will be within reach in the form of a wholly-regulated system benefiting both legitimate medical patients and licensed businesses. For now, there is still work to be done on the policy front and in redefining cannabis both as a product and as a market for the uninitiated public.

For most people — and maybe even some readers of Marijuana Venture — cannabis is represented by the green, five-leaf plant image that can be found on buttons, stickers, T-shirts and endless video clips featuring clouds of smoke at festivals. There are memorable characters in popular culture who serve as de facto representatives of marijuana, ranging from Cheech and Chong to Jeff Spicoli from Fast Times at Ridgemont High. But for most of us in the legal, regulated market, the caricature couldn't be further from reality.

That's why we came together to form the Washington CannaBusiness Association (WACA), the only organization of its kind advocating for state-licensed producers, processors and retailers of cannabis. In this group are professionals like Rob and Diane, who have put their life savings into a mom and pop store, and innovators

Tera Martin walks the pink carpet at her Pink Gene gala.

who are tirelessly working toward medical products to stave off the suffering from an illness or injury. Tera Martin, manager of the Green-Theory retail store in Bellevue, is one such innovator.

A former beauty pageant winner, Martin is a far cry from the widely-accepted stereotype of a cannabis user. As a breast cancer survivor and advocate who developed Stage 3 ductal carcinoma at age 28, her subsequent use of cannabis to alleviate the effects of her treatment underscored the importance of the safety and availability of the products she used. While Martin's professional background is in hospitality and event management, her personal experience led to the founding of the Pink Gene Foundation.

The Pink Gene Foundation strives to help young women become proactive in the fight against breast cancer by educating, providing resources and offering assistance. Specifically, Martin's foundation aims to create funds that help build awareness for women at high risk to support genetic testing, prevention and a new project with the Fred Hutchinson Cancer Research Center, called the Pink Gene Screen.

Getting beyond the frightening narrative about marijuana established by movies like Reefer Madness is a significant challenge for legalizing cannabis across the country. The sentiment that all marijuana users are "stoners" who sit in murky vans, or dangerous criminals running drug syndicates exemplifies the need to redefine the individuals and businesses at the core of the legalization movement.

While Tera Martin is one of a kind, cannabis entrepreneurs and others in the legal marketplace who share her passion and professionalism represent concerned citizens, community members, loving parents and good neighbors. They fit the stereotype of non-users far more than the exaggerated misrepresentation of those portrayed in popular culture. Washington State has already turned the page on the cannabis legend and begun to write a new story. Working together with policymakers, community leaders, elected officials and people like you, we look forward to writing a story that works for Washington.

Vicki Christophersen is the executive director of the Washington CannaBusiness Association.

PREMIUM. ALL-NATURAL. ORGANIC.

YOU CAN'T BEAT BIOCHAR

Miller Soils bio-char in action at a California farm.

- *Consistent quality from small batches to large-scale commercial quantities*
- *Ready-to-plant soil blends increase yields, while saving time and money*
- *Long-lasting moisture and nutrient holding ability works indoor and outdoor*
- *Bulk loads shipped weekly throughout Washington, Oregon and Colorado*

970-281-7907
MillerSoilsLLC.com
Louis@MillerSoilsLLC.com

MILLER SOILS

RED'S PREMIUM BLEND

Changing growing patterns will impact cannabis prices

Pierce County retailer ignores moratorium, pushes forward

By Jerry Whiting

The way cannabis is grown has a direct bearing on its price. Big, beautiful buds command higher prices, at least in the recreational market, and visual appeal has a direct bearing on pricing. Knowing this, growers prune and trim accordingly.

An emerging trend among growers is about to alter the way cannabis is priced and sold in what could be a very profound manner. Until recently, the vast majority of growers kept their plants in veg for weeks and months at a time. The goal was to grow the largest plants possible — the bigger the better.

Weed grown like this produces finished materials that come in three grades: Grade A, the trimmed flower; Grade B, the popcorn (small buds) and trim that produces Grade A materials; and Grade C, the leaves and rest of the plant that are left after A and B.

Indoor cultivation had been done this way for years. The introduction of concentrates and the Sea of Green (SoG) technique will fundamentally change the way marijuana is priced and sold. Concentrates like BHO and CO_2 oil command higher prices than flower, which means concentrate processors can afford to pay more for cannabis they use. The flipside is that those making edibles like candy and baked goods get squeezed because their products have lower retail prices with thinner margins.

Even more profound is the shift from growing large plants with lots of extra vegetative material to utilizing very short veg times with only one main flower. While harvests are quicker and yield more flower over the long haul, what's missing is all the extra popcorn, trim and shake that is a by-product of lengthy growth cycles. The SoG proponents chuckle that the long-veg growers blow right past the point of diminishing returns, blinded by the sheer size of their plants and blind to how much of the green has little market value.

Switching to a Sea of Green setup results in a drastic change in the leaf-to-flower ratio.

SWITCHING TO A SEA OF GREEN SETUP RESULTS IN A DRASTIC CHANGE IN THE LEAF-TO-FLOWER RATIO.

This works well for those growing Grade A flower for end users to smoke. Those who anticipate using the lower-priced popcorn, trim and leaf material not only find themselves competing with well-funded concentrate processors, but there's simply less non-flower material available. The only upside is that what little leaf material is produced by SoG growers is trichome-covered, cannabinoid and terpene rich and hence quite valuable. There just isn't much of it.

Is this a Chicken Little, the sky is falling, Doomsday scenario? No. The market will correct itself. Some will bite the bullet and pay more for what they need, and others will adjust recipes and workflows, and create new products. Some growers will take a different approach and grow cannabis as a bulk agricultural commodity as opposed to a hand-tended designer herb. Perhaps their harvests will be one grade: flower, trim, leaf and all. Ugly, but functional. Field corn, not sweet corn; industrial, not consumer.

However changing growing styles manifest in the marketplace, cannabis is a rapidly-evolving industry and SoG is but one of many changes that will shape this new industry.

Jerry Whiting is the founder of LeBlanc CNE, growers and brokers of medical cannabis and vintage heirloom strains. LeBlanc has an extensive collection of CBD-rich strains, including a seed bank and live plants. LeBlanc sponsors a hemp breeding project, reseaches the relationship between cannabis chemistry and genetics, and processes whole plant preparations.

MARIJUANA VENTURE
THE JOURNAL OF PROFESSIONAL CANNABIS GROWERS AND RETAILERS

Marijuana Venture is the only monthly B2B trade publication dedicated to the legal, licensed cannabis industry.

One Year (12 issues) $39.99*
*Offer includes print & digital issues

One Year Print Only Subscriptions $29.99

One Year Digital Only Subscriptions $19.99

SCAN & SUBSCRIBE

GROWER? RETAILER?
We offer complimentary subscriptions to companies licensed as growers and retailers.**

SUBSCRIBE NOW AT
www.marijuanaventure.com

**Go to http://www.marijuanaventure.com/subscription-request for complimentary subscription. Must be a qualified businesses related to the growing and production of marijuana.

Colette Thomas poses with The Gallery owners Mike Henery (left) and Tedd Wetherbee (right).

The Gallery opens doors, despite county warnings

Pierce County retailer ignores moratorium, pushes forward

By Colette Thomas

When Tedd Wetherbee and Mike Henery opened The Gallery in Parkland, Washington on March 1, they were prepared for the potentially rough road ahead of them. Pierce County, where the shop is located, is one of several municipalities in Washington that currently has a moratorium on recreational marijuana retail stores. Since The Gallery's early March opening, it has had local and national media coverage nearly every day, including features by ABC Nightly News and The Huffington Post, as well as local ABC and NBC affiliates, to name a few.

Although The Gallery was issued a recreational marijuana retail license by the Washington State Liquor Control Board, it is currently operating in defiance of a local zoning ordinance. On Tuesday, March 3 Wetherbee and Henery were verbally told that a cease and desist order would follow. By Thursday, March 5, the documentation was in their hands, giving them until March 19 to close their doors or face criminal charges or fines of up to $1,000 per day.

As of Marijuana Venture's press deadline, it had yet to be determined whether they will comply with Pierce County.

"We do not believe that Pierce County will do something arbitrary or capricious," Wetherbee said. "We are working very closely with county officials to reach a resolution that will please all of us."

When asked if they have received any resistance from licensed I-502 processors, the co-owners replied "absolutely not." They have been inundated with support and many processors are competing for shelf space. The Gallery is surrounded by more than a hundred medical dispensaries in Pierce County, where single grams are sold for $10. Consumers can purchase single grams at The Gallery for $14 to $24. Soon Wetherbee hopes to offer single grams and pre-rolls for $10. This will allow them to go head-to-head with dispensaries and the black market.

Wetherbee and Henery also won two other at-large licenses in Pierce County. They plan on opening them both in areas that currently have moratoriums. It remains unclear to Wetherbee how the state can continue to allow loosely-regulated medical marijuana dispensaries and ban tightly-regulated retail stores. He said will continue to litigate with state and local authorities, until the vote of the people is granted.

Colette Thomas is an advisor for Recreational Marijuana Management, which provides consulting services for I-502 retailers on licensing and compliance. RMM has assisted multiple retailers open for business. She can be reached at colette.rmm@gmail.com.

TraceWeed™

Our affordable traceability service for **producers** and **processors** is taking Washington by storm.

- **Manage your operation** with our easy-to-use mobile and desktop applications.
- **Stay compliant** with LCB requirements with a lot less hassle (works with the state's BioTrackTHC-powered system).
- **Spend more time growing**, and less time tracking.
- **Gain insight** into your business with streamlined reporting.

"We love how TraceWeed is mobile so you don't always have to go to your computer to get things entered."

Susan Strickland, co-owner of Happy Wayz Edibles in Spokane, WA

Schedule your TraceWeed installation

Contact us at: **info@traceweed.com**
(206) 489-4942

Find us online at:
http://traceweed.com

Powered by **TapNTrace ™**

Land-use codes turning dream into a nightmare

Years after legalization, officials maintain prohibitive approach

By Shawn DeNae

Ah, the life! Rolling out of bed when your dreams of living the good life awaken you to the sweet scent of success. Grabbing a cup of java before strolling into the tropic warmth of your garden that gives you such peace as you commune with your flowering ladies. Cooing softly at their loveliness, you dribble some water here, pluck a withered leaf there and envision the harvest that will make your path to financial freedom a reality. Ain't the weed business grand?

The hopes aspiring growers have for living the dream by developing a thriving legal marijuana business has lured thousands into this land of delusions. It's as if a trance has overcome restless entrepreneurs as they rush zombie-like into this tumultuous infant industry. The unbridled joy of having the chance to grow marijuana within a legal system is an unprecedented opportunity to improve one's standing in life — to be independent; to finally be the boss; to be successful, at last.

Not so fast! The harsh reality is an extraordinary amount of hoops, boulders and road blocks to overcome prior to living the idyllic life many envision. The Washington State Liquor Control Board did a great job of listening to the voters prior to establishing the structure of legal weed in our communities. They overwhelmingly heard from small family farmers to "not forget the little guy," and thus created the tiered system with a low entry fee. Thousands applied and overwhelmed the premature system.

Now that grow sites and adult-use stores are popping up on the landscape, the hoops that were jumped through in getting the application complete seem benign compared to the struggles at the local levels to actually implement the system. Local authorities have been inundated by concerned residents who now question their "yes" vote on Initiative 502 as grow sites and retail stores come on line. Their concerns reflect the tendrils of Reefer Madness and the Fear of the Unknown. They are using that uncontrollable fear to change policies at the local level by encouraging bans and moratoriums through the use of zoning and land-use codes.

"You can't outwit code," Snohomish County Planning Director Clay White said during a recent meeting on the issue. Code is the teeth behind the authority on local land use and councils all over the state are using it to bite hard into the establishment of legal marijuana business.

This is in direct opposition to not only the will of the voters, but the aspiring small family farmer that the system was designed to encourage. Washington is a right-to-farm state, yet when the 2014 Legislature voted to take away certain agricultural tax deductions from marijuana farmers, that gave the local authorities the basis they are using to restrict this activity on farmland via strict commercial building codes designed for large factory-type business that are mainly allowed only in industrial and commercial zones.

THE BATTLE FOR LEGAL CANNABIS HAS MOVED INTO LOCAL POLITICS AND IT HAS GOTTEN UGLY, BUT THERE IS A SILVER LINING.

The battle for legal cannabis has moved into local politics and it has gotten ugly, but there is a silver lining. Education rather than litigation seems to be key. Once local politicians understand the cannabis community is intelligent, organized and comprised of voters, they become softer to the idea of bringing living wage jobs and economic growth to their regions.

"But what about the children?" scared citizens cry. We are all worried about the children. That is a primary reason why marijuana needs to be legalized. We must make access to marijuana at least as hard as obtaining alcohol. The kids need a deterrent and the adult consumer is not going away. The market will be serviced one way or the other. Bans will anchor the consumer to the black market if the regulated market is not convenient.

The local use of code language and how it is being applied is hijacking the industry and financially devastating growers on a very personal level. The majority of these family farm sites are owned by folks closer to retirement than college age. Many are owned by women and it's the best last chance they have to earn a living off their land. The economic downturn caused many people's retirement dreams to slide down the drain. Some of those that were most affected looked to this new industry as a source of income. They invested heavily, only to be confronted by changes in zoning codes that could put them out of business before they even open.

The fact that the Liquor Control Board does not require proof of signed building permits, nor change-of-use permits, has amplified the push back. Those who had completed permit applications submitted prior to bans are vested and may be able to move forward; but is it a wise business decision to set up shop in an antagonistic region?

Adding to the pressure, the Liquor Control Board is gearing up to tell hopeful business owners, "Get moving on your application or lose it." The board has no sympathy to wait while these local issues get ironed out. Some applicants have been told to simply move or go against local authority. It is unbelievable that after all the background checks, we are being told that obeying local land-use codes is not required. It is simply heartless to assume people can afford to move off their land.

Prior to the application process, which started in November 2013, we devoted countless hours to finding a warehouse location close to our home. Landlords who became privy to the situation either put their foot down on the use or quickly raised lease rates from 50 cents a square foot to more than $1. The high costs led us to realize the warehouse option was not the best fit; we

>> CONTINUED ON PAGE 106

I-502 Compliant
Packaging Machines & Materials!

VC999®
PREMIUM PACKAGE

Congratulations to Db³
ZOOTS Cannabis Infusions Deliver Impeccable Quality & Delicious Innovation!

VC999 RS420
roll stock thermoformer
Made in the USA

Packaging for Cannabis Products. Bulk & Retail: Smokable, Extracts, Infused, Edible & Beyond.

- Guaranty Freshness, Longer Shelf Life, Great Taste, & Perfect Color
- Tamper Evident, Child-Proof, Flexible & Rigid
- Printing, Date-Coding and Labeling Options
- Easily change your package size and depth
- Lower labor costs and increase productivity
- Yes, We've always called it 'The 420'

Visit us at CANNA CON 2015 or Contact VC999 Today · 800-728-2999 · Sales@VC999.com

XTRAVAC
Providing Quality with Economical Solutions

XTRAPLAST
BEST SOURCE for packaging materials.

CM800L
Mid-size

CM300
Tabletop

Consumers Demand Consistency & Quality. Let Us Make Your Product Packages Better.

- Excellent Packaging Machines & Packaging Materials
- No One Else Has More Real-Life Packaging Experience
- All XtraVac Machines Available with Gas Back Flush (MAP)
- XtraPlast Materials Available in Standard, Custom, & Printed

Vacuum Chamber Machines, Tray Sealers, Flow Wrappers, Bags, Pouches, & More!

Packaging Machine Sales • Packaging Material Sales
Sales@XtraVac.com • Sales@XtraPlast.com
800-728-2999

A DIVISION OF INAUEN GROUP

<< CONTINUED FROM PAGE 104

wanted to own the property that housed our future business.

We began to look outside the city and discovered Snohomish County was being progressive in its discussions of land use toward the cannabis industry. We involved ourselves in the democratic process of attending hearings, giving testimony and witnessing deliberations. Nov. 13, 2013 was a standing ovation day when the Snohomish County Council adopted Ordinance 13-086 allowing legal cannabis producer/processors to utilize R5 zoned land for this use.

We submitted our application with an address in rural Snohomish County and received one of 86 letters sent from executive John Lovick's office confirming those applicants' addresses in R5 were zoned properly. Our building permit application process began in February 2014, with the hiring of an architect, land-use specialist, wetlands and drainage engineers. Our completed building permit application was accepted in late July 2014. We thought we were so very clever to have found this little piece of paradise.

A gut-wrenching email was received in September showing the video from a recent council meeting where discussion of placing a moratorium on R5 was taking place. On Oct. 1, 2014, the council, in fact, reversed its previous decision and placed a six-month hold on accepting permit applications for aspiring legal cannabis grows within the R5 zone.

A small group formed the R5 Cooperative with the intent to educate local officials, as opposed to litigating the decision. Hundreds of hours have been devoted to this effort and thousands of dollars have been spent to hire a land-use consultant, Reid Shockey, to advocate on the behalf of I-502 applicants located in the R5 zone.

We have scheduled tours of legal grow sites for the county's Agricultural Advisory Board and Planning Commission, as well as the Everett City Council and Snohomish County Council. Many officials, once they visit a site, have concluded these operations can be compatible within R5. Unfortunately, among the county council members, only chairman Dave Somers has taken a tour so far. Council member Ken Klein admitted he consciously decided not to tour. He and fellow council member Terry Ryan are ready to institute a permanent ban. It reminds me of the statement, "Don't confuse me with the facts, my mind is made up!"

Despite the best effort of the R5 Cooperative, a hearing on March 4, 2015 resulted in the moratorium being extended for an additional six months. This was seen as a small victory since they did schedule further deliberations for March 25 (the results of that meeting were unavailable as of Marijuana Venture's press deadline). The county has since begun sending violation notices to licensed I-502 operators for not complying with local codes.

We are one of only 14 companies that are considered vested within R5. We are continuing to move forward with our building permit with the intent to have our license by the third quarter of 2015.

The cannabis community is beginning to show up in city, county and state chambers as decisions affecting our lives and the future of the industry are being made and it is making a difference. Getting to know your local officials, answering their concerns,

>> CONTINUED ON PAGE 109

Create a Proven I-502 Operations Plan

More than just an Op-Plan

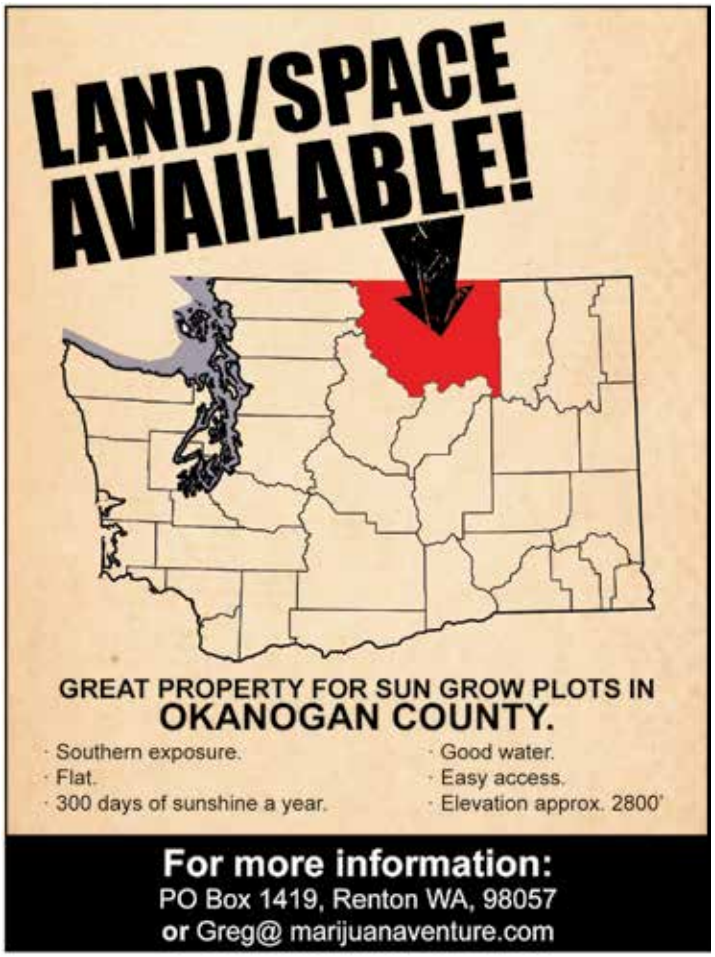
- All 10 sections of the LCB I-502 Operations Plan
- Script for 1st LCB call and Docu-Sign screen shots
- Employee Handbook with policies and procedures
- Product labels, security diagram and ID badges
- OSHA, EPA and Employee Safety Training Manuals
- Professionally laid out and customizable *(MS-Word)*

Production & Processing Calculator

- Forecasts yields, canopy areas and power needs
- Calculates real start-up costs, expenses and wages
- Evaluates capital investments, unit shares and ROI
- Profit and loss calculator is fully customizable *(Excel)*

This plan in not just for the LCB: it's designed to meet the needs of investors, building departments, landlords and employees. It's also a plan that has passed LCB scrutiny. Call or email to review samples and try the P&L calculator.

(360) 301-4754 - iquest4it@aol.com



How can CBD benefit YOU?

- CBD RICH HEMP OIL
- SPEARMINT FLAVOR
- LAB TESTED FOR SAFETY
- MANUFACTURED IN A cGMP FACILITY
- SUBSTANTIAL RETAIL MARGINS
- MADE IN THE USA

Call 302.257.5200
to become a distributor today

www.UltraCBD.com

UltraCBD™ 200mg cannabinoid supplement is prepared in a NSF cGMP-certified facility. All ingredients and lots are tested for e.coli, staph, total plate count, coliforms, salmonella, and are tested against industry standard quality control measures. An FDA Required Microbiological & ID Testing Final QC is also required before the final product can leave the facility.

Hemp-based dietary supplements are legal in all 50 states

Why advertise with Marijuana Venture?

- Marijuana Venture is the only monthly B2B for the exploding legal marijuana industry.
- There are never any ads featuring sexual content or questionable products.
- Marijuana Venture is not a consumer magazine. Our focus is 100% business.
- Marijuana Venture prints and distributes 5000+ hard copies each month to applicants and licensed growers in WA, CO, OR, and AK.
- Our readers are business owners and entrepreneurs with cash to invest in their legal marijuana company.

If you're looking for a smart and effective way to reach the thousands of new licensed companies starting up in the recreational marijuana industry, look no further. Marijuana Venture is your resource!

"Our business took off after advertising in Marijuana Venture"

– Craig Allen, co-owner Groco Supply.

For information, call:

Lisa Smith:
425-306-4706
Lisa@MarijuanaVenture.com

Greg James:
425-656-3621
GJames@Topics-Ent.com

Or go to:
www.marijuanaventure.com

<< CONTINUED FROM PAGE 106

providing them with facts to counter-balance the unfounded fears will give them the political cover they need against the "not in my back yard" push back. Good work is being done by a very few dedicated advocates who need the support of the entire industry at all levels.

So, keep a good hold on living that dream. Keep cooing over those beautiful flowers. And, most importantly, keep showing up to provide support. It's going to take all kinds to make this legalization effort work and we are making a positive impact as together we crush the boulders standing in our paths to a better life, a better world and a better dream to replace this current nightmare of legalized cannabis.

Legalization may be sexy, but implementation sucks.

Shawn DeNae is CEO of Washington Bud Company, an aspiring I-502 Tier 2 producer/processor applicant. She is one of the founding members of the Marijuana Business Association Women's Alliance and believes women are poised, for the first time in history, to lead an industry.

US Debit Services

Get the easy alternative to cash!

There's no need to be a cash-only business. US Debit Services offers a simple solution.

(855) 749-6121 www.usdebitservices.com

Packaging is the Perfect Finish to Your Brand

Packaging is the final element to present your product effectively. WS Packaging is the single source to help you differentiate your brand and products.

- Single-source provider of labels, folding cartons, shrink decorations, and labeling equipment
- Product identification and labeling experts to decorate your container, regardless of size or format
- Products and tools to help you promote and cross-promote your products on your package and on the shelf
- Experts in compliance labeling, serialization, and track-and-trace technologies

Labels
Shrink Decorations
Compliance Labels
Serialization

Folding Cartons
Flexible Packaging
Promotional Labels
Label Application Equipment

In Colorado contact:
Adam Peek
apeek@wspackaging.com
303-748-8741

In Washington contact:
Phil McCutcheon
pmccutcheon@wspackaging.com
425-583-8952

WS Packaging Group, Inc.®

www.wspackaging.com

Cannabis innovations will revolutionize the industry

Who will invent the cotton gin of cannabis?

Innovation has always fascinated me, and it's one of the aspects that I enjoy about publishing a business magazine and being a part of the cannabis industry.

Because it's been a black market endeavor for so long, the business of growing and selling marijuana hasn't changed all that much in the past few decades prior to legalization. Now, with nearly half the country allowing medical marijuana, four states legalizing recreational cannabis, a majority of Americans supporting full legalization and the federal government seriously considering the removal of marijuana from Schedule I of the Controlled Substances Act, the creative process can really get ramped up.

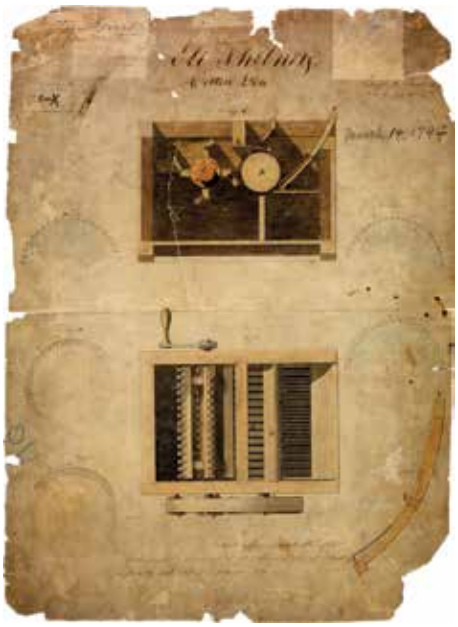
For the first time in our lifetime, it's probably safe for people to openly invest time and money into products geared specifically for cannabis. The impact that will have is hard to predict, but I think it's pretty safe to say that within the next couple years, we will see inventions — both large and small — that will revolutionize the cannabis industry. And these are the stories that I look forward to writing as the industry continues to evolve and gain more traction as a legitimate and recognized business.

In 1793, Eli Whitney invented the mechanical cotton gin, and it changed the entire cotton economy.

Somebody or something is likely to come along and do the same for cannabis, although in this case, it will probably be many different inventions rather than one singular game-changer.

You're already starting to see it.

LED lights, for example, have been getting better and better for years. It won't be long before a light is developed — be it LED, plasma or some as of yet unknown technology — that will be as energy-efficient and long-lasting as current LEDs, with the initial cost and reliable yield production of high-intensity discharge lighting.



Eli Whitney's original patent for the cotton gin, dated March 14, 1794.

Trimming machines have been getting better and cheaper.

Packaging options — obviously not a concern for the black market — are going to see a tremendous rise.

I've been talking with some people in Eastern Washington who believe they have created a hydroponic system that they believe will be a game-changer.

From the consumer side of things, the rise of vape pens are a classic example of new technology quickly capturing a share of the market. For several decades, smoking weed largely came in joint, pipe and bong varieties. Now, the methods of consumption feel limitless, further opening the possibility for cannabis to be enjoyed by people who are against smoking.

To me, greenhouses are largely an untapped gold mine for cannabis. Warehouse cultivation was the best option for decades because growers had to be invisible. Greenhouse manufacturers have been developing high-tech facilities for tomatoes and ornamentals for ages. Now, they'll be able to dial in exactly what would work best for cannabis growers, providing the ultimate best of both worlds between indoor and outdoor cultivation.

There are probably hundreds of products that are used in traditional farming and agriculture that can be adapted to the cannabis market. In some cases, the manufacturers might not want their product to be affiliated with an illegal drug. In other cases, people might not have put two and two together yet.

But it's only a matter of time. Those companies that shunned marijuana will eventually come around, or watch their competitors take a larger share of the market. And eventually somebody from the traditional agriculture industry is going to look at a tool or a piece of software and have that proverbial light bulb go off.

Of course there's a potential downside of any technological progress.

Whitney's masterpiece was considered a secondary cause of the Civil War, as it fueled the need for more and more manual labor and further entrenched the south in slavery.

While I doubt very strongly any cannabis-related inventions will lead to bloodshed, there may be a point in the near future where tedious tasks like hand trimming and harvesting are figments of the past.

To me, that's a bridge we'll cross when we get there.

GARRETT RUDOLPH
EDITOR

Corrections

There were several errors in the March 2014 edition of Marijuana Venture. Two names were spelled incorrectly: Ryan Cooper is one of the co-owners of The Happy Crop Shoppe (Page 14) and Gordon Redman is the formulator/growers consultant for Flying Skull (Page 45).

The editorial on Page 2 was attributed incorrectly. The author was publisher Greg James.

CANNA BRANDERS

Web & Branding **Experts** Dedicated To The **Cannabis** Industry!

Website Design • Web Applications
Graphic Design • Industry Writing & Research
Mobile Applications • Social Media Marketing
Search Engine Optimization (SEO)

Contact Us **Today** To Get Your **FREE Website Analysis!**

CannaBranders.com | info@CannaBranders.com | 844-420-WEB1

YOUR CANNABIS BUSINESS IS OUR BUSINESS.

dk | LAW

GET AHEAD OF THE I-502 CURVE.
POSITION YOUR CANNABIS BUSINESS FOR SUCCESS.

Proven track record of getting applications approved for I-502 Producers, Processors and Retailers

Regulatory Compliance • I-502 Operating Plans
Licensed Business Purchase / Sale
Required Employee Training • LCB Violation Appeals
Vendor and Supplier Contracts • Lease Agreements
I-502 Business/LLC Formation

www.dkerrlaw.com

600 N. 36th Street, Suite 202, Seattle, WA 98103
206.234.5819 • david@dkerrlaw.com • sean@dkerrlaw.com

FAST • QUIET • ENERGY EFFICIENT

The latest generation of Co2 and compressed gas systems from your partner in high-tech extraction equipment and protocols. Superb oils and concentrates for every product line.

Eden LABS LLC

Bench top to industrial systems. **www.edenlabs.com**

Your Electrical Solution To Your Cannabis Grow

DO YOU NEED AN ELECTRICAL CONTRACTOR TO DESIGN *AND* BUILD YOUR CANNABIS GROW OPERATION FROM THE GROUND UP?

Since 1971, Hamer Electric, Inc. has been an electrical contractor located in Southwest Washington. Due to our long history of experience, we have the capability to follow a project from conception to completion—including the engineering, designing, and installation—of your electrical system.

"Hamer Electric is the contractor to contact when it comes to providing electrical services for your cannabis grow operation"

We have more than three years of experience specifically designing and installing cannabis growing operations, including assistance with the permit and plan review process. Additionally, we have the knowledge and resources to help you choose your lighting and power distribution system to provide you with the most cost effective system to suit your needs.

- Design Build Services
  - LED Lighting Service Design
  - HID Lighting Service Design
  - Timing Controls for Lighting
  - Air Circulation/Movement
  - Hydro Setups
  - Life Safety Exit/Egress Planning
- Permit Processing
- Plan Review Processing
- Training
- Professional and Friendly
- No Job too Big or Small

Please call for a free estimate ▸▸▸

HEI

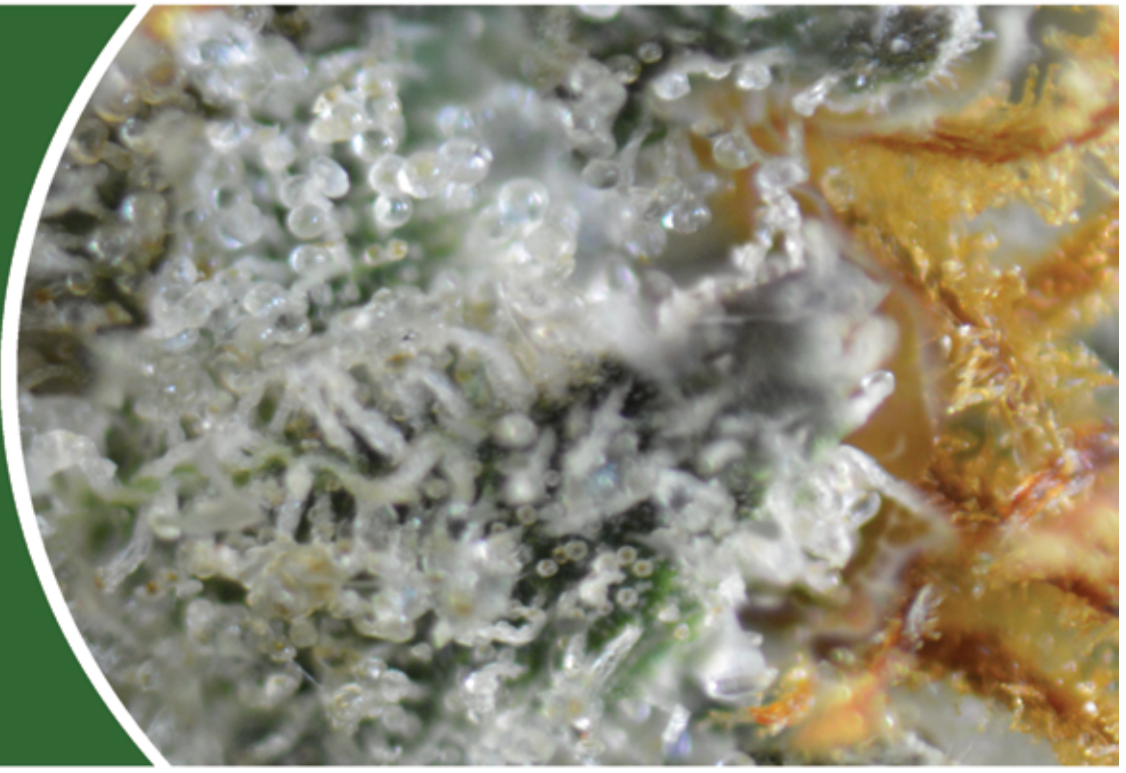
Hamer Electric, Inc.
Jon Murfitt
Commercial Division Manager
126 Industrial Way
Longview, WA 98632
(360) 636-2227 Office
(360) 431-9282 Cell
www.hamerelectric.com
jonmurfitt@hamerelectric.com

Confidence Analytics

14797 NE 95th St
Redmond, WA 98052
(206) 743-8843
info@conflabs.com
www.conflabs.com

Proud to bring excellence in laboratory testing to I502

- $50 p/Test
- 2 gr sample
- 2-4 day turnaround
- No Contracts
- No Account Setup Fees
- Transport Available



When you invest in us, we invest in you...

It's not hard to see why we test more cannabis for the recreational market than any lab in the state. With no account setup fees, no contracts, fast turnaround, and a base price of $50 for a complete I502 test, we offer a level of science and service that can't be beat.

We provide the data, consulting, and tools that ensure you get the most from your production and processing workflows. Let us help you lean your costs, improve your yields, and find your operation's best practices.

Need transportation? Our vehicles travel more than 3,000 miles a week to every corner of the state to help get your samples to the lab quickly, so you can get your product to the retail stores quickly.

Need to test more than a few samples? Call us for volume discounting!

Better Science, Better Service

AI VACUUM OVENS
- WINNERS' CHOICE -

HIGH TIMES
HIGH TIMES 2014 S.T.A.S.H. AWARD WINNER
2013 High Times Stash Award Winner

@AcrossIntl

AI's award winning vacuum ovens are the No.1 choice for cup champions*. They are your BEST choice for curing and converting botanical extracts. With deep vacuum level they can operate at temperatures which allow evaporation and degassing/purging to occur rapidly. This increases productivity and ensures the production of superior quality products with minimal processing time.

Check out our 3.2 and 7.5 cubic foot ovens with new internal shelf heating technology: each shelf in these ovens has its own heater, in-shelf temperature sensor and temperature controller; together with high quality thermal-conducted aluminum and our new low proportional controller technology, the result is perfect uniformity, accurate temperatures, super-fast heating rates, minimum heat loss/exterior temperature and ultra-low power consumption.

Our newly re-designed ELITE series vacuum ovens feature 5-sided jacket heating system that gives you an industry leading 3% temperature uniformity across all shelves, they also provide excellent temperature accuracy, exceptional build quality, and fast heating rates, covered by an industry best 2-year warranty.

* Check our Instagram posts for a list of winners

Re-designed Elite E44 4.4 Cu Ft 20x20x20" vacuum ovens with 5-sided jacket heating, adjustable gas back-fill and 6 aluminum shelves

Edwards vacuum pumps and accessories

AUTHORIZED DEALER AUTHORIZED

Welch diaphragm pumps and accessories

AccuTemp-19 1.9 Cu Ft 16x14x14" vacuum ovens with 3-sided heating, adjustable gas back-fill and 5 aluminum shelves

7.5 Cu Ft

AccuTemp-75 22x24x25" vacuum ovens with 3 heated shelves, 3 in-shelf temperature sensors, 3 controllers, and 6 stackable aluminum shelves

VISIT US AT

CANNACON

AI NEW JERSEY: 111 Dorsa Ave, Livingston, NJ 07039
AI NEVADA: 1197 Greg St, Sparks, NV 89431
888-988-0899 info@AcrossInternational.com

ACROSS INTERNATIONAL
Material processing equipment