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# Cannabinoid MONTHLY PLAYBOOK

September 2022





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# Dear Reader,

We want to thank you for your trust, and, most importantly, your time. With the endless number 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 of information more helpful than others and want us to expand on the topic, please never hesitate to reach out. For any suggestions or questions, we can be reached directly at [info@8threv.com](mailto:info@8threv.com)

## Welcome to the Revolution

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## IN THIS ISSUE

# September 2022

### Beginning of harvest season

**Kellen Finney, Eighth Revolution**

The atmosphere surrounding the CBD industry when compared to the THC industry is very different. While price compression continues to plague both industries, CBD seems to have lost its mass appeal, whereas THC seems to be just beginning its journey upward. The main difference is that the THC industry has several catalysts that continue to support the space, whether that it's the new domestic markets coming online (New Jersey, New York, Florida's recreational market) or the global markets starting to originate (Thailand, Europe, etc.). The CBD market's only catalyst seems to be the federal government classifying the molecule as a nutraceutical, which would pave the way for easier adoption by large retail stores. However, the science supporting CBD wellness claims continue to be lackluster at best. The next 12 months in the CBD industry will test the grit of most organizations as business models are tested and war chests are depleted in attempts to survive the price compression and inflation.

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### The Big Apple leads the way

**Bryan Fields, Eighth Revolution**

New York takes strong steps forward, and this quote by Troy Datcher, CEO of The Parent Company, says it best: "We appreciate that these first cannabis processors in New York will be providing mentorship to social equity applicants to enable broader participation in the state's industry. However, as we've learned in California, it is critical that we create a policy environment that gives these businesses a chance to succeed."

While this is a critical first step, it's important to recognize that it's not the only step needed. Given the current framework for how the industry operates, it's extremely challenging for these businesses to get their feet off the ground. We must, as an industry, do more to help them. This is a good first step. Now let's continue.

“

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**“Everyone wants to live on top of the mountain, but all the happiness and growth occurs while you’re climbing it.”**

***– Andy Rooney***

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# What is Cannabis Normal?

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According to Merriam-Webster, the term “normal” means “conforming to a type, standard, or regular pattern, characterized by that which is considered usual, typical, or routine.” For example, normal working hours under normal circumstances would just be considered a normal, average day.

So, normal is basically a social expectation based on a statistical majority. Here are a few normal aspects—that I would assume most would agree with—of being in the workforce:

- 9-5 working hours or standard business hours.
- Working in an office.
- Standard business trends.
- Essentially, calmness and expected peace in the waves.

Or, as the boomers like to say, “you put your time in for 40 years and work your way up in a company.” Now, let’s try and figure out normal in relation to Cannabis.

When I think about Cannabis, I truly don’t know what normal is - or what normal is for 8th Revolution. In my long but short 4.5 years in Cannabis (how can that be short yet feel like longer?) the Farm Bill was a game changer for the space. In my early days, I watched the excitement of the CBD industry literally explode as I sat in on countless project calls where I saw the optimism of farmers and investors who were beyond excited to pivot into the cannabinoid space. The fear of the unknown was practically nonexistent. This was a gold rush, and many started growing acres and acres of CBD. The plan was to scale as big as possible as fast as possible, and sales would take care of themselves. Boy, were they wrong.

I remember my first MJBIZCON in 2018 where everyone was handing out CBD-infused products.

The Farm Bill was early in 8th Revolution’s existence, and a large portion of our business was helping these facilities get up and running. This wasn’t its sole direction, but it was exploding and doing so quickly. Hence, we did what we always do and helped the industry solve problems.

Anyone who has ever started a business understands that it takes time to build traction.

Fast forward a little over 1.5 years, halfway into our business, and we were finally finding our “flow,” or what many like to call “normal.” Then, we experienced a curve ball.

The incoming global pandemic.

This not only changed our business efforts: it disrupted the entire world.

This is what changed in that instant.

Cannabis was deemed essential, and numbers started to wildly increase. The Cannabis industry essentially forever changed again.

The world as we knew it changed completely, and life was no longer as it used to be. Normal was no longer normal, and now, normal became something very different.

This time, the phrase “the new normal” for business meant:

- Remote work.
- Digital tradeshow.
- Explosion of Zoom and Peloton use.

Life was completely disrupted, and normal was, well, different. Again.

As we come through the other side of the global pandemic, normal is changing once more.

# What is Cannabis Normal?

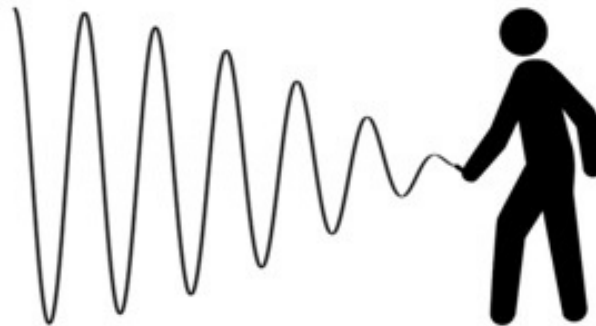
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Life is starting to slowly settle down, but not without its own adjustments, yet again, to what now has been perceived as our even newer "normal":

- Inflation
- Climate issues
- Ukraine-Russia war
- Monkey-pox
- Cannabis businesses are getting re-rated.
- Businesses are starting to push for in-the-office work.

Life is constantly changing ,so really, what is normal?

One of my favorite phrases is ,“a picture is worth 1,000 words,” so here you have what normal is:



## Wikipedia

It's an endless series of ups and downs and adjusting to the changes in life as the world continues to evolve. One of my favorite aspects of the Cannabis industry is knowing that I must bring it every single day to fight against the currents.

It's also one of my least favorite parts of Cannabis.

It's hard, the game changes often, and we don't really have a true "normal."

We don't even have banking and people are still in prison for Cannabis-related crimes!

So, here is my takeaway: the speed of change in the Cannabis industry is frustrating. Federal guidance continues to be absent, and how the industry will be played in the future is likely not the same as it is today. Some are in survival mode, and others are looking to figure out how to set themselves up for success.

Be nimble, plan for different scenarios, and recognize that data trends are helpful but not the sole variable when making decisions.

Understand that it will take time —a lot of time— for the Cannabis industry to finally operate like a normal industry. Recognize that the world outside of the Cannabis industry is also fighting the new normal, too.

I leave you with this quote from Karyn Kusma:

“There's no glory in climbing a mountain if all you want to do is to get to the top. It's experiencing the climb itself – in all its moments of revelation, heartbreak, and fatigue – that has to be the goal.”

Enjoy the journey.





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A weekly podcast covering the entire [Cannabis Industry](#)

## Cannabis a Political Pawn

### Current State of Cannabis

The bottom line is that we're operating in the most inefficient capital market scenario that we ever will as an industry.[...] so, that's the good news, and the bad news, is [that] we're here. The good news is [that] it's typically not going to be for much longer.

### A message for investing in the Cannabis Industry

I would say if you're committed to the industry and you have some money that you want, put into the capital markets just deploy it, but stop looking at it because the reality is that it's this way until something happens legislatively.

We're not too far off from, hopefully, something at the federal level that could be 3, 5, or 7 years away. We think there's so much value in not only the public companies but even more so in some of these private companies. So we think the best time to be investing in Cannabis is right now.

### The first thing Matt would change if he oversaw California's Cannabis Market

I would immediately say that we're going to completely redo our tax structure to where we are incentivized as a state to shut down the illicit market in order to generate more revenue than would come in because we're only converting about 40% of the market right now in the state.



Matt Hawkins, Founder of EEC Capital

I think Gavin Newsome finally come to the, understanding that he can only generate more revenue by going after the carrot that's just sitting there waiting to be taken, which is the illicit market. But, you have to shut it down first. [...] You have to tamp it down, and you have to reduce the tax burden on the legalized operators in order to convert users.

If you get the costs in a similar range, people are going to go to dispensaries. They're not going to buy it on the street. Look what happened during the pandemic. We had a surge, and we did have a tamping down of the illicit market. Because of that very reason, we had curbside delivery. The Cannabis industry pioneered social distancing and curbside delivery and pickup.

### A lessons learned to pass onto the next generation :

Roll up your sleeves and work hard, whether it's in the Cannabis [industry] or anything else. This is not a get-rich-quick industry. It takes a lot of blood, sweat, and tears to build companies in this space.



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

## Major changes ahead for the Canadian CBD market

By Marc Brandl

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Canadians may soon be able to purchase CBD health and wellness products at their local grocery store after a government scientific advisory panel found CBD 'safe and tolerable' as an OTC medication.



Current regulations limit access to CBD products to either doing so by obtaining a doctor's prescription or making purchases only from cannabis retail shops. After three years of research and deliberation, a scientific advisory panel appointed by Health Canada concluded that CBD is "safe and tolerable for short-term use (a maximum of 30 days) at doses from 20 milligrams per day to a maximum dose of 200 mg/day." If the changes are approved, grocery stores and other non-cannabis retailers will be able to sell CBD products for human consumption as an OTC medication. \*Most legal CBD products are currently manufactured and sold through Canadian licensed cannabis producers.

If the recommendations are approved by Health Canada, the changes would have wide-ranging effects.

- **Growth:** In 2020 the Canadian Health Food Association (CHFA) reported that the Canadian CBD market could grow to \$2 billion (CAD) with a 7% CAGR if regulations were changed to sell CBD as an OTC health product.
- **Competition:** New market entrants will enter the space without the need to be a cannabis LP or pharmaceutical company.
- **Branding:** Severe marketing restrictions would be lifted allowing companies to better market their products.
- **Global access:** Import and export restrictions on CBD products, virtually non-existent now, would be eased.

## Major changes ahead for the Canadian CBD market

By Marc Brandl

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After a review of over 100 scientific and medical studies, the panel made four primary recommendations about the OTC sale of CBD products for human consumption:

- Ask patients to first consult a doctor if they're also taking other medications
- Carry statements on potential interactions between CBD and other drugs or alcohol
- Bear "prominently placed" warnings recommending that CBD should not be used by individuals who are pregnant or nursing, or by people with allergies or hypersensitivity to cannabis
- Carry dosing instructions and warnings of potential side effects, especially at high doses

Approval by Health Canada, an agency US FDA, will come by the end of the year. The panel was composed of nine experts, and they endorsed the recommendations in the report unanimously. Based on the previous history of similar panels, full approval of the recommendations is expected to be implemented nation wide.

The panelists also looked into animal usage of CBD and concluded that CBD is safe for dogs at low doses – (less than 4 milligrams per day for every kilogram of animal weight).

Important challenges remain. Can the liberalization of federal CBD regulations turn Canada into a global CBD leader similar to its role in global cannabis? And will this comprehensive, thoughtful review with the weight of Health Canada behind it serve as a model for the FDA, EU EMA, and other government agencies currently considering how best to regulate CBD and protect consumers? As we've seen with cannabis liberalization expect surprises.

*\*CBD topicals and cosmetics were not in the scope of the panel are already widely available*

# Jurisdiction Roundup

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The Fyllo Regulatory Database creates unparalleled visibility at every level of government across the United States with access to more than 800,000+ files and entries addressing cannabis regulations. 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](https://hellofyllo.com).



## Florida

A new campaign seeking to place cannabis legalization on the 2024 ballot has been launched by the group Safe & Smart Florida. Representatives of the group believe their initiative will avoid legal challenges, but they are already facing pushback from industry advocates that say the measure will not address social equity. As it stands, the petition's language favors existing medical cannabis companies and does not guarantee an expanded licensing process. The group will need to collect approximately 900,000 signatures from voters to qualify.



## Missouri

Despite doubts that a Missouri ballot initiative to legalize cannabis would garner enough signatures to qualify for the election, voters will get to have their say this November. In August, the Secretary of State confirmed that the measure would appear on the ballot. The legislation would establish an adult-use licensed cannabis market, permit personal cultivation and work to release and expunge the records of those with cannabis related non-violent criminal convictions.



## North Dakota

A North Dakota ballot petition to legalize recreational cannabis has officially been verified for the November 8, 2022, election. The group New Approach North Dakota submitted nearly 26,000 signatures in July, approximately 10,000 more than required for qualification. If approved by voters, the measure would allow personal possession and retail sales of cannabis by adults 21 and older. A licensed marketplace could be ready to launch by the fall of 2023.



# INTERNATIONAL UPDATE

## Canada

Is Canada (finally) going to allow CBD to be sold in mainstream retail?

## Germany

German Health Minister lays out next steps for cannabis legalisation

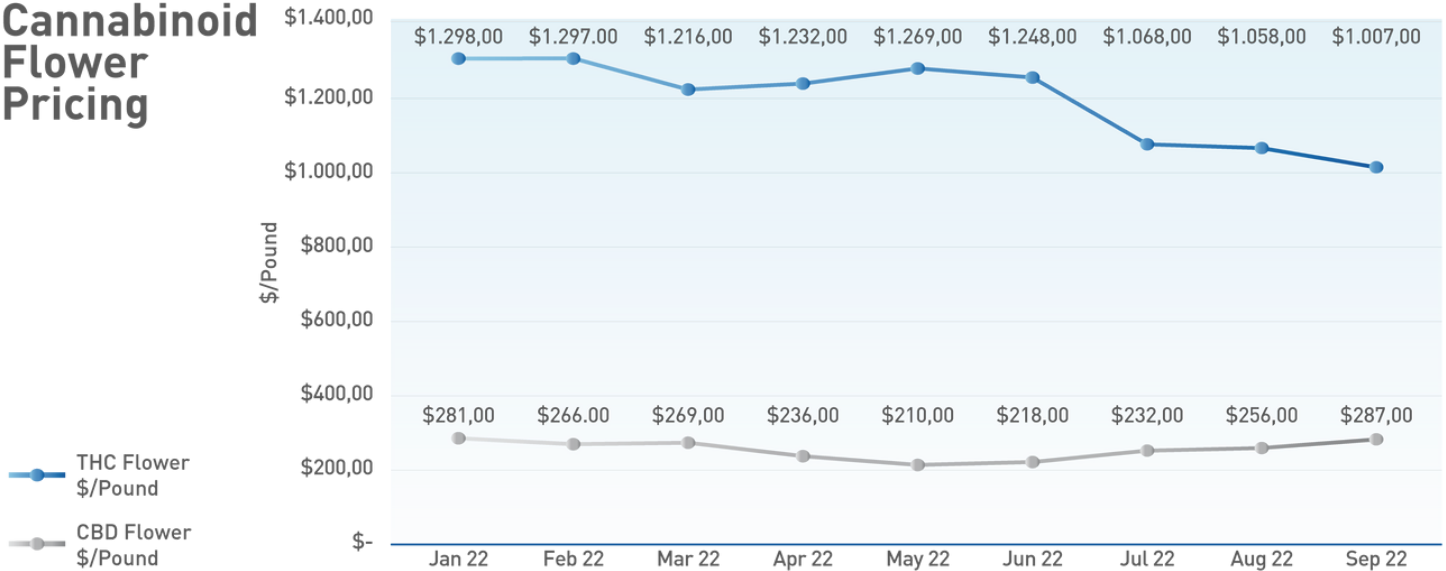
## Malaysia

Malaysia eyes Thai weed policy

# WHOLESALE FLOWER PRICING

## CBD vs. THC Flower

### Cannabinoid Flower Pricing



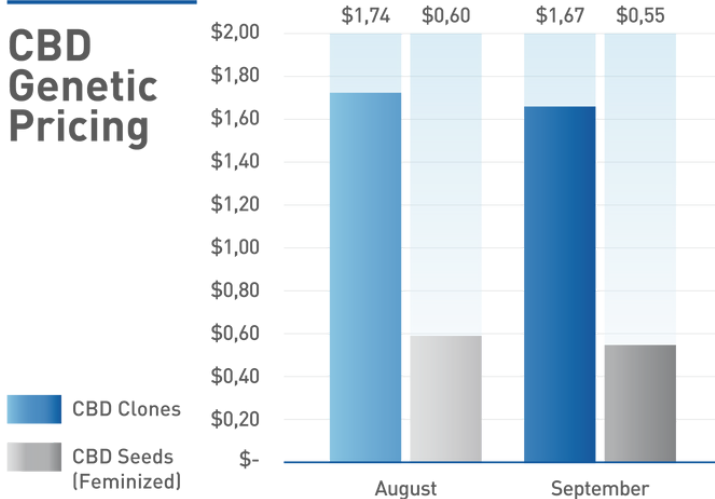
The average spot price for THC flower decreased for the 4th month in a row to \$1007 per lbs. whereas smokable CBD biomass prices increased for the 4th month in a row to \$287 / lbs. Even though there is still approximately a \$720 / lbs. price difference, CBD biomass wholesale prices continue to gain on THC flower. From an economic perspective farmers growing THC flower will, on average reap a 71% higher return for their crop than farmers cultivating CBD flower. There are significantly higher costs associated with licensing and regulations when comparing the industries but demand for THC flower continues to rise as new states come online, and the demand for CBD continues to decrease when observing the largest public players in the space. These combined factors make one wonder which crop will provide more financial return in the coming years.



# WHOLESALE DATA

## WHOLESALE HEMP GENETICS PRICING

### CBD Genetic Pricing



As the summer wraps up and harvest season quickly approaches, the genetics market continues its downward trend. This is to be expected, given the location in the growing cycle. However, CBD clone prices in September are expected to be around \$1.67 / clone, down 28% from last year when a clone was \$2.43 / clone.

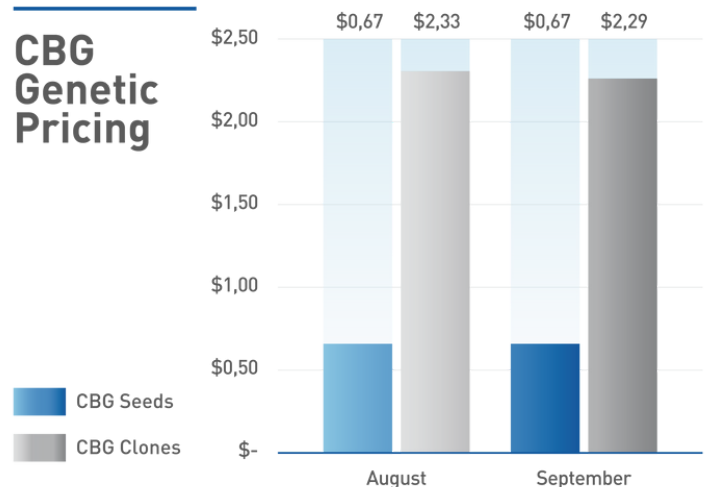
It is common for the genetics in other commodity markets to experience seasonal lows based on the time of year. Globalization does help other agricultural commodities, which will hopefully be an option for the cannabinoid-based hemp industry in the future.

CBD clone prices  
**down 28%**  
year over year



Similar to the CBD genetics market prices, CBG clone genetic prices are also down. It is important to note, however, that CBG seed prices stayed the same from last month. This is a sign that the CBG market has stabilized, and further support for this stabilization can be observed when analyzing the biomass wholesale prices for CBG, which is covered later in the report.

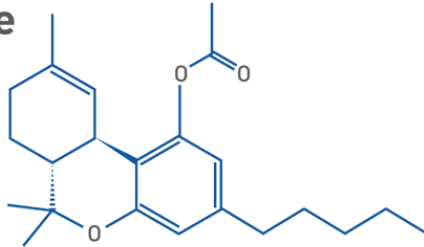
### CBG Genetic Pricing



# Minor Cannabinoid Wholesale Pricing

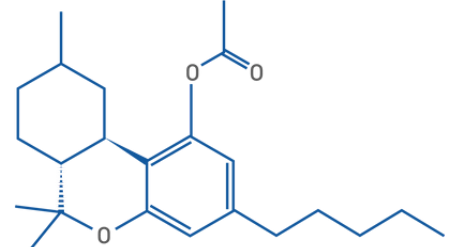
## THC-O-Acetate Distillate

August 22	\$ 893.34 / kg
September 22	\$ 875.00 / kg



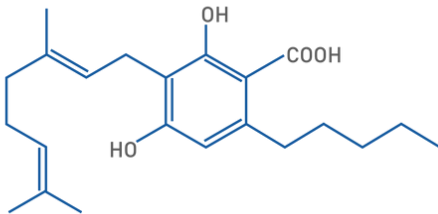
## HHC-Acetate Distillate

August 22	\$ 1,358.34 / kg
September 22	\$ 1,130.00 / kg



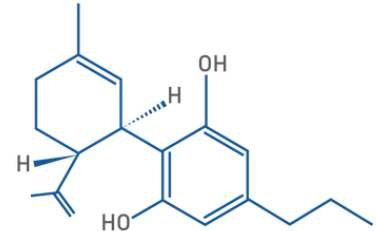
## CBGA Isolate

August 22	\$ 3,550.00 / kg
September 22	\$ 3,391.67 / kg



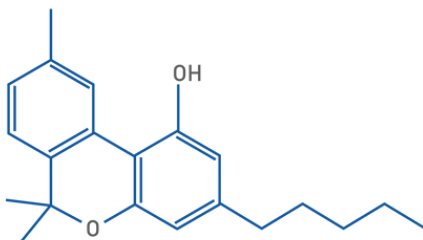
## CBDV Distillate

August 22	\$ 1,990.00 / kg
September 22	\$ 2,000.00 / kg



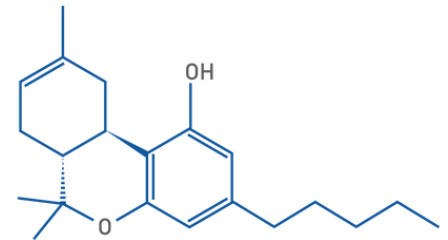
## CBN Isolate

August 22	\$ 2,858.50 / kg
September 22	\$ 2,400.00 / kg



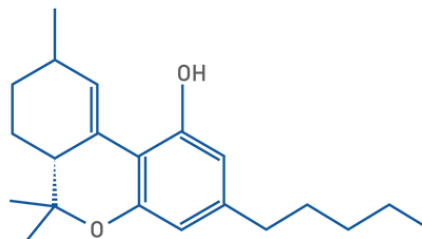
## Delta-8 THC Distillate

August 22	\$ 484.50 / kg
September 22	\$ 484.00 / kg



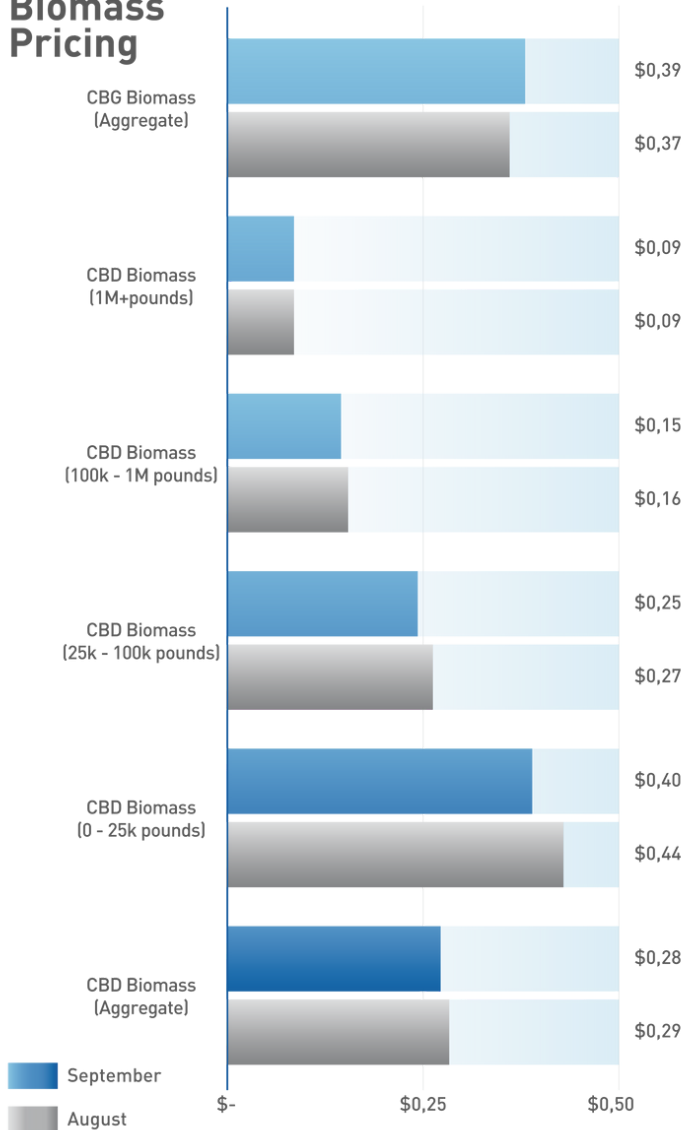
## Delta-10 THC Distillate

August 22	\$ 1,622.00 / kg*
September 22	\$ 1,431.00 / kg



# WHOLESALE HEMP BIOMASS PRICING

## Biomass Pricing

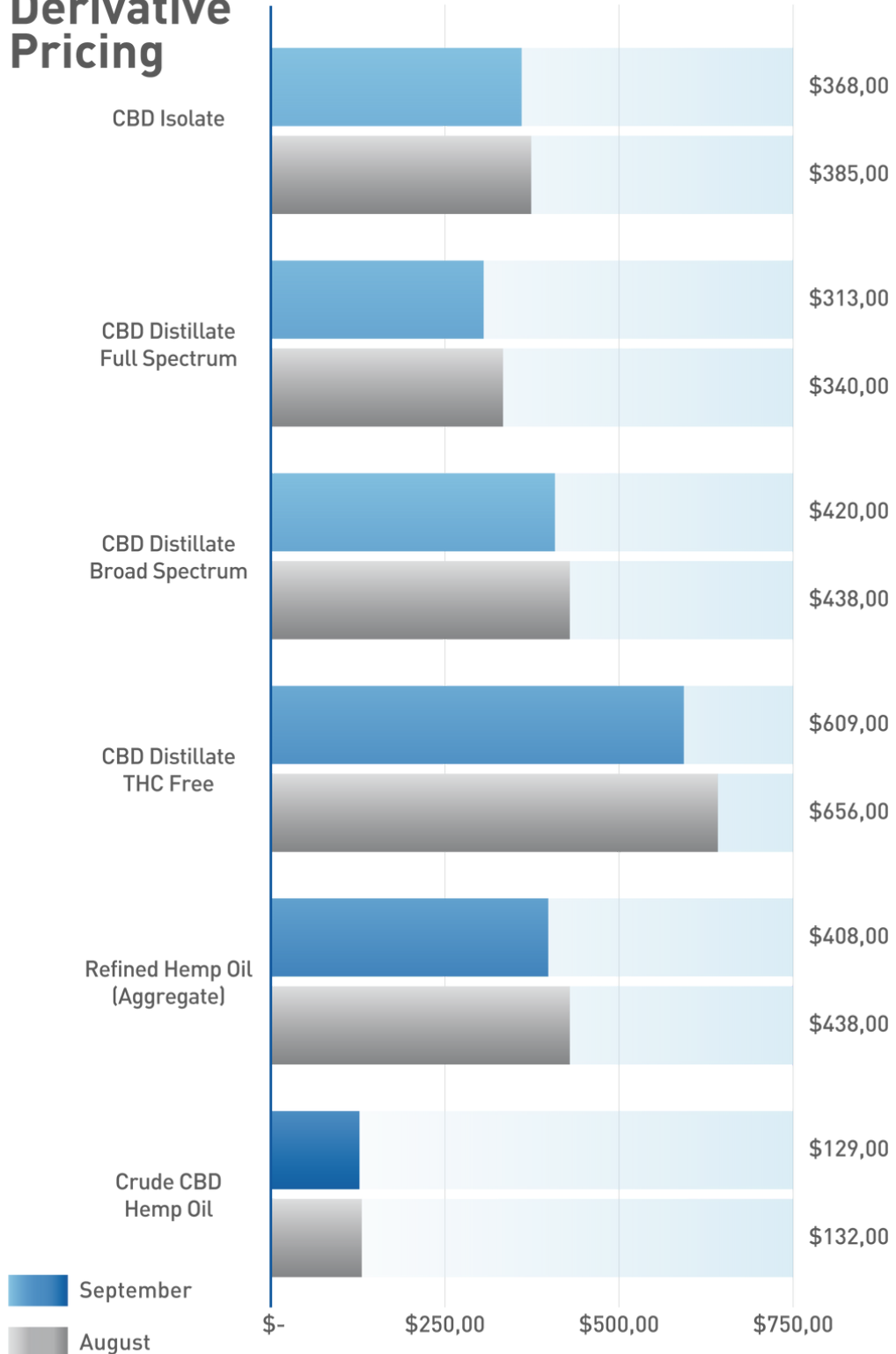


The average price for CBD biomass dropped to another historical low of \$0.28 / % CBD / lbs., down only \$0.01 from last month. The next 6 months will be some of the hardest times for operators in the space, as inflation and price compression test not only their business model but their commitment to the industry. Most reporting agencies are presenting data that suggest the oversupply of biomass is starting to dwindle and that this year's harvest will only provide a fraction of that of previous years. Basic economics of supply and demand suggest prices should increase. In theory, the prices should be increasing; unfortunately, that is not the reality most operators are facing.

CBG biomass continues to provide stable pricing for wholesale operators. The only issue continues to be volume as CBG is not as widely distributed or consumed. Regardless the price for each CBG product category has been significantly more stable than other cannabinoid wholesale products such as CBD or even THC depending on the market.

# WHOLESALE DERIVATIVE PRICING

## CBD Derivative Pricing



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**Founded on the belief that quality cannabis science  
is at the core of human health and well-being.**

For nearly 10 years we have advocated for collaboration, transparency, and the evolution of the cannabis industry toward more reliable and sophisticated methods.

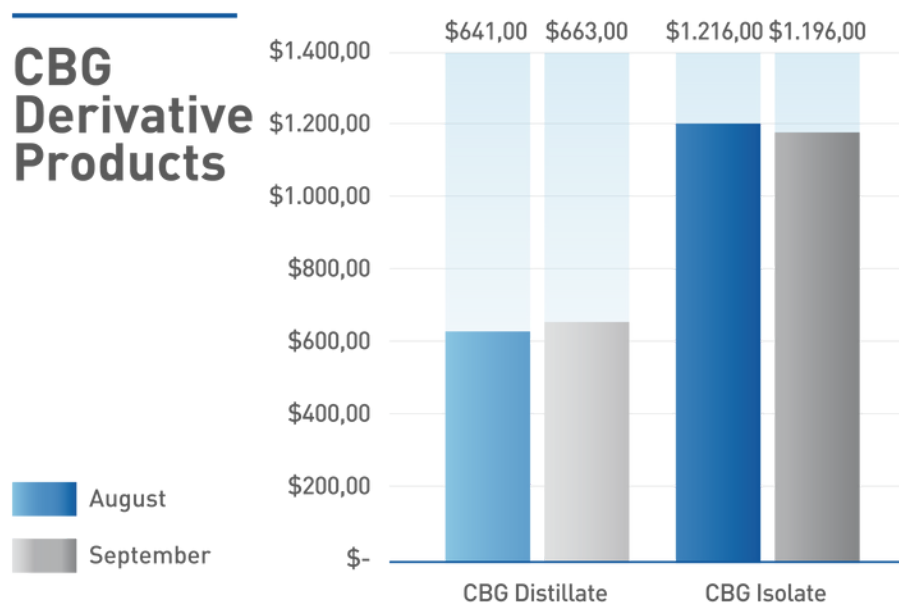
As our industry continues evolving, we remain focused on supporting that growth with continued elevation of testing standards, optimization of production processes, and collaborative sharing of scientific knowledge and results.



## WHOLESALE DERIVATIVE PRICING

The price for a kilogram of CBD isolates decreased to approximately \$368 / kg this month, down 4% from last month. The price decrease in CBD isolate suggests that even though there is a proliferation of minor cannabinoids that are synthesized using CBD as the base material, the raw supply of CBD isolate was so great that even with the new revenue outlets inventory has not been affected. This trend can be seen across the CBD product category with full spectrum CBD oil dropping 8% from last month.


The continued decrease in wholesale prices is a direct result of the lack of sales at the retail level. Hemp Benchmarks reports that the three largest publicly traded CBD companies (Charlotte's Web Holding (CWBHF), cbdMD (YCBD), and CV Sciences (CVSI)) all posted significant revenue drops in Q1 of 2022 when compared to last year, suggesting that the consumer demand has waned for CBD products.



The CBG wholesale marketplace continues to provide the most stable cannabinoid across the industry as far as pricing is concerned. The CBG distillate wholesale price per kilogram increased by \$22. **Due to the decreased volume of transactions for CBG products we believe most operators avoid the space due to the lack of upside.** We believe this sector of the cannabinoid space could provide organizations with consistent revenue, even if there is a smaller upside when compared to other cannabinoids. The game for the next 12 months will be survival.




## SECTOR ANALYSIS\*

	INDICES	3 MONTH%	6 MONTH %
	S&P 500	10.99%	-5.66%
	DOW JONES	6.35%	-0.08%
	NASDAQ	12.09%	-4.28%
	GLOBAL CANNABIS	-19.50%	-44.62%
	AMERICAN CANNABIS	-11.25%	-40.37%



### Cannabis Price targets adjusted. Vivien Azer "contemplates a lack of regulatory catalysts coupled with macro headwinds"

\*This text expresses the sole opinion 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	14.16%	-0.86%
	TECHNOLOGY Sector	16.63%	-12.34%
	INDUSTRIALS	11.70%	15.80%
	FINANCIALS	6.04%	-14.00%
	CONSUMER CYCLICAL	17.54%	-12.27%
	CONSUMER NON-CYCLICAL	0.096%	-2.86%
	BASIC	-2.06%	-7.93%
	ENERGY	3.79%	11.88%
	UTILITIES	7.64%	10.68%
	ALTERNATIVE HARVEST ETF (MJ)	-18.98%	-34.98%
	MULTI-STATE OPERATORS (MSOS)	-16.70%	-44.35%

\*Information retrieved from NCV and E\*trade.

## The Cannabis Workhorse: Trichomes

There's no doubt about it, cannabis is the most recognizable plant in the world. Either through pop culture, propaganda, or religion most people can identify its signature leaf. The reason for this is simple, **humans love the feeling** that comes from ingesting the unique compounds found in cannabis.



commons.wikimedia.org



It's ironic though. That famous leaf produces very little of the compounds that get you high. That function is the responsibility of a much lesser-known part of the plant, the trichome. Trichomes are tiny hair-like structures that coat cannabis flower. They're what make great weed look "frosty," feel sticky and smell unique. Broken down, they are **tiny chemical factories** that focus on one thing: making cannabinoids and terpenes.

Trichomes are far from unique to cannabis, however. More than **30% of plants** have trichomes. Go check the tomatoes you're growing on the patio. Did you see them? All over the leaves, stems, and in some cases, the tomato fruit itself. Nearly any herb you cook with has trichomes on the living plant.

Pine trees have specially designed trichomes referred to as resin ducts inside their needles. Trichomes are everywhere in the plant world and serve various plants with various functions. Some **trichomes protect the plant from insect invaders**. Others provide a way to send signals to their neighbors. Others help with attracting animals that help with pollination and seed dispersal.



# The Cannabis Workhorse: Trichomes

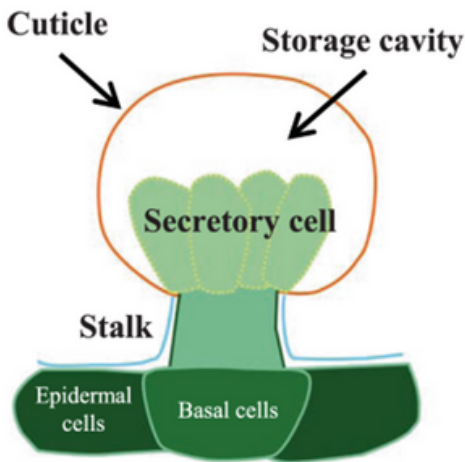


Fig. 2. Bartholomew, E.S., Liu, Z. et al. (2021)

Let's start with the basics. Plants perform photosynthesis. To refresh a 7th-grade biology class, plants turn carbon dioxide into sugar and oxygen. Trichomes generally don't do this. Trichomes take sugar from their neighboring leaf cells and turn that sugar into special chemicals, like terpenes and cannabinoids. Its because of these tiny special cells that the global cannabis industry exists.

To recap: trichomes = good. Great, you've got the basics. As the cannabis market has matured, so have its consumers. While compressed trichome products, like hashish, are likely as old as written history, the past decade has seen an explosion of consumer products focused on trichomes. Starting with the rise of BHO (butane hash oil) in the legacy market of the early 2000s, trichome concentrates now makeup >20% of legal cannabis sales. With that growth has come great innovation in producing concentrated cannabis products.



flowhub.com/cannabis-industry-statistics



One of the concentrate segments that has seen massive growth over the past two years is solvent-less rosin. Flower, or isolated trichomes (hash), is pressed between two heated plates to produce a waxy concentrate used typically for dabbing or vaporizing. This is a product that is considered more of an art than an exact science.

Science does play a part though. As this product has exploded in popularity, rosin producers have identified which traits make for exceptional rosin quality. The most referenced plant trait for rosin production is the trichome cuticle. Where the bigger the cuticle, the higher the rosin quality. To supply superior cultivars for rosin production, breeders have now turned their attention toward breeding for bigger trichome cuticles. While the cannabis flower (and its leaf) get the credit for a multi-billion-dollar industry, the trichome is the true workhorse that should garner the spotlight and will continue to drive innovation in consumer-focused cannabis products.



# The Dosing Project

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## Part III – Beyond Cannabinoids

### *Terpenes, thiols, and esters expand Cannabis characterization*

U.S. federal regulation of Cannabis based products is inevitable. For regulatory purposes, Cannabis products are likely best categorized as dietary supplements. Dietary supplements are not considered food or medicine. Consumers use dietary supplements for diverse reasons, including improving or maintaining general health and wellness.

The Dietary Supplement Health and Education Act (DSHEA) of 1994 sets the regulatory framework for dietary supplements defining products that contain one or more of the following ingredients: a vitamin, a mineral, an herb or botanical, or a concentrate, metabolite, extract, or combination of these ingredients. Cannabis products are primarily manufactured and marketed as botanical, thereby fitting the description for dietary supplements.

Cannabis contains several hundred naturally occurring ingredients. Beyond the set of unique cannabinoids are compounds that contribute to flavor, color, aroma, and health effects. This broad spectrum of active constituents presents the biggest challenge to characterizing Cannabis products. As a solution, Cannabis characterization should include a comprehensive lexicon of the multiple chemical classes intrinsic to the plant.

The CESC, a nonprofit Cannabis research organization, uses Multivariate Analysis (MVA) in exploratory fashion to generate predictive models based on terpene content. Principal Component Analysis (PCA) and Hierarchical Clustering Analysis (HCA) can reduce the multi-dimensional complexity of the Cannabis terpene space thereby providing an easily interpretable model.

The CESC's [Dosing Project initiative](#) addresses the problem by analyzing the terpene content of Type I (THC-dominant) Cannabis flowers. Understanding that flowers are the primary source of all Cannabis botanical products, [Dr. John Abrams](#), co-founder, and Chief Science Officer of the [CESC](#) explains the approach, *"We started by looking under the light. Our initial goal was to chemically describe subtypes of THC-dominant flowers, the most popular Cannabis product category."*

Terpenes are a class of natural products and dominant constituents in Cannabis essential oil. The [CESC](#) has identified (mono)terpenes beta-pinene and limonene, which together serve to define major subtypes of Type I Cannabis. Consequently, the relative amounts of these two terpenes can be used to correlate and ultimately predict the energizing (Sativa) or relaxing (Indica) effect common to smoking or vaporizing different Cannabis flower subtypes.

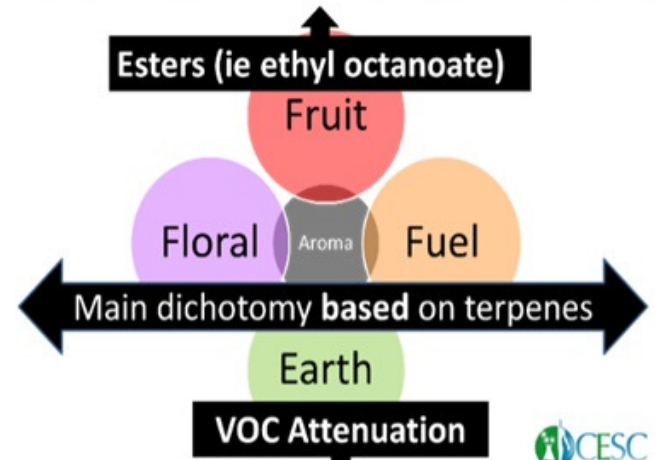


# The Dosing Project

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**Model: How Aroma Categories May Correlate with Cannabis Small Volatile Organic (SVO) Molecule Content**



The traditional approach to distinguishing Cannabis flower subtypes involves aroma. Cannabis flower aromas are attributed to different experiences. Cannabis terpenes, thiols (sulfur-containing organic compounds), and esters are major contributors. These and other volatile organic compounds may ultimately predict Cannabis effects.

As a next step, [CESC](#) deployed a computational algorithm that evaluates over 500,000 chemical signals using an approach that discriminates Gas Chromatography (GC) results based on sample categories. The GC signals are untargeted (not dependent on the use of calibrated reference standards) allowing for the discovery of new and unanticipated compounds. This approach was developed in collaboration with [Veda Scientific](#) and [SepSolve Analytical](#). [Leo Welder](#), CEO of [Veda Scientific](#), explains, “*With this new platform, we are identifying new or previously unidentified compounds found in Cannabis flowers and derivative products. Our analysis casts a very broad net.*” [Veda Scientific](#), a California-based Cannabis analytical laboratory, uses the untargeted analytical approach to facilitate Cannabis research and development.

Advances in Cannabis science are imperative for the growth of a revitalized Cannabis industry. Years of prohibition have left a gap in the fundamental understanding of how to characterize and categorize the Cannabis plant. Currently, most marketed products are presented in botanical forms or their herbal extracts. As such, the DSHEA pathway is, in the near-term, the best fit for the federal regulation of Cannabis products sold in the U.S. The [CESC](#) and its partners have led the industry by introducing novel analysis of Cannabis flowers. As a result, growers and manufacturers can rely on an algorithm that characterizes Cannabis beyond cannabinoids.

*The [CESC](#) is a non-profit organization that relies on community support for its ongoing investigations. [DONATE to Cannabis Science](#)  
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September 2022

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