



EIGHTH
REVOLUTION



ARCVIEW
CONSULTING

Cannabinoid MONTHLY PLAYBOOK

June 2022





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**For questions or concerns,
please contact**

info@8threv.com

inquiries@arcviewconsulting.com

516.653.2006

arcviewgroup.com

eighthrevolution.com

arcviewconsulting.com

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Dear Reader,

We want to thank you for your trust, and most importantly, your time. With the endless amount of resources at your disposal, we appreciate you leaning on us as your guide through the muddy waters of this industry's limitless news and intelligence.

In an industry that changes as aggressively as ours, we can't stress the importance of effective decision-making enough. Though the information in the report is never meant to dictate specific actions or guarantee certain outcomes, we hope that we're able to provide another voice in the room, one that illuminates, simplifies, and supports you.

If you find one area more helpful than others and want us to expand on it, please never hesitate to reach out. For any suggestions or questions, we can be reached directly at info@8threv.com

Welcome to the Revolution



Bryan Fields

*Managing Director
& Co-Founder
Eighth Revolution*



Kellen Finney

*CSO & Co-Founder
Eighth Revolution*



David Abernathy

*Principal
Arcview Consulting*



Jason Malcom

*Principal
Arcview Consulting*

IN THIS ISSUE

June 2022

The CBD and minor cannabinoid markets experienced a relatively stable month

Kellen Finney, Eighth Revolution

Reading through headlines this month you can feel the change in the air with several companies posting double-digit percent increases in revenue and several large companies posting double-digit percent decreases in revenue. The CBD and minor cannabinoid markets experienced a relatively stable month, especially when compared to the overall global securities market. As with all other agricultural-based industries, operators should at least be aware of the global fertilizer market landscape, as current unrest in Europe will drive raw ingredient prices higher resulting in higher operating expenses downstream. The cannabis industry continues to be a battlefield on the west coast and a brand new market on the east coast. It will be exciting to observe how quickly the East Coast markets mature and if they make the same mistakes the West coast did when bringing markets online. We look forward to providing you with consistent reliable information to navigate both the established and emerging markets.

Two Coasts, different Cannabis Worlds

Bryan Fields, Eighth Revolution

Excitement and interest is booming, and New Jersey is leading the way with \$2 million in cannabis sales on their first day. With other east coast dominos lining up, preparing to kick off adult-use sales, a massive wave of excitement is flooding the entire eastern side of the country. On the flip side, tension is building on the west coast, where extensive industry battles are threatening the existence of many operators that helped to shape these markets into what they are today.

“

**Licensed
marijuana sales
in 2021 eclipsed
coffee giant
Starbucks
- MJBIZ Factbook**

The Media's disconnect with the Cannabis Industry

The cannabis thesis continues to validate what most Americans already feel. Americans are ready for Cannabis legalization. 70% of Americans support cannabis legalization. 7 out of 10! That number is staggering when you break down how divided we are over some, let's call it, basic human rights issues.

Here are signs the thesis is strengthening: New Jersey adult use is live. New York is meandering toward online. Rhode Island just legalized. Maryland and Pennsylvania are all trending in the same direction. This is what substantial industry progress looks like to the outside industry. The outside industry believes the Cannabis industry is thriving. When you look under the hood it tells a different story. Internally, the Cannabis industry is fatigued and it's becoming more evident and harder to ignore.

California Cannabis Operators are fighting to survive. California is the largest domestic market—is this the thriving perspective that outside industry sees happening? Where is the complete disconnect between inside and out? Cannabis isn't the only industry fighting exhaustion or burnout. Burnout is happening in other industries. Post pandemic has nurses reconsidering their place in the industry. According to Mckinsey, "1 in 3 nurses plan on leaving within the year." 1 in 3!

While the Cannabis industry faces different obstacles the same constant applies. Exhaustion from industry-related challenges, pandemic, markets being bloodied, war, potential recession, supply chain, the list is hard to even write. Overcoming all of these obstacles on a regular basis is exhausting.

Is this the next phase of industry maturity or just another obstacle the Cannabis industry needs to overcome? Exhaustion is a byproduct of continuing to fight forward on all fronts. What needs to happen? Relief in some capacity. The industry could use a victory such as safe banking. We have come close before and the hope to disappoint cycle layers on top of the industry's challenges have lessened the morale.

Let the record show that this is a generational opportunity, the ability to be a part of an economy that could likely disrupt all industries, pharma, tobacco, alcohol, CPG, etc.

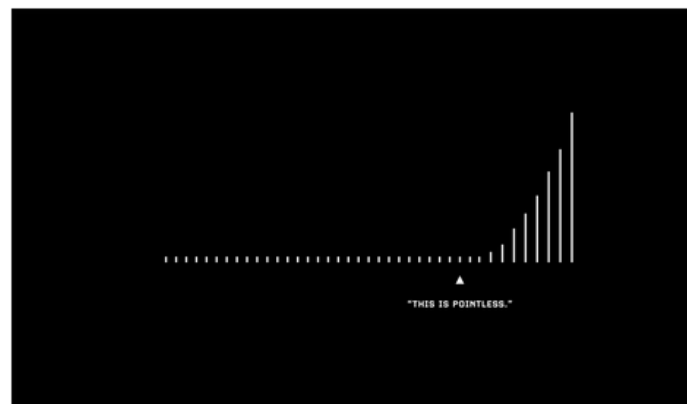
Every step forward leads to five steps back, which is tedious and exhausting, but eventually, you'll come across a tiny glimmer of hope that reminds you of why you are here, and inspires you to keep moving forward.

The thesis is the same.

Stay on the path it's still happening.

The visual, by Jack Butcher, sums it up beautifully.

This may feel pointless, but we may just be one step away from a true breakthrough.



Jack Butcher, Visualize Value



The Dime



 Listen Now

A weekly podcast covering the entire cannabis industry

The Chairman of Cannabis

On the call when the CRC announced TerrAscend was awarded a New Jersey Cannabis license:

On that call, it was interesting. They had already gone through the other six operators that they approved. And the process was, I believe, that the chairman would state the name of the operator and say, buy, have a motion to approve. Then somebody would come on, which other commissioner, and would say a motion to approve and then they would vote. And then they got to TerrAscend.

We felt really good about getting approved, even if it was a smaller number than the seven that ended up getting there. The chairwoman said, 'do I have a motion to approve?', and nobody said anything. It felt to me like everything froze. I went through all these emotions. I thought, 'did my line just die?' I wanted somebody to jump in and say something, but then it meant that, at some point, if they said something, then it meant that it wasn't just my phone that died, which I was almost hoping for that.

All of that happened in ten seconds or so. Then the chairwoman repeated it. And somebody came on and said, 'I make a motion.'

On why NJ is a key state for TerrAscend:

New Jersey will be a huge driver of our business one year from now. Hopefully, we have three stores that are rating in Jersey at over \$40 million in re. And, we should have a strong wholesale business selling to the other operators in the state as well.

We will have finished our expansion in New Jersey in terms of our cultivation expansion, where we're going to double our footprint. So that'll be in Jersey, and Maryland rec will have started or be about to start. We'll have completed that facility and be fully ready to be one of the top players there in that market, and Pennsylvania will be ready for rec as well.

We have three huge drivers coming up. Gage will be much larger than it is now. There are some amazing deals out there for small to buy small mom-and-pop dispensaries for low single-digit EBITDA multiples. So, we'll go from seventeen dispensaries right now to closer to thirty or so.



Jason Wild, Chairman of TerrAscend

On strategy differences from TerrAscend and other large MSOS:

We wanted to go deep into that. We don't have a big footprint. And New Jersey, where we aim to be one of the top one or two players, has so much more of an impact on our numbers and we're so much more leveraged to Jersey than all of the other operators.

I have definitely, even after the approval, been focusing a ton of my time and attention there. When being in this business, you have to keep a lot of balls in the air and certainly Maryland. We are building a large-scale facility down there that should be operational at least in the late summer of this year and hopefully rec will be on the ballot in Maryland. It looks like it will be. So that could be a state that turns a rec, say, sometime next year.

In Pennsylvania, where we have our largest power facility, there is a lot of talk that it will be going rec next year as well, that'll be done legislatively — because I think they can't do it with ballot.



*** The following transcript is AI generated and some words have been removed for spacing. Please listen to the episode for full context.



Emily Paxhia, Managing Director Posiedon

Harnessing The Green Wave

On when they first started investing in cannabis:

Back when we first started investing in cannabis, there were other firms that started to pop up and they would invest in cannabis, but they wouldn't do "plant-touching operators". We would actually invest in plant-touching operators because we couldn't ignore the business potential of these companies.

Now we all know because we hear the earnings calls and see the reports that come out of these operators. And when you're looking at gross margins, some of these companies are in the 60% and you're looking at EBITDA margins above 30%. These are very interesting business profiles, and they are experiencing massive growth year over year.

So, it's interesting how these limitations actually create opportunities when you pay attention.

On how Poseidon brings a value-added approach to the companies they invest in:

We don't just typically write checks.

Although sometimes you just have to know where your attention is best received. Sometimes when you do invest in a company, they're not as interested in having an active investor at the table. If they're running their business as well, we tend to just say, 'you're good to go.' But a lot of times we are actively involved, and it's something we set as an expectation at the outset of the investment for our founders — that we're here.

We're partners. At the beginning of the pandemic, we had an all-hands meeting for the entire portfolio and brought on insurance people, lawyers, accountants, just everything. Everybody had resources at hand for what appeared to be a Black Swan event, as Sequoia Capital called it.

On why Posiedon invested in Juul:

They were doing the razor blade model, which is that they were going to be able to work with partners.

They weren't going to take on the capital-intensive aspect of cultivating processing and infusing the pods themselves. They were going to work with some of these well-known brands like "Jetty extracts" in order to do it. The razor blade model is great because it's a light touch, then you have a pretty strong impact and a great brand experience.



The Dime



Listen Now

A weekly podcast covering the
entire cannabis industry



*** The following transcript is AI generated and some words have been removed for spacing. Please listen to the episode for full context.

Jurisdiction Roundup

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The Fyllo Regulatory Database creates unparalleled visibility at every level of government, with access to more than 4,300 sources in 1,450+ jurisdictions across the country. Today's leading MSOs, SSOs and law firms rely on Fyllo to accelerate research, track licensing opportunities and make better decisions. To learn more or schedule a demo, please visit hellofyllo.com.



Arkansas

Multiple groups of advocates are working to collect signatures to place recreational cannabis on the November ballot. Arkansas voters already approved medical cannabis use in 2016 and the first dispensaries opened in 2019. Responsible Growth Arkansas has put forward the Arkansas Adult-Use Cannabis Amendment, which would expand the current medical system to include a recreational industry. Competitors to that proposal, Arkansas True Grass, are hoping to submit their own Recreational Cannabis Amendment, which includes unlimited license caps, but no decriminalization language. Both groups must submit approximately 89,000 signatures by July 2022 in order to be considered for the ballot.



California

On May 13, 2022, the Governor's Office released a revised 2022-2023 state budget proposal that includes reforms to state cannabis taxes. One of the more significant changes would lower the cultivation tax rate to zero. The proposal comes after the wholesale price of flowers dropped to as low as \$400/lb in some parts of the state and growers became desperate for financial relief. Other budget updates include revised cannabis tax revenue allocations and strengthening tax enforcement policies.




Oklahoma

A campaign, which seeks to place a petition on the November ballot to legalize recreational cannabis, has been given the authorization to begin collecting signatures. Unlike two other cannabis ballot initiatives, SQ 818 and SQ 819, being considered this election season, SQ 820 would not alter the Oklahoma Constitution if approved by voters and therefore requires only 95,000 signatures collected by August 1st deadline. Petition language calls on the Oklahoma Medical Marijuana Authority to license and regulate adult-use cannabis businesses and to establish a 15% excise tax on sales to consumers. The measure would also provide a path to redesignate, expunge, or reverse certain cannabis sentences.

INTERNATIONAL UPDATE




SECTOR ANALYSIS*

| | INDICES | 3 MONTH% | 6 MONTH % |
|---|-------------------|----------|-----------|
| | S&P 500 | -13.69% | -15.90% |
| | DOW JONES | -7.34% | -9.63% |
| | NASDAQ | -15.59% | -24.72% |
|  | GLOBAL CANNABIS | -37.20% | -55.50% |
| | AMERICAN CANNABIS | -38.33% | -45.55% |



"Stocks Keep Tanking As Growing Number Of Wall Street Experts Warn About Rising Recession Risks"

*This text expresses the opinion solely of the writer. The thoughts expressed are independently formed and the writer is not compensated by any third party.

| | SECTOR | 3 MONTH | 6 MONTH |
|---|------------------------------|---------|---------|
| | HEALTHCARE | -11.02% | -17.11% |
| | TECHNOLOGY Sector | -22.57% | -24.94% |
| | INDUSTRIALS | 27.99% | 25.44% |
| | FINANCIALS | -18.40% | -15.94% |
| | CONSUMER CYCLICAL | -23.51% | -27.81% |
| | CONSUMER NON-CYCLICAL | -2.14% | 1.26% |
| | BASIC | -5.48% | 0.29% |
| | ENERGY | 9.41% | 26.61% |
| | UTILITIES | 3.42% | 6.21% |
|  | ALTERNATIVE HARVEST ETF (MJ) | -27.78% | -47.30% |
| | MULTI-STATE OPERATORS (MSOS) | -43.90% | -52.99% |

*Information retrieved from NCV and E*trade.

California Dreaming or Nightmare?

By Marc Brandl

Friday May 13th saw big news released from Governor Newsom's office on the future of the cannabis industry in California. The world's biggest cannabis market has struggled with a host of interrelated problems; high taxes, slow approval of licenses and a legacy grey market some estimate could be as high as 80% of total cannabis sales.

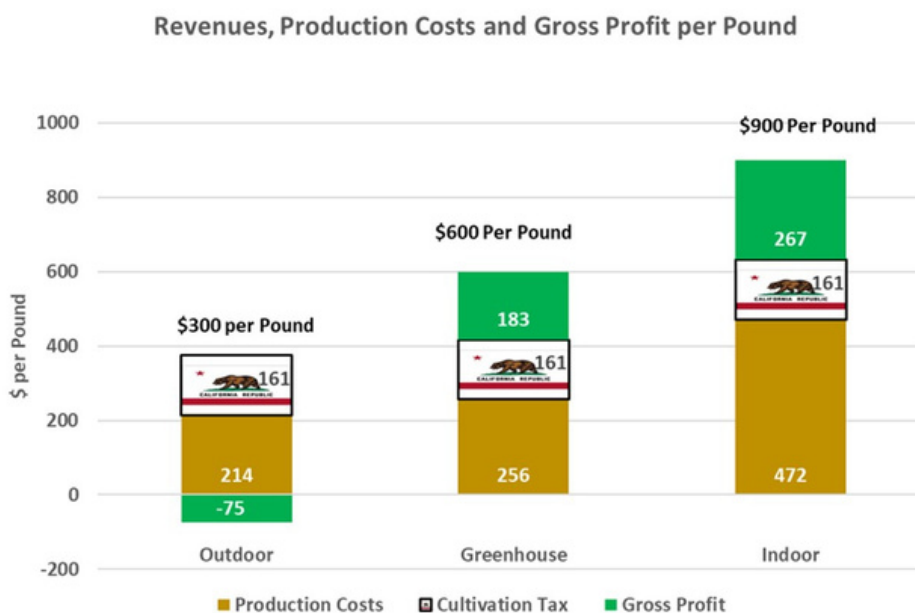
Some of the proposed changes to the regulations include:

- Elimination of the cultivation tax, which is currently at \$161 per pound of flower
- Changes to how tax revenue is allocated
- After three years the excise tax would be increased from 15% to 18%
- Point of Collection and Remittance of the excise tax would be shifted from Distributors to Retail operations
- Launching a \$20.5 million grant program to help municipalities implement retail licensing efforts; on top of \$100 million already allocated to help develop local and legal cannabis markets.

The Governor of California's proposal will need to be amended and approved by the state legislature before becoming law by the end of the 2022 legislative session ending August 31st.

Advocates welcomed eliminating the cultivation tax but there are still broad concerns within the industry about how much change these proposals will really bring about.

The California cannabis industry faces daunting challenges. A [recent survey](#) by the National Cannabis Industry Association of 396 cannabis operators found 26% of California operators are unprofitable. Federal 280E penalties on standard tax deductions combined with high state taxes are the two major barriers to profitable cannabis operations.



California Dreaming or Nightmare?

By Marc Brandl

As of December 2021, only 161 of California's 482 total municipalities and 24 of 58 counties allow commercial cannabis operations. This amounts to 2 retail shops per 100,000 people, a number tripled by another high cannabis state, Washington which has 6.2 shops per 100,000 people.

The lack of access to legal cannabis retailers has ensured a thriving unregulated market continues to thrive in the Golden State. Up to 3000 unlicensed retailers and up to 50,000 unlicensed cultivation sites are estimated to be in operation. The math is simple, pay no state taxes and costs associated with state and local regulations and the price you can charge your customers drops by 50% or more.

One of the major concerns with the Governors proposal is that customers won't see a reduction in the price they pay at legal retailers. Jerred Kiloh of the United Cannabis Business Association, a Los Angeles-based trade group, said, "All they are really doing is shifting some taxes around, and it's not ever going to get to the customer." Advocacy groups such as UCBA believe the excise tax needs to be lowered to 5% to reach customers pockets and draw them in to the legal market.



United Cannabis Business Association @UCBA_Network · May 14

And it's even possible the plan could result in higher costs for consumers at the retail counter, Kiloh warned. "All they are really doing is shifting some taxes around, and it's not ever going to get to the customer,"



sacbee.com

Tax cut for California pot industry: Too little, too late?

Gov. Gavin Newsom is proposing a temporary tax cut for California's ailing marijuana industry, but businesses say it falls short of what's ...

The California cannabis industry is the oldest in the US with its landmark passage of Prop. 215 in 1996 which legalized cannabis for medical patients and began the path to what we see today with 37 medical cannabis states and 18 adult recreational states. However, in the background, California operators have always faced many heavy burdens from the state. Hundreds of federal and state police raids per year on operators were the norm not that long ago. Unfriendly and outright hostile local politicians, sheriff's departments, bureaucrats, and neglect from Sacramento have been a feature, not a bug of doing business in California.

Since 1996 California has seen great brands, product innovations, a thriving culture and a reputation for the best cannabis in the world. Ambitious companies such as Glasshouse Brands, and 4Front along with many others continue to invest hundreds of millions of dollars into a golden future that always appears just around the corner. Faced with these challenges and concerns about a broader recession and reduced consumer spending, we'll soon see how far away that golden future actually is.

Follow Your Nose – Why Terpenes Matter

An elevator conversation with Mark Lange, Ph.D.

It is not THC or CBD that makes cannabis strains unique – it is terpenes. We need a stronger focus on developing the right genetics in this industry to realize the full potential of terpenes.

What are Terpenes?

This term is used to classify the largest class of natural products, with over 50,000 known structures. However, for cannabis connoisseurs, it is the terpenes with a skeleton of up to 15 carbons that you should really care about, and there are likely hundreds present in cannabis.

How Do Terpenes Contribute to Strain Uniqueness?

Terpenes largely determine the particular smell and aroma of each strain – gassy, earthy, woody, spicy, floral, fruity, you name it. While there are other contributors, for example, sulfur-containing metabolites associated with skunkiness and esters adding sweet notes, the generally high abundance of terpenes gives them the upper hand over the other aroma volatiles.

How Do Terpenes Impact Your Experience?

The terpenes present in cannabis are not psychoactive on their own but there is scientific evidence that they can enhance or mitigate the effects of cannabinoids. The synergistic action of terpenes and cannabinoids, and possibly other cannabis metabolites, has become known as the “entourage effect”. How this works exactly is not entirely clear, as terpenes bind only weakly to the receptors known to mediate the action of cannabinoids. Unfortunately, well-designed studies with large numbers of participants to directly compare different cannabis strains are currently lacking. Despite the widespread legalization of medicinal and recreational cannabis, this has been very difficult to do in the U.S. We also need to take psychology out of the equation with double-blind studies, where neither the participant nor the researcher knows which sample the participant is testing until after the trial is over. There is an obvious financial incentive to assess the clinical efficacy of cannabis-based formulations to address specific ailments but who is going to spend copious amounts of money on investigating your experience as a recreational user? Think about it – maybe you can do some blind testing with like-minded friends who also want to know. But we also need a concerted large-scale effort to figure this out.

Are Cannabis Terpenes Special?

Well, it depends. The individual terpenes found in cannabis are very common in the plant kingdom. Myrcene is also abundant in hops; bergamot oil contains a high proportion of L-limonene; pinenes dominate the emissions from conifer trees, linalool gives lavender its floral scent, and so on. It is the singular combination of sulfur-containing (skunky) volatiles and various terpenes that give each cannabis strain its unparalleled aroma.

Follow Your Nose – Why Terpenes Matter

An elevator conversation with Mark Lange, Ph.D.

Can One Breed Cannabis for Specific Terpene Profiles?

Yes. By carefully selecting parents for crosses, one can obtain progeny with novel aroma characteristics. But there are limits. Based on analyses of the currently available genome sequences for common commercial cannabis strains, it appears that they all contain similar sets of terpene synthase genes, which are critical determinants for terpene diversity. Breeding for potency has evidently led to a lack of diversity in the breeding pipeline. We now need to bring back that diversity to realize the full potential of terpenes in cannabis. Developing the right genetics in this industry is going to be key for a bright future.



Mark Lange, Ph.D.
Chief Scientific Officer

About Dewey Scientific

Dewey Scientific is an agtech innovator pioneering solutions for a sustainable and thriving cannabis industry. The privately funded company leverages genomics, data science, and classical breeding methods to improve the quality and genetic diversity of cannabis in the Pacific Northwest. Dewey Scientific has published industry leading research in several peer-reviewed scientific journals, including Plant Physiology and Frontiers in Agronomy. Beyond their breeding work, Dewey owns and operates Dewey Cannabis Co. - a recreational cannabis brand in Washington state.

HOT IN THE NEWS

June 2022

1 Ohio Will Not Vote On Marijuana This November, But Lawsuit Settlement Puts Legalization Activists On Path For 2023

2 Seven In Ten Biden Voters Support National Marijuana Legalization, New Poll Finds

3 New York Senator Files Bill To Allow Community Marijuana Gardens For Adults Who Can't Grow At Home

4 Michigan Broke Marijuana Sales Record In April, State Data Shows

5 Glass House Brands Acquires New California Cannabis Dispensaries

6 California Governor Proposes Eliminating Marijuana Cultivation Tax

7 Licensed Marijuana Sales in 2021 Eclipsed Coffee Giant Starbucks



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info@8threv.com
(516) 653-2006
www.eighthrevolution.com