

Intro-Blue, LLC | 617-454-1088 | peter@intro-blue.com | www.intro-blue.com | Volume 15 | 10/16/19

ONE YEAR LATER: CANNABIS 2.0 WILL BE ALL ABOUT FUNDAMENTALS

Investor sentiment has taken a turn for the worse in the build up to the one-year anniversary of cannabis legalization in Canada as regulatory issues, growth concerns, and supply-demand dynamics have taken a toll on the fundamentals of marijuana companies. In what can be considered symbolic of the whole cannabis industry, Canadian LP [Hexo Corp. \(HEXO\)](#) lowered its revenue expectations for 4Q19 by about 40%, citing slower-than-expected store rollouts, pricing pressure, and an alleged delay in government approval for derivative products. The company also withdrew its 2020 outlook where it had earlier set a CAD\$400 million revenue target. The slower-than-expected growth is evident across the board as Canadian LPs are expected to supply just 105,000 kg (\$1.1 billion) or ~11% of Canada's annual demand of 924,000 kg of dried flower in 2019. This is because legal pot, at \$10.23/gm, is priced nearly twice the illicit version which can be purchased for as low as \$5.59/gm. And despite the lower-than-expected sales, addition of capacity continues unabated as LPs' harvests are tracking to an annualized 750,000 kg, resulting in a supply glut in the Canadian market, in line with the thesis published in our [Cannabis Industry Primer](#) earlier this year.

A lack of focus on execution, a tight funding environment, and senior management departures have also hurt the sector. While most cannabis operators love to flaunt their scale, execution has not kept pace with capacity addition. A case in point is [Aleafia's](#) decision to end its supply agreement with leading LP [Aphria](#), citing the latter's failure to meet its supply obligations. The agreement was for up to 175,000 kg, or nearly a fifth of Canada's annual demand. Therefore, the hit it delivers to the sector's fundamentals and investors' confidence is undeniable, as is the fact that quality and consistency of supply will matter more than ever going forward. Weak fundamentals have resulted in a funding squeeze whose affects are being felt both in the U.S. and Canada. U.S. major [MedMen](#) called off its planned acquisition of PharmaCann less than a month after it received antitrust approval, citing the fall in cannabis stock prices/valuations as one of the "market developments" that led to the decision. Across the border, [The Green Organic Dutchman](#) announced a review of financing alternatives after it was unable to find sources of new capital (~\$160 million) needed to help complete two growing facilities, raising concerns over its ability to operate as a going concern and underscoring the fact that hype cannot substitute capital efficiency and free cash flow generation in the long term. It is worth noting that CFOs of both Hexo and MedMen left their respective organizations around the same time as these announcements, suggesting that investors need to monitor changes in management teams of their portfolio companies very closely for early clues of distress. These management exits also suggest a lack of stability at the top of cannabis companies, a trend that has only strengthened after Canopy CEO Bruce Linton was let go earlier this year.

So what should investors do? Be selective, not bearish. With stock prices falling 60%+ in one year, it is easy to doubt cannabis' investment potential. However, we remain bullish on the industry's long-term growth prospects given the large illegal-to-legal value migration opportunity. In the short-to-medium term, the industry will benefit from the launch of cannabis products in Canada in 4Q19 and the slow-but-sure move toward legalization in the U.S. through measures like the SAFE Banking Act and the STATES Act. While the chart indicates a retest of 2017 lows is probable, we believe that Cannabis 2.0 will separate the contenders from the pretenders as investors will choose quality and stability of management, profitability, and free cash flows over growth-at-any-cost models. The ongoing shakeout will end the currently-high correlation between cannabis stocks and ETFs as the market will consolidate and each segment will become winner take all. It will also force management teams to either issue conservative guidance or abstain from issuing any. In short, **if Cannabis 1.0 was all about sentiment, Cannabis 2.0 will be all about fundamentals.**

Chart 1: The North American Marijuana Index Is Down 60%+ From Its Legalization-Driven High of 350

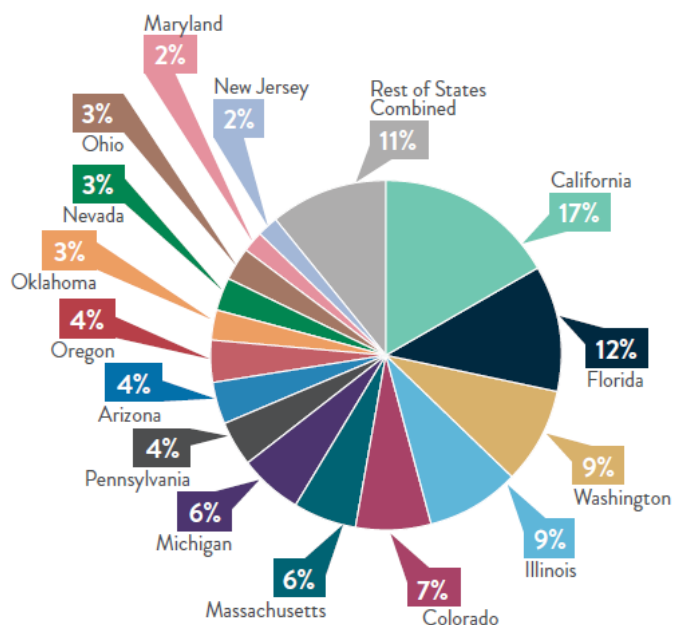


CANNA NEWS

STATE AND REGULATORY NEWS

Top five states to account for 54% of U.S.' legal cannabis market in 2025. While competitive forces and economies of scale should continue to drive down both wholesale and retail prices, the continued growth in consumer demand will ensure sustained positive growth through 2025. Furthermore, the strong demand for concentrates and edibles will buoy prices as these value-added products have held their premium pricing better than flower – which has been more vulnerable to pricing pressure as supply increases. By 2025, New Frontier Data projects the largest state markets for legal cannabis to be California, Florida, Washington, Illinois, Colorado, Massachusetts, and Michigan, with the top five accounting for 54% of the \$29.7 billion legal spend. [Read More](#) (New Frontier Data)

Chart 2: State-Wise Market Share of the \$29.7 Billion Legal Cannabis Market in the U.S. in 2025



Source: Intro-Blue, New Frontier Data

Nine states that could vote to legalize marijuana in 2020. The numbers 11 and 33 come up quite often when the topic of marijuana legalization is discussed. Currently, 11 U.S. states allow the legal use of recreational marijuana, while 33 states have legalized medical cannabis. But those numbers could soon change. Nine states could be on track to hold key votes on some form of marijuana legalization in 2020. [Read More](#) (Fool.com)

1. Arizona
2. Arkansas
3. Florida
4. Idaho
5. Mississippi
6. Nebraska
7. New Jersey
8. North Dakota
9. South Dakota

Mitch McConnell meets with pot execs in California, pitched need for cannabis banking reform. McConnell is attending at least two days' worth of meetings with cannabis industry executives, small-business owners and advocates in Southern California, in order to discuss potential cannabis-related banking reform, among other topics. McConnell's schedule includes two cannabis-related lunches with executives and advocates, one of which will take place in Newport Beach, Calif., and a tour of at least one cannabis-related company in the area. [Read More](#) (MarketWatch)

Even without reform, banks increasingly serving marijuana industry. The cannabis industry experienced a 62% year-over-year jump in banking options in the federal government's most recent quarter. The number of banks and credit unions actively serving the marijuana industry totaled 715 in the U.S. government's fiscal third quarter, which ended June 30, federal data shows. The data reflects a healthy increase in the number of financial institutions serving the cannabis industry, even when accounting for the roughly 35% growth in legal medical and recreational cannabis sales during that period. [Read More](#) (Marijuana Business Daily)

Why the SAFE Banking Act won't solve all of cannabis' payment problems. Even if the SAFE Banking Act were to become law, there will still be tension and contradiction between state legalization and federal law — a tension that reflects the larger issue of federalism in U.S. politics and governance. “I think there is a balance to be struck,” David Durant, executive vice president and general counsel for payment services provider YapStone said. “[The SAFE Banking Act] is a good way to move us in the right direction, to bring us a little more clarity and certainty. [Read More](#) (PYMNTS.com)

Big banking shows more interest in serving cannabis clients after recent SAFE Act passage by U.S. House. Banks and other financial institutions are gearing up for potential massive involvement with the marijuana industry after last month's passage of the SAFE Banking Act by the U.S. House of Representatives. While it remains unclear how the measure might fare in the Senate and if President Trump would sign it into law, the bill's eventual passage would allow banks to add state-legal cannabis firms from all over the country as customers without fear of federal reprisal. [Read More](#) (Marijuana Business Daily)

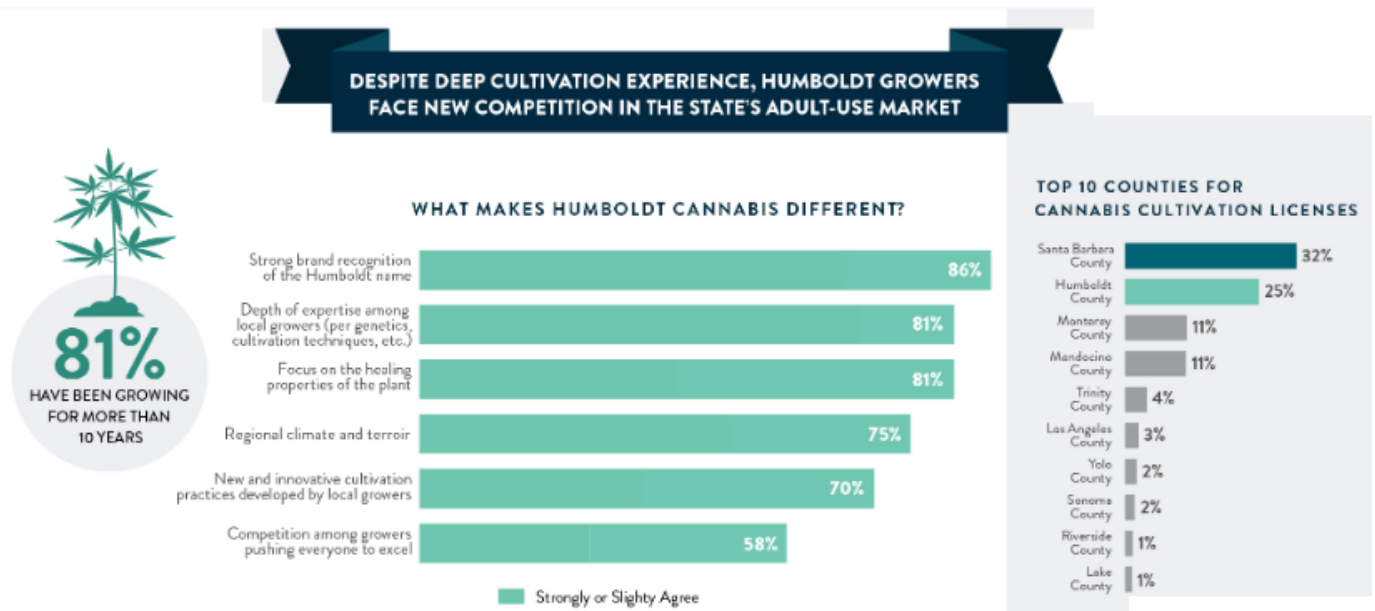
California to allow state tax deductions for cannabis businesses. California cannabis businesses will be allowed to deduct expenses on their state income returns after Gov. Gavin Newsom signed a legislator's proposal into law. Newsom signed into law AB 37, a bill introduced by a fellow Democrat, Assemblyman Reggie Jones-Sawyer. The measure will allow such state deductions, starting next year, for cannabis companies that file their taxes as sole proprietors or partnerships. [Read More](#) (Marijuana Business Daily)

Don't use THC vapes, says FDA, as lung injury toll tops 1,000. The FDA is now advising consumers to completely avoid vape products that contain tetrahydrocannabinol (THC) — whether bought from legal dispensaries or “obtained off the street.” Consumers are also being advised to avoid all vape products originating from illicit or unknown sources, regardless of whether they contain nicotine salts, tobacco, or THC. [Read More](#) (Analytical Cannabis)

Oregon and Rhode Island have joined the flavored vape ban. Oregon's Governor Kate Brown declared a six-month emergency ban on all flavored vaping products, which included nicotine and marijuana vapes. The same day that Oregon's ban went into effect, Rhode Island enacted a similar measure. Governor Gina Raimondo declared a ban on flavored nicotine vape products, which not only bans their sale in-state and out-of-state, but also temporarily bans the manufacture of flavored vape products, too. [Read More](#) (Merry Jane)

Humboldt growers face new competition in California's adult-use market. Despite Humboldt County's legendary reputation for cannabis cultivation, many of its growers are struggling amid the newly regulated market. Among those surveyed, more than 4 in 5 (81%) have been growing for at least a decade. Legalization and regulation have introduced major disruptions and uncertainty, presenting local farmers with onerous hurdles and expenses along with keen competition for licensing from Santa Barbara County. [Read More](#) (New Frontier Data)

Chart 3: Humboldt Growers Face New Competition in the California's Adult-Use Market



Source: Intro-Blue, New Frontier Data

Illinois releases 'Disproportionately Impacted Areas' map for adult-use cannabis business licensing. Illinois officials have released a “disproportionately impacted areas” map of regions in the state where adult-use cannabis business applicants would get preference under the law's social equity provision. The map shows 683 Census tracts considered to be “disproportionately impacted” by past cannabis law enforcement. [Read More](#) (Cannabis Business Times)

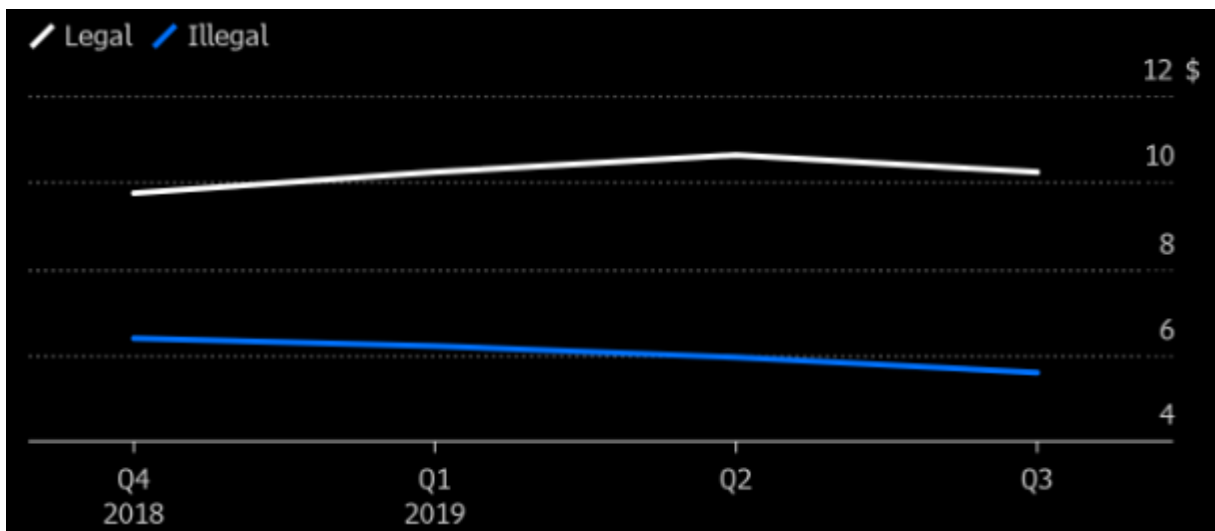
Marijuana goes on sale in Illinois in January — but a tight supply might make it hard to buy. When marijuana shops open their doors to the public in January, shoppers at the back of the line might notice something missing once they get inside: the weed. Nearly every state that allows recreational marijuana had some shops run out or run low in the first days of sales. In Colorado, some customers were greeted with signs telling them to check back the next day. In Nevada, higher-than-expected sales in the first week left shelves near empty. On Jan. 1, it will be Illinois' turn. [Read More](#) (Chicago Tribune)

Hundreds of cannabis businesses working with banks in Colorado. Colorado's cannabis industry has had a chief request since marijuana was legalized: Give us access to banks. But it turns out that hundreds of the state's pot businesses are already working with financial institutions under the close watch of federal regulators, even though marijuana remains illegal at the federal level. As many as 35 banks and credit unions offer services to the industry that has made \$6.5 billion in sales in Colorado since 2014, according to the Colorado Bankers Association. [Read More](#) (High Times)

FBI probing potential public corruption in California capital's marijuana industry. The FBI is investigating suspected corruption involving Sacramento, California, cannabis businesses and public officials. The FBI interviewed marijuana industry officials in California's capital city over the past few months about potential bribes made in exchange for license approvals and other favorable treatment. The report about the probe comes a day after Sacramento officials called for an investigation into cannabis dispensary licensing, including the decision to grant eight dispensary permits to a group that includes a Ukrainian-born businessman indicted last week for allegedly violating federal campaign finance laws. [Read More](#) (Marijuana Business Daily)

As Canadian pot gets cheaper, black market still offers best deals. Canadian pot smokers are finally getting some price relief almost a year after the country legalized recreational use. But it's still a lot cheaper to get the drug from illegal dealers. A gram of cannabis purchased from government-sanctioned sellers cost \$10.23 in the third quarter, down 3.9 percent from the prior three-month period, according to Statistics Canada. At the same time, the price for a gram of pot bought in the illicit market fell 5.9 percent to \$5.59. [Read More](#) (BNN Bloomberg)

Chart 4: Price Gap: Legal vs. Illegal Cannabis Prices in Canada



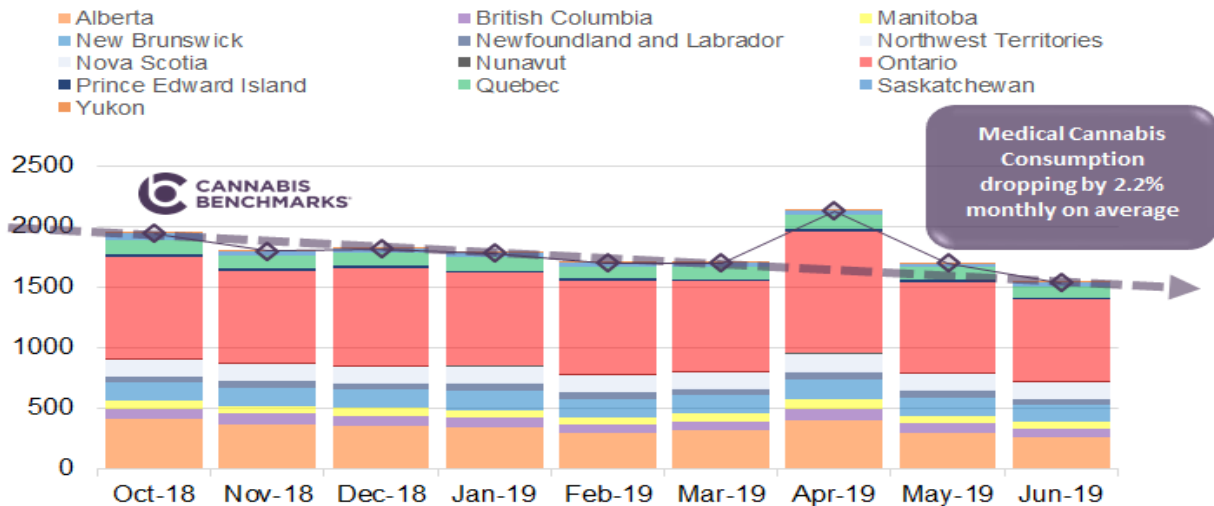
Source: Intro-Blue, Stats Canada, Bloomberg

Cannabis 'gold rush' falling short amid Canada's cheap black market. Canadians are buying a fraction of the legal recreational cannabis that the government projected, according to estimates suggesting that cheaper black-market pot is proving irresistible for many consumers. Canadian licensed cannabis producers are expected to sell approximately \$1.1 billion worth of legal pot in the first full year of legalization, according to an analysis of retail sales data by Cannabis Benchmarks. Based on Statistics Canada's crowdsourced price estimate of \$10.23 per gram, that's the equivalent of selling 105,000 kilograms — a fraction of the 924,000 kilograms of dried flower equivalent Canadians are believed to consume each year. [Read More](#) (BNN Bloomberg)

B.C. predicting legal cannabis prices will drop. BC's Minister of Public Safety Mike Farnworth is predicting the legal price will drop further. "We know from US jurisdictions that have legalized that there can be significant price fluctuations in the early years and we expect prices to come down as supply ramps up. We also know from US jurisdictions that it will take time to capture the illegal market —so we shouldn't expect this to happen overnight," Farnworth said in a statement. [Read More](#) (GlobalNews.ca)

Downward trend in Canada's medical cannabis market since adult-use legalization a year ago. According to data from Health Canada, there is a very noticeable downward trend in the purchase of cannabis for medical purposes. Use of cannabis for medical purposes is not necessarily diminishing. Instead, those that may have previously registered as patients are likely turning to the recreational market for their product for some very apparent reasons. [Read More](#) (Cannabis Benchmarks)

Chart 5: Dried Cannabis Sold of Medical Purposes (Kg)



Source: Intro-Blue, Cannabis Benchmarks, Health Canada

Price is one of the biggest reasons patients are turning to recreational markets for their cannabis. Cannabis Benchmarks reviewed the average net selling prices contained in recent quarterly reports from some of the top producers and found that there is a large discrepancy in the average selling prices of recreational and medical cannabis, despite their being fungible. There is a massive spread between the price per gram of recreational and medical cannabis. Additionally, this gap continues to grow as prices drop in the recreational market. [Read More](#) (Cannabis Benchmarks)

Chart 6: Dry Cannabis Net Average Wholesale Price (CAD\$/gm)

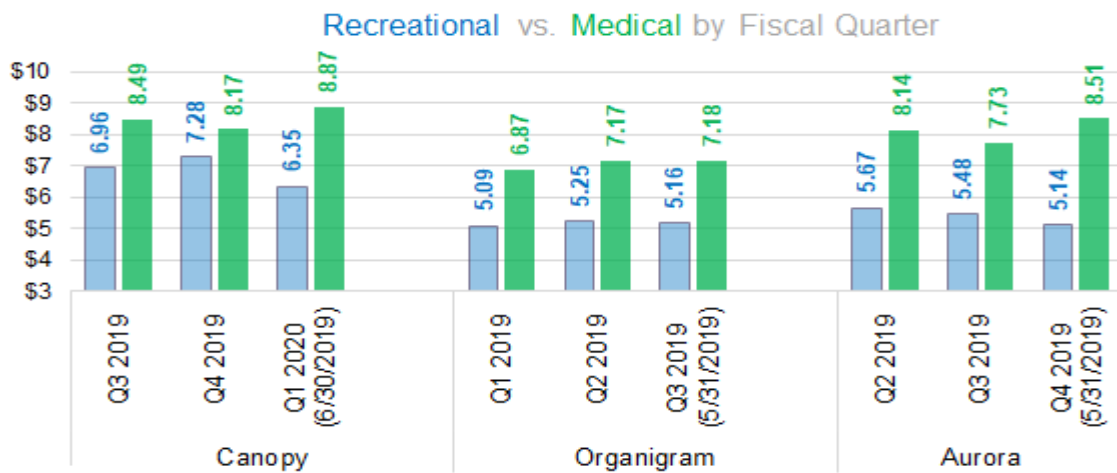
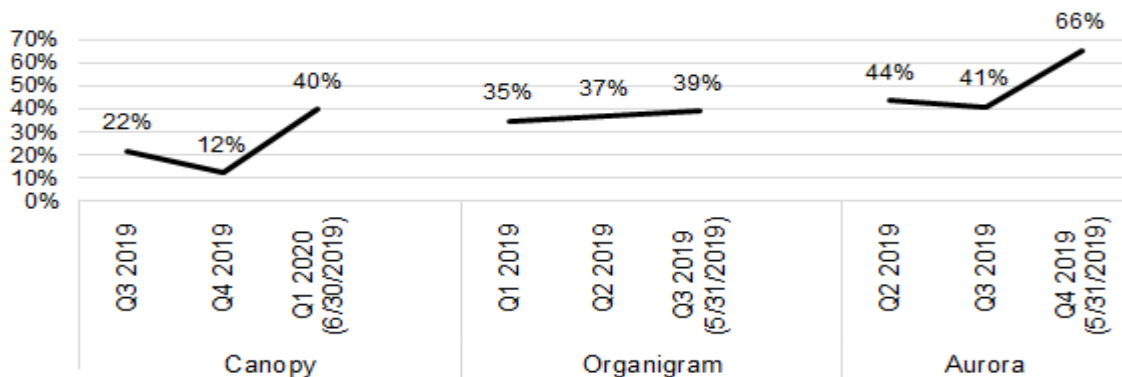


Chart 7: Reported Medical Price Premium Over Recreational



Source: Intro-Blue, Cannabis Benchmarks

'It's confounding': Former Nova Scotia premier wants Ottawa to fix cannabis banking problems. Former Nova Scotia Premier Darrell Dexter is calling on the federal government to address banking issues stymieing legal marijuana businesses across Canada. Almost one year into adult-use legalization, cannabis entrepreneurs and registered not-for-profit trade associations are accusing Canada's banking sector of gouging and arbitrarily closing bank accounts – sometimes citing U.S. federal law that prohibits marijuana. [Read More](#) (Marijuana Business Daily)

COMPANY NEWS

Hexo abandons 2020 outlook amid pot market uncertainty. [Hexo Corp. \(HEXO\)](#) withdrew its forecast for fiscal 2020 results while providing investors with a 4Q19 revenue warning the company attributes to a lack of retail stores and regulatory uncertainty. Hexo now sees its fourth-quarter revenue coming in between approximately \$14.5 million and \$16.5 million, while projecting full-year 2019 revenue between \$46.5 million and \$48.5 million. During a conference call in June, Hexo CEO Sebastien St-Louis said the company's 4Q revenue would be double what it reported in third quarter, which was \$13.0 million. [Read More](#) (BNN Bloomberg)

CannTrust to destroy CA\$77 million in cannabis plants, inventory. Embattled [CannTrust Holdings \(CTST\)](#) disclosed it plans to destroy 77 million Canadian dollars (\$58.2 million) worth of cannabis plants and inventory as part of the Ontario company's efforts to regain its suspended business licenses. The company said its board "has determined that it is necessary to destroy approximately CA\$12 million of biological assets and approximately CA\$65 million worth of inventory that was not authorized by CannTrust's license." [Read More](#) (Marijuana Business Daily)

Constellation Brands CFO named chair at Canopy Growth. The chief financial officer of [Canopy Growth Corp.'s \(CGC\)](#) largest shareholder has been appointed chair of the cannabis company's board of directors amid an ongoing shakeup in its executive ranks. David Klein, the CFO at Constellation Brands Inc., has been appointed to the position effective immediately, the Smiths Falls, Ont.-based Canopy Growth said in a statement. [Read More](#) (BNN Bloomberg)

Crop Corp in default on Nevada THC property, secured debt. [Crop Infrastructure Corp \(CRXPF\)](#) halted equity trading prior to putting out a news release identifying several changes at the firm, including the move away from purchasing extraction equipment, a failure to pay interest on certain debts, and the default status of its Nevada THC property as a result of an overdue mortgage. The announcement comes on the heels of the firm announcing massive crop failures for its hemp farms in Nevada. [Read More](#) (the deep dive)

Cannabis REIT to invest \$42 million in LivWell Michigan project. [Innovative Industrial Properties \(IIPR\)](#) announced that it closed on the acquisition of a property in Warren, Michigan, which comprises approximately 156,000 square feet of industrial space. The purchase price for the Michigan property was \$19.0 million. Concurrent with the closing of the purchase, IIPR entered into a long-term, triple-net lease agreement with LivWell Michigan which intends to operate the property as a licensed cannabis cultivation and processing facility upon completion of redevelopment. [Read More](#) (New Cannabis Ventures)

Harvest One announces receipt of new cultivation license. [Harvest One Cannabis \(HRVOF\)](#), through its wholly-owned subsidiary and licensed producer United Greeneries Ltd., has received a cultivation license from Health Canada for Phase I of its new Mission Road facility. The license allows United Greeneries to immediately begin to cultivate cannabis in the new Mission Road facility located adjacent to the existing facility on Vancouver Island in the town of Duncan, British Columbia. Once fully completed, the Mission Road facility will triple the production capacity in Duncan and increase operational efficiency. [Read More](#) (Newswire)

Harborside acquires full ownership of San Leandro Wellness Solutions. [Harborside Inc \(HSDEF\)](#) announced it has acquired full ownership of San Leandro Wellness Solutions. Harborside previously owned 50 percent of the dispensary under a joint venture with Dark Heart Nursery, and would have provided management services to the store upon opening in Q4 of this year. With the close of this transaction, Harborside now operates three dispensaries in the San Francisco Bay Area, alongside their flagship Oakland and San Jose locations. [Read More](#) (Cannabis Business Times)

Medicine Man halts sales of certain vape pens from its dispensaries. [Medicine Man \(MDCL\)](#), which operates four recreational dispensaries and one medical dispensary in Colorado, has halted sales of all vape products that contain the ingredients propylene glycol or vitamin E acetate. This action comes on the heels of recent reports that found that chemical additives, such as vitamin E acetate, were associated with dangerous and deadly vaping-related respiratory illnesses. [Read More](#) (Extraction Magazine)

FSD Pharma appoints former member of U.S. Congress to its Board of Directors, announces share consolidation. [FSD Pharma Inc. \(FSDDF\)](#) announced the appointment of former U.S. Congressman Stephen Buyer to the company's Board of Directors. The company also announced that it will complete a consolidation of its class A multiple voting shares and its class B subordinate voting shares, each on a 1 to 201 basis. [Read More](#) (Cannabis Business Times)

Pasha Brands signs supply deal with fifth micro cultivator. Pasha Brands (CRFTF) announced that it has signed a micro-cultivator deal with that of Waterloo, Ontario-based Greenterra Cannabis. The agreement is the fifth such deal that the issuer has signed with micro cultivators. The firm has signed on a number of micro cultivators and brands to assist the transition from the grey market to that of the legal market. [Read More](#) (the deep dive)

EARNINGS

Aphria beats profit expectations, reaffirms guidance of up to \$700 million in annual revenue. [Aphria \(APHA\)](#) reported a first-quarter profit that beat analyst expectations after the cannabis producer increased the amount of marijuana sold in the Canadian recreational market while lowering costs. The Ontario-based pot producer reported \$16.4 million in net income in the first quarter of fiscal 2020 or seven cents per share, compared to \$21.2 million or \$0.09 per share for the same period last year. Analysts polled by Bloomberg expected the company to report an adjusted loss of \$7.7 million or three cents per share. [Read More](#) (BNN Bloomberg)

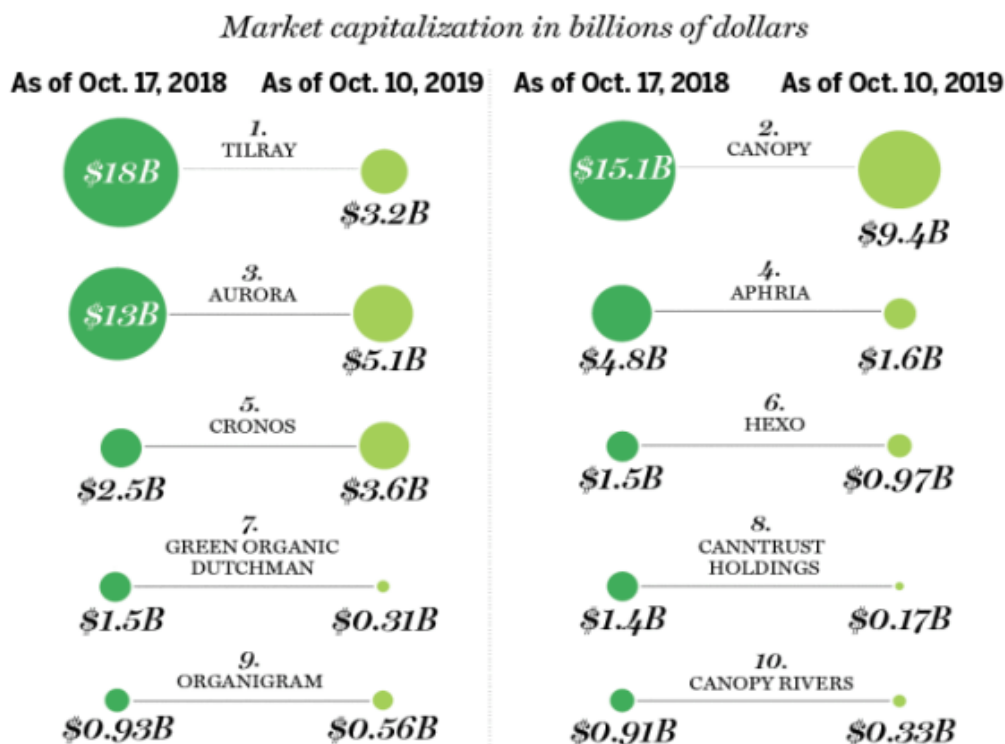
Valens GroWorks reports record revenue, adjusted EBITDA, and profitability. [Valens GroWorks \(VGWCF\)](#) reported its financial results for the third quarter of fiscal 2019. Revenue increased to \$16.5 million, an 87.1% increase over the second quarter and a 641.4% increase over the first quarter of 2019. Gross profit increased to \$12.8 million, or 77.8% of revenue, for the third quarter of 2019 compared to \$5.1 million or 57.9% of revenue in the second quarter. Adjusted EBITDA of \$9.8 million in the third quarter, or 59.4% of revenue compared to \$2.0 million or 23.0% of revenue in the second quarter of 2019. [Read More](#) (New Cannabis Ventures)

CAPITAL MARKETS

Green Organic Dutchman reviewing financing options for construction. [The Green Organic Dutchman Holdings \(TGODF\)](#) said it is reviewing its financing options for the funds needed to complete construction at facilities in Ancaster, Ontario, and Valleyfield, Quebec. The company has already disclosed that it was engaged in talks for commercial bank facilities and equipment leasing. "However, due to changing market conditions, those sources of financing have been unavailable on acceptable terms within the timeframes required, leading the company to commence a review of additional alternatives," the company said in a statement. It current has zero debt and \$56.7 million in cash available in Canada, including \$40.2 million in restricted cash allocated to capital expenditures, said the statement. [Read More](#) (MarketWatch)

Feeling burned: The first year of legal cannabis has been a complete disaster for investors. Since recreational cannabis became legal on Oct. 17, 2018, the shares of what were then the 10 largest Canadian cannabis producers by market capitalization have been bludgeoned, yielding an average negative return of more than 57 percent for investors. Tilray Inc. alone has lost more than \$14 billion in market cap, and [Aurora Cannabis](#) has shed \$6.8 billion. Six of the Top 10 have lost at least half their value, with scandal-plagued [CannTrust](#) suffering such resounding losses that it no longer appears in the list. Of the 10, only [Cronos Group's](#) market cap has grown over the past 12 months, though its share price has declined, like those of all the others on the list. [Read More](#) (Financial Post)

Chart 8: How the Top 10 Cannabis Companies Have Fared Since Legalization



Source: Intro-Blue, Bloomberg, Financial Post

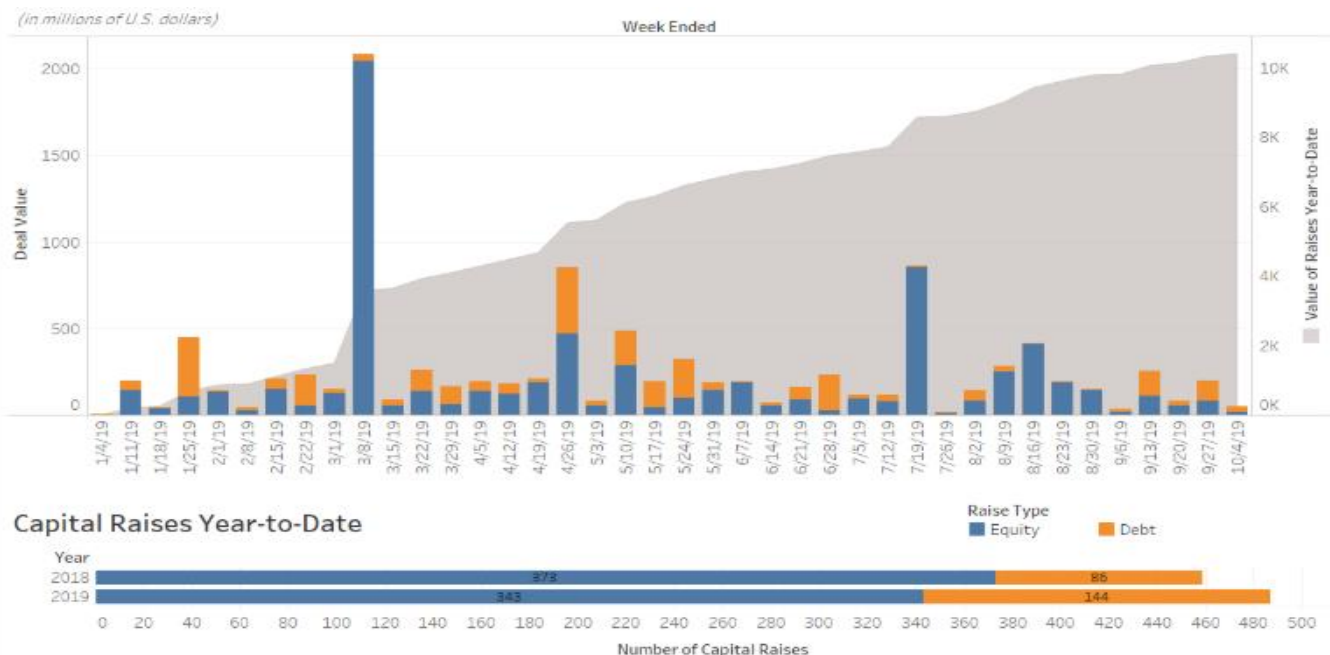
Canadian cannabis business owners ‘ditched’ by big banks. Canadian cannabis business owners say they’re being punished by big banks backing away from bud. Thomas H. Clarke was one of the first Canadians to legally sell marijuana but has had to resort to becoming a cash-only business after the Royal Bank of Canada (RBC) closed his account. The cannabis market has been put into a haze ever since resignations from executives at larger corporations in the industry and a rising number of hospitalizations from vaping-related illnesses in the U.S., where many states still haven’t legalized cannabis. [Read More](#) (The Growthop)

MediPharm Labs closes new \$38.7 million upsized credit facility with a Top 5 Canadian Schedule 1 Bank. [MediPharm Labs \(MEDIF\)](#) announced that its wholly-owned subsidiary, MediPharm Labs Inc., has closed a credit agreement with a top 5 Canadian Schedule 1 bank for an aggregate \$38.7 million. The facility was upsized from the previously announced committed term sheet of \$20.0 million, and is comprised of a revolving term facility, a non-revolving term facility and a non-revolving delayed draw term facility. [Read More](#) (Globe Newswire)

Village Farms raises CAD\$25 million. Village Farms International (VFF) announced that it has entered into an agreement with a syndicate of underwriters co-led by Beacon Securities Limited and GMP Securities L.P., pursuant to which the underwriters have agreed to purchase, on a bought deal basis, 2,660,000 common shares in the capital of the company at a price of \$9.40 per offered share for aggregate gross proceeds to the company of \$25,004,000. [Read More](#) (New Cannabis Ventures)

Cannabis M&A deals slow in September. The breakneck pace of completed mergers and acquisitions in the marijuana industry may be coming to an end. Deal activity was down significantly in September versus a year ago – only 16 this year compared with 29 in 2018. The amount of deals in the first nine months of 2019, however, was still ahead of 2018 – 278 versus 242. Cultivation and retail remained the prime mover behind M&A activity in September. While the number of raises in September 2019 was up over the same month in 2018 – 53 capital raises versus 43 – the total amount raised was actually down. In September 2018, the average raise was \$14.7 million for an overall total of \$630.4 million. This year, September’s average was \$11.3 million for an overall figure of \$599.1 million. [Read More](#) (Marijuana Business Daily)

Chart 9: 2019 Capital Raises by Type and Week



Source: Intro-Blue, Marijuana Business Daily

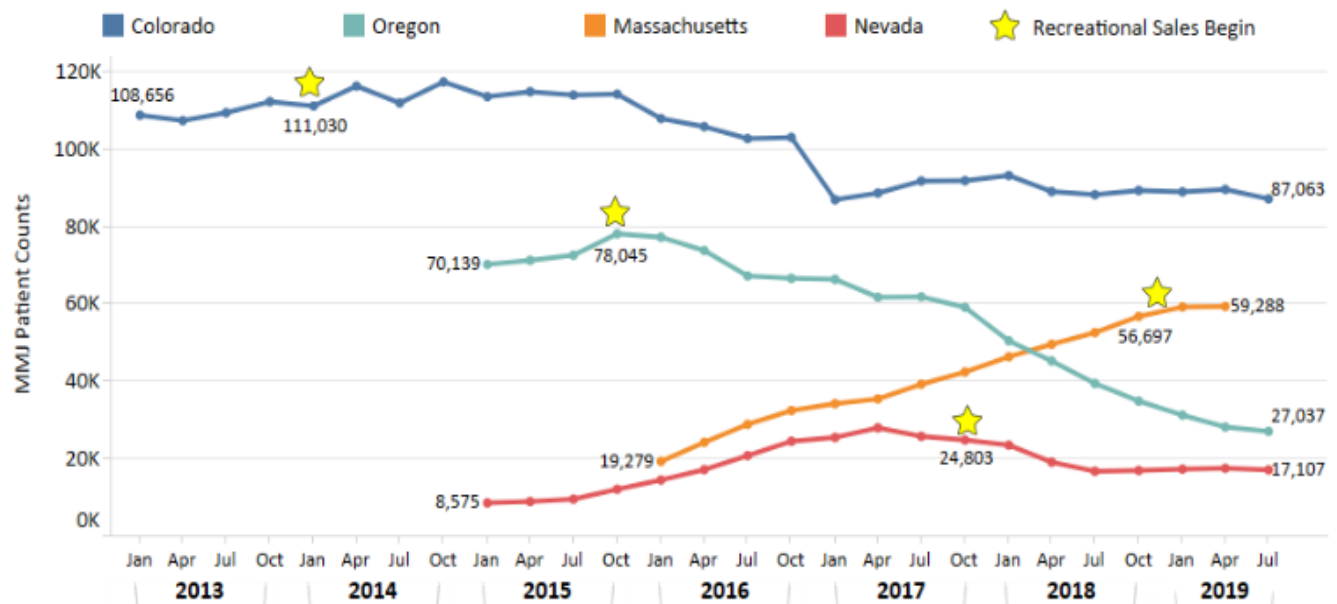
MEDICAL CANNABIS

Arkansas medical marijuana sales brisk, total \$12.3 million for five months. Sales of medical cannabis in Arkansas continue at a strong pace, totaling \$12.35 million in the first five months of the program. At this rate, sales are on pace to reach the upper end if not exceed Marijuana Business Factbook projections of \$15 million-\$20 million for 2019. The sales, representing 1,730 pounds of marijuana, were achieved with just a fraction of the licensed dispensaries in operation. [Read More](#) (Marijuana Business Daily)

Texas stops medical cannabis dispensary licensing process. The Texas Department of Public Safety (DPS) announced last month that it would accept new applications for low-THC medical cannabis dispensary licenses from Oct. 1 through Nov. 1 as part of a broad expansion of the medical cannabis market that was signed into law earlier this year. Now, just over a week into the licensing process, the state has abruptly halted it. “The Department’s Compassionate Use Program is not accepting applications at this time,” the DPS website reads. [Read More](#) (Cannabis Business Times)

How medical cannabis programs fare in states with recreational markets. The legalization of recreational cannabis can put a big dent in a state's pre-existing medical marijuana market. Patient counts in Colorado, Massachusetts, Nevada and Oregon – the only states with both an active recreational marijuana industry and a pre-existing MMJ patient database – have all suffered in the months and years since the launch of an adult-use market in each. In each state, medical cannabis customers pay less in taxes than recreational consumers. [Read More](#) (Marijuana Business Daily)

Chart 10: Impact of Recreational Marijuana on Medical Patient Counts in Colorado, Nevada, Massachusetts, and Oregon



Source: Intro-Blue, Marijuana Business Daily

California governor signs law allowing medical cannabis on school campuses. California Gov. Gavin Newsom signed legislation into law Oct. 9 that allows schools in the state to decide whether parents can administer medical cannabis to their children on school property. The law—called “Jojo’s Act”—goes into effect Jan. 1, according to a KTLA report. Previously, California law prohibited cannabis within 1,000 feet of K-12 campuses, the news outlet reported. Now, school districts can decide whether to allow it. Under the new law, parents of students with a valid medical cannabis recommendation could bring cannabis in a non-smokable form to the school and administer it to their children. [Read More](#) (Cannabis Business Times)

Australian government pledges \$3 million to medical cannabis research. The Australian Government is investing \$3 million AUD (\$2.03 million USD) from the country's Medical Research Future Fund (MRFF) to finance further research into the benefits of medicinal cannabis for cancer patients, the Australian health minister announced. The multi-million-dollar grant will fund research that will investigate the therapeutic potential of medicinal cannabis for treating pain and other cancer symptoms, as well as managing the side effects that come with cancer treatments such as chemotherapy. [Read More](#) (Analytical Cannabis)

Australian company Zelda Therapeutics to acquire American cannabis company Ilera Therapeutics. Merger brings together a leading pipeline of clinical candidates, revenue generating medicines, and a combined strategy to disrupt global medicinal cannabis and pharmaceutical markets. With operations in Australia and the USA, the merged company will have access to the world's largest, most profitable and fastest growing medicinal cannabis markets. [Read More](#) (New Cannabis Ventures)

CBD/HEMP

Southeast harvest preview: 98% of North Carolina and Virginia farmers planted hemp for CBD production. Hemp producers in the South faced a dry, warm growing season, along with high disease and pest pressure. Most farmers growing hemp for CBD production and smokable flower were challenged especially by corn earworms attacking flowers. Hemp Industry Daily caught up with Keith Edmisten, a professor at North Carolina State University, and crop consultant Charlie McKenzie with Orlando, Florida-based CropWalk, to learn about how the 2019 season went for farmers in the Southeast, specifically North Carolina and Virginia. [Read More](#) (Hemp Industry Daily)

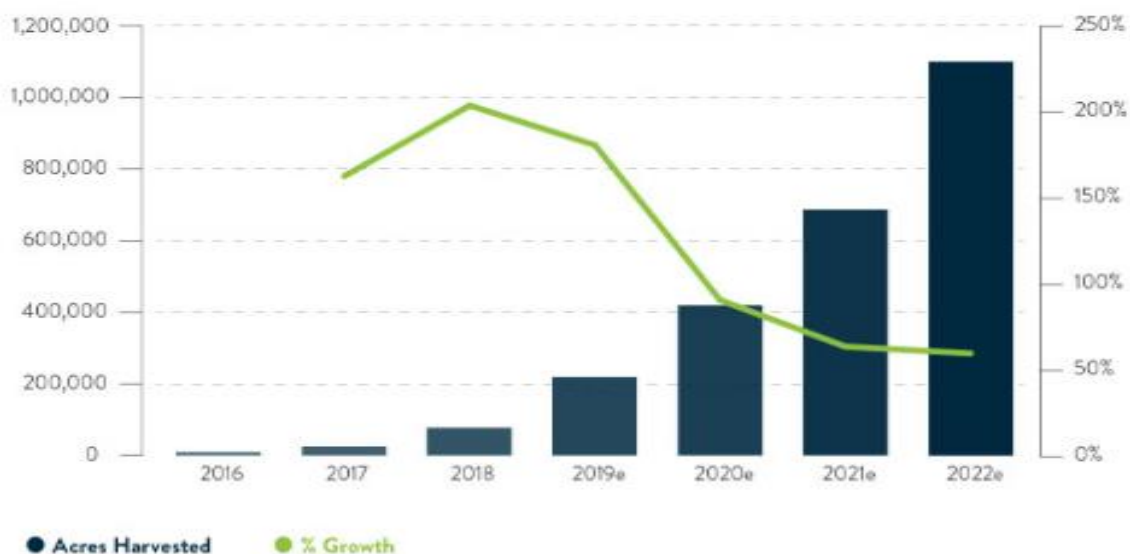
Why harvesting and processing may be expensive lessons for this year's new hemp farmers. First-time hemp farmers who hurried to cash in after the crop became federally legal may be the biggest losers of this crop year, experts say. Congress legalized hemp to bring a new crop to farmers hurting from depressed markets, low prices and crop tariffs. But with hemp acreage up more than 300% this year, according to industry advocates, the crop that was meant to help could actually end up driving small farmers out of the business. [Read More](#) (Hemp Industry Daily)

U.S. hemp farmers are leaving Canada in the dust. Struggling American family farms are praising a cash crop worth more than US\$45,000 per acre. According to projections by market research firm Brightfield Group, the hemp-derived CBD boom isn't cropping up nearly as much attention in Canada. "Hemp is going to be a saving grace for these small U.S. farmers. It really has been a game-changer for hundreds of American farms," Brightfield managing director Bethany Gomez told Yahoo Finance Canada. "The growth on the Canadian side is much more linear in nature. There is not that dramatic shift that we have seen in the U.S. over the past year." [Read More](#) (Yahoo! Finance)

CBD for arthritic dogs: University 'clinical' trial. Led by University of Pennsylvania School of Veterinary Medicine associate professor of small animal surgery, Dr. Kimberly Agnello, researchers at the school have joined forces with Denver-based Dixie Brands (DXBRF) to source the formulations used in the trial, including a proprietary CBD blend, an isolated CBD oil and a placebo, according to the Philly publication. The trial will be double-blind, meaning neither researchers nor the owners will know which of the formulations is being given to a particular pup. [Read More](#) (Cannabis Business Times)

Lack of federal crop insurance sows uncertainty for cultivators. Among the most significant reform benefits of the 2018 Farm Bill's passage was the ability for hemp cultivators to obtain federal crop insurance. Yet, more than 10 months after the measure's passage, no such policy has been available to the hemp industry. The lack of coverage has been acutely missed by many cultivators, including several in Oregon who lost approximately \$25 million in damaged crops due to a late-summer hailstorm in the state's central region. [Read More](#) (Morningstar)

Chart 11: U.S. Hemp Cultivation (Acres)



Source: Intro-Blue, New Frontier Data

U.S. contractors say hemp giant GenCanna owes them \$13 million. A group of building contractors say American hemp giant GenCanna Global, based in Kentucky, owes them \$13 million for work performed at the company's planned processing facility at Mayfield, in the western part of the state. The contractors last week filed 19 liens in the local county clerk's office. The liens were filed against property owned by the Industrial Authority of Mayfield-Graves County which is under lease to GenCanna, one of the USA's biggest and most prominent hemp producers. [Read More](#) (Hemp Today)

CBD firm trades shares for ads with media conglomerate in unconventional deal. A Canadian wellness company has entered into an equity partnership with an American consumer-media company to promote its hemp-derived CBD products in the U.S. [Neptune Wellness Solutions \(NEPT\)](#) developed the deal with NY-based American Media, a privately held publisher of consumer magazines such as Men's Journal and Us Weekly. The media company will advertise Neptune products and help support the wellness company's marketing and commercialization efforts for its CBD products in the U.S. [Read More](#) (Hemp Industry Daily)

PRODUCTS

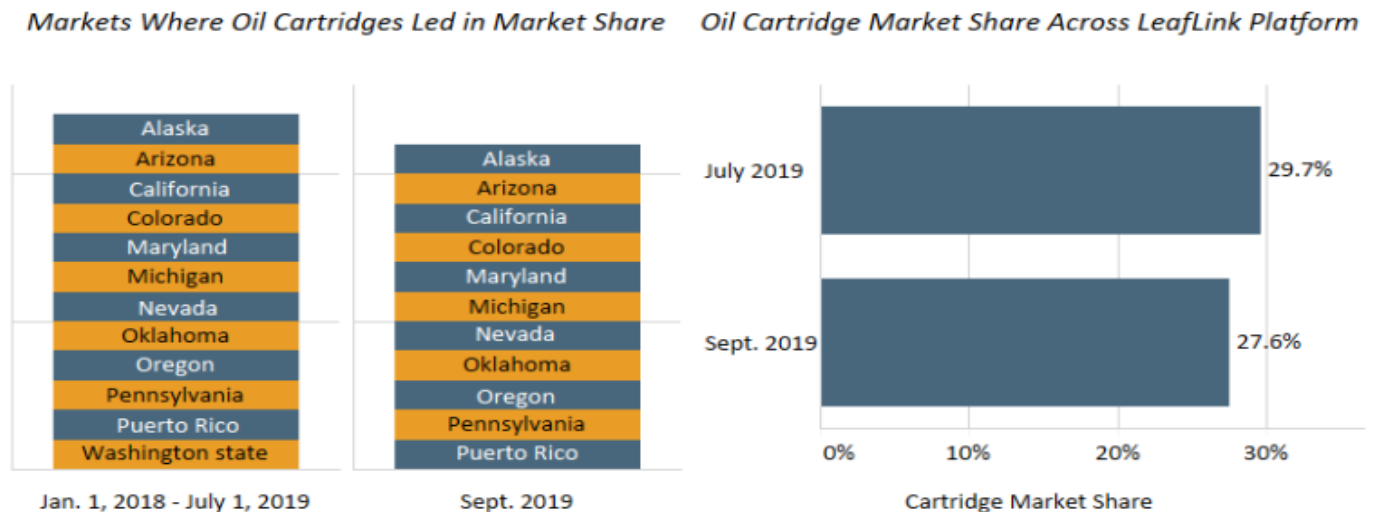
These \$1 tablets could be the future of cannabis. In 2016, a venture capital-backed California company called Hmbldt — now called Dosist — released a cannabis vape pen that wasn't for stoners. Instead of loading your own oil and taking huge hits, each pen, made of recyclable medical-grade plastic, comes loaded with a set number of drags and every hit is the same every time (2.25mg). It earned plenty of recognition and won all sorts of design awards. Now it's doing the same thing for edibles. The Dose Dial is pocket-sized cannabis tablet dispenser. Each \$30 dispenser holds 30, 3.7mg dissolving peppermint-flavored tablets inside. [Read More](#) (Gear Patrol)

Drinkables are the new edibles. Weed-infused drinks make up one of the fastest-growing segments of the cannabis market. It's a sprawling category that includes tinctures to mix with cocktails; non-alcoholic alternatives to wine, beer, or champagne; wellness beverages that can lull you to sleep or take the place of aspirin or ibuprofen after a strenuous game of hoops or tennis; and sparkling sodas that are as appealing to millennials as they are to baby boomers who aren't comfortable lighting up. [Read More](#) (Weedmaps)

Tilray, Budweiser parent to launch CBD drinks in late 2019. A joint venture between [Tilray \(TLRY\)](#) and the world's largest brewer Anheuser-Busch InBev plans to have CBD-infused drinks on the Canadian market as early as December, but says it needs more time to research beverages containing THC. Fluent Beverage Company's chief executive Jorn Socquet said that through the two companies' previously-announced research partnership, it has determined how to formulate beverages containing cannabidiol, the non-intoxicating compound also known as CBD, in a way that keeps the active ingredients stable and potent over the lifecycle of the product. [Read More](#) (BNN Bloomberg)

Wholesale market share of marijuana oil cartridges only slightly down since vape crisis. The wholesale market share of marijuana oil cartridges has declined only slightly in recent months, but the length and severity of the decline – and whether it is related to the vape crisis – remains to be seen. LeafLink, an online wholesale marketplace that connects licensed brands with licensed retailers, reported that leading up to the vape crisis, oil cartridges were among the top three products in 12 key markets, holding 29.7% of market share. During September – after the first vape-related death – market share fell marginally to 27.6%, but cartridges remained in the top three products in 11 of the 12 markets. [Read More](#) (Marijuana Business Daily)

Chart 12: Marijuana Oil Cartridge Wholesale Market Performance



Source: Intro-Blue, LeafLink, Marijuana Business Daily

Nextleaf Solutions acquires water-soluble technology for cannabis beverages. [Nextleaf Solutions \(OILFF\)](#) announced that it has entered into an agreement to acquire intellectual property pertaining to water-soluble cannabinoid formulations. Based around a Nano- and Micro-Emulsification process, the technology utilizes food grade emulsifiers already approved by Health Canada. These water-soluble cannabinoids are shelf stable, resulting in no constituent separation, and boast a rapid onset time. [Read More](#) (Extraction Magazine)

CONSUMER AND SOCIAL TRENDS

Marijuana legalization doesn't cause increased crime, federally funded study finds. Legalizing marijuana has little to no impact on rates of violent or property crime, according to a new study that was funded by a federal agency. The policy change did seem connected to a long-term decline in burglaries in one state, however. The study, published in the journal *Justice Quarterly* and funded by the federal National Institute of Justice, found that violent and property crimes rates were not affected in a statistically significant way in the years after Colorado and Washington State became the first in the nation to legalize marijuana for adult use. [Read More](#) (Marijuana Moment)

Social media influencers can help cannabis businesses get around advertising restrictions. Because of advertising and marketing limitations imposed on the cannabis industry, influencers can broadcast companies' messages in places the companies themselves cannot. "Cannabis brands cannot utilize social advertising currently – meaning no Facebook ads, no Instagram ads, no LinkedIn ads, no Pinterest ads, etc.," said Natalie Cupps DiBlasi, co-founder of Laced, a strategic digital agency in California that specializes in cannabis marketing. "The No. 1 way (cannabis brands can get their) message out there is through influencers." [Read More](#) (Marijuana Business Daily)

RETAIL

Does the Marketplace Facilitator Act apply to Weedmaps and others? The California Dept. of Tax and Fee Administration (CDTFA) just issued a set of regulations that apply to the “Marketplace Facilitator Act”. This new law which has been unnoticed by most in California’s cannabis industry could be applied to Weedmaps and others who facilitate sales of cannabis to California residents. A new California law generally provides that a marketplace facilitator is responsible for collecting and paying the tax on retail sales made through their marketplace for delivery to California customers. [Read More](#) (Green Market Report)

SQDC to open 20 new pot stores by March. The Société Québécois du Cannabis (SQDC) plans to double its number of stores by March, according to Jean-François Bergeron. The SQDC’s president and director said that 20 new stores will open during the next six months, bringing the total number of Quebec outlets to 43. There are currently 21 outlets in the province, including one recently opened in Châteauguay. [Read More](#) (Montreal Gazette)

INTERNATIONAL

Wading through the details of the Dutch ‘Wietexperiment’. In all, 10 municipalities are participating in the ‘wietexperient’ (i.e., Dutch for “weed experiment”) They include Almere, Arnhem, Breda, Groningen, Heerlen, Hellevoetsluis, Maastricht, Nijmegen, Tilburg, and Zaanstad. They are smaller cities by Dutch standards. Between them they represent 79 coffeeshops. Breda, Maastricht and Heerlen are designated as “border municipalities” in which coffeeshops can only supply local residents rather than visitors and tourists at large. [Read More](#) (New Frontier Data)

Chart 13: Dutch Coffeeshop Cultivation Experiment

Starting in 2021 some Dutch cities will start an experiment to learn what the impact is when the cultivation and sale of cannabis for recreational use takes place in a closed chain, free from crime.

10
CITIES

79
COFFEESHOPS

10
CULTIVATION
LICENSES



CITIES

- 1 Groningen
 - 2 Almere
 - 3 Arnhem
 - 4 Nijmegen
 - 5 Zaanstad
 - 6 Hellevoetsluis
 - 7 Breda*
 - 8 Tilburg
 - 9 Maastricht*
 - 10 Heerlen*
- *resident only sales

QUICK FACTS

- No THC limit
- Out of criminal loop
- Products must be tested
- Price set by coffeeshop

Source: Intro-Blue, New Frontier Data

Mexico will legalize cannabis this month. The leader of Mexico’s ruling political party – Senator Ricardo Monreal – has confirmed his country will fully legalize cannabis by the end of the month. Monreal, head of the MORENA party, said the public consultation over the prospect of Mexican marijuana legalization had ended, with the majority of the public heavily in favor of legalization. [Read More](#) (The Leaf Desk)

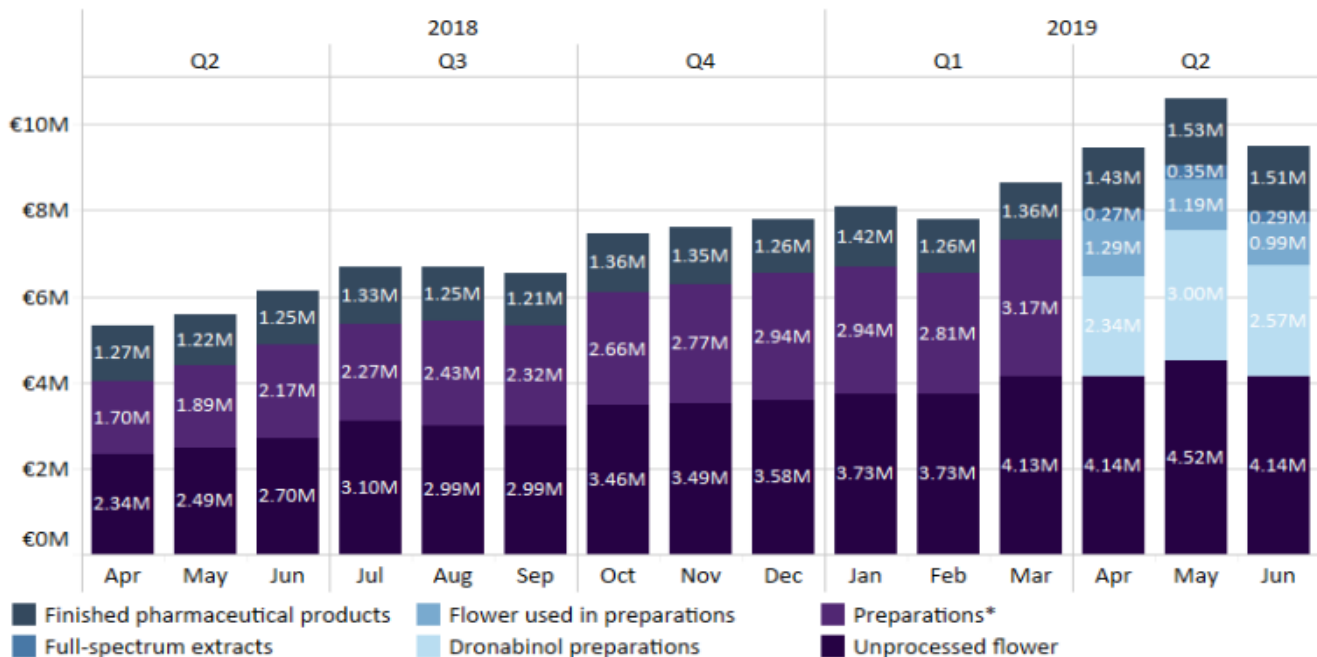
Brazil again delays vote on regulating cannabis cultivation and products registration, dealing further setback to open market. Brazilian health regulators unexpectedly postponed another vote on a groundbreaking proposal to regulate the cultivation and registration of cannabis-based medicines, delivering a further blow to efforts to open up fresh business opportunities in Latin America’s largest medical cannabis market. The directory of the Brazilian Agência Nacional de Vigilância Sanitária – or National Sanitary Surveillance Agency (ANVISA) – was expected to vote Tuesday on two resolutions that for the first time would have established a regulatory framework on the domestic cultivation and registration of cannabis-based medicines without the need for finished clinical trials. But two of ANVISA’s five directors – Fernando Mendes and Antonio Barra – asked to postpone the vote, effectively blocking any decision from happening. [Read More](#) (Marijuana Business Daily)

Brazil's medical marijuana market projected to reach \$ 1.1 billion per year. Entrepreneurs continue to invest in Brazil's medical marijuana market, despite a lack of support from Brazil's government. There is no legislation in favor of legalizing medical marijuana in Brazil, and the government disapproved of the National Health Surveillance Agency's proposal to regulate the issue. The medical marijuana market is projected to reach R\$ 1.1 billion (US\$ 269 million) to R\$ 4.7 billion (US\$ 1.1 billion) per year, according to studies. [Read More](#) (420 Intel)

The UK's messy CBD oil industry is finally starting to clean up its act. Poor testing standards and lax regulation means that some CBD products in the UK have illegal levels of THC or no CBD at all. Now the industry is starting to regulate itself. Lab tests from the Centre for Medicinal Cannabis (CMC) in June found that 62 per cent of the UK high street products studied didn't contain the CBD content promised on the label. One product (retailing for £90) had no measurable amount of the non-toxic cannabis compound at all. [Read More](#) (Wired)

German sales of insured medical cannabis soar in second quarter. Sales of medical cannabis covered by insurance continue to increase in Germany, reaching new highs in the second quarter, according to newly released data. The steady growth in sales in the world's largest importer of medical marijuana is a good sign for the global industry, and it comes as several countries are gearing up to start large-scale marijuana exports. Medical marijuana reimbursements reached 29.5 million euros (\$32.3 million) for the April-June period, up 20% over the previous quarter, when 24.5 million euros worth of medical cannabis was reimbursed by statutory health insurers. [Read More](#) (Marijuana Business Daily)

Chart 14: Insurance-Covered Cannabis Products Sales in Germany



Source: Intro-Blue, Marijuana Business Daily

CANNA SCIENCE – EXTRACTION, TESTING, BIOSYNTHESIS

Marijuana breath tests could be available by 2020. Roadside breath tests which can detect whether drivers have smoked marijuana in the past three hours may be available by next year. Firms such as Oakland-based Hound Labs and Canadian company SannTek are hoping to have working products ready in the latter half of 2020. [Read More](#) (Newsweek)

Understanding how to evaluate water-soluble technology. Lately, there has been much discussion about water-soluble technology in the cannabis industry. Many companies, eager to convey a transformative milestone to the public, are announcing that they've developed their own water-soluble technology. Unfortunately for consumers, many of these claims are premature. The technology being claimed is, in the vast majority of cases, a nanoemulsion. Put simply, a nanoemulsion is created when an oil is combined with functional ingredients and then blasted with energy, causing the oil particles to split into smaller pieces. [Read More](#) (420 Intel)

TECHNOLOGY

Cannabis big data firm to acquire Zefyr, the 'Nielsen' of cannabis. New Frontier Data reached an agreement to acquire Zefyr Inc., creating the first marketing tech solution of its kind for mature market entrants. Zefyr captures data from multiple sources and then ingests, normalizes, analyzes, and deploys data and associated informational solutions via artificial intelligence, machine learning, and Amazon Web Services. [Read More](#) (Business Wire)

Seed & Smith partners with Gofire to provide precision concentrate dosing through SmartCartridge technology. Seed & Smith, has partnered with healthcare technology company Gofire, an innovator of hardware and software solutions that aid in dose delivery, health tracking, and medication management, to enable precision-dosing of Seed & Smith's cannabis oils through Gofire's SmartCartridge and patented, IoT-enabled Gofire Inhaler. [Read More](#) (Extraction Magazine)

Cannabis tech platform Flowhub raises \$23 million. Denver-based Flowhub, a marijuana software technology platform, raised \$23 million in a Series A funding to bankroll its expansion. The raise was backed by numerous investors, including existing stakeholders Phyto Partners, based in Boca Raton, Florida, and San Francisco-headquartered Poseidon Asset Management. The \$23 million of financing closed on this round brings the privately owned company's total funding to \$27 million, Flowhub said. The company will use the new funds to continue investment in product innovation, hiring of new employees and to look for further partnerships. [Read More](#) (Flowhub)

IP

Marijuana's branding problem. Federal prohibition requires creative thought to protect the marijuana industry's brand names and logos. There's no imagery among marijuana brands with the instant recognition of something like McDonald's golden arches or the Nike swoosh — at least not yet. And without federal trademark protection and the ability to tightly control one's brand, building something as recognizable as that won't be possible. [Read More](#) (Crain's Cleveland)

LEGAL

Canopy, U.S. hemp grower head to court over dismal crop, missed payments. [Canopy Growth \(CGC\)](#) and a Nevada-based hemp producer are suing each other in rival federal cases over a bad crop and allegations of missed payments and misspent advances. The cases center on Go Farm Hemp, a Henderson, Nevada-headquartered company that entered contracts to grow hemp in 2019 for Canopy Growth in Colorado, Kentucky, New York and North Carolina. [Read More](#) (Hemp Industry Daily)

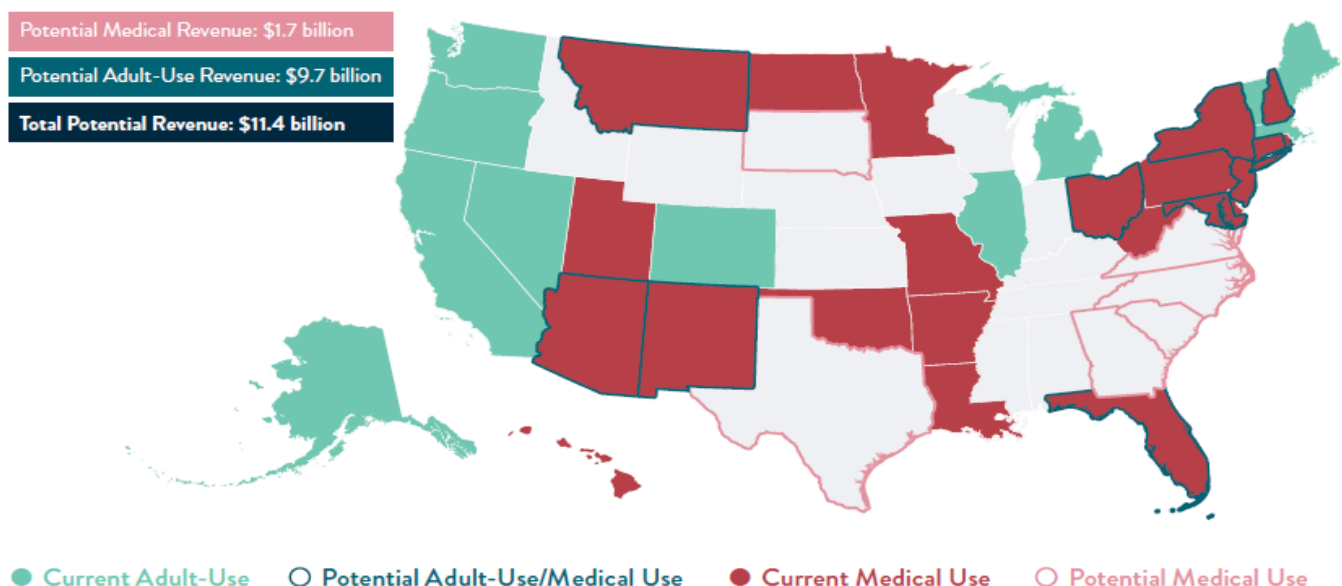
Quebec files appeal after court strikes down home grow ban. Quebec has filed an appeal to challenge a court's ruling that the province cannot ban its citizens from growing their own adult-use cannabis at home. Premier François Legault said he intends to "go all the way to ensure that the courts allow us to do what we think is best for Quebecers". The appeal comes after Quebec Superior Court Justice Manon Lavoie's ruling last month that the province's ban on home cannabis cultivation was unconstitutional. [Read More](#) (Cannabis Business Times)

SUSTAINABILITY

Cannabis: a remedy for the soil? Hemp offers untold benefits for the soil, production processes, renewable fuel and sustainable fashion. Unlike cotton and many other plants used in textile, hemp needs less water and requires no pesticides, allows for soil remediation (phytoremediation) - whereby hemp can absorb pollutants from the earth - and it returns 60-70 percent of the nutrients it takes from the soil. The cannabis plant has a wide range of uses which makes its cultivation both a boon for the ecology as well as for nutrition among other uses. [Read More](#) (The Ecologist)

CANNA FACTS

Chart 15: Potential Additional Revenue from States Currently Debating New Cannabis Laws

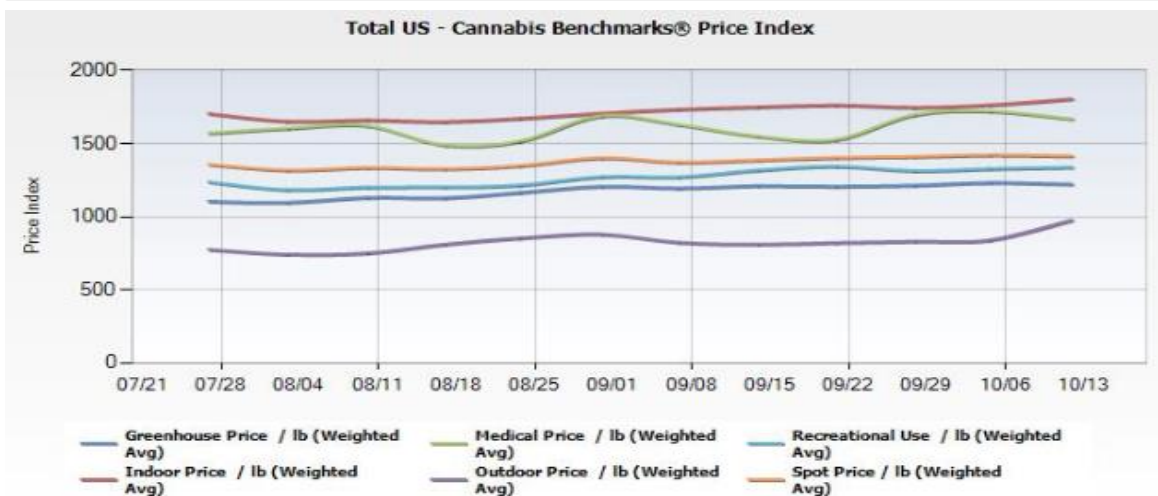


Source: Intro-Blue, New Frontier Data

CANNA PRICES – WEEKLY TREND

Chart 16: U.S. Cannabis Market Prices

Commodity	October 11	October 4	\$ Change	% Change
Spot Price / lb (Weighted Avg)	\$1,416.00	\$1,423.00	(\$7.00)	-0.5 %
Indoor Price / lb (Weighted Avg)	\$1,806.00	\$1,765.00	\$41.00	2.3 %
Greenhouse Price / lb (Weighted Avg)	\$1,224.00	\$1,234.00	(\$10.00)	-0.8 %
Outdoor Price / lb (Weighted Avg)	\$978.00	\$842.00	\$136.00	16.2 %
Medical Price / lb (Weighted Avg)	\$1,670.00	\$1,722.00	(\$52.00)	-3.0 %
Recreational Use / lb (Weighted Avg)	\$1,339.00	\$1,329.00	\$10.00	0.8 %



Source: Intro-Blue, Cannabis Benchmarks Price Index

Chart 17: U.S. Implied Forward Prices (Week Ending October 11, 2019)

Delivery Month	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
This Week's Forward Price	\$ 1,250	\$ 1,275	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,290
Last Week's Forward Price	\$ 1,250	\$ 1,275	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,290
Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Premium/Discount to Spot	-11.7%	-10.0%	-8.2%	-8.2%	-8.2%	-8.9%

Source: Intro-Blue, Cannabis Benchmarks Price Index

Chart 18: Canada Cannabis Market Prices

	LP Average Selling Price	Excise Taxes*	CCSI**	Exchange Rate	CCSI	Weekly Chg
Week Ending	C\$/gram	C\$/gram	C\$/gram	C\$ per US\$	US\$/pound	%
16-Aug	\$5.73	\$1.13	\$6.86	1.326	\$2,345	
23-Aug	\$5.87	\$1.13	\$7.00	1.331	\$2,384	2.0%
30-Aug	\$5.60	\$1.12	\$6.72	1.329	\$2,293	-3.9%
6-Sep	\$5.66	\$1.13	\$6.79	1.328	\$2,320	1.1%
13-Sep	\$6.08	\$1.14	\$7.22	1.321	\$2,479	6.3%
20-Sep	\$6.24	\$1.14	\$7.38	1.325	\$2,524	2.2%
27-Sep	\$6.17	\$1.14	\$7.31	1.326	\$2,499	-0.9%
4-Oct	\$5.94	\$1.13	\$7.07	1.328	\$2,415	-3.2%
11-Oct	\$5.68	\$1.13	\$6.81	1.330	\$2,323	-3.7%

Source: Intro-Blue, Cannabis Benchmarks Price Index











CANNA BRANDS AND PRODUCTS RANKING – STATE IN FOCUS: CALIFORNIA

Chart 19: Best-Selling Flower Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Strawberry Cough (Eighth) DIME BAG	\$22.81	
2		Clementine (Eighth) DIME BAG	\$22.38	
3		Glue (Eighth) PACIFIC STONE	\$16.91	
4		Triangle Kush (Eighth) DIME BAG	\$22.43	
5		Banana OG (Eighth) DIME BAG	\$22.34	


Source: Intro-Blue, Headset

Chart 20: Best-Selling Concentrates Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Orange Peel Sauce (Gram) RAW GARDEN	\$33.82	
2		Gelato Crumble (Half Gram) FLAVOR	\$12.88	
3		Strawberry Banana Shatter (Half Gram) FLAVOR	\$13.68	
4		Lemon Cake Shatter (Half Gram) FLAVOR	\$10.70	
5		Strawberry Banana Crumble (Half Gram) FLAVOR	\$12.23	

Source: Intro-Blue, Headset

Chart 21: Best-Selling Vapor Pens Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Lemon Cookie Cartridge (Gram) RAW GARDEN	\$52.49	
2		Pink Cindy Cartridge (Half Gram) RAW GARDEN	\$32.01	
3		Super Lemon Haze Cartridge (Gram) SELECT	\$47.90	
4		Creme De Citron Cartridge (Gram) RAW GARDEN	\$50.04	
5		Trainwreck Cartridge (Gram) SURPLUS CARTRIDGE CO.	\$39.84	

Source: Intro-Blue, Headset

Chart 22: Best-Selling Beverage Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		THC Hi-Fi Hops (10mg) LAGUNITAS BREWING COMPANY	\$7.56	
2		Kwik Zzz's - Kush Berry (100mg) MANZANITA NATURALS	\$12.63	
3		Kwik Ease - Pineapple Express (100mg) MANZANITA NATURALS	\$9.67	
4		CBD:THC 1:1 Hi-Fi Hops (5mg CBD, 5mg THC) LAGUNITAS BREWING COMPANY	\$7.80	
5		Strawberry Lemonade Quencher (100mg) CANNABIS QUENCHER	\$21.12	



Source: Intro-Blue, Headset

Chart 23: Best-Selling Tincture & Sublingual Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		CBD:THC 30:1 Releaf Tincture (435mg CBD, 15mg THC, 15ml, 0.5oz) PAPA & BARKLEY	\$52.05	
2		CBD:THC 18:1 Sublingual Drops (270mg CBD, 15mg THC, 15ml) CARE BY DESIGN	\$40.72	
3		CBD:THC 1:3 Releaf Tincture (112.5mg CBD, 337.5mg THC, 15ml) PAPA & BARKLEY	\$56.04	
4		CBD/THC 30:1 CBD Rich Relief Tincture (870mg CBD, 30mg THC, 30ml) PAPA & BARKLEY	\$88.57	
5		CBD:THC 1:1 Sublingual Drops (240mg CBD, 240mg THC, 15ml) CARE BY DESIGN	\$41.21	

Source: Intro-Blue, Headset

Chart 24: Best-Selling Capsules Brands and Products in California

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Soft Gels 10-Pack (100mg) ABX / ABSOLUTEXTRACTS	\$56.02	
2		Soft Gels 10-Pack (250mg) ABX / ABSOLUTEXTRACTS	\$32.50	
3		Soft Gels 30-Pack (300mg) ABX / ABSOLUTEXTRACTS	\$34.03	
4		CBD:THC 30:1 CBD Rich Capsules 30-Pack (870mg CBD, 30mg THC) PAPA & BARKLEY	\$88.42	
5		CBD:THC 1:1 Soft Gels 10-Pack (100mg CBD, 100mg THC) CARE BY DESIGN	\$34.69	

Source: Intro-Blue, Headset

CANNA EVENTS CALENDAR

Chart 25: Cannabis Company Events Calendar – Upcoming Conference Calls

Date	Company	Ticker	Web Access	Phone Dial-in
10/16/19 - 11:00 A.M. ET	Valens GroWorks	(TSX:VGW)/(OTC:VGWCF)	Webcast	1-877-407-0792 passcode 13695323
10/24/19 - 8:30 A.M. ET	Green Growth Brands	(CSE: GGB)/(OTC:GGBXF)	n/a	1-888-390-0605 passcode 66844833
10/24/19 - 8:30 A.M. ET	Hexo Corp	(TSX: HEXO)/(NYSE: HEXO)	Webcast	1-888-390-0541 passcode 531469
10/28/19 - 5:00 P.M. ET	MedMen	(CSE: MMEN)/(OTC:MMNFF)	Webcast	1-844-559-7829 passcode 3858067
11/05/19 - 4:30 P.M. ET	GW Pharmaceuticals	(NASDAQ: GWPH)	Webcast	
11/06/19 - 9:00 A.M. ET	Scotts Miracle-Gro	(NYSE: SMG)	Webcast	1-866-337-5532 passcode 1062443
11/12/19 - 8:30 A.M. ET	Medipharma Labs	(TSX: LABS)/(OTC: MEDIF)	Webcast	1-877-791-0216 passcode 6389604
11/12/19 - 8:30 A.M. ET	Cronos Group	(NASDAQ: CRON)/(TSX: CRON)	Webcast	1-866-795-2258
11/13/19 - 8:30 A.M. ET	Acreage Holdings	(CSE: ACRG.U)/(OTC: ACRGF)	Webcast	
11/20/19 - 5:00 P.M. ET	Green Thumb Industries	(CSE: GTII)/(OTC: GTBIF)	Webcast	1-877-273-8145 passcode 7085899

Source: Intro-Blue, New Cannabis Ventures

Chart 26: Cannabis Company Events Calendar – Recent Conference Calls

Date	Company	Ticker	Replay
10/15/19 - 9:00 A.M. ET	Aphria	(TSX: APHA)/(NYSE: APHA)	Webcast
10/01/19 - 8:30 A.M. ET	48North	(TSXV: NRTH)/(OTC: NCNMF)	Webcast
09/23/19 - 4:30 PM ET	Akerna	(NASDAQ: KERN)	Webcast
09/12/19 - 9:00 A.M. ET	Aurora Cannabis	(TSX: ACB)/(NYSE: ACB)	Webcast
09/03/19 - 9:00 A.M. ET	4Front	(CSE: FFNT)/(OTC: FFNTF)	1-844-512-2921 passcode 13694074
08/30/19 - 11:00 A.M. ET	Harborside	(CSE: HBOR)	Webcast
08/30/19 - 10:00 A.M. ET	Planet 13 Holdings	(CSE: PLTH)/(OTC: PLNHF)	Webcast
08/30/19 - 10:00 A.M. ET	Dixie Brands	(CSE: DIXI)/(OTC: DXBRF)	Webcast
08/29/19 - 5:00 P.M. ET	Cansortium	(CSE:TIUM)/(OTC: CNTMF)	Webcast
08/29/19 - 10:00 A.M. ET	WeedMD	(TSX-V:WMD)/(OTC:WDDMF)	1-800-319-6413 passcode 3544
08/29/19 - 10:00 A.M. ET	MJardin Group	(CSE: MJAR)/(OTC: MJARF)	Webcast
08/29/19 - 10:00 A.M. ET	VIVO Cannabis	(TSX-V: VIVO)/(OTC: VVCIF)	Webcast
08/29/19 - 8:30 A.M. ET	Vireo Health	(CNSX: VREO)/(OTCQX: VREOF)	Webcast
08/29/19 - 8:30 A.M. ET	Biome Grow Inc.	(CSE:BIO)/(OTC: BIOIF)	Webcast
08/28/19 - 5:00 P.M. ET	Green Thumb Industries	(CSE: GTII)/(OTC: GTBIF)	Webcast
08/28/19 - 5:00 P.M. ET	TILT Holdings	(CSE: TILT)/(OTC: SVVTF)	Webcast
08/28/19 - 4:30 P.M. ET	CB2 Insights	(CSE:CBII)/(OTC:CBIIIF)	1-800-319-4610
08/28/19 - 9:00 A.M. ET	Delta 9	(TSXV: DN)/(OTC: VRNDF)	1-877-674-6060 passcode 528211
08/28/19 - 8:30 A.M. ET	SLANG Worldwide	(CNSX: SLNG)/(Frankfurt: 84S)	Webcast

08/27/19 - 5:00 P.M. ET	Curaleaf	(CSE: CURA)/(OTC: CURLF)	Webcast
08/27/19 - 1:00 P.M. ET	Abacus Health Products	(CSE: ABCS)/(OTC: ABAHF)	Webcast
08/27/19 - 10:00 A.M. ET	Canopy Rivers	(TSXV: RIV)/(OTC: CNPOF)	Webcast
08/27/19 - 8:30 A.M. ET	iAnthus	(CSE: IAN)/(OTC: ITHUF)	Webcast
08/26/19 - 5:00 P.M. ET	James E Wagner	(TSXV: JWCA)/(OTC: JWCAF)	Webcast
08/22/19 - 8:30 A.M. ET	Lift & Co	(TSXV: LIFT)	Webcast

Source: Intro-Blue, New Cannabis Ventures

Chart 27: Cannabis IPO Pipeline

S. No	Company	Filing	Market	Description
1	AAA Medic Montreal	SEDAR	TSX-V	Quebec ACMPR Applicant
2	Blackshire Capital	SEDAR	CSE	Invests in Private Cannabis Companies
3	Breath of Life International	SEDAR	TSX	Israeli Licensed Medical Cannabis Producer
4	CWE European Holdings	SEDAR	TSX-V	German Hemp Operator
5	HollyWeed North Cannabis	SEDAR	TSX-V	Canadian LP Focused on Processing and Ancillary Solutions
6	IM Cannabis	SEDAR	CSE	Israeli Medical Cannabis License Holder
7	Innovate Phytotechnologies	SEDAR	CSE	Canadian Hemp Services Provider and ACMPR Applicant
8	Isracann Biosciences	SEDAR	CSE	Israeli Cannabis Producer
9	Lifted Innovations	SEDAR	CSE	Cannabis accessories e-commerce company in U.S. and Canada
10	Lobo Genetics	SEDAR	TSX-V	Genetics Testing for Cannabis Consumers
11	ManifestSeven	SEDAR	CSE	California Retail and Distribution
12	Merced Holdings	SEDAR	CSE	California Extraction
13	Merrco Payments	SEDAR	TSX-V	Canadian Payments Processor Focused on Cannabis
14	OG DNA Genetics	SEDAR	CSE	Seeds and Genetics
15	Potbotics	SEDAR	CSE	U.S.-Based Data Aggregation and Technology
16	Province Brands	SEDAR	TSX-V	Canadian Developer of Cannabis Beverages
17	RAMM Pharma	SEDAR	CSE	Latin American Pharmaceutical
18	Southern Sun	SEDAR	TSX-V	Canadian Company Focused on Africa
19	Starling Brands	SEDAR	CSE	California Cannabis Operator
20	Terrace. Inc	SEDAR	TSX-V	Multi-Country Operator in Spain and Entering Uruguay and Portugal
21	The Hacienda Company	SEDAR	CSE	California Cannabis Brand Owner
22	Theracann International Benchmark	SEDAR	TSX-V	Panama-Based Provider of Technology, Operations and Analytics
23	Trichome Financial	SEDAR	TSX-V	Canada-Based Specialty Finance Company
24	urban-Gro	SEC	OTC	Colorado-Based Provider of Technology, Lighting and Supplies
25	Varianz	SEDAR	TSX-V	Colombian Applicant

Source: Intro-Blue, New Cannabis Ventures

Chart 28: Cannabis Industry Events Calendar

S. No	Event Name	Place	Date
1	MJMicro Conference	BEVERLY HILLS, CA	October 16, 2019
2	Cannabis Business Italia 2019	ROME, ITALY	October 16 - 17, 2019
3	High Hopes Summit	LOS ANGELES, CA	October 20 - 22, 2019
4	Institutional Capital and Cannabis Conference	NEW YORK, NY	October 21, 2019
5	Benzinga Capital Conference	CHICAGO, IL	October 22 - 23, 2019
6	Burns & Levinson's Third Annual State of the Cannabis Industry Conference	WALTHAM, MA	October 23, 2019
7	RAD Expo	PORTLAND, OR	October 23 - 24, 2019
8	The International Congress on Clinical Trials in Cannabis	LONDON, UK	October 23 - 24, 2019
9	Sensible Minnesota's 3rd Annual Minnesota Cannabis Summit	ST. PAUL, MN	October 24, 2019
10	Central European Cannabis Forum	WARSAW, PL	October 24 - 25, 2019
11	Cannabis World Congress and Business Expo	BOSTON, MA	October 24 - 26, 2019
12	Cannabis Advancement Series: Innovation and Inclusion in Entrepreneurship	DARTMOUTH, MA	October 26, 2019
13	4th Annual Cannabis Lab Conference & Expo	MIAMI, FL	October 28 - 29, 2019
14	Cannabis Capital Convention	AMSTERDAM, NL	October 30, 2019
15	HortiCann Light + Tech Conference	DENVER, CO	October 31, 2019
16	European American Cannabis Business Conference	LETNANY, PRAGUE	October 31, 2019
17	Cannafest	LETNANY, PRAGUE	November 1 - 3, 2019
18	Cannabis & Hemp Expo	WINNIPEG, MB	November 2 - 3, 2019
19	IC3 Real Estate	LOS ANGELES, CA	November 5, 2019
20	Evolve Health and Wellness Expo	VANCOUVER, BC	November 8 - 9, 2019
21	Analytical Cannabis Expo Europe 2019	LONDON, UK	November 12, 2019
22	Cannabis Private Investment Summit	SAN FRANCISCO, CA	November 13, 2019
23	Ark-La-Tex Cannabis Business Expo	LITTLE ROCK, AR	November 13 - 14, 2019
24	Canna-Pharma 2019	LA JOLLA, CA	November 13 - 14, 2019
25	The Florida Cannabis Expo	MIAMI, FL	November 13 - 14, 2019
26	CBD Expo Tour East	ORLANDO, FL	November 14 - 15, 2019
27	Ohio CBD Expo	COLUMBUS, OH	November 16 - 17, 2019
28	The Cannabis Consumer & Business Expo	TORONTO, ON	November 22 - 24, 2019
29	Cannabis & Hemp Expo	OTTAWA, ON	November 23 - 24, 2019
30	Cannabis Business Iberia	ZARAGOZA, SPAIN	November 27 - 28, 2019
31	CBD Expo Tour West	SAN DIEGO, CA	December 5 - 6, 2019
32	Arcview Investor Group Forum Vegas	LAS VEGAS, NV	December 8 - 10, 2019
33	Hemp Industry Daily Forum	LAS VEGAS, NV	December 10, 2019
34	MJBizCon	LAS VEGAS, NV	December 11 -13, 2019
35	The Headies: Vermont Growers Cup	ESSEX, VT	January 11, 2020
36	Texas Hemp Convention	DALLAS, TX	January 28 - 30, 2020
37	Cannabis Packaging Summit	ANAHEIM, CA	February 11 - 12, 2020
38	Seed to Sale Show	BOSTON, MA	February 18 - 19, 2020
39	Northeast Cannabis Business Conference	BOSTON, MA	February 19 - 20, 2020
40	Women Grow Strong	NEW ORLEANS, LA	March 4 - 6, 2020
41	Cannabis Meets Healthcare	NEW ORLEANS, LA	March 4 - 6, 2020
42	Cannabis 2020: Pros & Cons	NEW YORK, NY	April 3, 2020
43	Cannabis Business Asia 2020	THAILAND	April 7 - 8, 2020
44	The Cannabis Consumer & Business Expo	MONTREAL, QC	April 10 - 12, 2020
45	Women in Cannabis Summit	BURLINGTON, VT	April 11, 2020
46	Cannabis Conference 2020	LAS VEGAS, NV	April 21 - 23, 2020
47	Cannabis Business France 2020	PARIS, FRANCE	May 5 - 6, 2020
48	10th Annual Cannabis Industry Lobby Days	WASHINGTON, D.C.	May 19 - 21, 2020
49	MJBizConNEXT Executive Summit	NEW ORLEANS, LA	June 11 - 12, 2020
50	Cannabis Business Summit & Expo	SAN FRANCISCO, CA	June 15 - 17, 2020
51	Cannabis Business Poland 2020	WARSAW, PL	July 1 - 2, 2020

52	Be Part Of The New Cannabis Drinks Category	SAN FRANCISCO, CA	July 30, 2020
53	Cannabis Drinks Expo Chicago	NORTHLAKE, IL	August 3, 2020
54	Midwest Cannabis Business Conference	DETROIT, MI	August 26 - 27, 2020
55	CannaOne BizCon + Expo	LAS VEGAS, NV	August 26 - 28, 2020

Source: Intro-Blue, Cannabis Business Times, CannabisFN, Cannabis Business Executive

CANNA INDEX

Chart 29: U.S Cannabis Index



Source: Intro-Blue, The Marijuana Index

Chart 30: Canada Cannabis Index



Source: Intro-Blue, The Marijuana Index

COMPARABLES & COMPANY PROFILE LINKS

						Shares		Price Performance			
						Out	Daily Vol	% to High	% from Low	% H-L Range	% YTD
Peer Set											
Canadian LP - Cultivation, Processing (and Dispensing)											
1	CANOPY GROWTH CORP	CGC	20.10	6,992	5,496	348	2.7%	195%	-11%	5%	-25%
2	AURORA CANNABIS INC	ACB	3.76	3,868	4,088	1,029	1.8%	233%	-10%	4%	-24%
3	CRONOS GROUP INC	CRON	8.32	2,839	1,065	341	1.2%	202%	-22%	10%	-20%
4	HEXO CORP	HEXO	2.56	657	542	257	2.2%	228%	-11%	5%	-25%
5	SUNDIAL GROWERS INC.	SNDL	4.48	421	497	94	0.2%	195%	-10%	5%	
6	TERRASCEND CORP	TRSSF	3.83	203	401	95	0.0%	172%	-27%	14%	-50%
8	SUPREME CANNABIS CO INC	SPRWF	0.73	257	275	352	0.1%	145%	-13%	8%	-24%
9	ZENABIS GLOBAL INC	ZBISF	0.51	106	194	209	0.0%	495%	-14%	3%	
7	GREEN ORGNC DUTCHMN HLD	TGODF	0.99	273	181	276	0.4%	380%	-17%	4%	-45%
10	FLOWR CORP (THE)	FLWPF	1.56	104	118	67	0.0%	304%	-14%	5%	-49%
12	AGRAFLORA ORGANICS INTL INC	PUFXF	0.19	92	81	483	0.1%	237%	-53%	18%	15%
11	HERITAGE CANNABIS HLDGS CORP	HERTF	0.20	84	74	425	0.0%	176%	-45%	20%	75%
15	RUBICON ORGANICS INC	ROMJF	1.50	50	63	37	0.0%	74%	-33%	31%	4%
18	DELTA 9 CANNABIS INC	VRNDF	0.46	41	50	88	0.1%	279%	-3%	1%	-49%
17	SPROUTLY CANADA INC	SRUTF	0.28	44	49	161	0.1%	208%	-31%	13%	-8%
16	EVE & CO INC	EEVVF	0.16	38	41	241	0.0%	206%	-27%	12%	-6%
20	JAMES E. WGNR CLTIVION CORP	JWCAF	0.35	32	35	91	0.0%	216%	-12%	5%	-33%
14	VIVO CANNABIS INC	VVCIF	0.22	60	31	271	0.1%	417%	-9%	2%	-57%
25	LOTUS VENTURES INC	LTTSF	0.35	29	29	83	0.0%	6%	-80%	93%	400%
13	48NORTH CANNABIS CORP	NCNNF	0.40	68	28	171	0.0%	226%	-37%	14%	-5%
21	GTEC HOLDINGS LTD	GGTTF	0.16	19	23	113	0.0%	500%	-12%	2%	-54%
24	BELEAVE INC	BLEVF	0.02	10	20	419	0.0%	912%	-43%	5%	-67%
23	TERRANUEVA CORP.	TEQ-CA	0.25	16	17	63	0.0%	-82%	-98%	582%	
28	INDIVA LTD	NDVAF	0.19	12	13	65	0.1%	227%	-19%	8%	-36%

19	SUGARBUD CRAFT GROWERS CORP	SUGR-CA	0.06	17	12	222	0.0%	256%	-29%	10%	61%
27	GROWN ROGUE INTL INC	NVSIF	0.13	9	11	72	0.0%	344%	-45%	12%	-53%
29	NORTH BUD FARMS INC	NOBDF	0.14	7	7	56	0.0%	157%	-10%	6%	-18%
26	MATICA ENTERPRISES INC	MQPXF	0.03	9	4	315	0.0%	693%	-27%	4%	-52%
30	EXPERION HOLDINGS LTD	EXPFF	0.11	11	3	99	0.0%	693%	-81%	11%	-73%
22	BLISSCO CANNABIS CORP	BLIS-CA				107	0.0%				
31	LEANLIFE HEALTH INC	LNLHF	0.03	3				58%	0%	0%	
32	SPEAKEASY CANNABIS CLUB LTD	EASY-CA				87					
CBD/Hemp											
33	CHARLOTTE'S WEB HLDGS INC	CWBHF	13.65	543	1,236	94	0.2%	85%	-40%	32%	-48%
34	CV SCIENCES INC	CVSI	1.94	193	182	99	0.4%	240%	-20%	8%	-55%
35	ELIXINOL GLOBAL LTD	ELLXF	1.46	201	171	138	0.0%	191%	-23%	11%	-19%
37	CBDMD INC (LEVEL BRANDS)	YCBD	3.55	98	85	28	0.2%	104%	-28%	21%	15%
36	VERITAS FARMS INC	SSWH	1.91	71	68	37	0.1%	380%	-58%	13%	45%
38	EUREKA 93	LXLLF	0.34	25	36	74	0.0%	4605%	-95%	2%	-96%
43	ALTERNATE HEALTH CORP	AHGIF	0.12	9	28	75	0.0%	417%	-9%	2%	-64%
39	EARTH SCIENCE TECH INC	ETST	0.35	19	19	53	0.0%	414%	-14%	3%	-56%
51	HEMP INC	HEMP	0.01	3	18	274	2.6%	362%	-15%	4%	-69%
55	KALYTERA THERAPEUTICS	KALTF	0.03	14	14	508	0.0%	278%	-26%	9%	-43%
44	APPLIED BIOSCIENCES CORP	APPB	0.70	9	11	13	0.1%	220%	-45%	17%	-45%
45	MAPLE LEAF GREEN WORLD INC	MGWFF	0.06	9	11	149	0.0%	447%	-28%	6%	-38%
42	ISODIOL INTERNATIONAL INC	ISOLF	0.21	9	10	42	0.0%	1257%	-31%	2%	-78%
48	NATURALLY SPLENDID ENTPRS	NSPDF	0.06	8	9	133	0.0%	247%	-8%	3%	-40%
41	PHIVIDA HLDGS INC	PHVAF	0.16	14	8	89	0.1%	384%	-14%	4%	-60%
46	GLOBAL HEMP GROUP INC	GBHPF	0.04	7	7	188	0.0%	316%	-32%	9%	-63%
47	EMPOWER CLINICS INC	EPWCF	0.04	3	5	77	0.0%	528%	-67%	11%	-41%
53	EASTWEST BIOSCIENCE INC	EAST-CA	0.03	2	3	51	0.0%	650%	-1%	0%	-68%
49	NEWLEAF BRANDS INC	NWGFF	0.34	5	3	8	0.1%	1339%	-26%	2%	-66%
50	REVIVE THERAPEUTICS LTD	RVVTF	0.03	2	1	72	0.0%	346%	-69%	17%	-55%

52	EVIANA HEALTH CORP	EVNNF	0.03	0	1	24	0.0%	2896%	-2%	0%	-96%
54	GRIDIRON BIONUTRIENTS INC	GMVP	0.01	1	1	135	0.0%	2355%	-76%	3%	-86%
56	CBD OF DENVER INC.	CBDD	0.00	0	0	84	1.7%	600%	-40%	6%	-71%
40	HEMPCO FOOD & FIBER INC	HMPPF				62	0.0%				
Diversified											
57	ALTRIA GROUP INC	MO	43.43	81,131	108,610	1,868	0.4%	52%	-10%	15%	-12%
58	CONSTELLATION BRANDS	STZ	196.76	32,957	51,015	189	0.4%	16%	-24%	59%	22%
59	AUXLY CANNABIS GROUP INC	CBWTF	0.57	339	327	596	0.1%	121%	-22%	15%	-14%
60	GREEN GROWTH BRANDS	GGBXF	1.14	187	234	219	0.1%	357%	-84%	19%	-75%
62	MJARDIN GROUP INC	MJARF	0.38	24	115	62	0.0%	1673%	-19%	1%	-90%
68	MPX INTL. CORPORATION	MPXOF	0.39	52	50			62%	-89%	59%	
61	1933 INDUSTRIES INC	TGIFF	0.20	51	50	261	0.2%	136%	-24%	15%	-23%
63	HARVEST ONE CANNABIS INC	HRVOF	0.30	48	46	214	0.0%	209%	-29%	12%	-25%
67	STEM HLDGS INC	STMH	1.12	44	43	40	0.0%	168%	-29%	15%	-44%
73	AMERICAN CANNABIS INNOVATIONS CONGLOMERATED	PURA	0.06	37	38	595	0.5%	307%	-37%	11%	-36%
65	NUTRITIONAL HIGH INTL INC	SPLIF	0.09	31	34	309	0.0%	237%	-21%	8%	-49%
70	RAVENQUEST BIOMED INC	RVVQF	0.17	21	32	123	0.1%	357%	-5%	1%	-48%
71	MJ HOLDINGS INC	MJNE	0.27	19	18	71	0.1%	1849%	-21%	1%	-75%
74	MCIG INC	MCIG	0.03	18	17	517	0.3%	782%	-25%	3%	-77%
72	NEXT GREEN WAVE HLDGS INC	NXGWF	0.15	22	17	121	0.1%	596%	-34%	5%	-29%
64	INDIA GLOBALIZATION CAPITAL	IGCC	0.92	36	15	40	0.6%	494%	-73%	13%	227%
77	INTERNATIONAL CANNABRANDS IN	GEATF	0.02	6	13	290	0.0%	1030%	-35%	3%	-61%
69	MYM NUTRACEUTICALS INC	MYMMF	0.09	13	11	140	0.0%	900%	-17%	2%	-75%
75	ROTO-GRO INTL LTD	RGI-ASX	0.10	13	11	130	0.0%	288%	-16%	5%	-56%
76	FUTURE FARM TECHNOLOGIES INC	FFRMF	0.05	7	10	165	0.0%	789%	-22%	3%	-67%
66	LIFESTYLE DELIVERY SYSTEMS	LDSYF	0.45	10	5	23	0.0%	590%	-16%	3%	-66%
78	ACACIA DIVERSIFIED HLDGS INC	ACCA	0.09	3	5	38	0.1%	186%	-76%	29%	-46%
79	MJ VENTURE PARTNERS, INC. (NVEST INC.)	MJVP	0.49	0	1			161%	-99%	38%	1135%
80	INTERNATIONAL ENDEAVORS CORP	IDVV	0.00	0	1	14	0.0%	1125%	0%	0%	-75%

Downstream - Distribution/Marketing/Retail/Delivery

82	ALCANNA INC	LQSIF	3.37	125	429	37	0.0%	153%	-13%	8%	9%
83	ORIGIN HOUSE	ORHOF	4.86	325	341	67	0.1%	101%	-24%	19%	2%
81	MEDMEN ENTERPRISES INC	MMNFF	1.13	226	320	167	0.4%	570%	2%	0%	-52%
84	PLANET 13 HLDGS INC	PLNHF	1.68	136	220	136	0.1%	61%	-48%	44%	-8%
85	GREENLANE HOLDINGS INC	GNLN	3.37	34	74	10	1.0%	761%	-7%	1%	
86	NATIONAL ACCESS CANNABIS CORP.	NACNF	0.28	50	64	175	0.0%	243%	-89%	27%	-25%
89	DRIVEN DELIVERIES INC	DRVD	0.71	36	36	51	0.0%	724%	-90%	11%	631%
90	DIONYMED BRANDS INC	HMDEF	0.08	3	32	20	0.1%	3685%	-35%	1%	-95%
96	INNER SPIRIT HLDGS LTD	INSHF	0.10	0	29	206	0.0%	164%	-26%	14%	-100%
91	WILDFLOWER BRANDS INC	WLDF	0.22	15	21	68	0.0%	292%	0%	0%	-45%
87	CHOOM HOLDINGS INC	CHOO	0.19	34	15	70	0.1%	368%	-5%	1%	53%
88	GSRX INDUSTRIES INC	GSRX	0.15	12	14	81	0.0%	1313%	-20%	2%	-91%
95	DIEGO PELLICER WORLDWIDE INC	DPWWD	0.02	1	11	322	0.1%	2052%	-35%	2%	-98%
93	SMOKE CARTEL INC	SMKC	0.41	9	9			567%	-23%	4%	-63%
94	ROCKY MTN HIGH BRANDS INC	RMHB	0.04	5	5	121	0.4%	695%	-10%	1%	-81%
92	HIGH HAMPTON HLDGS CORP	HHPHF	0.06	6	5	104	0.0%	568%	-13%	2%	-68%
97	HIGH TIDE INC	HITI-CA				207					

Extraction, Genetics, Canna Science, etc.

98	MEDIPHARM LABS CORP	MEDIF	3.20	418	416	131	0.1%	77%	-71%	48%	156%
99	NEPTUNE WELLNESS SOLUTION IN	NEPT	3.47	321	321	92	0.6%	89%	-30%	25%	37%
100	VALENS GROWWORKS CORP	VGWCF	2.47	230	182	93	0.1%	48%	-66%	58%	125%
101	ENWAVE CORP	NWVCF	1.52	168	151	111	0.1%	39%	-39%	51%	55%
103	PLUS PRODUCTS INC	PLPRF	2.30	99	142	53	0.0%	161%	-6%	3%	-39%
102	RADIANT TECHNOLOGIES	RDDTF	0.41	109	96	264	0.0%	135%	-21%	13%	-24%
104	WORLD-CLASS EXTRACTIONS	PUMP-CA	0.05	27	17	599	0.0%	240%	16%	-7%	-65%
115	CANNABIS ONE (METROPOLITAN ENERGY CORP)	CBIS-CA	0.17	13	11	73	0.0%	172%	158%	-1095%	
118	BHANG INC.	BHNGF	0.20	10	10	51	0.0%	606%	-90%	13%	-54%
107	CANNAPOWDER INC	CAPD	0.76	9	9	12	0.0%	426%	-33%	7%	-24%

106	MICRON WASTE TECHNOLOGIES IN	MICWF	0.14	10	8	79	0.0%	244%	-27%	10%	-37%
112	AREV BRANDS INTL LTD	AREVF	0.07	0	5	55	0.0%	343%	-100%	23%	
105	HALO LABS INC	AGEEF	0.21	2	4	9	10.6%	224%	-19%	8%	-9%
109	NEUTRISCI INTERNATIONAL INC	NRXCF	0.04	4	3	110	0.0%	316%	-20%	6%	-33%
110	KALI INC	KALY	0.01	2	2	266	2.4%	461%	-97%	17%	-68%
108	ESENSE-LAB LTD	ESE-ASX	0.01	2	1			892%	-3%	0%	-34%
111	ALTERNET SYSTEMS INC	ALYI	0.01	1	1	117	0.5%	922%	-40%	4%	-12%
113	QUADRON CANNATECH CORP	QUDCF				72	0.0%				
114	CANNA-V-CELL SCIENCES INC	CNVC-CA				97					
116	CLS HOLDINGS USA INC	CLSH-CA				126					
117	NEXTLEAF SOLUTIONS LTD	OILS-CA				97					
Input Materials - Nutrients, Hydroponic Equipment, etc.											
119	SCOTTS MIRACLE-GRO CO	SMG	101.21	5,617	7,512	55	0.6%	13%	-43%	76%	65%
120	MARRONE BIO INNOVTIONS	MBII	1.38	170	190	123	0.0%	39%	-20%	34%	-6%
121	GROWGENERATION CORP	GRWG	3.94	143	133	36	0.4%	46%	-48%	51%	75%
122	GROWLIFE INC	PHOT	0.00	14	20	3,818	0.1%	524%	-12%	2%	-48%
123	SURNA INC	SRNA	0.07	16	15	228	0.0%	157%	-70%	31%	-5%
124	SHARC INTL SYS INC	INTWF	0.03	1	6	39	0.0%	1013%	-49%	5%	-90%
125	AFFINOR GROWERS INC	RSSFF	0.01	1	1	100	0.0%	471%	-26%	5%	-59%
Medical Cannabis											
126	ABBVIE INC	ABBV	74.50	110,147	142,392	1,478	0.3%	27%	-16%	37%	-19%
127	GW PHARMACEUTICALS PLC	GWPH	120.33	3,696	3,138	31	1.6%	63%	-25%	29%	24%
128	TILRAY INC	TLRY	22.12	1,791	2,374	98	1.4%	709%	-9%	1%	-69%
130	GREEN THUMB INDUSTRIES INC	GTBIF	9.19	1,134	1,540	169	0.1%	116%	-20%	15%	-16%
129	ARENA PHARMACEUTICALS INC	ARNA	48.90	2,436	1,489	50	0.4%	32%	-35%	52%	26%
132	APHRIA INC	APHA	5.43	1,363	1,323	251	4.3%	198%	-31%	14%	-5%
152	TRULIEVE CANNABIS CORP	TCNNF	10.05	76	1,174	110	0.1%	109%	-34%	24%	-71%
133	HARVEST HEALTH & RECREATION	HRVSF	2.60	246	794	285	0.0%	318%	-98%	24%	-84%
131	CARA THERAPEUTICS INC	CARA	19.38	903	792	47	0.8%	42%	-37%	47%	49%

134	ORGANIGRAM HOLDINGS INC	OGI	3.54	553	525	156	2.2%	138%	-23%	14%	-1%
137	ITEM 9 LABS CORP	INLB	2.48	158	367	147	0.0%	239%	-40%	14%	-79%
135	CORBUS PHARMACEUTICALS HLDGS	CRBP	4.84	313	247	65	0.4%	88%	-8%	9%	-17%
139	22ND CENTURY GROUP INC	XXII	2.03	255	210	126	0.4%	53%	-45%	46%	-18%
142	PHARMACIELO LTD	PHCEF	3.15	200	200	63	0.0%	216%	-13%	6%	
136	CANNTTRUST HLDGS INC	CTST	1.38	195	174	141	4.1%	768%	-44%	5%	-71%
140	ALEAFIA HEALTH INC	ALEAF	0.61	165	157	272	0.1%	402%	-6%	1%	-42%
149	BOTANIX PHARMA LTD	BOT-ASX	0.17	160	157	965	0.4%	22%	-72%	77%	236%
143	CURE PHARMACEUTICAL HLDG COR	CURR	3.70	135	128	36	0.0%	58%	-68%	54%	147%
148	LIBERTY HEALTH SCIENCES INC	LHSIF	0.30	101	120	342	0.1%	314%	-13%	4%	-57%
154	CANSORTIUM INC	CNTMF	0.42	80	112	195	0.0%	502%	-18%	3%	
144	CANN GROUP LTD	CNGGF	0.99	140	107	142	0.0%	113%	-6%	5%	-33%
150	WEEDMD INC	WDDMF	0.94	91	107	96	0.1%	81%	-23%	22%	-2%
146	MEDICAL MARIJUANA INC	MJNA	0.03	93	100	3,654	0.1%	312%	-22%	6%	-66%
141	EMERALD HEALTH THERAPEUTICS	EMHTF	0.62	92	96	146	0.1%	550%	12%	-2%	-70%
138	ZYNERBA PHARMACEUTICALS INC	ZYNE	7.92	184	95	23	1.2%	108%	-65%	38%	167%
155	VIREO HEALTH INTERNATIONAL	VREO-CA	1.25	30	83	85	0.0%	-88%	-95%	1371%	980%
153	TPI/PALLA PHARMA LTD	TPE-ASX	0.68	55	75	81	0.1%	59%	-10%	14%	-16%
192	MEDLAB CLINICAL LTD	MDBBF	0.32	68	61	215	0.0%	7%	-21%	76%	3%
147	FSD PHARMA INC	FSDDF	0.04	62	56	1,506	0.0%	1337%	-22%	2%	-81%
161	EMERALD BIOSCIENCE INC	NMUS	0.41	55	55	134	0.0%	185%	-88%	32%	2%
145	KHIRON LIFE SCIENCES CORP	KHRNF	0.85	87	47	103	0.1%	287%	-16%	5%	-24%
195	CARDIOL THERAPEUTICS INC.	CRTPF	2.09	54	45	26	0.1%	379%	-22%	6%	
160	THC GLOBAL GROUP LTD	HDRPF	0.35	48	44	136	0.0%	14%	-21%	60%	2%
164	TETRA BIO-PHARMA INC	TBPMF	0.20	43	42	211	0.0%	366%	-15%	4%	-67%
156	LEXARIA BIOSCIENCE CORP	LXRP	0.52	40	39	79	0.1%	271%	-22%	8%	-45%
159	AXIM BIOTECHNOLOGIES INC	AXIM	0.51	32	37	63	0.0%	390%	-12%	3%	-32%
151	AUSCANN GROUP HLDGS LTD	ACNNF	0.19	59	34	317	0.1%	256%	3%	-1%	-53%

165	MGC PHARMACEUTICALS LTD	MGCLF	0.02	33	31	1,367	0.0%	138%	-28%	17%	-6%
163	CRESO PHARMA	CPH-ASX	0.19	29	30	152	0.1%	140%	2%	-1%	-44%
168	RHINOMED LTD	RHNMF	0.18	30	29	169	0.0%	239%	-72%	23%	39%
170	GOLDEN LEAF HOLDINGS LTD	GLDFF	0.02	14	29	584	0.0%	795%	-25%	3%	-77%
162	ZELDA THERAPEUTICS LTD	ZLDAF	0.04	31	29	759	0.0%	95%	-47%	33%	16%
167	CANNABICS PHARMACEUTICALS	CNBX	0.22	29	25	134	0.1%	223%	-8%	3%	-25%
169	INMED PHARMACEUTICALS INC	IMLFF	0.22	38	25	172	0.1%	181%	-26%	13%	-13%
166	BOD AUSTRALIA LTD	BDA-ASX	0.29	26	24	89	0.2%	74%	-46%	38%	5%
176	PREMIER HEALTH GROUP INC	PHGRF	0.36	25	22	63	0.0%	123%	-72%	37%	-40%
157	BENCHMARK BOTANICS INC	BHHKF	0.16	23	18	143	0.0%	191%	-100%	34%	-6%
171	THC BIOMED INTL LTD	THCBF	0.11	16	17	146	0.0%	494%	-23%	5%	-54%
158	PIVOT PHARMACEUTICALS INC	PVOTF	0.12	21	16	171	0.0%	345%	-87%	20%	-43%
178	PREVECEUTICAL MED INC	PRVCF	0.02	8	11	396	0.0%	953%	-53%	5%	-44%
180	CANADA HOUSE WELLNSS GRP INC	SARSF	0.05	9	11	194	0.0%	325%	-22%	6%	-64%
183	THERAPIX BIOSCIENCES LTD	TRPX	2.53	9	8	4	0.5%	268%	-19%	7%	-22%
177	TREE OF KNOWLEDGE INTL CORP	TRKWF	0.04	7	8	202	0.0%	1342%	-43%	3%	-78%
181	CANNTAB THERAPEUTICS LTD	TLFTF	0.37	9	8	25	0.0%	311%	-32%	9%	-48%
172	WAYLAND GROUP CORP	MRRCF	0.06	5	7	73	0.0%	2225%	-21%	1%	-91%
175	INTEC PHARMA LTD	NTEC	0.74	26	6	35	0.9%	1152%	-44%	4%	-90%
174	NANOSPHERE HLTH SCIENCES INC	NSHSF	0.06	6	6	108	0.0%	584%	-12%	2%	-65%
179	CANNPAL ANIMAL THE	CP1-ASX	0.09	8	6	93	0.1%	55%	-16%	23%	-7%
185	AURA HEALTH INC	LMLLF	0.04	3	6	83	0.0%	503%	0%	0%	-78%
184	RELEVIVUM TECHNOLOGIES INC	RLLVF	0.03	4	6	130	0.0%	270%	-22%	8%	-58%
182	ABATTIS BIOCEUTICALS CORP	ATTBF	0.02	6	3	353	0.1%	704%	-85%	11%	-69%
189	VODIS PHARMACEUTICALS INC	VDQSF	0.04	0	3	60	0.0%	472%	0%	0%	-100%
188	VERITAS PHARMA INC	VRTHF	0.18	2	2	12	0.0%	851%	-31%	3%	-76%
186	WIZE PHARMA LTD	WIZP	0.22	2	2	11	0.0%	1253%	-54%	4%	-74%
187	ALLIANCE GROWERS CORP	ALGWF	0.02	2	2	86	0.0%	1475%	-50%	3%	-64%

173	INSYS THERAPEUTICS INC	INSY	0.08	6	(64)	75	0.2%	11382%	-64%	1%	-98%
190	BLUEBERRIES MEDICAL CORP	BBM-CA				107					
191	CANNARA BIOTECH, INC.	LOVE-CA									
193	ORION NUTRACEUTICALS INC	ORI-CA				47					
194	CANN GLOBAL LIMITED	ASX-CGB									
Real Estate & Investors											
197	COMPASS DIVERSIFIED HOLDINGS	CODI	20.01	1,199	1,917	60	0.3%	0%	-42%	99%	61%
196	INNOVATIVE INDUSTRIAL PTYS	IIPR	78.21	884	846	11	2.6%	78%	-50%	39%	72%
198	CANOPY RIVS INC	CNPOF	1.28	198	177	191	0.0%	315%	-7%	2%	-55%
199	FIRE & FLOWER HOLDINGS CORP.	FFLWF	0.95	117	116	123	0.0%	58%	-28%	32%	
201	CANNEX CAPITAL HOLDINGS INC	CNXXF	0.48	57	91	184	0.1%	373%	-20%	5%	-4%
225	C21 INVTS INC	CXXI-CA	0.37	30	69	82	0.0%	426%	399%	-1430%	
200	AUSTRALIS CAPITAL INC	AUSCF	0.48	62	57	158	0.0%	473%	-18%	4%	-27%
209	LEVIATHAN CANNABIS GP INC	LVCNF	0.56	53	54	95	0.0%	263%	-100%	28%	
202	CANNABIS STRATEGIC VENTURES	NUGS	0.13	24	38	188	0.1%	3102%	-6%	0%	-93%
205	TARGET GROUP INC	CBDY	0.05	26	26	551	0.0%	525%	-27%	5%	-52%
211	GENERAL CANNABIS CORP.	CANN	0.63	25	25	39	0.5%	533%	-21%	4%	-58%
206	LGC CAPITAL LTD	LGGCF	0.05	25	24	524	0.0%	525%	-100%	16%	-62%
207	INVICTUS MD STRATEGIES CORP	IVITF	0.12	15	23	125	0.1%	1125%	-15%	1%	-78%
222	MJ HARVEST INC	MJHI	0.93	18	18			1873%	-30%	2%	
203	SOL GLOBAL INVESTMENTS CORP	SOLCF	0.69	32	17	23	0.1%	394%	-15%	4%	-15%
217	VENTURA CANNABIS & WELLNESS	CVHIF	0.22	8	10	35	0.0%	233%	-22%	9%	-5%
219	CANADABIS CAPITAL INC	CANB-CA	0.18	8	7	43	0.0%	178%	-27%	13%	-54%
216	CROP INFRASTRUCTURE CORP	CRXPF	0.03	2	7	165	0.1%	1414%	-54%	4%	-95%
215	FINCANNA CAPITAL CORP	FNNZF	0.08	8	7	99	0.0%	212%	-25%	11%	-4%
214	CORDOVACANN CORP	LVRLF	0.15	6	6	41	0.0%	792%	-12%	1%	-80%
210	NABIS HOLDINGS INC.	INNPF	0.06	5	3	95	0.0%	1323%	-23%	2%	
223	VENCANNA (TOP STRIKE RES CORP)	TPPRF	0.03	5	2	170	0.0%	343%	-16%	5%	-77%
218	REDFUND CAP CORP	PNNRF	0.04	2	2	47	0.0%	2150%	-75%	3%	-87%

221	LIBERTY LEAF HOLDINGS LTD	LIBFF	0.03	1	0	31	0.0%	497%	-19%	4%	-54%
220	BELGRAVIA CAPITAL INTL INC	BLGVF	0.01	2	(4)	237	0.0%	204%	-43%	17%	-38%
213	QUINSAM CAPITAL CORP	QCAAF	0.15	17	(18)	118	0.0%	121%	-92%	43%	-18%
212	CANNABIS GROWTH OPRTUNITY	CWWBF	0.78	12	(23)	16	0.0%	157%	-100%	39%	11%
204	MMJ GROUP HLDGS LTD	MMJF	0.16	37	(30)	226	0.0%	72%	-39%	35%	5%
208	CAPTOR CAP CORP	CPTRF	0.51	20	(40)	39	0.0%	388%	-97%	20%	-44%
227	JUSHI HOLDINGS INC.	JUSHF	1.52	135	(64)	14	0.3%	66%	-90%	58%	6547%
224	BOUGAINVILLE VENTURES INC	BOG-CA				59					
226	YIELD GROWTH CORP	BOSS-CA									
Technology, Ancillary Products and Services											
228	KUSCO HOLDINGS INC	KSHB	1.38	148	156	107	0.8%	422%	-4%	1%	-74%
233	TILT HOLDINGS INC	SVVTF	0.24	46	152	245	0.2%	1142%	-30%	3%	-91%
230	MEDICINE MAN TECHNOLOGIES IN	MDCL	3.49	125	121	36	0.1%	19%	-70%	78%	177%
246	AKERNA CORP.	KERN	5.74	63	63	11	0.3%	1166%	-6%	1%	-43%
229	NAMASTE TECHNOLOGIES INC	NXTTF	0.33	99	58	300	0.1%	627%	-21%	3%	-43%
231	HELIX TCS INC	HLIX	0.52	39	42	76	0.1%	541%	-3%	1%	-43%
232	CANNABIX TECHNOLOGIES INC	BLOZF	0.46	48	40	104	0.1%	294%	-26%	8%	-55%
236	NEXTECH AR SOLUTIONS CORP	NEXCF	0.70	30	30	43	0.2%	44%	-67%	60%	-3%
235	NUGL INC	NUGL	0.28	13	13	46	0.1%	785%	-11%	1%	-85%
238	CANNVAS MEDTECH INC	CANVF	0.06	22	13	204	0.0%	1513%	-98%	6%	102%
234	LEAFBUYER TECHNOLOGIES INC	LBUY	0.10	8	10	78	0.1%	1627%	-18%	1%	-78%
245	VAPEN MJ VENTURES CORPORATION	VAPNF	0.48	9	9			258%	-53%	17%	
239	YPB GROUP LTD	YPB-ASX	0.00	5	7	1,507	0.6%	325%	-20%	6%	-72%
237	LIFT & CO CORP	LFCOF	0.11	5	4	41	0.0%	447%	-4%	1%	
240	GLOBAL CANNABIS APPLICATIONS	FUAPF	0.03	3	3	101	0.0%	523%	-53%	9%	-55%
242	ADVANTIS CORP	ADVT	0.00	1	2	978	0.0%	3900%	-93%	2%	-95%
243	BRAINGRID CORP.	BGRD-CA	0.00	0	0	1	0.0%	717%	674%	-1558%	
241	GLOBAL HEALTH CLINICS LTD	LRSNF	0.02	1	(0)	49	0.0%	2567%	-85%	3%	-81%
244	CB2 INSIGHTS INC	CBII-CA				79					

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