

Intro-Blue, LLC | 617-454-1088 | peter@intro-blue.com | www.intro-blue.com | Volume 24 | 12/18/19

CANNABIS 3Q19 EARNINGS AND 2020 OUTLOOK: THE STORY IN 33 CHARTS AND 5 TAKEAWAYS

As 2019 draws to a close and we move into 2020, we analyze the latest earnings, management guidance, and CY20 revenue estimates of cannabis companies to identify trends that will matter the most in the coming year. As the industry tries to emerge from a tough year that presented headwinds in the form of oversupply, shortage of retail outlets, senior management exits, and compliance issues, among others, we present our analysis in 33 charts and 5 takeaways:

- **Takeaway 1: Input materials and U.S. MSO and SSO companies will dominate investor attention in 2020** thanks to their stronger fundamentals, long growth runway, and the illegal-to-legal value migration in the U.S.
- **Takeaway 2: Canadian LPs and diversified cannabis companies will have a tough and volatile 2020** as supply settles and products are launched, but stock prices suggest that weakness in fundamentals is factored in and a floor is in place for leaders.
- **Takeaway 3: Medical cannabis will remain a segment for bottom-up stock pickers** while change in pricing and competitive intensity will be the key areas to monitor for CBD/Hemp names.
- **Takeaway 4: Correlation between cannabis stocks will breakdown** as investors will distinguish between leaders and laggards based on fundamentals, i.e. free cash flow generation, management team strength, and market leadership.
- **Takeaway 5: Balance sheet strength will matter more than ever** as the funding environment tightens and deals dry up; companies with adequate capital will take market share from peers.

Chart 1: Revisions to CY20 Revenue Estimates Suggest That Input Materials and US MSOs & SSOs Will Win While Canadian LPs, Diversified Cannabis, and CBD/Hemp Companies Are Likely to Struggle Next Year

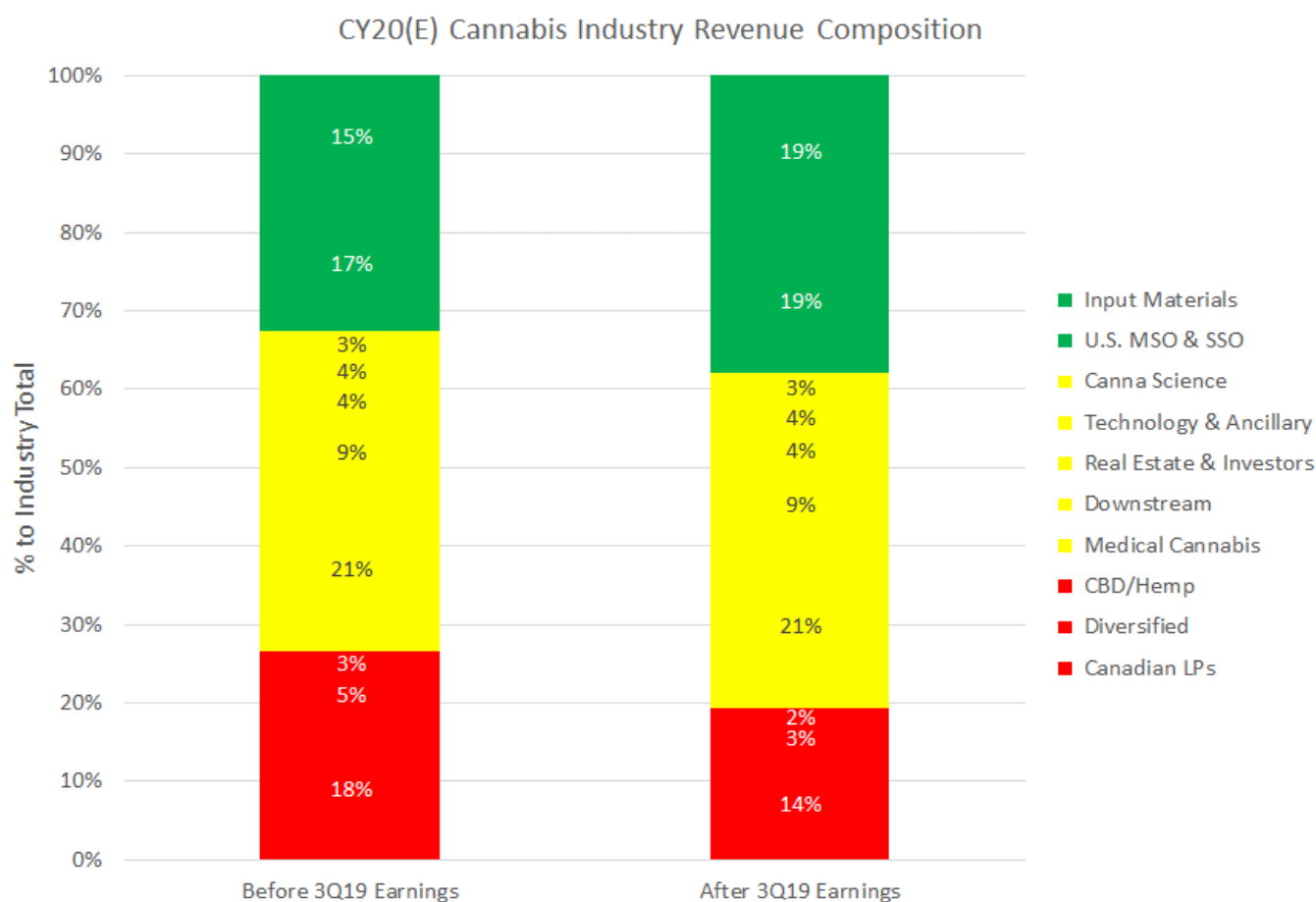
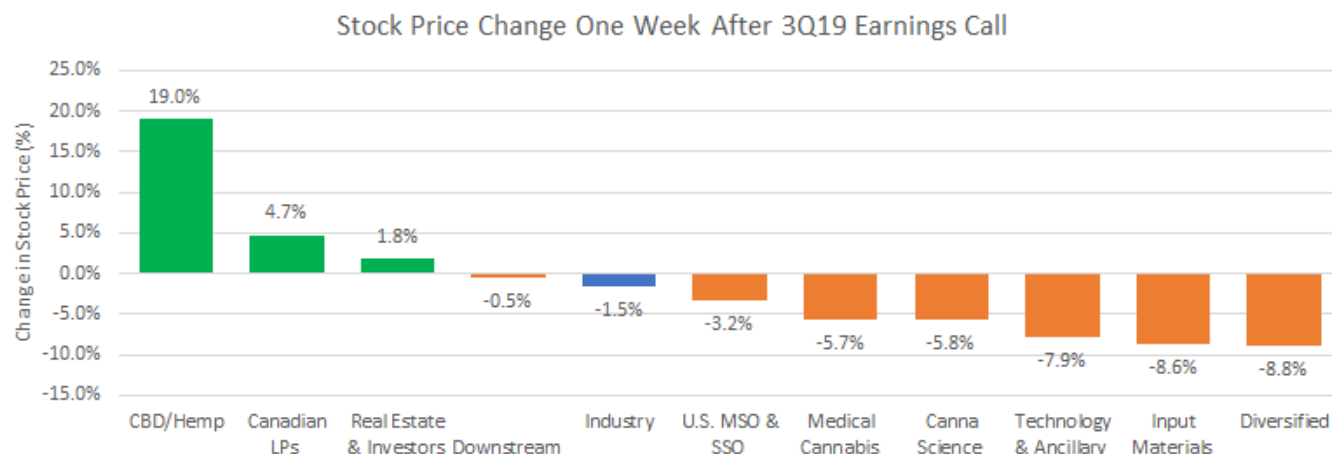
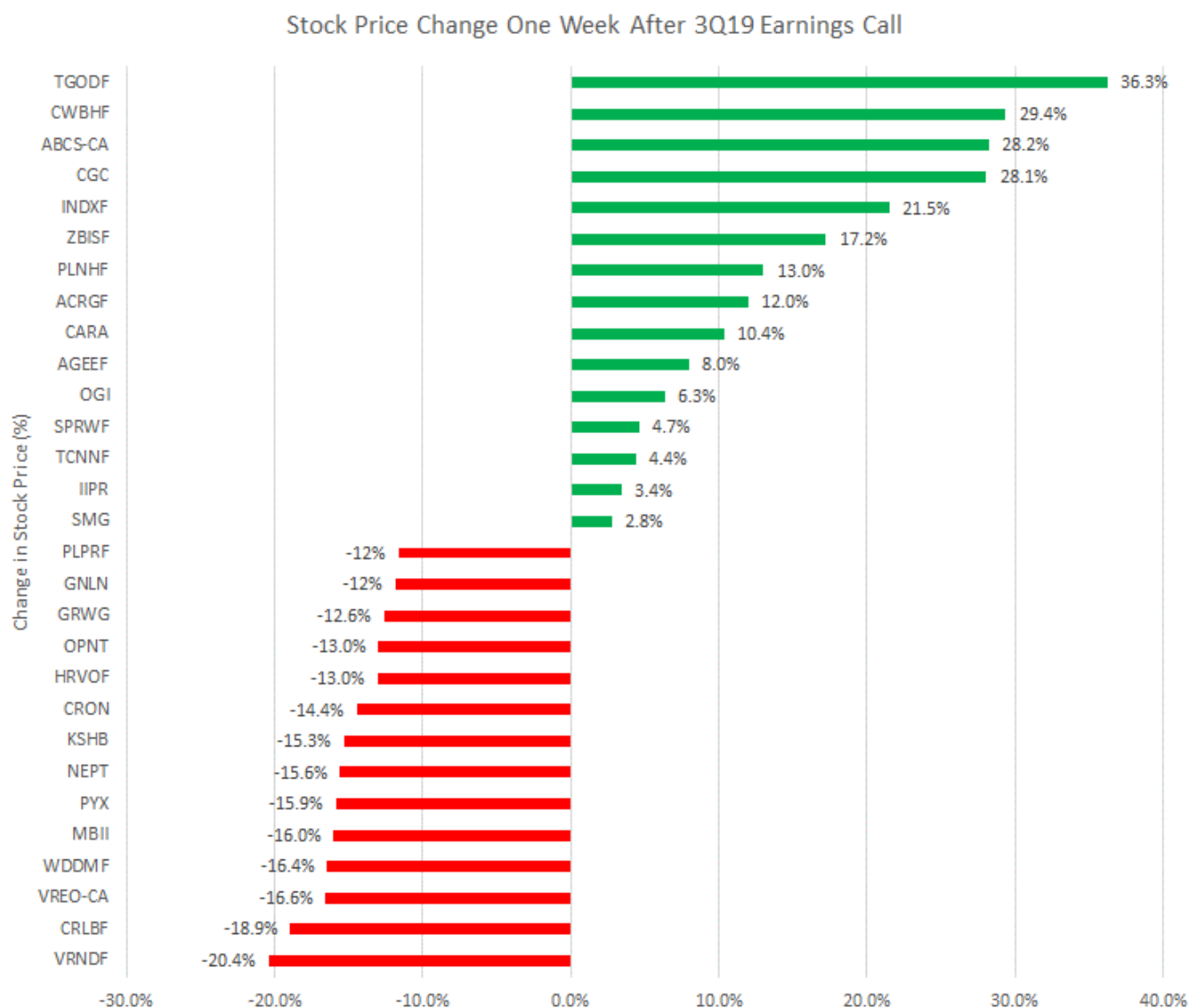


Chart 2: The Bounce Back in CBD/Hemp and Canadian LP Stocks After 3Q19 Earnings Suggests That the Worst is Factored into Stock Prices



Source: Intro-Blue

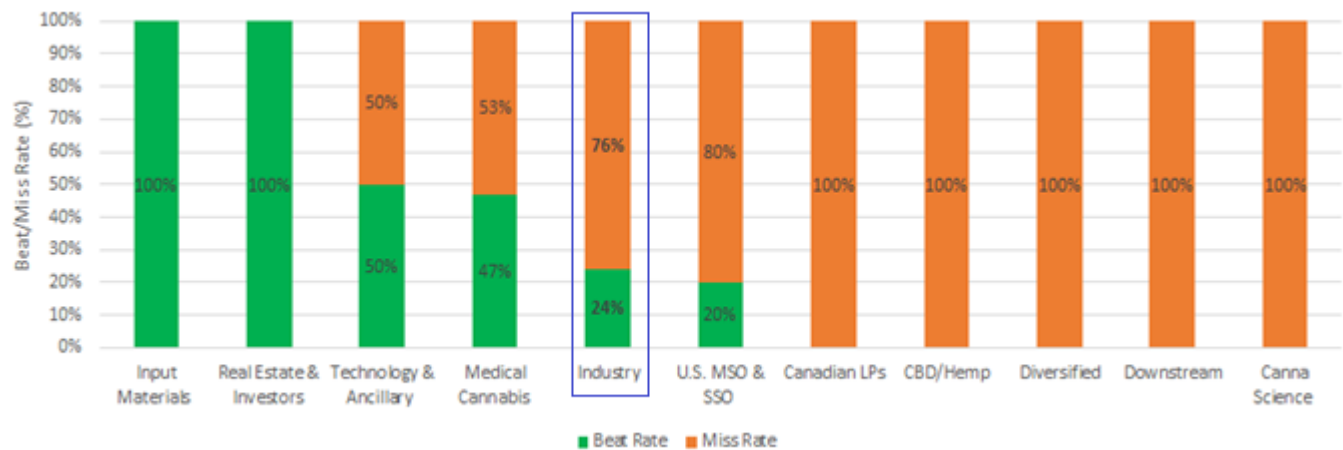
Chart 3: The Green Organic Dutchman (TGODF) and Charlotte's Web Holdings (CWBHF) Gained the Most After Their 3Q19 Earnings Calls While Delta 9 Cannabis (VRNDF) and Cresco Labs (CRLBF) Were the Biggest Losers



Source: Intro-Blue

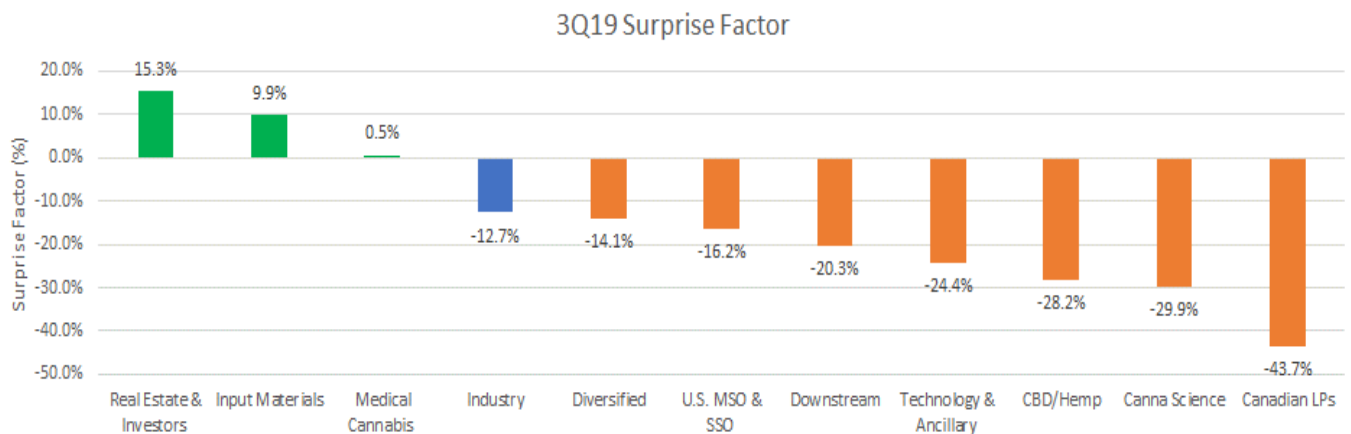
INPUT MATERIALS, AND REAL ESTATE & INVESTORS COMPANIES STOOD OUT IN A WEAK 3Q19 FOR THE CANNABIS INDUSTRY

Chart 4: All Input Materials Companies and Real Estate & Investment Firms Delivered a Top Line Beat in 3Q19...



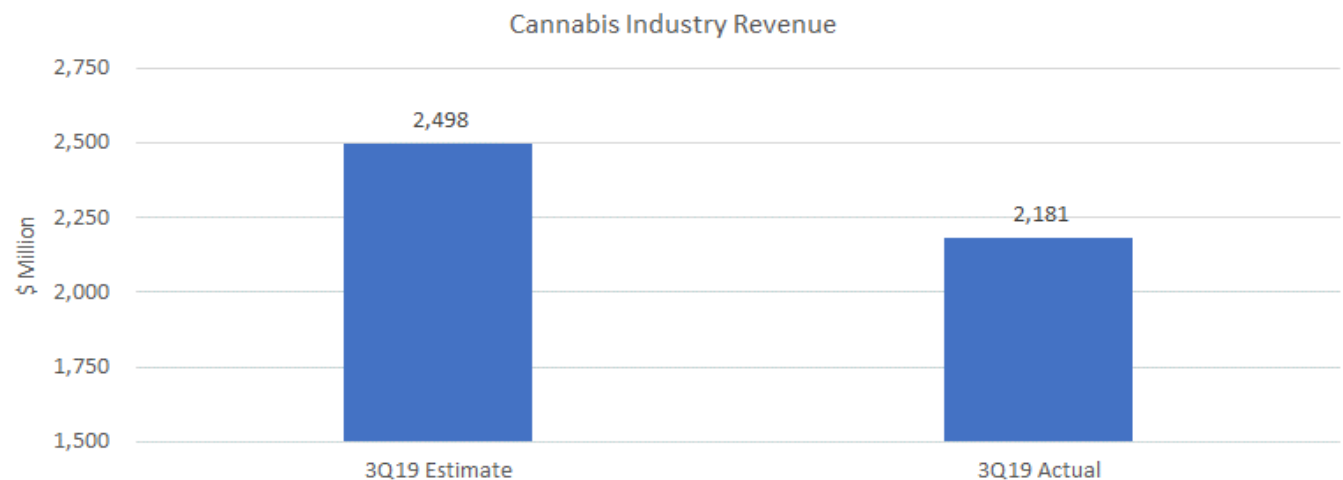
Source: Intro-Blue

Chart 5: ... And Outperformed Canadian LPs Whose Revenue Came In 43.7% Lower Than Expected



Source: Intro-Blue

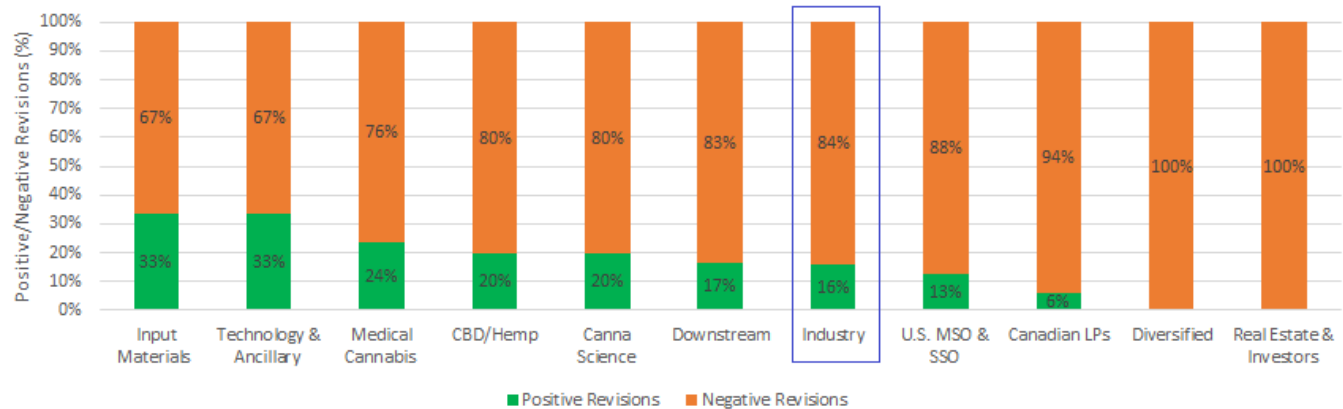
Chart 6: The Broadly In-Line 3Q19 of Medical Cannabis Firms, Coupled with Outperformance of Input Materials and Real Estate & Investment Companies, Ensured That the Industry-Wide Revenue Miss Was Restricted to 12.7%



Source: Intro-Blue

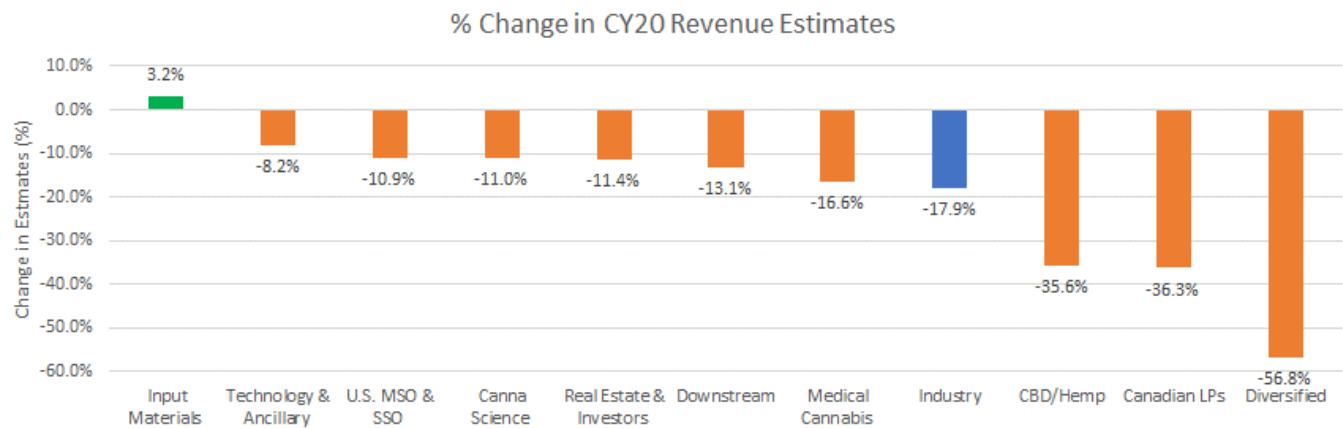
INPUT MATERIALS IS THE ONLY SEGMENT WHOSE CY20 REVENUE ESTIMATES HAVE BEEN MARKED HIGHER

Chart 7: Positive Revisions to CY20 Estimates Are Concentrated Among Input Materials and Technology & Ancillary Plays ...



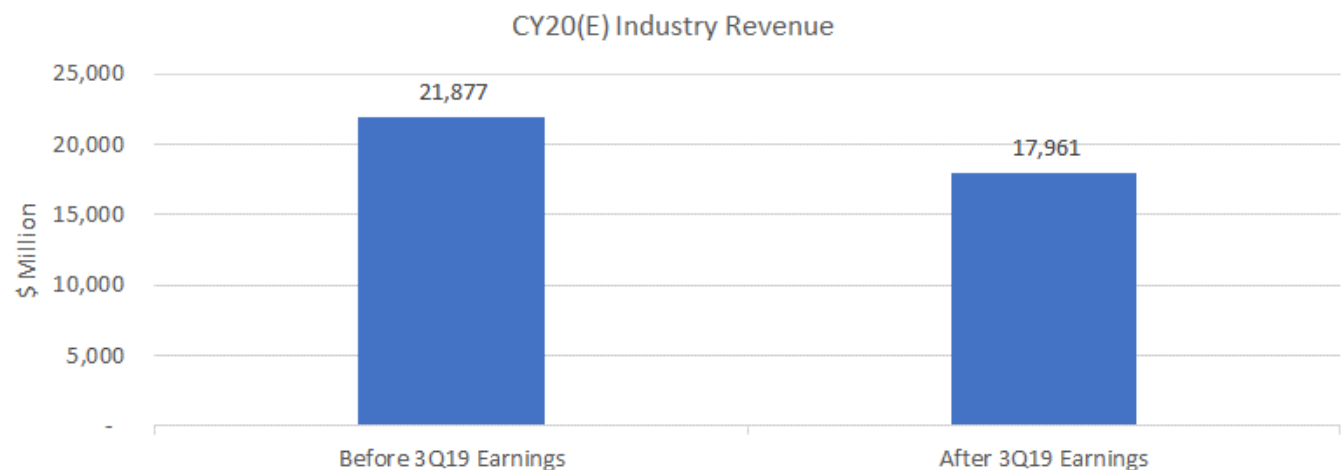
Source: Intro-Blue

Chart 8: ... While Expectations from Canadian Cultivation and Production Companies Have Moderated After 3Q19



Source: Intro-Blue

Chart 9: Industry-Wide CY20 Revenue Estimate Now Stands at \$17.9 billion, ~13% Lower Than Before 3Q19 Earnings



Source: Intro-Blue

MEDICAL CANNABIS FIRMS DELIVERED THE BIGGEST BEATS IN 3Q19, WHILE CANADIAN LPs PRODUCED THE BIGGEST MISSES

Chart 10: Top 10 3Q19 Beats — Dominated by Medical Cannabis Firms

Company	Ticker	Segment	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
OPIANT PHARMACEUTICALS, INC.	OPNT	Medical Cannabis	56	21	6	274.2%
CORBUS PHARMACEUTICALS HLDGS	CRBP	Medical Cannabis	329	3	2	38.8%
CARA THERAPEUTICS INC	CARA	Medical Cannabis	795	6	5	17.5%
FRANKLIN STREET PROPERTIES CORP.	FSP	Real Estate & Investors	925	75	65	16.0%
CANSORTIUM INC	CNTMF	Medical Cannabis	35	7	7	13.6%
INNOVATIVE INDUSTRIAL PPTYS	IIPR	Real Estate & Investors	905	12	10	10.7%
SCOTTS MIRACLE-GRO CO	SMG	Input Materials	5,668	498	452	10.2%
GREEN THUMB INDUSTRIES INC	GTBIF	Medical Cannabis	1,050	68	63	8.8%
TRULIEVE CANNABIS CORP	TCNNF	U.S. MSO & SSO	468	71	66	7.8%
GW PHARMACEUTICALS PLC	GWPH	Medical Cannabis	3,253	90	85	5.8%

Source: Intro-Blue

Chart 11: Top 10 3Q19 Misses — Dominated by Canadian LPs

Company	Ticker	Segment	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
FSD PHARMA INC	FSDDF	Medical Cannabis	37	0.01	0.09	-89.8%
GREEN ORGNC DUTCHMN HLD	TGODF	Canadian LPs	173	2	6	-67.2%
HEXO CORP	HEXO	Canadian LPs	548	12	33	-64.9%
DELTA 9 CANNABIS INC	VRNDF	Canadian LPs	29	5	14	-63.3%
SUPREME CANNABIS CO INC	SPRWF	Canadian LPs	171	9	22	-60.4%
ORGANIGRAM HOLDINGS INC	OGI	Canadian LPs	404	12	30	-59.1%
ZENABIS GLOBAL INC	ZBISF	Canadian LPs	50	9	20	-53.8%
WEEDMD INC	WDDMF	Medical Cannabis	69	5	11	-52.5%
PLUS PRODUCTS INC	PLPRF	Canna Science	54	4	7	-49.7%
ACREAGE HOLDINGS INC	ACRGF	U.S. MSO & SSO	356	22	44	-49.4%

Source: Intro-Blue

Chart 12: Top 10 CY20 Positive Revisions — Led by Medical Cannabis and Real Estate & Investors

Company	Ticker	Segment	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
INNOVATIVE INDUSTRIAL PPTYS	IIPR	Real Estate & Investors	905	71	96	35.2%
ARENA PHARMACEUTICALS INC	ARNA	Medical Cannabis	2,354	9	12	33.9%
YIELD GROWTH CORP	BOSS-CA	Real Estate & Investors		6	7	18.0%
CORBUS PHARMACEUTICALS HLDGS	CRBP	Medical Cannabis	329	8	10	17.8%
CBDMD INC (LEVEL BRANDS)	YCBD	CBD/Hemp	81	67	73	9.5%
CARA THERAPEUTICS INC	CARA	Medical Cannabis	795	25	27	6.8%
COLUMBIA CARE INC.	COLXF	Medical Cannabis		404	422	4.5%
OPIANT PHARMACEUTICALS, INC.	OPNT	Medical Cannabis	56	27	29	4.4%
FLOWR CORP (THE)	FLWPF	Canadian LPs	114	96	99	3.7%
VALENS GROWWORKS CORP	VGWCF	Canna Science	261	163	169	3.7%

Source: Intro-Blue

Chart 13: Top 10 CY20 Negative Revisions — Canadian LPs and Diversified Names Lead the Downgrades

Company	Ticker	Segment	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
48NORTH CANNABIS CORP	NCNNF	Canadian LPs	45	89	21	-75.9%
INDUS HOLDINGS, INC.	INDXF	Diversified	4	311	99	-68.2%
AUXLY CANNABIS GROUP INC	CBWTF	Diversified	285	245	83	-66.1%
HEXO CORP	HEXO	Canadian LPs	548	248	87	-65.1%
SUNDIAL GROWERS INC.	SNL	Canadian LPs	223	398	148	-62.8%
CANNTRUST HLDGS INC	CTST	Medical Cannabis	109	139	54	-61.5%
VIVO CANNABIS INC	VVICF	Canadian LPs	47	122	52	-57.7%
GREEN GROWTH BRANDS	GGBXF	Diversified	182	305	132	-56.6%
GREEN ORGNC DUTCHMN HLD	TGODF	Canadian LPs	173	204	89	-56.4%
HARVEST ONE CANNABIS INC	HRVOF	Diversified	24	62	27	-56.0%

Source: Intro-Blue

SEGMENT ANALYSIS: MOVERS AND SHAKERS

CANADIAN LPs: TGOD AND HEXO DOMINATE 3Q19 MISSES AND CY20 DOWNGRADES

Chart 14: Canadian LPs Missed 3Q19 Expectations by 43.7%; CY20 Estimates Lowered 36.3%

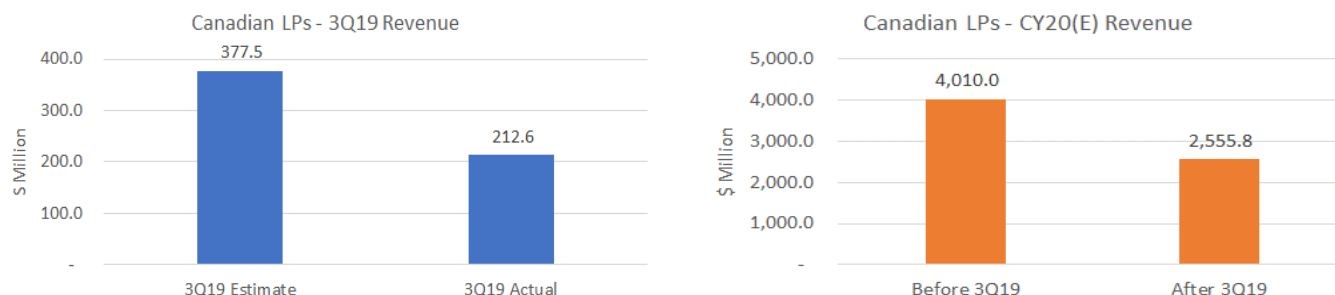


Chart 15: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
GREEN ORGNC DUTCHMN HLD	TGODF	173	1.9	5.8	-67.2%
HEXO CORP	HEXO	548	11.6	33.1	-64.9%
DELTA 9 CANNABIS INC	VRNDF	29	5.0	13.8	-63.3%
SUPREME CANNABIS CO INC	SPRWF	171	8.7	21.8	-60.4%
ORGANIGRAM HOLDINGS INC	OGI	50	12.3	30.2	-59.1%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
48NORTH CANNABIS CORP	NCNNF	45	89	21	-75.9%
HEXO CORP	HEXO	548	248	87	-65.1%
SUNDIAL GROWERS INC.	SNDL	223	398	148	-62.8%
VIVO CANNABIS INC	VVCIF	47	122	52	-57.7%
GREEN ORGNC DUTCHMN HLD	TGODF	173	204	89	-56.4%

Source: Intro-Blue

CBD/HEMP: SHARP MARKDOWN IN CWBHF'S ESTIMATES; CBDMD STAND OUT PERFORMER

Chart 16: CBD/Hemp Names Missed 3Q19 Expectations by 28.2%; CY20 Estimates Lowered 35.6%

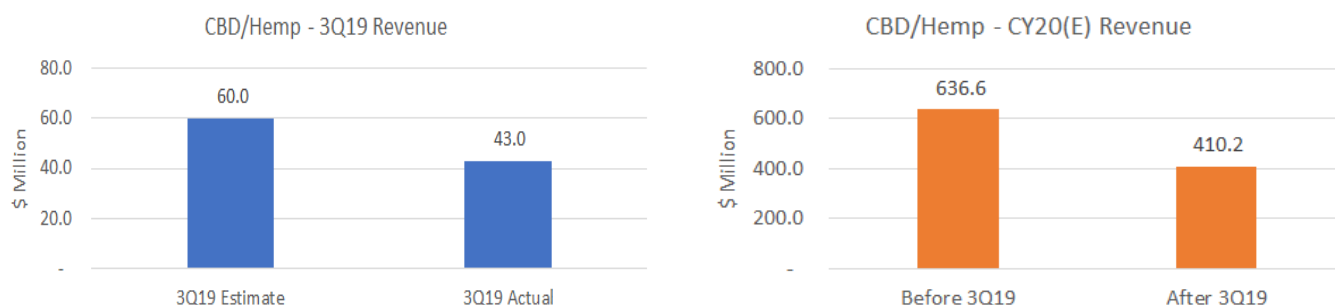


Chart 17: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
CV SCIENCES INC	CVSI	99	13	20	-35.5%
CHARLOTTE'S WEB HLDGS INC	CWBHF	523	25	34	-25.6%
ABACUS HEALTH PRODUCTS, INC.	ABCS-CA	-	5	7	-20.5%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
CBDMD INC (LEVEL BRANDS)	YCBD	81	67	73	9.5%
ELIXINOL GLOBAL LTD	ELLXF	92	56	52	-8.5%
ABACUS HEALTH PRODUCTS, INC.	ABCS-CA	-	96	63	-34.7%
CV SCIENCES INC	CVSI	99	115	75	-34.8%
CHARLOTTE'S WEB HLDGS INC	CWBHF	523	302	148	-51.1%

Source: Intro-Blue

CANNA SCIENCE: VGWCF'S CY20 ESTIMATES MARKED HIGHER; PLPRF THE BIG LOSER

Chart 18: Canna Science Names Missed 3Q19 Expectations by 29.9%; CY20 Estimates Lowered 11.0%

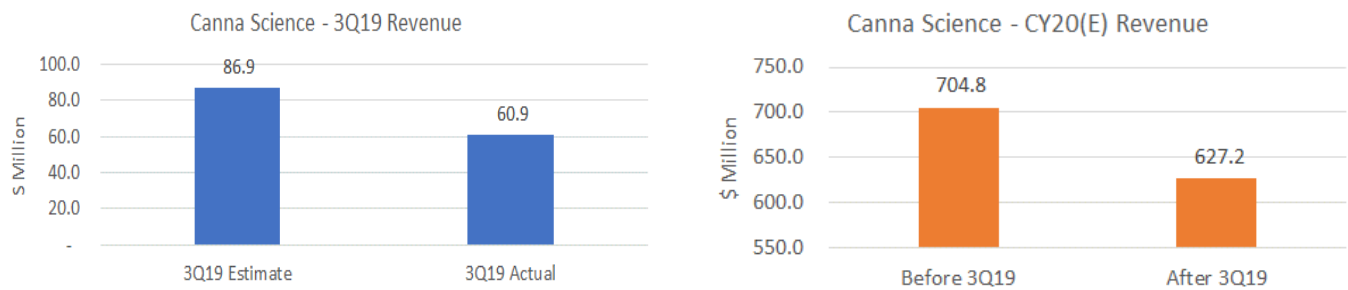


Chart 19: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
PLUS PRODUCTS INC	PLPRF	54	4	7	-49.7%
NEPTUNE WELLNESS SOLUTION IN	NEPT	253	5	8	-40.9%
HALO LABS INC	AGEEF	2	7	11	-35.0%
MEDIPHARM LABS CORP	MEDIF	338	33	44	-25.8%
VALENS GROWWORKS CORP	VGWCF	261	12	16	-23.3%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
VALENS GROWWORKS CORP	VGWCF	261	163	169	3.7%
ENWAVE CORP	NWVCF	151	63	60	-5.5%
MEDIPHARM LABS CORP	MEDIF	338	242	226	-6.5%
NEPTUNE WELLNESS SOLUTION IN	NEPT	253	138	108	-21.7%
PLUS PRODUCTS INC	PLPRF	54	99	64	-34.9%

Source: Intro-Blue

DIVERSIFIED: ACROSS-THE-BOARD WEAKNESS LED BY HRVOF, MJARF, AND GGBXF

Chart 20: Diversified Names Missed 3Q19 Expectations by 14.1%; CY20 Estimates Lowered 56.8%

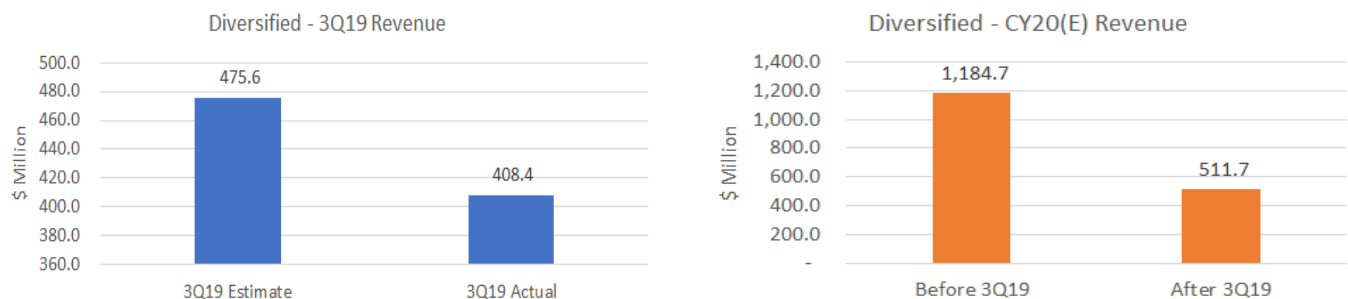


Chart 21: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
HARVEST ONE CANNABIS INC	HRVOF	24	3	6	-47.8%
INDUS HOLDINGS, INC.	INDXF	4	10	19	-47.3%
MJARDIN GROUP INC	MJARF	10	6	10	-42.1%
1933 INDUSTRIES INC	TGIF	42	4	7	-39.3%
WESTLEAF INC.	WSLFF	20	1	2	-34.4%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
INDUS HOLDINGS, INC.	INDXF	4	311	99	-68.2%
AUXLY CANNABIS GROUP INC	CBWTF	285	245	83	-66.1%
GREEN GROWTH BRANDS	GGBXF	182	305	132	-56.6%
HARVEST ONE CANNABIS INC	HRVOF	24	62	27	-56.0%
MJARDIN GROUP INC	MJARF	10	120	63	-47.4%

Source: Intro-Blue

DOWNSTREAM: MMNFF PRESSURING SEGMENT PERFORMANCE; LQSIF THE LONE UPGRADE

Chart 22: Downstream Names Missed 3Q19 Expectations by 20.3%; CY20 Estimates Lowered 13.1%

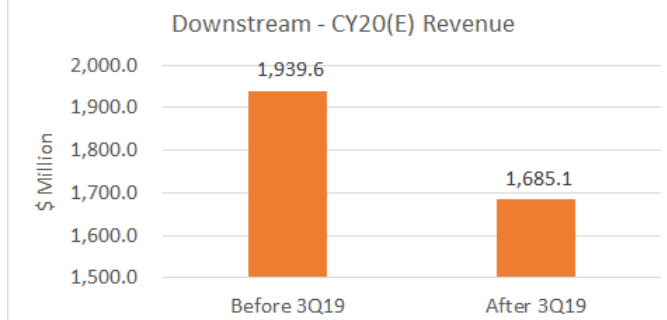
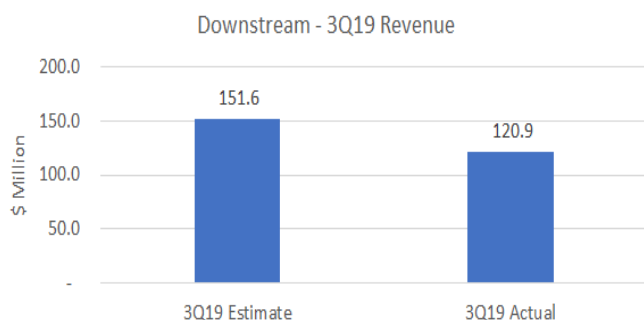


Chart 23: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
MEDMEN ENTERPRISES INC	MMNFF	89	44	61	-28.2%
HIGH TIDE INC	HITI-CA		8	11	-23.3%
GREENLANE HOLDINGS INC	GNLN	31	45	54	-17.5%
SLANG WORLDWIDE INC.	SLGWF		7	8	-14.4%
PLANET 13 HLDGS INC	PLNHF	131	17	17	-1.5%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
ALCANNIA INC	LQSIF	121	925	933	0.9%
PLANET 13 HLDGS INC	PLNHF	131	103	93	-9.4%
HIGH TIDE INC	HITI-CA		84	72	-14.3%
SLANG WORLDWIDE INC.	SLGWF		203	161	-20.6%
GREENLANE HOLDINGS INC	GNLN	31	272	191	-29.8%
MEDMEN ENTERPRISES INC	MMNFF	89	352	234	-33.5%

Source: Intro-Blue

INPUT MATERIALS: SMG & GRWG LEAD SEGMENT'S 3Q19 BEAT

Chart 24: Input Materials Names Beat 3Q19 Expectations by 9.9%; CY20 Estimates Raised 3.2%

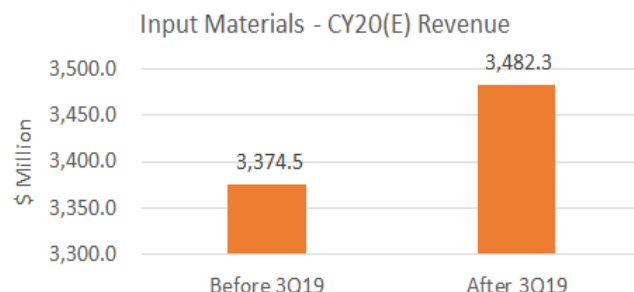
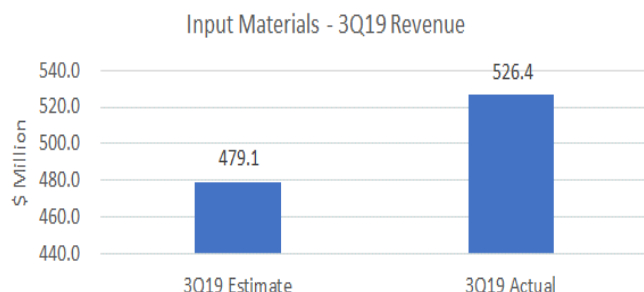


Chart 25: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
SCOTTS MIRACLE-GRO CO	SMG	5,668	498	452	10.2%
GROWGENERATION CORP	GRWG	149	22	21	5.6%
MARRONE BIO INNOVATIONS	MBII	148	7	7	0.2%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
SCOTTS MIRACLE-GRO CO	SMG	5,668	3,199	3,311	3.5%
GROWGENERATION CORP	GRWG	149	135	131	-2.8%
MARRONE BIO INNOVATIONS	MBII	148	41	40	-3.2%

Source: Intro-Blue

MEDICAL CANNABIS: CARA STANDS OUT AMONG 3Q19 BEATS AND CY20 UPGRADES

Chart 26: Medical Cannabis Names Beat 3Q19 Expectations by 0.5%; CY20 Estimates Lowered 16.6%

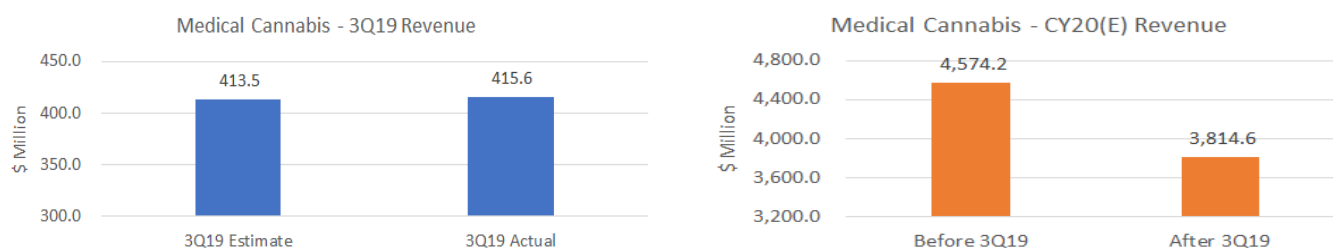


Chart 27: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
OPIANT PHARMACEUTICALS, INC.	OPNT	56	21	6	274.2%
CORBUS PHARMACEUTICALS HLDGS	CRBP	329	3	2	38.8%
CARA THERAPEUTICS INC	CARA	795	6	5	17.5%
CANSORTIUM INC	CNTMF		7	7	13.6%
GREEN THUMB INDUSTRIES INC	GTBIF	1,050	68	63	8.8%
GW PHARMACEUTICALS PLC	GWPH	3,253	90	85	5.8%
COLUMBIA CARE INC.	COLXF		22	32	-31.8%
ARENA PHARMACEUTICALS INC	ARNA	2,354	1	2	-32.7%
WEEDMD INC	WDDMF	69	5	11	-52.5%
FSD PHARMA INC	FSDDF	37	0.01	0.09	-89.8%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
ARENA PHARMACEUTICALS INC	ARNA	2,354	9	12	33.9%
CORBUS PHARMACEUTICALS HLDGS	CRBP	329	8	10	17.8%
CARA THERAPEUTICS INC	CARA	795	25	27	6.8%
KHIRON LIFE SCIENCES CORP	KHRNF	79	43	26	-39.5%
MGC PHARMACEUTICALS LTD	MGCLF	32	4	2	-43.3%
ALEAFIA HEALTH INC	ALEAF	134	157	72	-54.2%

Source: Intro-Blue

REAL ESTATE & INVESTORS: FSP & IIPR LED SEGMENT'S OUTPERFORMANCE

Chart 28: Real Estate & Investors Names Beat 3Q19 Expectations by 15.3%; CY20 Estimates Lowered 11.4%

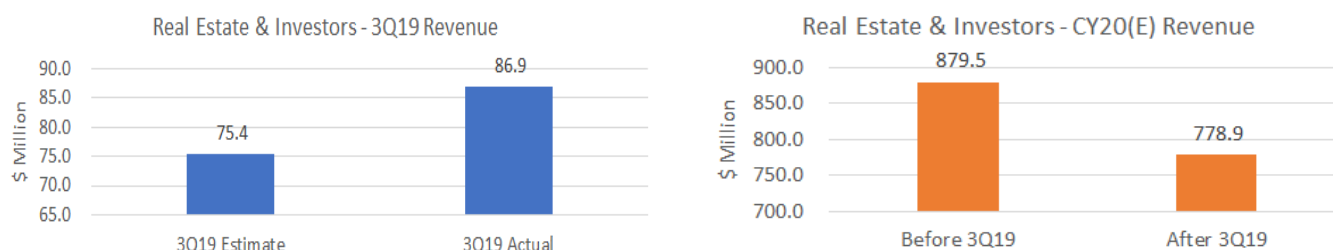


Chart 29: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
FRANKLIN STREET PROPERTIES CORP.	FSP	925	75	65	16.0%
INNOVATIVE INDUSTRIAL PPTYS	IIPR	905	12	10	10.7%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
INNOVATIVE INDUSTRIAL PPTYS	IIPR	905	71	96	35.2%
YIELD GROWTH CORP	BOSS-CA		6	7	18.0%
CANNEX CAPITAL HOLDINGS INC	CNXXF	51	333	236	-28.9%
CANOPY RIVS INC	CNPOF	150	32	19	-41.3%

Source: Intro-Blue

TECHNOLOGY & ANCILLARY: KSHB CONTNUES TO BE THE ANCILLARY LEADER

Chart 30: Technology & Ancillary Names Missed 3Q19 Expectations by 24.4%; CY20 Estimates Lowered 8.2%

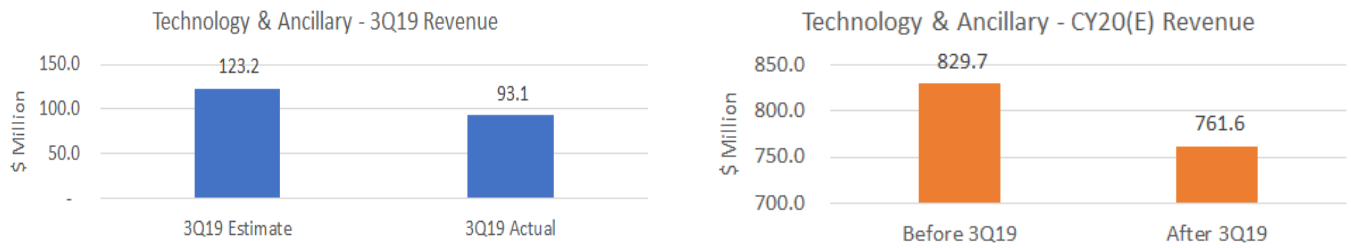


Chart 31: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
KUSHCO HOLDINGS INC	KSHB	179	47	46	2.7%
TILT HOLDINGS INC	SVTF	79	46	77	-40.5%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
YPB GROUP LTD	YPB-ASX	11	14	14	0.7%
KUSHCO HOLDINGS INC	KSHB	179	230	227	-1.6%
TILT HOLDINGS INC	SVTF	79	585	521	-11.0%

Source: Intro-Blue

U.S. MSO & SSO: TCNNF THE TRUE OUTPERFORMER WHILE ACRGF UNDERPERFORMS

Chart 32: U.S. MSO & SSO Names Missed 3Q19 Expectations by 16.2%; CY20 Estimates Lowered 10.9%

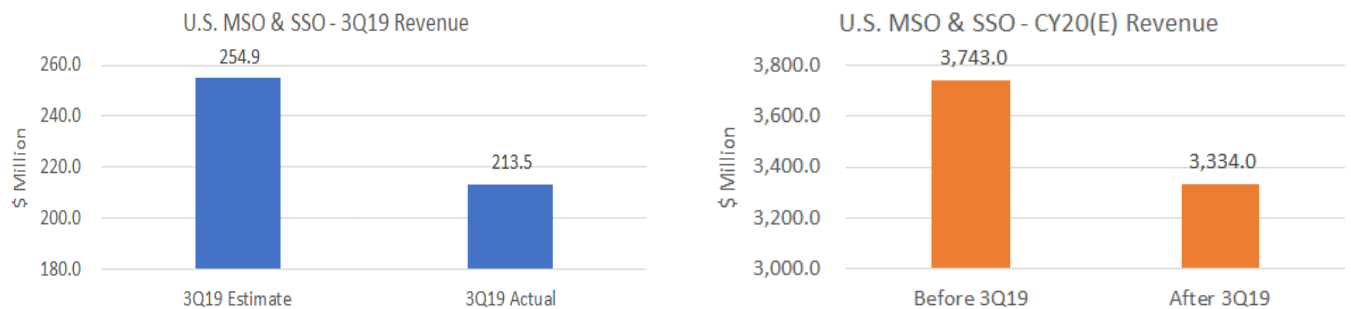


Chart 33: Key Names Driving 3Q19 Beats/Misses and CY20 Sales Revisions

Company	Ticker	Mkt Cap (\$ Mn)	3Q19 Actual (\$ Mn)	3Q19 Est. (\$ Mn)	% Beat/(Miss)
TRUELIEVE CANNABIS CORP	TCNNF	468	71	66	7.8%
CURALEAF HOLDINGS INC	CURLF	2,134	62	66	-5.9%
IANTHUS CAPITAL HOLDINGS INC	ITHUF	213	22	25	-10.5%
CRESCO LABS INC	CRLBF	305	36	54	-33.4%
ACREAGE HOLDINGS INC	ACRGF	356	22	44	-49.4%
Company	Ticker	Mkt Cap (\$ Mn)	CY20 E (\$ Mn, Before)	CY20 E (\$ Mn, After)	% Change
TRUELIEVE CANNABIS CORP	TCNNF	468	386	399	3.3%
CURALEAF HOLDINGS INC	CURLF	2,134	934	972	-3.9%
IANTHUS CAPITAL HOLDINGS INC	ITHUF	213	258	274	-5.8%
AYR STRATEGIES INC.	AYRSF	133	222	236	-5.8%
ACREAGE HOLDINGS INC	ACRGF	356	392	452	-13.1%
CRESCO LABS INC	CRLBF	305	754	914	-17.5%
FLOWER ONE HOLDINGS INC	FLOOF	87	139	178	-22.0%
4FRONT VENTURES CORP.	CNXXF	51	236	333	-28.9%

Source: Intro-Blue

CANNA NEWS

STATE AND REGULATORY NEWS

BDS Analytics data reveals limited vaping crisis impact in October. During October, the second month after the onset of the vaping crisis, sales across the six markets totaled \$618.9 million, up 0.4% from September. Sales growth from a year ago among the five Western markets ranged from 8% in California, the same as in the prior month, to as high as 29% in Arizona. Concentrates, which represented 22-32% of sales by market (compared to 23-33% in September and 26-38% in August), grew more slowly within each market than overall sales grew due to reduced sales of vape pens, which ranged from -12% in Oregon to +16% in Arizona and Colorado. [Read more](#) (New Cannabis Ventures, BDS Analytics)

Chart 34: California

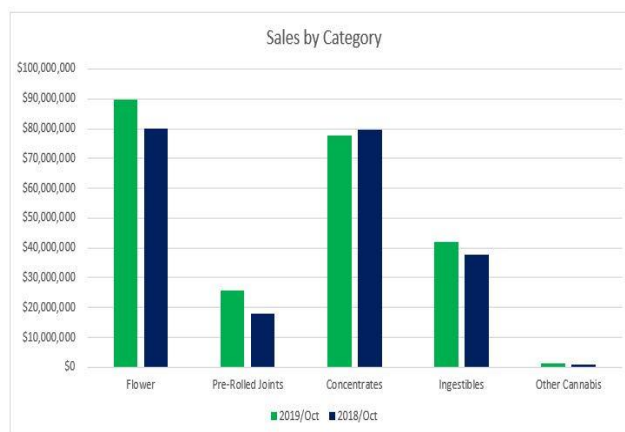
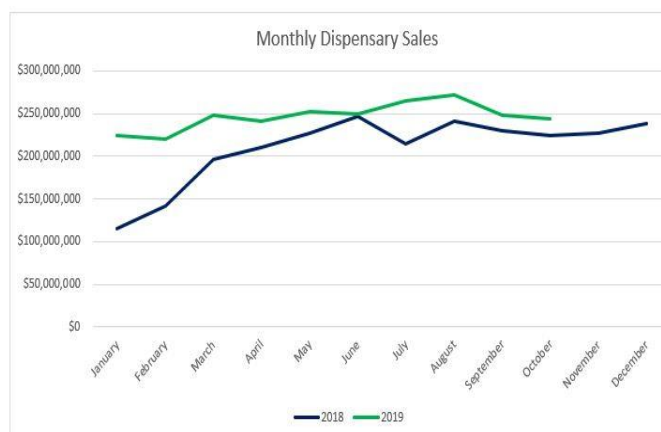


Chart 35: Oregon

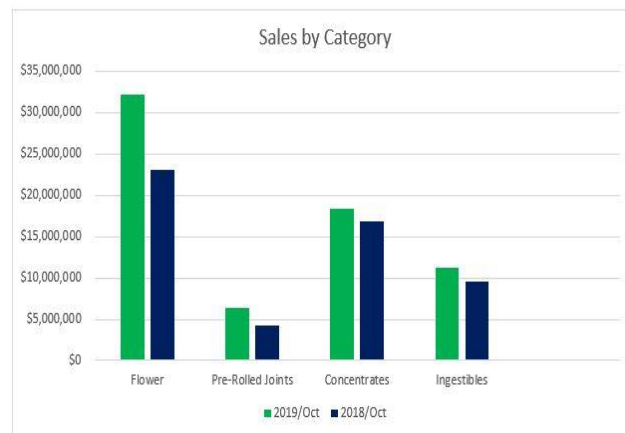
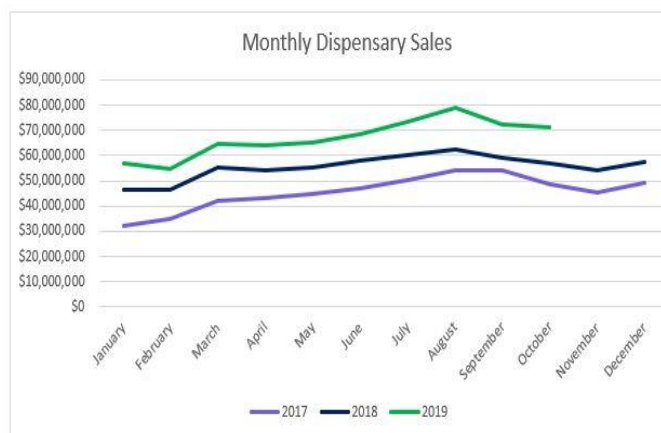
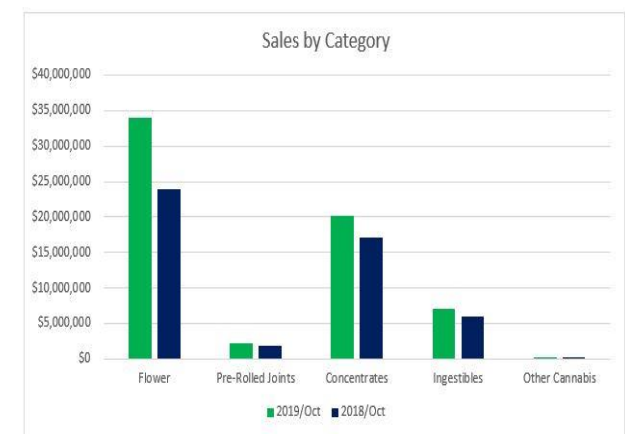
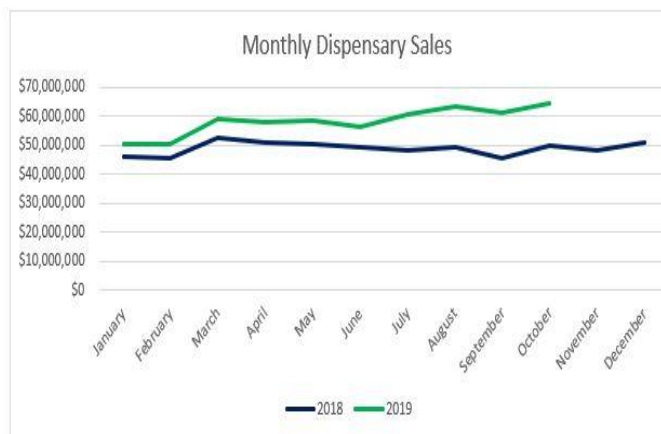
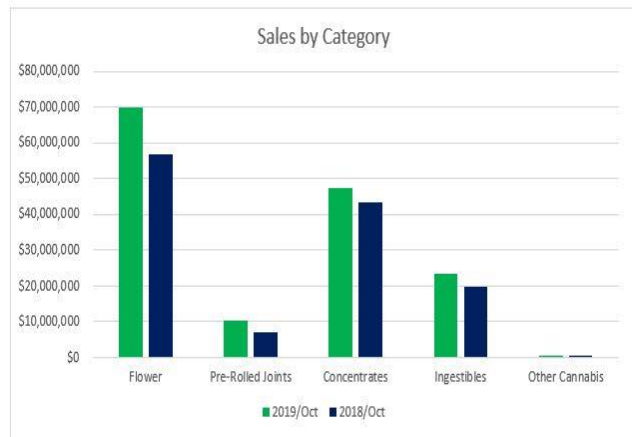
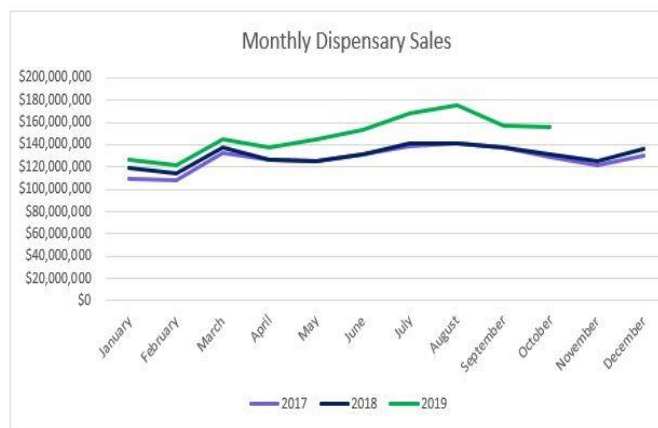
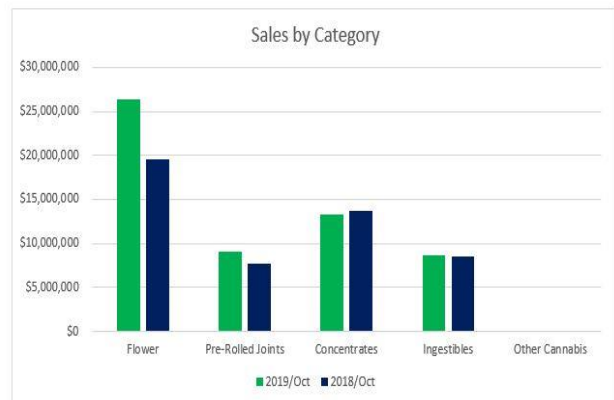
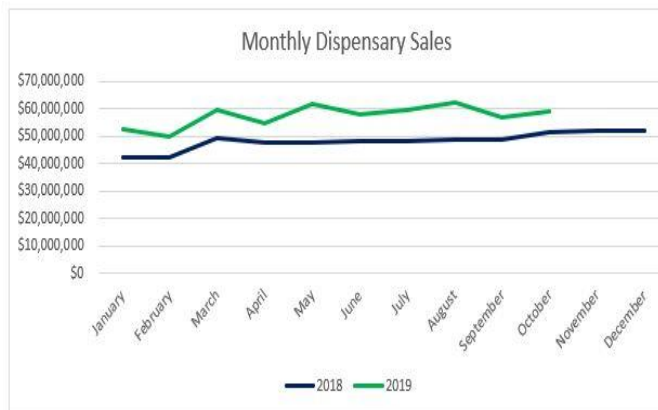
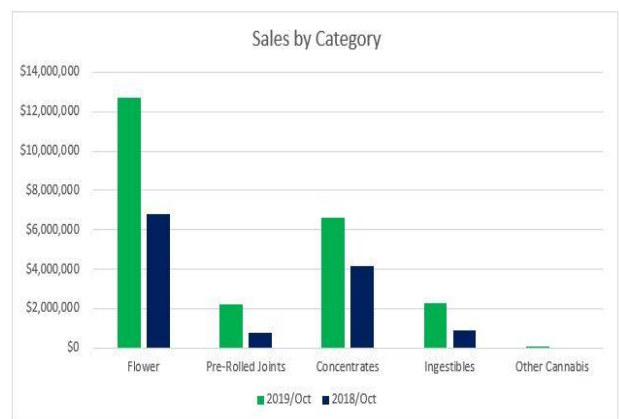
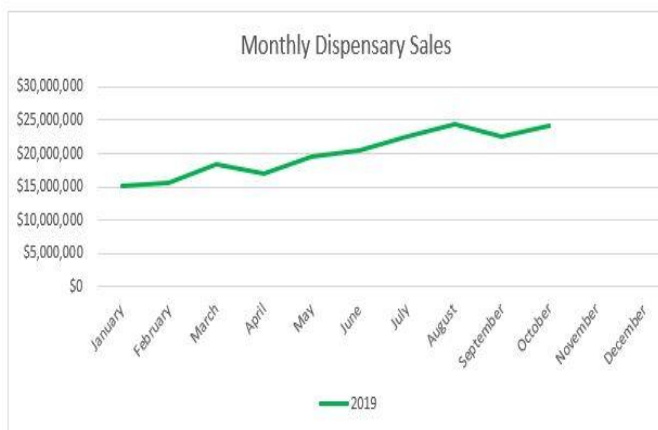


Chart 36: Arizona



Source: Intro-Blue, New Cannabis Ventures, BDS Analytics

Chart 37: Colorado**Chart 38: Nevada****Chart 39: Maryland**

Source: Intro-Blue, New Cannabis Ventures, BDS Analytics

After 'blood spilled' in 2019, pot firms brace for 2020 repeat. As the cannabis industry comes off an annus horribilis, things are expected to get worse before they get better in 2020. The new year is likely to kick off with a wave of bankruptcies and consolidations as struggling pot companies run out of cash. But, for those that survive long enough, bipartisan support for U.S. legalization could jump-start a turnaround heading into the November election. Consolidation is also likely, but not necessarily to the benefit of the companies being acquired, said Troy Dayton, CEO of cannabis investment and research firm Arcview Group. "You're going to have opportunities for distressed-asset deals," Dayton said. "We're going to start seeing a lot of roll-up strategies, collecting companies for pennies on the dollar." [Read More](#) (BNN Bloomberg)

Recreational marijuana sales in Michigan exceed \$1.6 million in first eight days. In the first eight days of legal weed sales, \$1.6 million of recreational marijuana was sold at the five retail shops open around the state. And three of those shops either sold out or had limited supplies of cannabis products. The sales from Dec.1-8 totaled \$1,629,007 and brought in \$162,900 from the 10% state excise tax and \$107,514 from the 6% state sales tax. [Read More](#) (Detroit Free Press)

Six reasons to be excited by Illinois cannabis legalization. In just few days, Illinois, with a population of 12.7 million, the sixth highest in the country, will permit sales of cannabis for adult-use. Legalization in Illinois is likely to be perceived as one of the most successful to date that will help drive the industry forward. This is due to the following factors: 1) It's a big state with a big opportunity; 2) The infrastructure is in place; 3) Public companies are poised to benefit; 4) Nearby states may join in; 5) Success could help bypass the ballot box; and 6) The social equity aspect appears robust. [Read More](#) (New Cannabis Ventures)

Illinois approves two more marijuana cultivation centers. Illinois has approved two more marijuana cultivation centers ahead of the start of legal recreational sales next year. The two sites, located in Albion and Shelbyville, brings the total number of cultivation centers in the state to 16. Initially, only cultivation centers that have been licensed to grow medical marijuana can able to apply for recreational use. The other approved Illinois centers are located in cities including Aurora, Dwight, and Joliet. [Read More](#) (AP News)

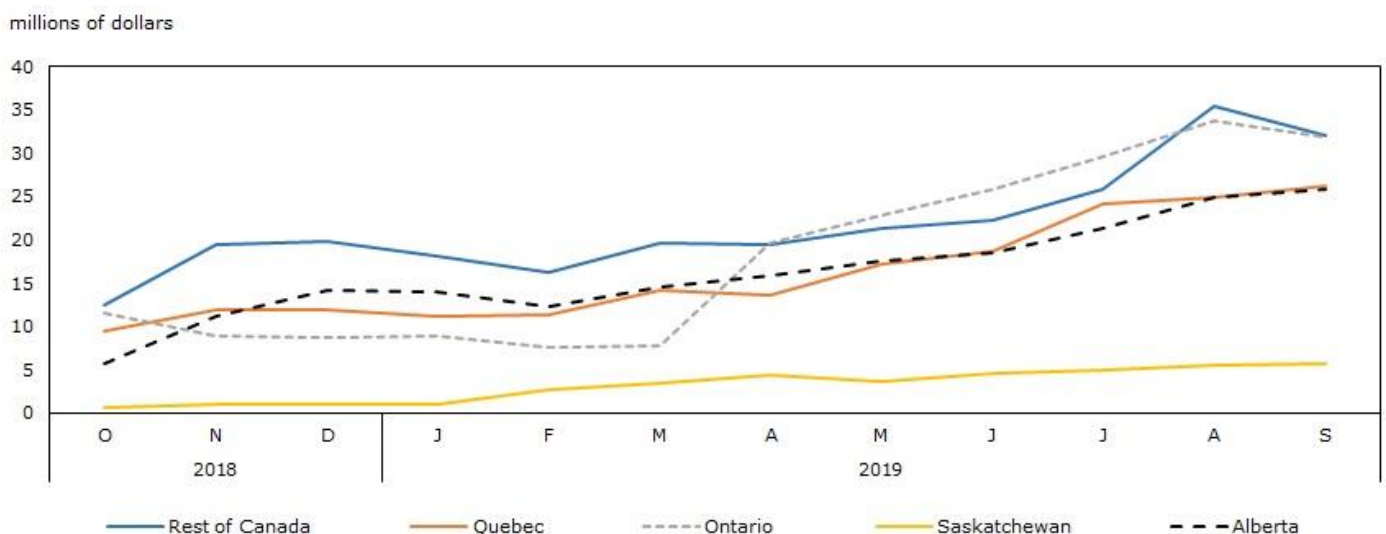
New Jersey lawmakers considering referendum to legalize cannabis. New Jersey lawmakers scheduled hearings on a proposal to let voters decide in 2020 whether to legalize recreational marijuana. Democrat-led Assembly and Senate committees set hearings on the proposed referendum. Lawmakers failed in March to advance legislation legalizing recreational cannabis, despite support from Democratic leaders and Democratic Governor Phil Murphy, so they plan to seek support from voters. [Read More](#) (Marijuana Retail Report)

Cuomo signs New York hemp law; decision on extracts in food, beverages deferred. New York Governor Andrew Cuomo signed a bill into law that sets up a regulatory framework for the production and sale of hemp and hemp extracts in the state. According to a statement from the governor's office, the new law also requires hemp businesses to test and properly label products to safeguard consumers. Cuomo also said the state plans to conduct a hemp summit in January with the goal of doing more work on hemp industry policies. [Read More](#) (Hemp Industry Daily)

Virginia jump-starts cannabis reform: No more 'baby steps,' lawmakers say. Virginia has long been one of the nation's most conservative states on cannabis, having passed a very limited medical marijuana law in 2018. But with a new generation of state leaders taking over, Virginia could take action on badly needed cannabis reform in 2020. At the Virginia Cannabis Summit hosted by state Attorney General Mark Herring, lawmakers heard from state officials in Illinois and Colorado, legal experts, and law enforcement leadership, "to create a plan of action for badly needed reform of Virginia's cannabis laws." [Read More](#) (Leafly)

The retail cannabis market in Canada: A portrait of the first year. In the year following the legalization of non-medical cannabis in Canada, the retail non-medical cannabis market has grown considerably, with retailers of legal cannabis establishing more than 400 brick-and-mortar stores and registering \$908 million in online and retail store sales. Ontario cannabis retailers led sales at the provincial level, contributing \$217 million to the sector from October 2018 to September 2019, followed by Alberta (\$196 million) and Quebec (\$195 million). [Read More](#) (Stats Canada)

Chart 40: Retail Trade Sales by Cannabis Stores, October 2018 to September 2019, Select Geographies



Source: Intro-Blue, Stats Canada

Ontario to dramatically expand cannabis retail market and remove cap on number of pot shops. The Ontario government has announced steps to allow more cannabis retail stores to open in January. Attorney General Doug Downey said that opening the cannabis market in Ontario as "responsibly" as possible has always been the government's "number one priority." In order to achieve these goals, the government said that it will eliminate the temporary cap on the number of private stores and cancel the pre-qualification requirements for prospective retailers. [Read More](#) (CTV News)

Alberta, with 22 percent of national sales, is the per capita leader in legal cannabis purchases. Statistics Canada figures show Albertans bought \$196 million worth of cannabis from privately operated stores and a government-run website from October 2018 to September 2019. That represents 22 percent of national sales of \$908 million in a province that makes up just 12 percent of Canada's population. The only province with bigger dollar sales was Ontario with \$217 million, but that came from a population more than three times that of Alberta. [Read More](#) (Calgary Herald, Statics Canada)

Health Canada reports preliminary September cannabis data. Total sales of dried cannabis in September decreased by 0.4% compared to August (from 12,972 kilograms to 12,922 kilograms) while the total sales of cannabis oil increased by 4.8% (from 10,671 litres to 11,187 litres). Total inventory of dried cannabis (finished and unfinished) held by cultivators, processors, distributors and retailers stood at 380,666 kilograms at the end of September – 29.5 times total sales in that month. Cannabis oil inventories totalled 164,771 litres – 14.7 times total sales. [Read More](#) (Health Canada)

Chart 41: Total Inventories and Sales – Dried Cannabis (Kilograms)

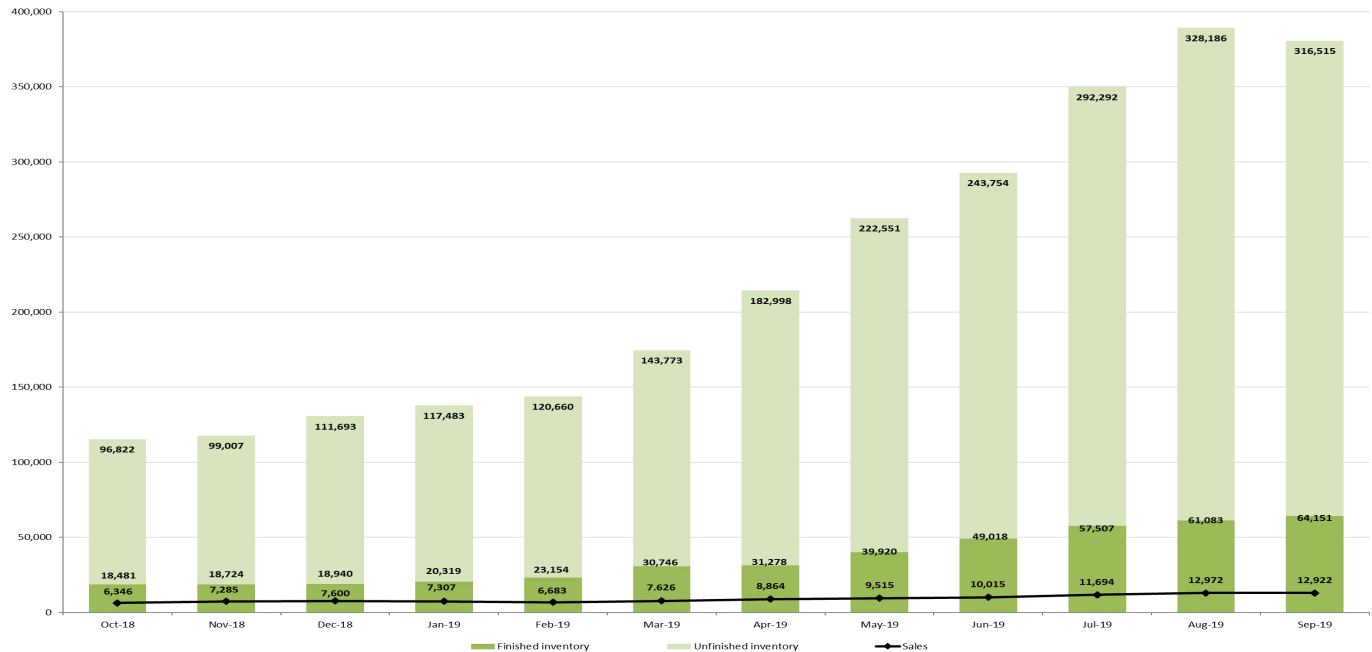
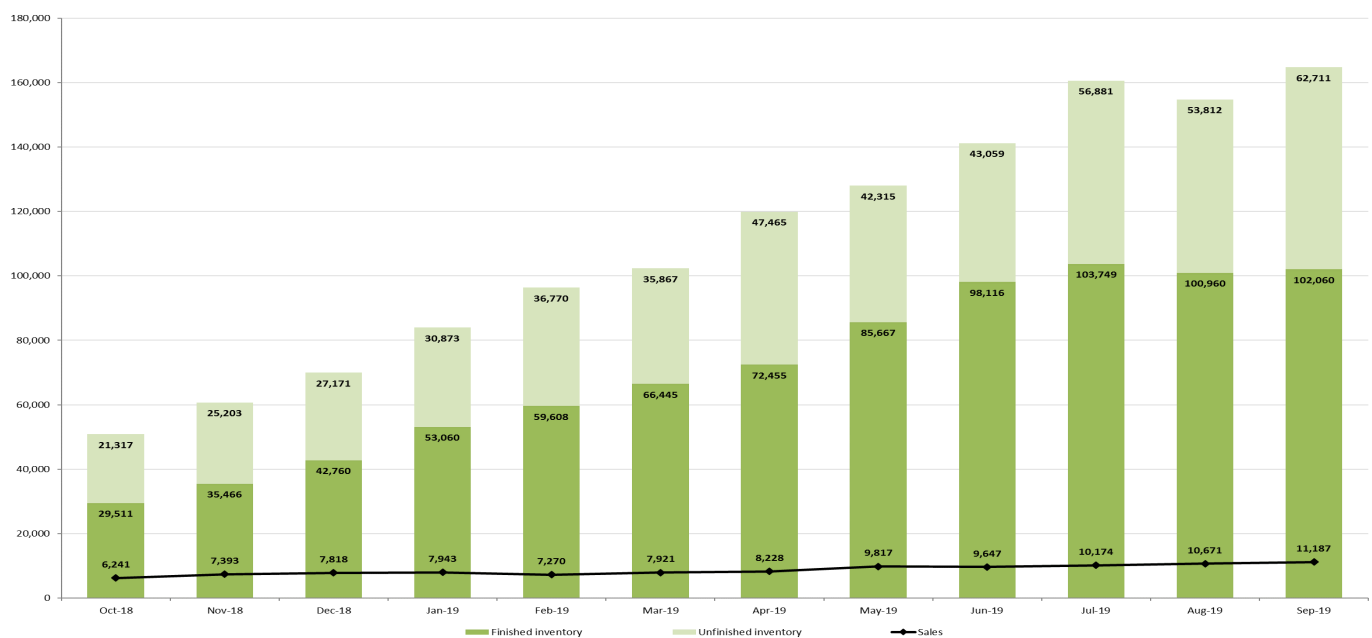


Chart 42: Total Inventories and Sales – Cannabis Oil (Liters)



Source: Intro-Blue, Health Canada

Chart 43: Finished Inventories and Sales – Dried Cannabis (Kilograms)

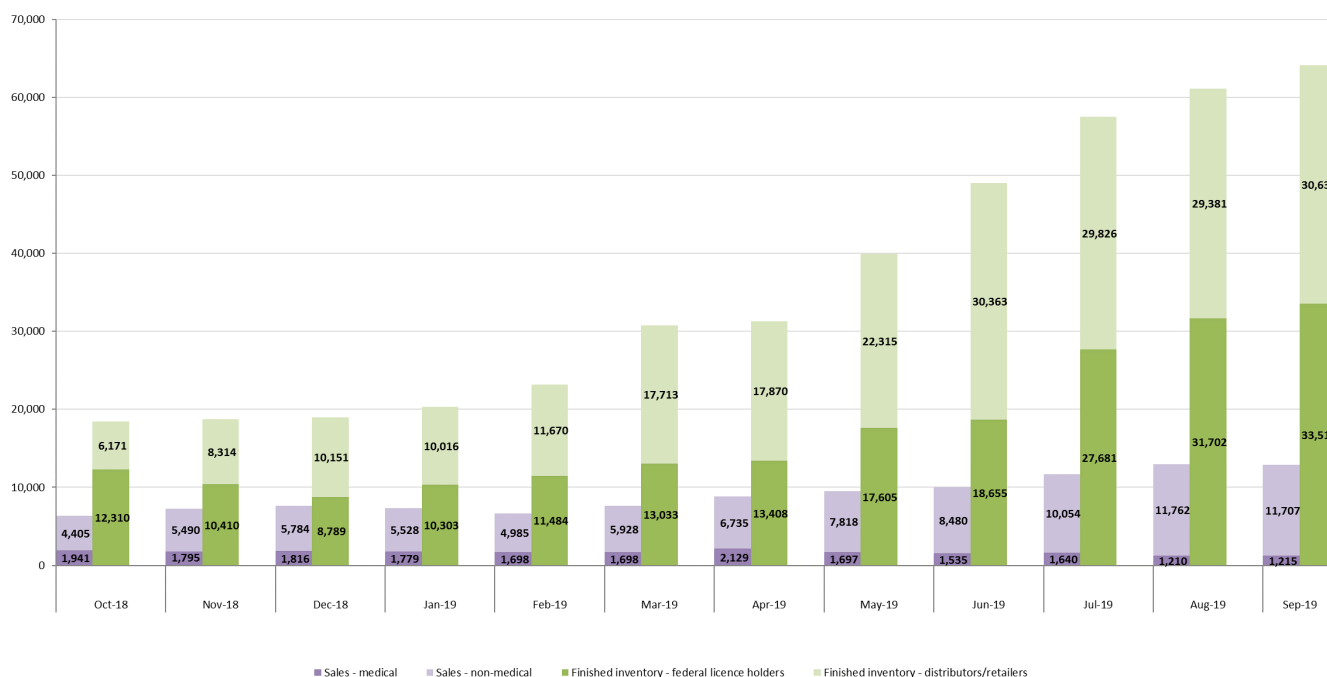
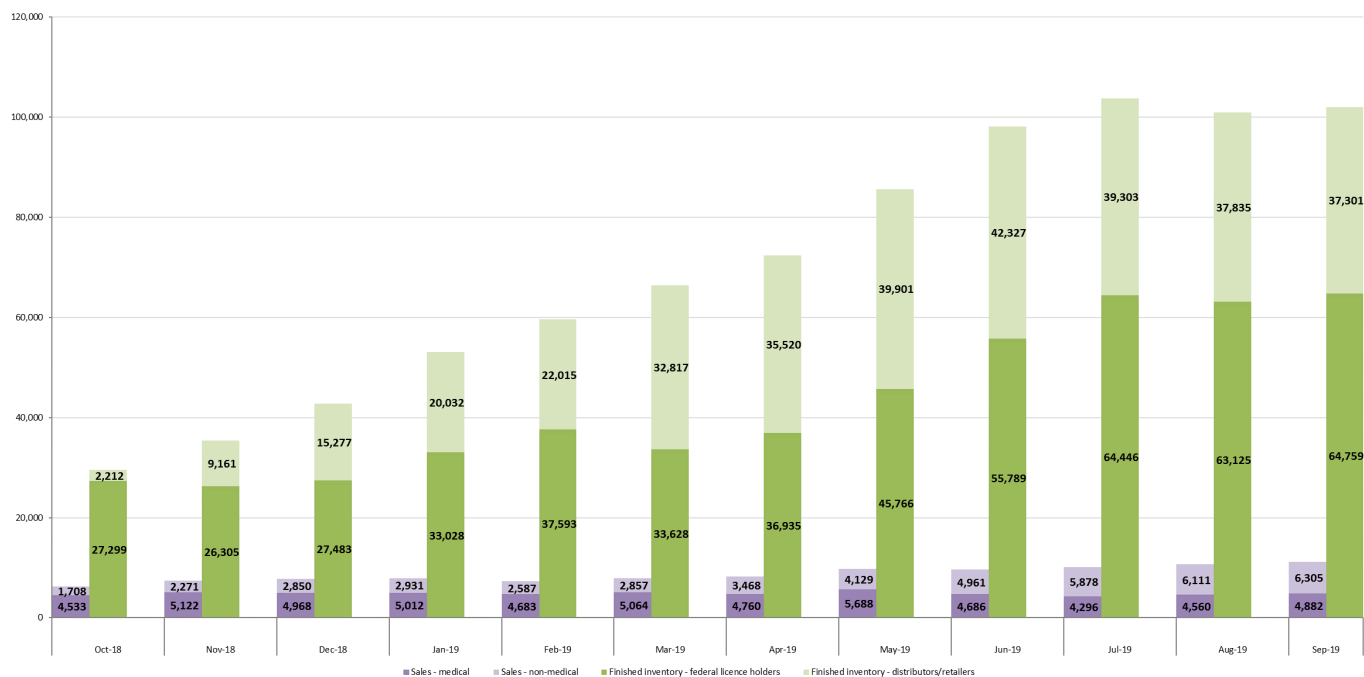


Chart 44: Finished Inventories and Sales – Cannabis Oil (Liters)



Source: Intro-Blue, Health Canada

BC, Ontario see lowest cannabis sales per capita in first year of legalization. The two most important cannabis markets in Canada experienced the worst sales of adult-use products per capita in the first year of legalization, reflecting struggles of officials in those provinces to get a handle on the policy tools at their disposal to regulate the industry. From October 2018 through September 2019, British Columbia’s marijuana stores sold 50 million Canadian dollars (\$37 million) worth of cannabis, while Ontario recorded sales of CA\$216 million. That represents just CA\$10 and CA\$15 per person, respectively. [Read More](#) (Marijuana Business Daily)

Alberta weighs legal changes for marijuana vape market. Findings from Alberta’s smoking law review could lead to legislative or regulatory changes involving cannabis vaping – though the analysis is not specifically aimed at cannabis. The review, which started in October, is being conducted because Alberta’s current legislation does not address vaping or “tobacco-like” products. It is expected to be completed by the end of the year so potential amendments can be considered in 2020. [Read More](#) (Marijuana Business Daily)

COMPANY NEWS

Canopy Growth introduces First & Free – a line of branded hemp-derived CBD products to the U.S. market. [Canopy Growth \(CGC\)](#) announced the launch of First & Free – a hemp-derived CBD product line offered in a variety of formats, including softgels, oil drops, and creams. The products will be available for purchase on the company's first e-commerce site: www.firstandfree.com. Perfected through state-of-the-art technology and rigorous testing, First & Free products are created by extracting and isolating derivatives from the hemp plant to produce pure and consistent CBD formulations that are packaged in easy-to-use formats. [Read More](#) (Yahoo! Finance)

Organigram receives licensing for chocolate production and packaging area. [Organigram Holdings \(OGI\)](#) announced that the company has received Health Canada's approval for the licensing of 16 additional cultivation rooms under the Cannabis Regulations. The expanded license was effective as of December 12, 2019. The new cultivation rooms represent approximately 13,000 kg/yr of increased target cultivation capacity. These are the remaining 16 rooms licensed within the Company's Phase 4B expansion and now brings the Company's Moncton campus licensed capacity to a target of 89,000 kg/yr. [Read More](#) (Business Wire)

Harvest Health & Recreation announces national roll out of award-winning products from Evolab. [Harvest Health & Recreation \(HRVSF\)](#) announced the availability of a series of advanced, high-quality vaporizers at Harvest stores and select retailers in Arizona, Colorado, and Maryland. The product line, from the award-winning brand Evolab, includes Chroma, Alchemy, and Delta 8, all of which utilize a distillation process resulting in an extract that is 100% cannabis-derived, free from cutting agents using instrument grade CO2 — considered a clean extraction method. [Read More](#) (PR Newswire)

Cresco Labs taps GreenAcreage REIT for \$50 million with Illinois sale/leaseback transaction. [Cresco Labs \(CRLBF\)](#) announced the closing of an agreement to sell its Lincoln, Illinois cultivation facility to GreenAcreage Real Estate Corp. for \$50 million. Concurrent with the closing of the sale, Cresco has agreed to enter into a long-term, triple-net lease agreement with GreenAcreage and will continue to operate the property as a licensed medical & recreational cannabis cultivation and processing facility. [Read More](#) (New Cannabis Ventures)

Tilray completes merger with Privateer Holdings. [Tilray \(TLRY\)](#) announced that its merger with Privateer Holdings closed on December 12, 2019. Pursuant to the merger, all of Privateer's capital stock outstanding immediately prior to the effective time of the merger (excluding certain shares) were cancelled and automatically converted solely into the right to receive the applicable portion of an aggregate shares of Tilray Class 2 common stock and shares of Tilray Class 1 common stock (inclusive of shares of Tilray Class 2 common stock held in escrow for contingent release to Privateer's stockholders) issuable as consideration in merger. Tilray did not pay any cash consideration in connection with the merger. [Read More](#) (Business Wire)

Tilray receives additional GMP certification at EU campus allowing for international export of finished medical cannabis products. [Tilray \(TLRY\)](#) said its wholly-owned subsidiary Tilray Portugal received its Good Manufacturing Practice (GMP) certification in accordance with European Union standards, for its manufacturing facility in Cantanhede, Portugal. This is the second GMP certification for Tilray Portugal, which allows the facility to manufacture and export GMP-certified finished medical cannabis products, including dried flower and oils, from Portugal to international markets with legal medical cannabis regulations. [Read More](#) (Business Wire)

Aurora details why it temporarily halted German medical cannabis sales. Cam Battley, [Aurora's \(ACB\)](#) chief corporate officer, said that Aurora was forced to stop sales of medical marijuana in Germany over "a form of treatment that we use to maintain the product without microbial contamination." A company spokesperson cited the need for additional authorization of a "proprietary step in our production process." [Read More](#) (Marijuana Business Daily)

MedMen strengthens balance sheet, provides updated guidance, and enhances corporate governance. [MedMen \(MMNFF\)](#) announced several financial arrangements and corporate updates that will strengthen the company's balance sheet and enhance overall corporate governance. Updates include: 1) the execution of financial agreements, which includes \$37 million in financing; 2) an amendment to certain of the company's outstanding debt; 3) an expansion of the company's corporate SG&A initiatives through a new round of cost reductions; and 4) enhanced corporate governance with the company's co-founder Andrew Modlin granting a limited proxy to Ben Rose, Executive Chairman of the Board. [Read More](#) (Medmen)

MedMen reveals another round of layoffs. [MedMen \(MMNFF\)](#) announced more layoffs last week. "This week, the company provided layoff notices to an additional 20% of its corporate-level employees," MedMen said in a news release. "In total, over the past 30 days, the company has strategically reduced its corporate headcount by over 40%, representing approximately \$20 million in annual salary-related savings." [Read More](#) (Marijuana Business Daily)

Zenabis Global announces transition of Chief Executive Officer with appointment of Kevin Coft. [Zenabis Global \(ZBISF\)](#) announced the appointment of Kevin Coft as interim Chief Executive Officer (CEO), effective immediately. Mr. Coft will replace Andrew Grieve as CEO, whose contract was set to expire shortly. While Mr. Grieve will be returning to his investment business, he has agreed to continue to provide Zenabis with his knowledge, expertise and guidance as a continuing member of Zenabis' board. [Read More](#) (PR Newswire)

Despite early freeze and \$7 million in losses, Colorado marijuana grower Los Sueños still enjoys strong sales. Colorado-based Los Sueños Farms – the state’s largest cannabis grower – now estimates it lost about \$7 million in an early October freeze, but the owner said the outdoor harvest was still better than last year, and the company will have ample material for the extraction market. The Colorado market was initially concerned when news of the freeze broke. Had Los Sueños lost its entire crop, the state’s supply chain would have been disrupted, with retailers and processors likely paying higher prices for flower and raw material for extraction. But those fears didn’t come to bear. [Read More](#) (Marijuana Business Daily)

VidaCann announces \$25 million expansion of operations to include over 600,000 sq ft of cultivation space. VidaCann announced a \$25 million expansion of operations that will include over 600,000 square feet of total cultivation space, making VidaCann one of the largest medical cannabis producers in Florida. The company currently has 200 employees and the expansion will add over 300 new jobs statewide. VidaCann’s expansion of its state-of-the-art cultivation space from 175,000 square feet to over 600,000 square feet is currently in progress, with expected completion by the end of 2021. This expansion will increase VidaCann’s footprint statewide and allow the company to ramp up production to meet patient demand. [Read More](#) (VidaCann)

EARNINGS

Hexo reports \$62.4 million first-quarter loss. [Hexo \(HEXO\)](#) said it lost \$62.4 million in its latest quarter compared with a loss of \$12.8 million in the same quarter last year. The loss amounted to 24 cents per diluted share for the quarter ended Oct. 31, compared with a loss of seven cents per share a year ago when the company had fewer shares outstanding. Net revenue for what was the first quarter of the company's financial year totaled \$14.5 million, up from \$5.7 million a year ago. [Read More](#) (BNN Bloomberg)

Valens announces revenue guidance for 4Q19. [Valens GroWorks \(VGWCF\)](#) expects revenues for fourth quarter to be in the range of \$27 million to \$30 million, nearly double what the cannabis extraction company made in its third quarter. The company also said its annual revenue should come in between \$55 million to \$58 million. It also stated it extracted over 24,400 kilograms of cannabis and hemp biomass in the fourth quarter of 2019, in line with the prior quarter. Lastly, Valens said it plans to buy back about five percent of its outstanding shares over the course of 2020 to help maximize shareholder value. [Read More](#) (Newswire)

CAPITAL MARKETS

You can now bet big on cannabis with first U.S. leveraged ETN. American investors can now turbocharge their cannabis bets with a new juiced-up exchange-traded note. The MicroSectors Cannabis 2x Leveraged ETN, which is due to begin trading Wednesday under the ticker MJO, is the first of its kind in the U.S. It will charge 95 basis points -- or \$9.50 for every \$1,000 invested -- according to regulatory documents. It’s a challenging time to invest in pot. While cash has continued to flow into the two largest marijuana ETFs this year, both have lost more than 30% of their value. The ETN is also entering a newly crowded market. A number of money managers have recently started weed funds, and at least six ETFs are currently duking it out for assets in the U.S. [Read More](#) (Bloomberg)

Chart 45: Pot Funds Have Suffered This Year, With Some Losing 50%



Source: Intro-Blue, Bloomberg. Some funds launched at different parts of the year.

The cannabis biz is down, but long term it’s smoking, analysts say, as marijuana industry gathers in Las Vegas. With the cannabis industry reeling from a series of setbacks over the last six months, the marijuana business conference began in Las Vegas on Monday with an investors’ meet-up marked by existential distress. “We are undergoing a recalibration in a very painful way” said Scott Greiper, president of Viridian Capital Advisors. “Markets are really depressed right now and we are looking for ways to come out of it.” Still, most experts who attended the cannabis business intelligence conference remained guardedly optimistic for the future of the industry and held out hope for a reversal of fortunes. [Read More](#) (Inquirer)

Pot stocks try to rebound from terrible 2019: 'This is 2008 for the cannabis industry'. The legal marijuana industry is going through an epic shakeout. "This is 2008 for the cannabis industry," said Kevin Murphy, chairman and CEO of [Acreage Holdings](#). He also compares it to the dot-com bust. The question remains, which cannabis company will come out of the bust as marijuana's Google, and which will disappear like Pets.com? "It has been an exciting year, and not in the way that shareholders in this sector would like," said Cam Battley, chief corporate officer of [Aurora Cannabis](#). "I think the launch in the state of Illinois is going to be a big market mover for the entire industry and that's coming in January," said Danny Moses of Moses Ventures. [Read More](#) (CNBC)

CIBC: 'Indiscriminate' cannabis selloff should start to shift in 2020. The cannabis stock meltdown that erased \$49 billion in enterprise value this year should begin to shift in 2020 as the industry leaders separate themselves, one of Canada's largest investment banks forecasts. A new CIBC World Markets report by John Zamparo, director of institutional equity research, called this year's "rationalization" of marijuana stock prices inevitable. "Even the most bullish investor would struggle to justify CA\$65 billion in enterprise value for an industry we expect to generate (less than) CA\$1 billion of 2022E domestic EBITDA," according to CIBC's Equity Outlook report. [Read More](#) (Marijuana Business Daily)

NYSE warns CannTrust its listing in danger. [CannTrust Holdings \(CTST\)](#) said the New York Stock Exchange has notified the Canadian marijuana producer that its stock price had fallen below the \$1-a-share threshold required to continue trading on the Big Board. The Vaughan, Ontario-based company said in a news release it has six months to regain compliance. In the meantime, CannTrust's stock, which trades as CTST, will continue to list on the NYSE. [Read More](#) (Marijuana Business Daily)

FSD Pharma approved to list on NASDAQ. [FSD Pharma \(FSDDF\)](#) announced that the firm has finally received approval to list its series B common shares on the Nasdaq stock exchange. The announcement follows a long road to achieving the approval from the exchange, including a large reverse split of its equity and a shift in its business strategy. When FSD Pharma first announced its intent to list on a US big board exchange, the entire business plan was focused on being one of the largest cannabis growers in the world via their Cobourg, Ontario facility. [Read More](#) (the deep dive)

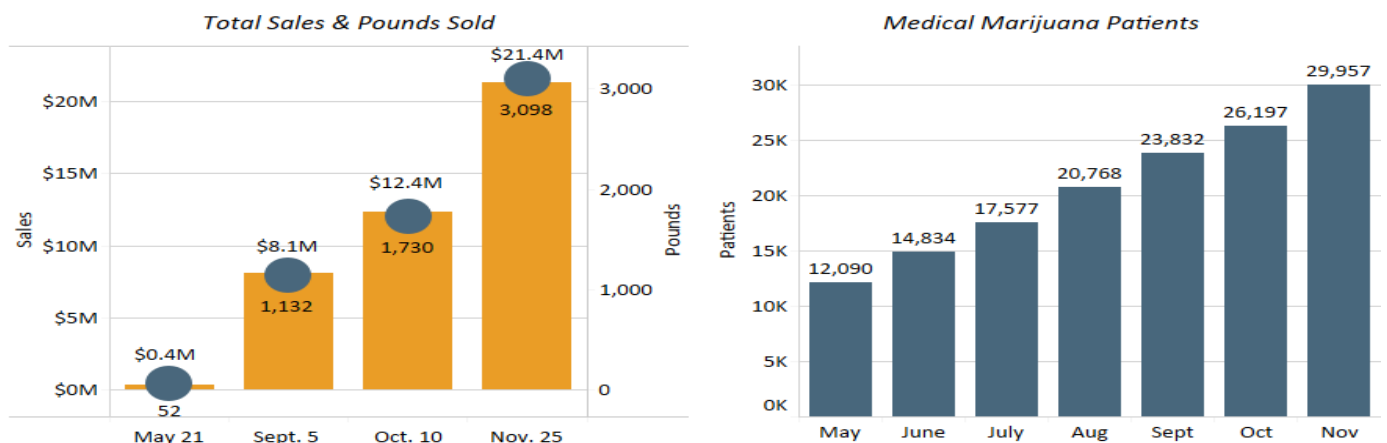
Cannabis VC firm Phyto Partners sees value in the industry's ancillary companies. Phyto Partners, a venture capital firm focused solely on the cannabis industry, has invested in approximately 30 companies over the past four-and-a-half years. The firm's portfolio touches nearly every vertical in the cannabis supply chain, but it largely focuses on the ancillary companies that support licensed operators. The majority of the company's investments have been in the form of convertible notes or Series A rounds. [Read More](#) (New Cannabis Ventures)

The Green Organic Dutchman announces a \$41.7 million senior secured credit facility. [The Green Organic Dutchman \(TGODF\)](#) announce that the company has entered into a binding term sheet with Maynbridge Capital for a senior secured first lien credit facility of up to \$41.7 million. The facility will replace the proposed mortgage loan as well as the sale and leaseback of its Ancaster Energy Centre, which are no longer being pursued by the company at this time. [Read More](#) (Newswire)

MEDICAL CANNABIS

Lack of dispensaries doesn't limit first six months of Arkansas medical marijuana sales. Arkansas posted impressive medical cannabis sales during the program's first six months of operation, surpassing \$21 million, even though only a third of approved dispensaries are open for business. Between the mid-May launch and Nov. 25, Arkansas dispensaries sold \$21.4 million of medical marijuana, comprising 3,098 pounds of product and equating to about \$3.3 million per month. Comparing the first six months of medical marijuana sales in Arkansas to other states, it outperformed Illinois (\$2.2 million average monthly sales) and is on pace with Ohio (\$3.6 million). [Read More](#) (Marijuana Business Daily)

Chart 46: Arkansas 2019 Medical Marijuana Sales and Patient Count



Source: Intro-Blue, Marijuana Business Daily

U.S. Senate confirms Hahn as new head of FDA. The U.S. Senate has confirmed a cancer specialist from Texas to lead the U.S. Food and Drug Administration (FDA). Dr. Stephen Hahn was confirmed Thursday. He replaces Dr. Scott Gottlieb. Hahn hasn't said how he believes cannabis extracts such as CBD should be regulated, though he said at his confirmation hearing that he wants to see more research to answer "open and unanswered questions" about cannabinoids. The FDA's current stance is that CBD is an active drug ingredient and can't be added to foods and dietary supplements outside pharmaceutical channels. [Read More](#) (Hemp Industry Daily)

GOP shows support for legalizing medical cannabis in Wisconsin. For more than a decade, the Wisconsin Legislature has been where marijuana reform bills go to die. But a new bill to legalize some forms of medical marijuana, introduced by a pair of Republican lawmakers instead of the usual cohort of Democrats, may fare differently. At the very least, the new medical marijuana proposal may mean that the Wisconsin GOP's brick-wall opposition to marijuana legalization is beginning to crack. [Read More](#) (High Times)

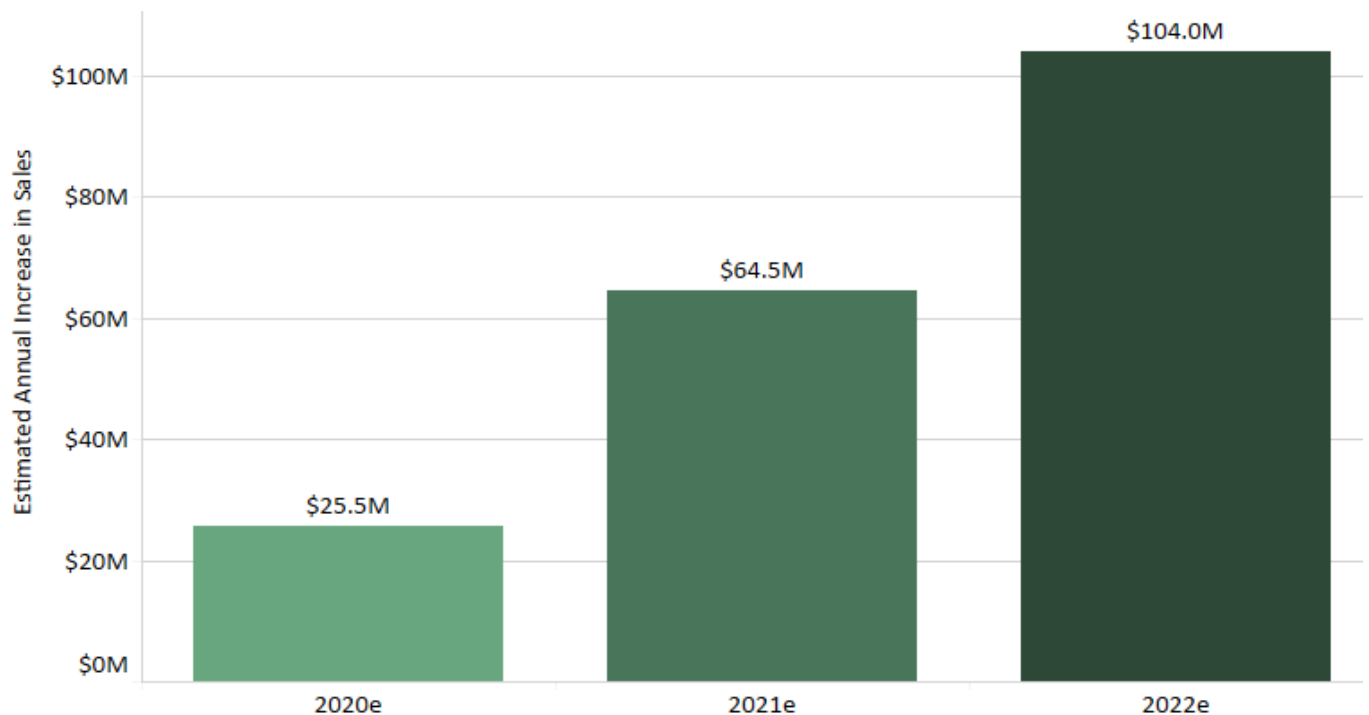
CBD/HEMP

Hemp sales could increase by more than \$100 million by 2022, USDA predicts. U.S. hemp sales could increase as much as \$25 million in 2020 and by more than \$100 million by 2022, according to new estimates by the U.S. Department of Agriculture (USDA). The agency points to three drivers of growth for hemp sales:

- The rate at which hemp acreage has increased in recent years.
- The number of states whose hemp pilot programs produced a crop in recent years.
- How many states have passed legislation following the signing of the 2018 Farm Bill.

[Read More](#) (Hemp Industry Daily)

Chart 47: Estimated Annual Increase in Hemp Producer Sales



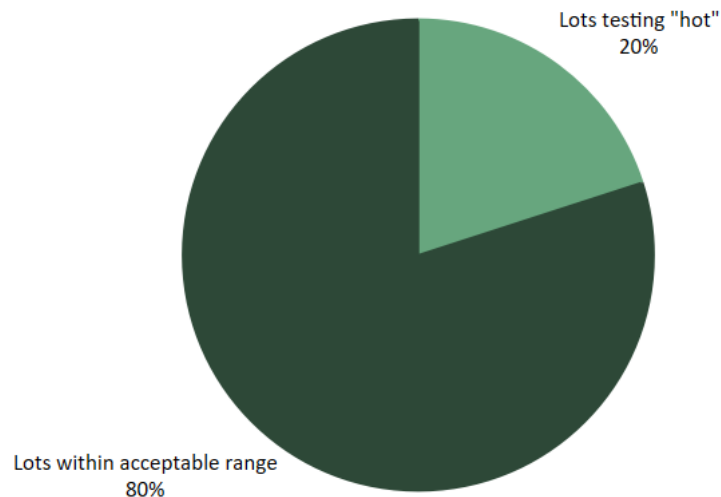
Source: Intro-Blue, USDA, Hemp Industry Daily

Some fear new federal rules on hemp production may go too far. Chris Thorne, a board member of the Hemp Federation of America, a recently formed trade group, found fault with parts of the USDA rules. "They are trying to define hemp through the lens of marijuana. It's all about continuing the prohibition on marijuana as a controlled substance as opposed to expanding the opportunity to grow and produce industrial hemp." The basic regulatory approach stems from the 2014 farm bill, which included provisions backed by Kentucky Republican Mitch McConnell, now the Senate majority leader, that required that hemp farmers be licensed or certified and that crop samples be tested. [Read More](#) (Roll Call)

AB InBev will sell CBD-infused tea in Canada. The world's biggest brewer will kick off its push into cannabis-infused beverages with a lineup of flavored teas -- Lavender Chamomile, Vanilla Rooibos and Peach Ginger Green. The "Everie" teas will contain 98% pure cannabidiol, the non-psychoactive ingredient in cannabis, with only a trace -- 0.05 milligrams -- of THC, the component that gets you high. They will be sold through Fluent Beverages, a joint venture between Anheuser-Busch InBev NV's Labatt Breweries of Canada and pot company Tilray Inc.'s High Park Co. [Read More](#) (Yahoo! Finance)

20% of hemp lots will exceed 0.3% THC limit next year, USDA estimates. In 2020, one in five lots of hemp will need to be destroyed because the plants exceed the legal THC limit, according to new estimates from the U.S. Department of Agriculture (USDA). The USDA estimates that 20% of hemp lots sent in for testing will test “hot,” or above the legal threshold of 0.3% THC content. The USDA concedes that it isn’t possible to know in advance how much hemp will fail to meet the legal THC threshold. But the agency said it arrived at this estimate “based on information discussions with states that have a hemp program under the 2014 Farm Bill.” [Read More](#) (Hemp Industry Daily)

Chart 48: Estimate Annual Proportion of Hemp Lots Testing “Hot”



Source: Intro-Blue, USDA, Hemp Industry Daily

PRODUCTS

Sales of cannabis edibles get off to a slow start. If you want pot edibles in Canada, you’re going to have to go a long way east. Monday marked the first day Canadians could legally buy a range of new cannabis formats including vapes, edibles and beverages. Newfoundland and Labrador, on Canada’s easternmost edge, was one of the only provinces that appeared to have some of those products available for sale. CannabisNL, the province’s government-owned wholesaler, had chocolate squares and gummies from Auxly Cannabis Group Inc. brands Kolab and Foray available for sale on Monday morning. Many other choices were listed as “coming soon.” [Read More](#) (BNN Bloomberg)

Pot firms expected to 'start low and go slow' with 2.0 products. If you're expecting a plethora of new cannabis-infused products to hit the Canadian legal market next week, prepare to be disappointed. It looks like most cannabis producers will be making their first foray into the cannabis-infused market with only a handful of products before rolling out their full portfolio over the next year. Some companies are choosing to hold off on selling Cannabis 2.0 products next week, pausing their plans to ensure they meet safety and quality standards. [Read More](#) (BNN Bloomberg)

How much money is Canada missing out on from the lagged edibles rollout? It’s becoming clear cannabis edibles, extracts, and topicals probably won’t be a part of holiday shopping this year as provincial regulators can only order products as of December 16. While storeowners were hoping to bank off the bud and customers were hoping to get high this season, the anticipation for new products will have to spill into January 2020. A total of 6.7 million Canadians may have looked to buy edibles, extracts, and topicals for the holiday season. [Read More](#) (The GrowthOp)

Evo Hemp announces new line of hemp-infused herbal teas with beverage maker Mood33. Evo Hemp, a leading hemp food and beverage company based in Boulder, Colorado, announced a new line of hemp-infused herbal teas with beverage maker Mood33. These new teas are infused with Evo Hemp’s organic, U.S.-grown hemp extract and made with premium botanicals and real fruit juices. They will be available in the beginning of 2020 at retail outlets nationwide. [Read More](#) (Extraction Magazine)

CONSUMER AND SOCIAL TRENDS

Jerry Jones, Tom Brady expect NFL marijuana policy change following MLB action. A top National Football League (NFL) team owner and a star player said this week that they’re expecting changes to the league’s marijuana policy after the MLB announced it is removing cannabis from the banned substances list for baseball players. Both Jerry Jones, owner of the Dallas Cowboys, and New England Patriots quarterback Tom Brady touched on the possibility of the NFL’s marijuana rules being revisited. [Read More](#) (Marijuana Moment)

Study: The number of people who abuse weed is decreasing. Legalization may be responsible. Contrary to the expectations of public health experts, the rate of frequent marijuana consumers who are diagnosed with cannabis use disorder (CUD) is not increasing, a new study reports. In fact, it's actually decreasing, and that may be due to the growing number of states that have legalized access to marijuana. [Read More](#) (Green Entrepreneur)

RETAIL

CalEthos unveils immersive showcase retail concept for cannabis brands. Michael Campbell spent 20 years in tech and 20 years in finance, bringing companies public and learning how to read market trends. The CEO of CalEthos says that many of those trends can be universal; what works in one industry tends to work in another. In retail, this is often the case. "Cannabis obviously is the next emerging market on the board, if you will," he says. "Probably four-plus years ago, the deal flow that came across my desk started to be cannabis maybe once a month, then once a week, once a day, multiple times a day, right? Everyone and their brother was looking for capital to do something in cannabis, so that piqued our interest." [Read More](#) (Cannabis Business Times)

Sweet Flower aims to destigmatize cannabis shopping. It's no secret that cannabis has a long and colorful association with all sorts of artists, from Shakespeare to Snoop Dogg. Which is why it seems only natural that cannabis companies are finding their way into the LA Arts District. The latest to plant a flag downtown is Sweet Flower, whose newest dispensary opened November 21st — and it may not be the biggest or the splashiest, but it's certainly one of the nicest. [Read More](#) (Green Entrepreneur)

INTERNATIONAL

Peru issues key cannabis regulations, effectively launching nation's medical marijuana program. Peruvian authorities have published long-awaited guidelines governing the nation's medical marijuana program, allowing companies to start applying for different types of business licenses spelled out under a 2017 law. The new regulations mark the effective launch of Peru's medical cannabis industry and create business opportunities for companies to produce medicine domestically and import products from overseas. Government officials also announced that Peru's first imported medical cannabis product has become available to patients. [Read More](#) (Marijuana Business Daily)

Zambia legalizes Marijuana growth for exports and for medical purposes only. The Zambian government has finally approved a proposal to legalize the production of Marijuana. The production of Marijuana in Zambia will, however, be restricted to exports and for medical purposes only. Companies wishing to trade in Marijuana in Zambia will be charged US\$250,000 annual license fees. Only successful bidders will be issued with commercial licenses to grow and trade in Marijuana for exports. The licenses will be issued by the Ministry of Health while the growth of the crop will be strictly supervised by the Zambia National Service. [Read More](#) (Lusaka Times)

Denmark eyes medical marijuana trial extension. Denmark might need to extend its medical cannabis trial plans in order for the government to conduct a mandated midterm evaluation of the pilot program, Health Minister Magnus Heunicke said. The four-year program launched in 2018, and a formal evaluation is required to take place in 2020. The number of patients who accessed medical cannabis via the scheme saw virtually no growth in recent quarters because of a combination of pricey imports and supply issues. [Read More](#) (Marijuana Business Daily)

Thailand joins '1-percent club' in setting THC limits for hemp. Thailand has joined leading global nations by setting the level of THC allowable in hemp to a full 1.0% by dry weight, according to a recent announcement from the country's Narcotics Control Committee (NCC). The announcement clarifies earlier confusion over the allowable THC level, revoking and replacing previously considered rules which had variably been reported as setting the THC limit for hemp at maximum 0.1%, 0.2% or 0.3% by weight of the dried plant, including flowers and leaves. The move greatly affects the potential in Thailand's CBD sector.. [Read More](#) (Hemp Today)

CANNA SCIENCE – EXTRACTION, TESTING, BIOSYNTHESIS

Valens expands exclusive license agreement to bring cannabis-infusion technology to new international markets. Valens expands exclusive license for SÖRSE cannabis emulsion technology to include Europe, Australia, and Mexico in addition to Canada. The amendment represents a nearly 20x increase in the addressable population exclusively available to Valens and its customers. It also provides a framework for Valens to obtain rights to utilize the technology in the U.S. and other markets on a non-exclusive basis in the future, creating the potential for Valens customers to sell branded cannabis infused products globally. [Read More](#) (Newswire)

How nanoemulsions create new cannabis building blocks. Thanks to nanotechnology, cannabis can fit into any consumable product, whether it's a soda, a gummy or a lotion. Axiomm Technologies is evolving the realm of consumable possibility with a precursor called µGOO — a micro goo that facilitates the easy creation of nano products. By allowing any cannabis concentrate to be mixed into water, it lets brands expand their product range, improve their products' performance and, in turn, grow their customer base. [Read More](#) (Leafly)

TECHNOLOGY

WAYV & Hypur launch first digital, compliant payments and ordering solution for cannabis supply chain. WAYV and Hypur announced the launch of the first digital, compliant payments and ordering solution for the entire cannabis supply chain. The first-of-its-kind solution offers businesses new predictability, safety, and transparency with a "credit card like" transaction and next-day wire and ACH payments to reduce reliance on cash and move money digitally throughout the supply chain -- the fastest and most reliable way. The new solution and partnership provides fast, digital, and reliable payments from retailers to brands. Brands can now offer a line of credit to retailers that WAYV will auto debit on the due date, ensuring prompt and predictable payments. Brands will now be able to receive digital payments from distributors - the fastest and most efficient way to get paid. Brands and retailers will enjoy zero payment fees for a limited time. [Read More](#) (PR Newswire)

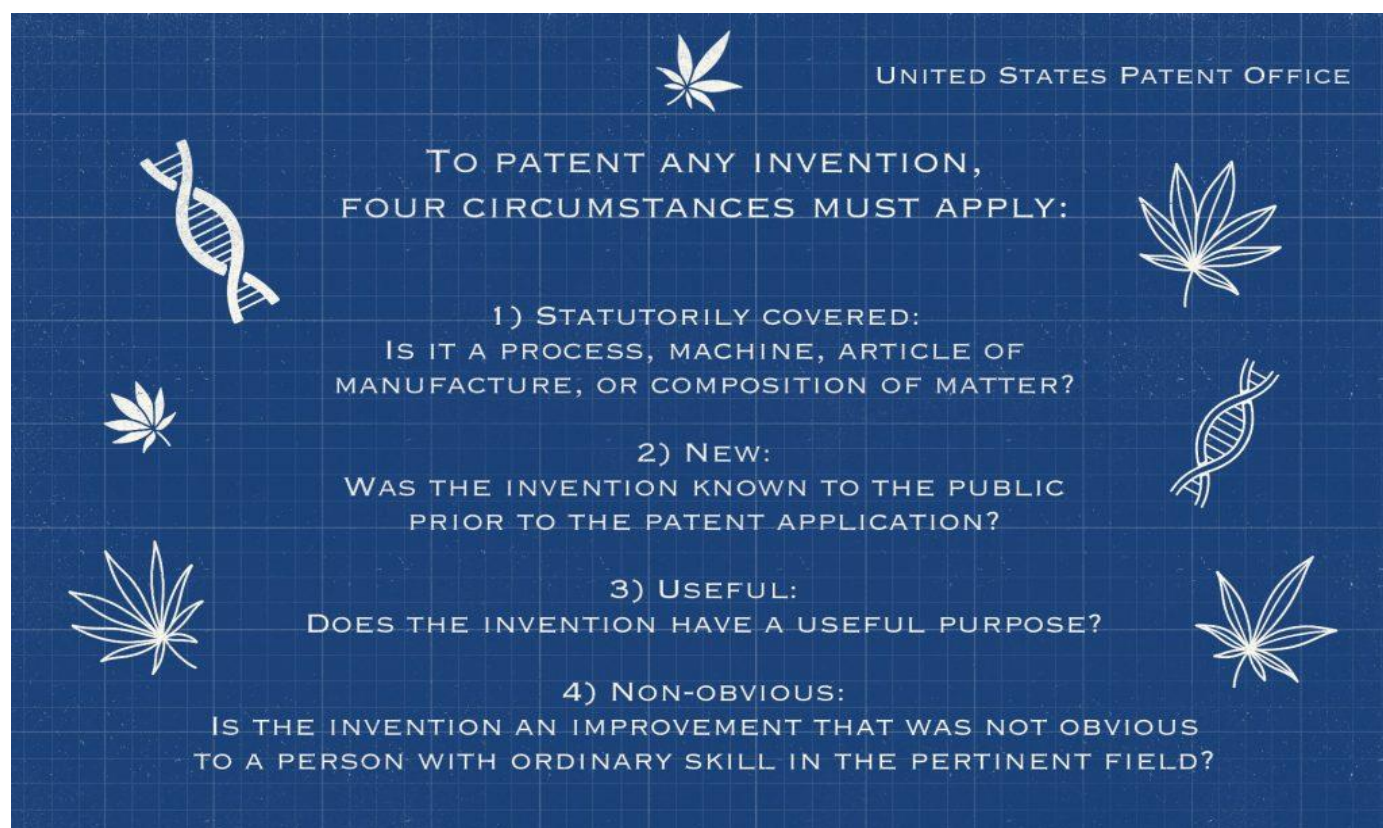
AI monitoring system aims to optimize hemp crops. A Polish start-up has developed the first application in a suite of artificial intelligence (AI) tools dedicated to crop monitoring, yield optimization and management of outdoor hemp fields. "We'll be able to accurately predict when flowers will be perfect for a harvest. That's important not only because cannabinoids content can drop more than 35% if collected too late, but it's also critical from a logistics point of view," said Marcin Marczak, CEO at the developer, Green Cube Solutions. "With the limitations on available equipment, good planning is the key to a successful harvest." [Read More](#) (Hemp Today)

How to leverage machine learning to fill IoT security gaps. Technology is helping the cannabis and hemp industries evolve. From cultivation monitoring systems to comprehensive seed to sale solutions and retail automation, the internet of things is changing the landscape. Since the IoT ecosystem always works as a loosely dependent and connected set of devices spread across an environment, without proper security protocol in place, they always remain vulnerable to attacks and threats. This is where sophisticated technologies like Machine Learning can really a massive proactive role. [Read More](#) (Cannabis Tech)

IP

Inside the billion-dollar race to patent cannabis. Today's legal cannabis market is worth an estimated \$11 billion. That could easily double within the next few years. Imagine holding a patent that required every grower of a popular strain to pay the patent holder a licensing fee. Biotech startups and Big Ag corporations aren't imagining—they're planning. With federal legalization looming, some are already filing patent claims on cannabis strains. The bigger players are waiting in the wings, ready to purchase those patents and claim ownership of hugely valuable DNA. [Read More](#) (Leafly)

Chart 49: The USPTO Uses This Four-Part Test to Evaluate Patent Applications



Source: Intro-Blue, Leafly

Cannabis farmers scramble to protect heirloom seeds from Big Ag. Dan Pomerantz, founder and CEO of California-based Rebel Grown—which cultivates outdoor sustainable cannabis and seeds—urged the Meadowlands round table to recognize that the real threat facing cannabis is coming directly from the so-called Big Four agricultural and seed corporations (Bayer-Monsanto, DowDuPont, ChemChina-Syngenta, and BASF): “All of the biggest agricultural companies in the world want our genetics. Those people aren’t coming into our industry now, they’ve been doing it for a decade, and they’ve been doing it pretty much under the radar. So who’s paying for this forward-thinking technology to be applied to cannabis genetics?” [Read More](#) (Leafly)

LEGAL

Lawsuit targets Trulieve over text messages. In a federal lawsuit seeking millions of dollars in damages, a Tennessee man is accusing Florida’s largest medical marijuana operator of illegally sending text messages to his cellphone. The lawsuit alleges that Quincy-based [Trulieve](#) violated federal communications laws by sending unsolicited text messages to Mats Jaslow that advertised special deals on marijuana products in October and November. [Read More](#) (Law.com)

Two lawsuits between Canopy, US hemp grower dropped. The legal battle between the U.S. arm of Canadian cannabis giant [Canopy Growth](#) and a Nevada-based hemp producer appears to be over. Canopy filed notice that it is dropping its lawsuit accusing Go Farm Hemp of squandering a \$12 million advance to grow hemp. Canopy’s filing to dismiss came a month after Go Farm Hemp’s initial lawsuit against the Ontario, Canada-based company for allegedly failing to pay some advance money was dismissed by a New York court. [Read More](#) (Hemp Industry Daily)

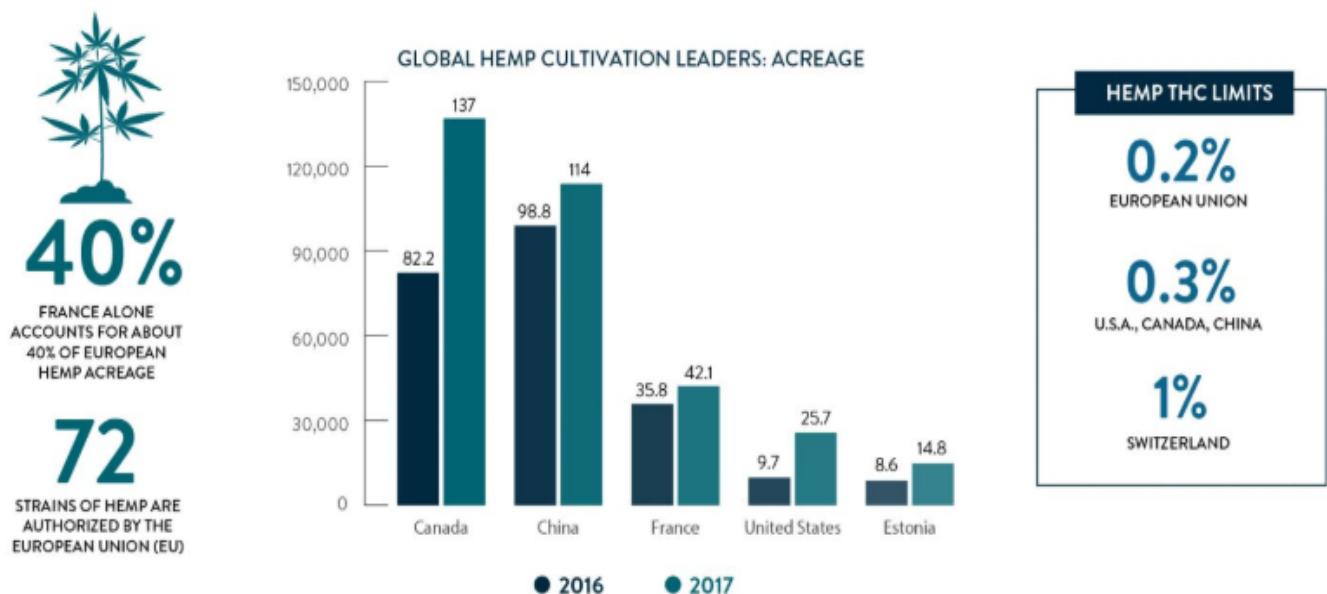
SUSTAINABILITY

“Trespass grows,” which feed the marijuana black market, do great damage to the planet. Trespass grows are not just an eyesore and a misuse of public lands. Growers on the sites use powerful illegal pesticides. That makes the grows a severe threat to the forest ecosystem, from the microbes in the dirt all the way up to apex predators like eagles. They are an object lesson in the invisible harms of the black market—and in the invisible harms of cannabis prohibition. [Read More](#) (The Atlantic)

Cutting edge green building, hempcrete masonry just got better. JustBioFiber, a Canadian Company in Calgary, has made headlines in the building industry by overcoming one of hempcrete's main disadvantages: its structural integrity. Hempcrete, a building material created by combining the robust fibrous core from hemp with lime and water, is experiencing a bit of a heyday. It's eco-friendly, relatively affordable, and it has many thermal benefits for interior and exterior applications. It's one of the most sustainable building materials available today. With the launch of their new Just BioFiber Block, they have created an eco-friendly building medium that can finally compete with conventional building materials. [Read More](#) (Cannabis Tech)

CANNA FACTS

Chart 50: Global Hemp Cultivation Leaders



Source: Intro-Blue, New Frontier Data

CANNA CAPITAL MARKET TRENDS

Chart 51: Weekly Summary (Week 49 ending December 6, 2019)

Week 49	Capital Raises			M&A
\$ Million	# of Deals	\$ Raised	Avg. Size	# of Deals
This Year	2	\$10.5	\$5.3	1
Last Year	14	\$189.6	\$13.5	3

CAPITAL RAISES

Company	Public/Private	Ticker	Market	Sector	Segment	Amount Raised (\$ Millions)	Equity/Debt	Deal Type
Vertosa	Private	-	-	Agri Technology	Ancillary Products & Services	\$6.0	Equity	Series Seed Funding
Leaf Trade	Private	-	-	Miscellaneous Ancillary	Ancillary Products & Services	\$4.5	Equity	Growth Equity

M&A

Acquirer/Buyer						Deal Type	Target/Seller					
Company	Public/Private	Ticker	Market	Sector	Segment		Company	Public/Private	Ticker	Market	Sector	Segment
Enlighten	Private	-	-	Software/Media	Ancillary Products & Services	Acquisition	Cannabis Club TV	Private	-	-	Software /Media	Ancillary Products & Services

Chart 52: Cannabis Capital Raises by Week

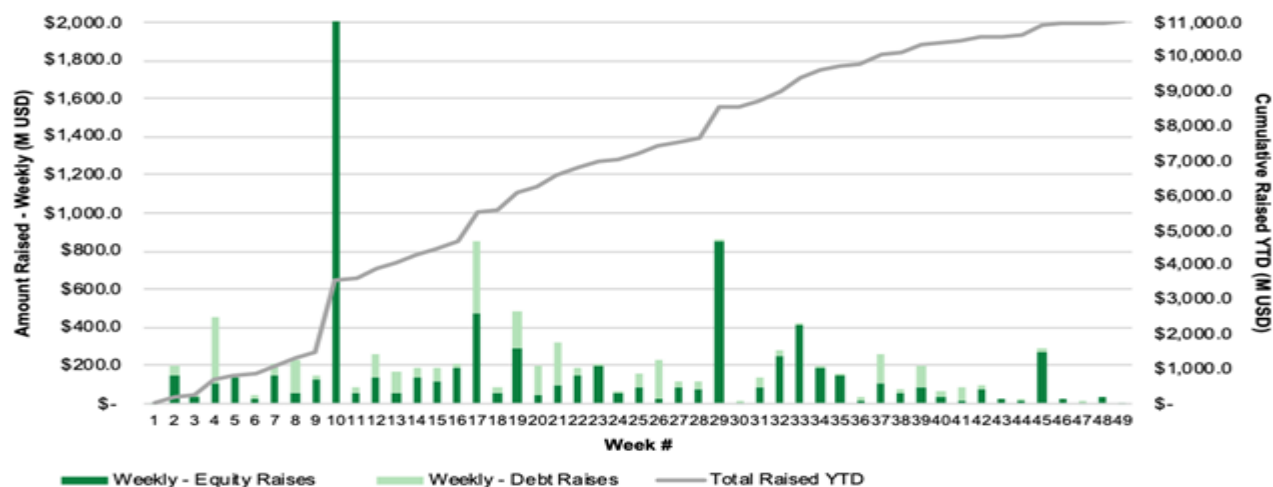
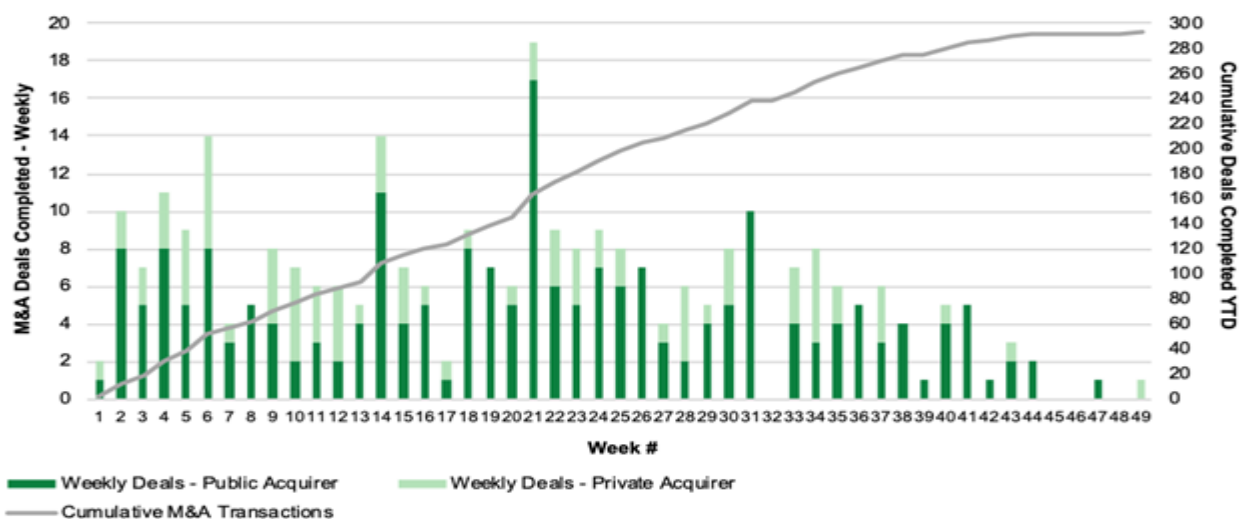


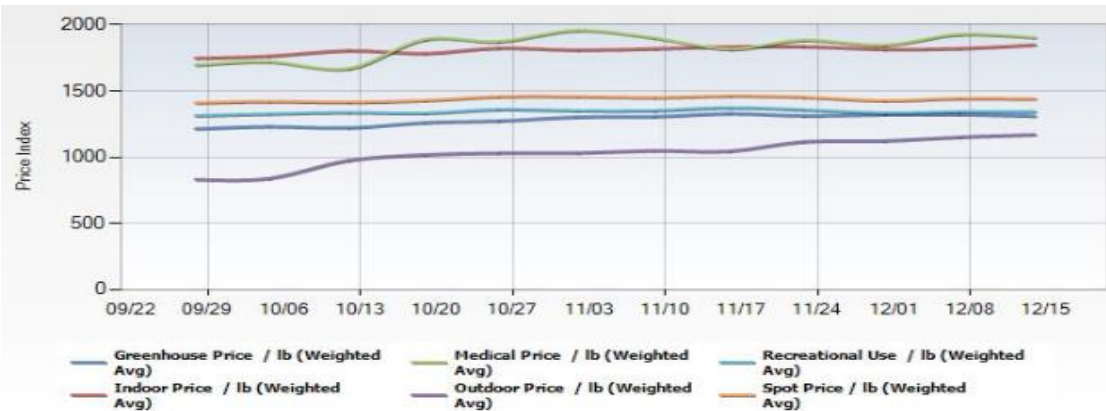
Chart 53: Cannabis M&A Activity by Week



CANNA PRICES – WEEKLY TREND

Chart 54: U.S. Cannabis Market Prices

Commodity	December 13	December 6	\$ Change	% Change
Spot Price / lb (Weighted Avg)	\$1,442.00	\$1,446.00	(\$4.00)	-0.3 %
Indoor Price / lb (Weighted Avg)	\$1,850.00	\$1,822.00	\$28.00	1.5 %
Greenhouse Price / lb (Weighted Avg)	\$1,313.00	\$1,325.00	(\$12.00)	-0.9 %
Outdoor Price / lb (Weighted Avg)	\$1,172.00	\$1,154.00	\$18.00	1.6 %
Medical Price / lb (Weighted Avg)	\$1,906.00	\$1,928.00	(\$22.00)	-1.1 %
Recreational Use / lb (Weighted Avg)	\$1,345.00	\$1,345.00	\$0.00	0.0 %



Source: Intro-Blue, Cannabis Benchmarks Price Index

Chart 55: U.S. Implied Forward Prices (Week Ending December 13, 2019)

Delivery Month	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
This Week's Forward Price	\$ 1,475	\$ 1,475	\$ 1,475	\$ 1,435	\$ 1,455	\$ 1,455
Last Week's Forward Price	\$ 1,475	\$ 1,475	\$ 1,475	\$ 1,435	\$ 1,455	\$ 1,455
Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Premium/Discount to Spot	2.3%	2.3%	2.3%	-0.5%	0.9%	0.9%

Source: Intro-Blue, Cannabis Benchmarks Price Index

Chart 56: Canada Cannabis Spot Index



Source: Intro-Blue, Cannabis Benchmarks Price Index











CANNA BRANDS AND PRODUCTS RANKING – STATE IN FOCUS: NEVADA

Chart 57: Best-Selling Flower Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1	 OLD PAL CANNABIS	Gorilla Glue #4 (Eighth) OLD PAL	\$18.55	
2	 OLD PAL CANNABIS	Cinex (Eighth) OLD PAL	\$18.17	
3	 FOLD	Anslinger (Gram) 8 FOLD	\$7.60	
4	 CANNABIOTIX	Kush Mountains (Eighth) CANNABIOTIX (CBX)	\$43.90	
5	 OLD PAL CANNABIS	Fire OG (Eighth) OLD PAL	\$15.60	











Source: Intro-Blue, Headset

Chart 58: Best-Selling Concentrates Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1	 HSH	Tropical Treasure Kush Live Resin (Half Gram) HIGH SIERRA HOLISTICS	\$21.05	
2	 HSH	Orange Julius Live Resin (Half Gram) HIGH SIERRA HOLISTICS	\$21.56	
3	 CANNABIOTIX	Blue Flame Budder (Half Gram) CANNABIOTIX (CBX)	\$14.51	
4	 DESERT GROWN FARMS	Lime Skunk Shatter (Half Gram) DESERT GROWN FARMS	\$18.29	
5	 TRENDI	Kush OG Shatter (Gram) TRENDI	\$25.67	

Source: Intro-Blue, Headset

Chart 59: Best-Selling Vapor Pens Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1	 SILVER STATE TRADING	Rise - Granddaddy Purple Cartridge (Half Gram) SILVER STATE TRADING	\$26.18	
2	 SILVER STATE TRADING	Rise - Alaskan Thunder Fuck Cartridge (Half Gram) SILVER STATE TRADING	\$26.20	
3	 SILVER STATE TRADING	Rise Pineapple Express Cartridge (Half Gram) SILVER STATE TRADING	\$28.09	
4	 RYTHM	Relax Cartridge (Half Gram) RYTHM	\$24.98	
5	 RYTHM	Balance Cartridge (Half Gram) RYTHM	\$24.35	


Source: Intro-Blue, Headset

Chart 60: Best-Selling Beverage Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Enough Said Lager (5mg) TWO ROOTS BREWING CO.	\$7.11	
2		Road Scholar New West IPA (5mg) TWO ROOTS BREWING CO.	\$7.01	
3		Sonder Blonde Ale (5mg) TWO ROOTS BREWING CO.	\$6.71	
4		Fruit Punch Elixir (100mg) DIXIE ELIXIRS	\$25.50	
5		Granddaddy Grape (100mg) CANNAPUNCH	\$21.31	











Source: Intro-Blue, Headset

Chart 61: Best-Selling Tincture & Sublingual Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		CBN Good Night Tincture (500mg,14ml) EXPERIENCE PREMIUM CANNABIS (EPC)	\$56.43	
2		CBD/THC 1:1 Tincture (50mg CBD,50mg THC) EXPERIENCE PREMIUM CANNABIS (EPC)	\$36.96	
3		CBD Unflavored Hemp Tincture Drops (1000mg, 30ml) SELECT	\$54.86	
4		CBD Lemon Ginger Tincture Drops (1000mg, 30ml) SELECT	\$54.70	
5		CBD:THC 1:1 Balance Tincture (100mg CBD, 100mg THC) STRAINZ	\$28.22	

Source: Intro-Blue, Headset

Chart 62: Best-Selling Capsules Brands and Products in Nevada

	BRAND	PRODUCT	AVG. PRICE	SALES (30 DAY)
1		Sativa Capsules 10-Pack (100mg) CANNAVATIVE	\$27.54	
2		Indica Capsules 10-Pack (100mg) CANNAVATIVE	\$27.74	
3		CBD:THC 1:1 Tablets (100mg CBD, 100mg THC) ALTUS LABS	\$35.28	
4		CBD:THC 5:1 Tablets (500mg CBD, 100mg THC) ALTUS LABS	\$67.06	
5		CBD/THC 20:1 Tablets (100mg) ALTUS LABS	\$33.04	

Source: Intro-Blue, Headset

CANNA EVENTS CALENDAR

Chart 63: Cannabis Company Events Calendar – Recent Conference Calls

Date	Company	Ticker	Replay
12/16/19 - 8:30 A.M. ET	HEXO Corp	(TSX: HEXO)/(NYSE: HEXO)	Webcast
12/13/19 - 4:15 P.M. ET	Veritas Farms	(OTC:VFRM)	1-888-567-1602
12/11/19 - 9:00 A.M. ET	EnWave	(TSXV:ENW)	Webcast
12/03/19 - 4:30 P.M. ET	Akerna	(NASDAQ: KERN)	Webcast
12/02/19 - 9:00 A.M. ET	4Front	(CSE: FFNT)/(OTC: FFNTF)	1-844-512-2921 passcode 13696657
12/02/19 - 8:30 A.M. ET	Indus Holdings	(CSE:INDS)/(OTC: INDXF)	Webcast
12/02/19 - 8:30 A.M. ET	PLUS Products	(CSE: PLUS)/(OTC: PLPRF)	Webcast
11/29/19 - 1:00 P.M. ET	WeedMD	(TSX-V:WMD)/(OTC:WDDMF)	1-800-319-6413 passcode 3858
11/29/19 - 9:00 A.M. ET	Lift & Co.	(TSXV: LIFT)/(OTC: LFCOF)	Webcast
11/27/19 - 11:00 A.M. ET	Sunniva	(CSE: SNN)/(OTC: SNNVF)	Webcast
11/27/19 - 8:30 A.M. ET	Flower One	(CSE: FONE)/(OTC: FLOOF)	Webcast
11/27/19 - 8:30 P.M. ET	Vireo Health	(CNSX: VREO)/(OTC: VREOF)	Webcast
11/26/19 - 6:00 P.M. ET	Origin House	(CSE: OH)/(OTC: ORHOF)	Webcast
11/26/19 - 6:00 P.M. ET	Cresco Labs	(CSE: CL)/(OTC: CRLBF)	Webcast
11/26/19 - 5:30 P.M. ET	Flowr	(TSXV: FLWR)/(OTC: FLWPF)	Webcast
11/26/19 - 5:00 P.M. ET	MedMen	(CSE: MMEN)/(OTC: MMNFF)	Webcast
11/26/19 - 12:00 P.M. ET	Golden Leaf Holdings	(CSE:GLH)/(OTC:GLDFF)	Webcast
11/26/19 - 10:00 A.M. ET	SLANG Worldwide	(CNSX: SLNG)/(OTC: SLGWF)	Webcast
11/26/19 - 9:00 A.M. ET	Indus Holdings	(CSE:INDS)/(OTC: INDXF)	Webcast
11/26/19 - 8:30 A.M. ET	Biome Grow	(CSE: BIO)/(OTC: BIOIF)	Webcast
11/26/19 - 8:30 A.M. ET	Planet 13	(CSE: PLTH)/(OTC: PLNHF)	Webcast
11/26/19 - 8:30 A.M. ET	Green Growth Brands	(CSE: GGB)/(OTC: GGBXF)	Webcast
11/26/19 - 8:30 A.M. ET	48North	(TSX: NRTH)	1-888-231-8192 passcode 8672507
11/25/19 - 5:00 P.M. ET	PharmaCielo	(TSXV:PCLO)/(OTC:PCLOF)	Webcast
11/25/19 - 10:00 A.M. ET	MJardin Group	(CSE: MJAR)/(OTC: MJARF)	Webcast
11/25/19 - 8:00 A.M. ET	Organigram	(TSX: OGI)/(NASDAQ: OGI)	Webcast
11/22/19 - 11:00 A.M. ET	Harborside	(CSE: HBOR)	Webcast
11/21/19 - 10:00 A.M. ET	Abacus Health Products	(CSE: ABCS)/(OTC: ABAHF)	1-855-859-2056 passcode 3343986
11/21/19 - 8:30 A.M. ET	iAnthus	(CSE: IAN)/(OTC: ITHUF)	Webcast
11/20/19 - 5:00 P.M. ET	TILT Holdings	(CSE: TILT)/(OTC: TLLTF)	Webcast
11/20/19 - 5:00 P.M. ET	Green Thumb Industries	(CSE: GTII)/(OTC: GTBIF)	Webcast
11/20/19 - 4:00 P.M. ET	Surna	(OTC: SRNA)	Webcast
11/20/19 - 8:00 A.M. ET	Harvest Health & Recreation	(CSE: HARV)/(OTC: HRVSF)	Webcast
11/19/19 - 5:00 P.M. ET	Curaleaf	(CSE: CURA)/(OTC: CURLF)	Webcast
11/19/19 - 9:00 A.M. ET	3 Sixty Risk Solutions Ltd.	(CSE: SAFE)/(OTC: SAYFF)	1-888-390-0541 passcode 120171
11/19/19 - 8:30 A.M. ET	Ayr Strategies	(CSE: AYR.A)/(OTC: AYRSF)	Webcast
11/19/19 - 8:00 A.M. ET	Trulieve	(CSE: TRUL)/(OTC: TCNNF)	Webcast

11/15/19 - 12:00 PM ET	Alcanna	(TSX: CLIQ)/(OTC: LQSIF)	1-800-408-3053 passcode 5420415
11/15/19 - 10:00 A.M. ET	VIVO Cannabis	(TSX-V: VIVO)/(OTC: VVCIF)	Webcast
11/15/19 - 9:00 A.M. ET	The Green Organic Dutchman Holdings	(TSX: TGOD)/(OTC: TGODF)	Webcast
11/15/19 - 9:00 A.M. ET	Halo Labs	(NEO: HALO)/(OTC: AGEEF)	1-866-211-3166 passcode 9063097
11/15/19 - 8:30 A.M. ET	Jushi Holdings	(NEO: JUSH.B)/(OTC: JUSHF)	Webcast
11/15/19 - 8:30 A.M. ET	Village Farms International	(TSX:VFF)/(NASDAQ:VFF)	Webcast
11/14/19 - 6:00 P.M. ET	Aurora Cannabis	(NYSE TSX: ACB)	Webcast

Source: Intro-Blue, New Cannabis Ventures

Chart 64: 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 & Ancillary Solutions
6	Innovate Phytotechnologies	SEDAR	CSE	Canadian Hemp Services Provider and ACMPR Applicant
7	Lifted Innovations	SEDAR	CSE	Cannabis accessories e-commerce company in U.S. and Canada
8	Lobo Genetics	SEDAR	TSX-V	Genetics Testing for Cannabis Consumers
9	ManifestSeven	SEDAR	CSE	California Retail and Distribution
10	Merced Holdings	SEDAR	CSE	California Extraction
11	Merrco Payments	SEDAR	TSX-V	Canadian Payments Processor Focused on Cannabis
12	Molecular Science	SEDAR	TSX-V	Canadian Mobile Lab for Testing and Research
13	Mota Ventures	SEDAR	CSE	Colombian Licensed Producer
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	Southern Sun	SEDAR	TSX-V	Canadian Company Focused on Africa
18	Starling Brands	SEDAR	CSE	California Cannabis Operator
19	Terrace. Inc	SEDAR	TSX-V	Multi-Country Operator in Spain and Entering Uruguay and Portugal
20	The Hacienda Company	SEDAR	CSE	California Cannabis Brand Owner
21	Theracann International Benchmark	SEDAR	TSX-V	Panama-Based Provider of Technology, Operations and Analytics
22	Varianz	SEDAR	TSX-V	Colombian Applicant

Source: Intro-Blue, New Cannabis Ventures

Chart 65: Cannabis Industry Events Calendar

S. No	Event Name	Place	Date
1	Cannabis Dealmakers Summit: Entrepreneurship Summit	MIAMI, FL	January 8, 2020
2	Lift & Co Cannabis Expo	VANCOUVER, BC	January 9 - 11, 2020
3	Midwest iHemp Expo	LANSING, MI	January 10 - 11, 2020
4	The Headies: Vermont Growers Cup	ESSEX, VT	January 11, 2020
5	NCIA Washington Industry Social	SEATTLE, WA	January 14, 2020
6	NCIA Arizona Industry Social	PHOENIX, AZ	January 14, 2020
7	NCIA Nevada Industry Social	LAS VEGAS, NV	January 14, 2020
8	NCIA Oregon Industry Social	EUGENE, OR	January 15, 2020
9	NCIA Northern California Industry Social	SAN JOSE, CA	January 16, 2020
10	Winter Hemp Summit 2020	BOULDER, CO	January 16, 2020
11	HempWorld Expo & National Vape Expo	ATLANTA, GA	January 18 - 19, 2020
12	NCIA Utah & Florida Industry Social	SLC, UT & FTL, FL	January 21, 2020
14	CannaTech Davos 2020	SWITZERLAND	January 20 - 24, 2020
15	NCIA Texas Industry Social	DALLAS, TX	January 22, 2020
16	NCIA Missouri Industry Social	KANSAS CITY, MO	January 22, 2020
17	Canna West	LOS ANGELES, CA	January 22 - 24, 2020
18	NCIA Southern California Industry Social	IRVINE, CA	January 23, 2020
19	American Conf on Controversies on Cannabis-Based Medicine	ORLANDO, FL	January 23 - 24, 2020
20	Texas Hemp Convention	DALLAS, TX	January 28 - 30, 2020
21	Hemp CBD Connex	PORTLAND, OR	January 29 - 30, 2020
22	Cannabis Europa	MADRID, ES	February 5, 2020
23	Cannabis Packaging Summit	ANAHEIM, CA	February 11 - 12, 2020
24	Seed to Sale Show	BOSTON, MA	February 18 - 19, 2020
25	Northeast Cannabis Business Conference	BOSTON, MA	February 19 - 20, 2020
26	Indoor Agriculture Energy Solutions (IAES) Conference	SAN DIEGO, CA	February 24 - 26, 2020
27	Women Grow Strong	NEW ORLEANS, LA	March 4 - 6, 2020
28	Cannabis Meets Healthcare	NEW ORLEANS, LA	March 4 - 6, 2020
29	The 6th Annual New England Cannabis Convention	BOSTON, MA	March 20 - 22, 2020
30	Oklahoma Cannabis Expo	OKLAHOMA, OK	March 23 - 24, 2020
31	Cannabis 2020: Pros & Cons	NEW YORK, NY	April 3, 2020
32	NECANN New England Cannabis Convention	CHICAGO, IL	April 3 - 4, 2020
33	Cannabis Business Asia 2020	THAILAND	April 7 - 8, 2020
34	The Cannabis Consumer & Business Expo	MONTREAL, QC	April 10 - 12, 2020
35	Women in Cannabis Summit	BURLINGTON, VT	April 11, 2020
36	Cannabis Conference 2020	LAS VEGAS, NV	April 21 - 23, 2020
37	CBD Senior Health and Well-Being Expo	NEWTON, MA	April 24 - 25, 2020
38	Cannabis Business France 2020	PARIS, FRANCE	May 5 - 6, 2020
39	10th Annual Cannabis Industry Lobby Days	WASHINGTON, D.C.	May 19 - 21, 2020
40	NECANN Cannabis & Hemp Convention	BURLINGTON, VT	May 30 - 31, 2020
41	MJBizConNEXT Executive Summit	NEW ORLEANS, LA	June 11 - 12, 2020
42	Cannabis Business Summit & Expo	SAN FRANCISCO, CA	June 15 - 17, 2020
43	NECANN Cannabis & Hemp Convention	SPRINGFIELD, MA	June 20 - 21, 2020
44	Cannabis Business Poland 2020	WARSAW, PL	July 1 - 2, 2020
45	Great Alaskan Cannabis Bowl	WASILLA, AK	July 24 - 26, 2020
46	Be Part Of The New Cannabis Drinks Category	SAN FRANCISCO, CA	July 30, 2020
47	Cannabis Drinks Expo Chicago	NORTHLAKE, IL	August 3, 2020
48	Midwest Cannabis Business Conference	DETROIT, MI	August 26 - 27, 2020
49	CannaOne BizCon + Expo	LAS VEGAS, NV	August 26 - 28, 2020
50	NECANN Cannabis & Hemp Convention	ATLANTIC CITY, NJ	September 11 - 12, 2020
51	NECANN Cannabis & Hemp Convention	PORTLAND, ME	October 10 - 11, 2020
52	Michigan's Commercial Cannabis Conference & Expo	DETROIT, MI	October 16 - 17, 2020
53	2nd Medical Cannabis Patient Therapies and Wellness Summit	WORCESTER, MA	November 6 - 7, 2020

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

CANNA INDEX

Chart 66: U.S Cannabis Index

Constituents	25
% Change	0.31%
Open Price	52.08
Total Volume	10.88 m
52 Week High	137.07
52 Week Low	48.79



Source: Intro-Blue, The Marijuana Index

Chart 67: Canada Cannabis Index

Constituents	20
% Change	0.76%
Open Price	221.86
Total Volume	56.44 m
52 Week High	727.25
52 Week Low	195.73



Source: Intro-Blue, The Marijuana Index

COMPARABLES & COMPANY PROFILE LINKS

						Shares		Price Performance			
						Out	Daily Vol	% in H-L			
								% to High	% from Low	Range	% YTD
Peer Set											
Canadian LP - Cultivation, Processing (and Dispensing)											
1	CANOPY GROWTH CORP	CGC	20.63	7,191	5,861	349	1.7%	156%	-33%	18%	-23%
2	AURORA CANNABIS INC	ACB	2.32	2,437	2,870	1,051	1.9%	345%	-8%	2%	-53%
3	CRONOS GROUP INC	CRON	6.98	2,399	902	344	1.4%	260%	-13%	5%	-33%
4	HEXO CORP	HEXO	2.10	540	526	257	1.8%	300%	-26%	8%	-39%
5	SUNDIAL GROWERS INC.	SNDL	2.53	261	309	103	0.9%	423%	-26%	6%	
6	TERRASCEND CORP	TRSSF	1.88	100	302	128	0.1%	273%	-8%	3%	-82%
7	SUPREME CANNABIS CO INC	SPRWF	0.50	176	217	354	0.1%	260%	-13%	5%	-48%
9	ZENABIS GLOBAL INC	ZBISF	0.15	53	137	348	0.0%	1502%	-89%	6%	
8	FLOWR CORP (THE)	FLWPF	1.53	102	116	67	0.1%	311%	-13%	4%	-50%
10	GREEN ORGNC DUTCHMN HLD	TGODF	0.56	155	109	276	0.3%	680%	-16%	2%	-69%
13	AGRAFLORA ORGANICS INTL INC	PUFXF	0.09	86	99	930	0.1%	592%	2%	0%	-44%
11	HERITAGE CANNABIS HLDGS CORP	HERTF	0.19	89	70	425	0.0%	190%	-42%	18%	86%
12	RUBICON ORGANICS INC	ROMJF	1.16	46	53	40	0.0%	125%	-16%	11%	-11%
14	DELTA 9 CANNABIS INC	VRNDF	0.38	33	47	88	0.0%	276%	-23%	8%	-59%
17	EVE & CO INC	EEVVF	0.20	48	44	241	0.1%	147%	-61%	29%	16%
16	EPHS HOLDINGS, INC.	STNN	0.39	29	31	74	0.0%	408%	-23%	5%	-74%
15	VIVO CANNABIS INC	VVCIF	0.15	43	25	278	0.0%	507%	-2%	0%	-70%
18	SPROUTLY CANADA INC	SRUTF	0.15	33	24	162	0.1%	478%	-4%	1%	-31%
19	JAMES E. WGNR CLTIVION CORP	JWCAF	0.20	19	23	97	0.0%	387%	-21%	5%	-62%
20	GTEC HOLDINGS LTD	GGTTF	0.14	16	21	113	0.0%	319%	-16%	5%	-60%
22	TERRANUEVA CORP.	TEQ-CA	0.30	19	20	63	0.1%	339%	-87%	20%	-37%
21	BELEAVE INC	BLEVF	0.02	11	18	419	0.0%	458%	-51%	10%	-66%
26	INDIVA LTD	NDVAF	0.19	13	16	65	0.1%	150%	-41%	22%	-33%
23	48NORTH CANNABIS CORP	NCNNF	0.26	47	16	176	0.1%	392%	-24%	6%	-37%

24	SUGARBUD CRAFT GROWERS CORP	SUGR-CA	0.04	16	11	229	0.1%	368%	-10%	3%	55%
25	LOTUS VENTURES INC	LTTSF	0.12	10	9	83	0.0%	214%	-41%	16%	73%
27	GROWN ROGUE INTL INC	NVSIF	0.09	6	9	72	0.0%	538%	-44%	8%	-67%
28	NORTH BUD FARMS INC	NOBDF	0.14	9	8	63	0.0%	165%	-9%	5%	-14%
29	MATICA ENTERPRISES INC	MQPXF	0.03	9	6	316	0.0%	313%	-31%	9%	-54%
30	EXPERION HOLDINGS LTD	EXPFF	0.08	8	2	101	0.0%	670%	-74%	10%	-80%
31	LEANLIFE HEALTH INC	LNLHF	0.03	3				58%	0%	0%	
32	BLISSCO CANNABIS CORP	BLIS-CA				107	0.0%				
33	SPEAKEASY CANNABIS CLUB LTD	EASY-CA	0.29	0		87	0.3%	223%	-20%	8%	-100%
CBD/Hemp											
34	CHARLOTTE'S WEB HLDGS INC	CWBHF	7.98	463	769	98	0.5%	216%	6%	-3%	-58%
35	CV SCIENCES INC	CVSI	1.09	108	104	99	0.9%	505%	-25%	5%	-75%
36	BETTER CHOICE COMPANY INC.	BTTR	1.75	79	88	45	0.0%	658%	-25%	4%	-84%
37	GREEN HYGIENICS HOLDINGS INC.	GRYN	2.02	76	77	37	0.0%	23%	-95%	81%	522%
38	CBDMD INC (LEVEL BRANDS)	YCBD	2.88	80	66	28	0.7%	151%	-12%	7%	-7%
39	VERITAS FARMS INC	SSWH	1.18	49	44	41	0.1%	676%	-11%	2%	-11%
40	ELIXINOL GLOBAL LTD	ELLXF	0.53	73	43	138	0.1%	702%	-17%	2%	-71%
41	EUREKA 93	LXLLF	0.38	28	39	74	0.0%	4197%	-96%	2%	-95%
42	CBD UNLIMITED, INC.	EDXC	0.10	26	29	262	0.2%	644%	-57%	8%	103%
43	UPPER STREET MARKETING INC.	UPPR	0.30	24	24	80	0.0%	641%	-83%	12%	-12%
44	FREEDOM LEAF, INC.	FRLF	0.07	41	23	311	0.1%	352%	-20%	5%	-40%
45	KONA GOLD SOLUTIONS, INC.	KGKG	0.04	21	21	497	0.5%	260%	-4%	1%	-51%
46	EXACTUS, INC.	EXDI	0.44	18	20	41	0.2%	809%	-89%	10%	191%
47	HEMP INC	HEMP	0.01	2	19	274	11.0 %	567%	16%	-3%	-79%
48	KALYTERA THERAPEUTICS	KALTF	0.03	17	18	514	0.0%	158%	-54%	25%	-29%
49	ISODIOL INTERNATIONAL INC	ISOLF	0.12	7	8	42	0.1%	1192%	-7%	1%	-81%
50	NATURALLY SPLENDID ENTPRS	NSPDF	0.05	7	8	133	0.0%	201%	-14%	6%	-49%
51	MAPLE LEAF GREEN WORLD INC	MGWFF	0.04	6	8	149	0.0%	605%	-43%	7%	-57%
52	WEEKEND UNLIMITED INC.	WKULF	0.02	8	7	405	0.0%	1689%	-37%	2%	

53	ALTERNATE HEALTH CORP	AHGIF	0.08	6	7	78	0.1%	661%	-28%	4%	-76%	
54	EMPOWER CLINICS INC	EPWCF	0.04	5	7	137	0.0%	352%	-64%	15%	-47%	
55	EARTH SCIENCE TECH INC	ETST	0.10	5	5	53	0.1%	921%	-31%	3%	-88%	
56	NEWLEAF BRANDS INC	NWGFF	0.16	5	5	33	1.0%	1517%	-27%	2%	-92%	
57	GLOBAL HEMP GROUP INC	GBHPF	0.02	5	4	188	0.1%	453%	-18%	4%	-75%	
58	APPLIED BIOSCIENCES CORP	APPB	0.20	3	4	14	0.0%	1014%	0%	0%	-84%	
59	EASTWEST BIOSCIENCE INC	EAST-CA	0.02	1	2	51	0.4%	540%	-33%	6%	-79%	
60	REVIVE THERAPEUTICS LTD	RVVTF	0.02	2	2	72	0.0%	453%	-59%	12%	-66%	
61	EVIANA HEALTH CORP	EVNNF	0.04		1	24	0.0%	1186%	-31%	3%		
62	GRIDIRON BIONUTRIENTS INC	GMVP	0.01	1	1	135	0.0%	1367%	-78%	5%	-85%	
63	CBD OF DENVER INC.	CBDD	0.00	0	0	84	4.1%	1067%	0%	0%	-82%	
64	PHIVIDA HLDGS INC	PHVAF	0.08	7	0	89	0.1%	940%	-7%	1%	-81%	
65	HEMPCO FOOD & FIBER INC	HMPPF				62	0.0%					
66	ABACUS HEALTH PRODUCTS, INC.	ABCS-CA	4.45	54		22	0.1%	204%	-30%	13%		
Diversified												
					121,53	1,86						
67	ALTRIA GROUP INC	MO	50.91	95,102	6	8	0.6%	14%	-23%	62%	3%	
68	CONSTELLATION BRANDS	STZ	183.1	0	30,669	48,431	189	0.7%	17%	-18%	51%	14%
69	PYXUS INTERNATIONAL, INC.	PYX	6.11	56	1,413	9	10.5%	435%	-5%	1%	-48%	
70	GREEN GROWTH BRANDS	GGBXF	0.59	123	296	238	0.1%	775%	4%	-1%	-85%	
71	AUXLY CANNABIS GROUP INC	CBWTF	0.47	289	294	618	0.1%	76%	-5%	6%	-30%	
72	MJARDIN GROUP INC	MJARF	0.16	11	145	68	0.1%	3231%	-32%	1%	-96%	
73	MPX INTL. CORPORATION	MPXOF	0.35	48	48	135	0.0%	79%	-88%	53%		
74	1933 INDUSTRIES INC	TGIF	0.15	43	46	282	0.1%	205%	-4%	2%	-41%	
75	WEED, INC	BUDZ	0.31	34	34	108	0.1%	619%	-3%	0%	-70%	
76	STEM HLDGS INC	STMH	0.81	32	31	40	0.0%	270%	-1%	0%	-60%	
77	INDUS HOLDINGS, INC.	INDXF	0.85	13	27	9	0.4%	1199%	-52%	4%		
78	WESTLEAF INC.	WSLFF	0.14	17	26	121	0.0%	3497%	-48%	1%	92%	
79	AMERICAN CANNABIS INNOVATIONS CONGLOMERATED	PURA	0.04	24	25	595	0.5%	275%	-5%	2%	-58%	
80	HARVEST ONE CANNABIS INC	HRVOF	0.14	22	22	160	0.0%	578%	-10%	2%	-54%	

81	RAVENQUEST BIOMED INC	RVVQF	0.09	11	22	123	0.0%	537%	-29%	5%	-73%
82	NUTRITIONAL HIGH INTL INC	SPLIF	0.03	11	17	365	0.1%	767%	-30%	4%	-85%
83	MJ HOLDINGS INC	MJNE	0.24	16	17	65	0.0%	442%	-17%	4%	-77%
84	NEXT GREEN WAVE HLDGS INC	NXGWF	0.09	14	15	158	0.0%	1093%	-15%	1%	-65%
85	MCIG INC	MCIG	0.02	11	13	517	0.4%	868%	-8%	1%	-86%
86	MYM NUTRACEUTICALS INC	MYMMF	0.09	13	11	152	0.0%	546%	-18%	3%	-78%
87	ROTO-GRO INTL LTD	RGI-ASX	0.09	12	10	130	0.0%	200%	-7%	4%	-60%
88	INTERNATIONAL CANNABRANDS IN	GEATF	0.01	4	10	299	0.0%	677%	-85%	11%	-73%
89	LIFESTYLE DELIVERY SYSTEMS	LDSYF	0.42	10	9	23	0.5%	634%	-57%	8%	-68%
90	FUTURE FARM TECHNOLOGIES INC	FFRMF	0.03	4	6	165	0.2%	951%	-2%	0%	-81%
91	INDIA GLOBALIZATION CAPITAL	IGCC	0.62	24	5	40	1.4%	436%	-59%	12%	120%
92	ACACIA DIVERSIFIED HLDGS INC	ACCA	0.07	3	4	42	0.0%	274%	-68%	20%	-59%
93	INTERNATIONAL ENDEAVORS CORP	IDVV	0.00	0	1	14	0.0%	1474%	-2%	0%	-81%
94	MJ VENTURE PARTNERS, INC. (NVEST INC.)	MJVP	0.04	0				3125%	-82%	3%	0%
Downstream - Distribution/Marketing/Retail/Delivery											
95	ALCANNA INC	LQSIF	3.40	126	434	37	0.1%	52%	-25%	33%	10%
96	MEDMEN ENTERPRISES INC	MMNFF	0.63	133	458	167	2.3%	510%	-43%	8%	-72%
97	ORIGIN HOUSE	ORHOF	3.52	275	285	78	0.4%	177%	-26%	13%	-26%
98	PLANET 13 HLDGS INC	PLNHF	1.66	136	221	137	0.1%	63%	-48%	43%	-9%
99	IGNITE INTERNATIONAL BRANDS, LTD.	BILZF	1.22	129	132	106	0.1%	228%	-86%	27%	597%
100	DRIVEN DELIVERIES INC	DRVD	2.26	100	100	44	0.1%	159%	-96%	38%	2226%
101	GREENLANE HOLDINGS INC	GNLN	2.88	29	85	10	5.0%	907%	-18%	2%	
102	NATIONAL ACCESS CANNABIS CORP.	NACNF	0.25	45	59	175	0.2%	214%	-91%	30%	-33%
103	SLANG WORLDWIDE INC.	SLGWF	0.27	60	53	223	0.3%	834%	-9%	1%	
104	DIONYMED BRANDS INC	HMDEF	0.02	1	31	33	0.0%	16362%	-31%	0%	-99%
105	INNER SPIRIT HLDGS LTD	INSHF	0.09	18	27	206	0.0%	171%	-15%	8%	-13%
106	GABY INC.	GABLF	0.07	13	18	176	0.0%	405%	-14%	3%	-76%
107	CHOOM HOLDINGS INC	CHOOF	0.12	24	17	70	0.3%	422%	-18%	4%	10%
108	WILDFLOWER BRANDS INC	WLDF	0.14	9	15	68	0.0%	415%	2%	0%	-66%

109	PASHA BRANDS LTD.	CRFTF	0.06	13	12	194	0.0%	970%	-84%	8%	
110	DIEGO PELLICER WORLDWIDE INC	DPWWD	0.01	1	10	322	0.2%	2283%	-40%	2%	-97%
111	SMOKE CARTEL INC	SMKC	0.07	2	5			2382%	0%	0%	-94%
112	GSRX INDUSTRIES INC	GSRX	0.03	2	4	81	0.0%	6567%	0%	0%	-98%
113	ROCKY MTN HIGH BRANDS INC	RMHB	0.02	3	3	134	1.1%	1235%	-3%	0%	-90%
114	HIGH HAMPTON HLDGS CORP	HHPHF	0.02	2	1	104	0.0%	1600%	-35%	2%	-89%
115	HIGH TIDE INC	HITI-CA	0.13	0		207	0.2%	258%	-6%	2%	-100%
Extraction, Genetics, Canna Science, etc.											
116	MEDIPHARM LABS CORP	MEDIF	2.62	343	316	131	0.2%	116%	-65%	36%	109%
117	NEPTUNE WELLNESS SOLUTION IN	NEPT	2.64	247	230	94	0.8%	149%	-8%	5%	4%
118	VALENS GROWWORKS CORP	VGWCF	2.31	269	217	116	0.4%	58%	-62%	51%	110%
119	ENWAVE CORP	NWVCF	1.16	129	115	111	0.1%	81%	-21%	21%	19%
120	PLUS PRODUCTS INC	PLPRF	1.24	54	100	53	0.1%	385%	-12%	3%	-67%
121	22ND CENTURY GROUP, INC.	XXII	1.06	133	90	126	2.0%	172%	-34%	16%	-57%
122	RADIANT TECHNOLOGIES	RDDTF	0.31	84	88	272	0.1%	200%	-13%	6%	-43%
123	DIXIE BRANDS INC.	DXBRF	0.20	25	24	126	0.2%	504%	-10%	2%	
124	WILLOW BIOSCIENCES INC.	CANSF	0.43	34	17	79	0.0%	403%	-2%	1%	-49%
125	WORLD-CLASS EXTRACTIONS	PUMP-CA	0.05	27	17	599	0.1%	267%	-16%	6%	-64%
126	CANNAPOWDER INC	CAPD	0.85	10	10	12	0.0%	373%	-40%	10%	-16%
127	CANNABIS ONE (METROPOLITAN ENERGY CORP)	CBIS-CA	0.13	7	5	50	0.2%	2533%	-15%	1%	-70%
128	HALO LABS INC	AGEEF	0.23	2	5	9	1.7%	196%	-33%	14%	0%
129	BHANG INC.	BHNGF	0.08	4	4	51	0.1%	1708%	-75%	4%	-82%
130	MICRON WASTE TECHNOLOGIES IN	MICWF	0.09	7	5	79	0.0%	365%	-29%	7%	-58%
131	AREV BRANDS INTL LTD	AREVF	0.05	3	3	57	0.0%	589%	-99%	14%	
132	NEUTRISCI INTERNATIONAL INC	NRXCF	0.02	2	2	110	0.0%	352%	-39%	10%	-65%
133	KALI INC	KALY	0.00	1	1	266	3.4%	1769%	-24%	1%	-90%
134	ESENSE-LAB LTD	ESE-ASX	0.01	1				367%	0%	0%	-61%
135	ALTERNET SYSTEMS INC	ALYI	0.01	1	1	117	5.8%	808%	-48%	6%	-1%
136	QUADRON CANNATECH CORP	QUDCF				72	0.0%				

137	CANNA-V-CELL SCIENCES INC	CNVC-CA	0.11	0		97	0.0%	127%	-30%	19%	-100%
138	CLS HOLDINGS USA INC	CLSH-CA	0.23	29		126	0.1%	60%	-31%	34%	
139	NEXTLEAF SOLUTIONS LTD	OILS-CA	0.22	21		97	0.1%	180%	-11%	6%	-49%
Input Materials - Nutrients, Hydroponic Equipment, etc.											
				103.5							
140	SCOTTS MIRACLE-GRO CO	SMG	1	5,776	7,414	56	1.0%	11%	-44%	80%	68%
141	MARRONE BIO INNOVTIONS	MBII	1.08	143	166	133	0.1%	79%	-5%	6%	-27%
142	GROWGENERATION CORP	GRWG	4.30	158	150	37	0.3%	34%	-52%	61%	91%
143	GROWLIFE INC	PHOT	0.45	12	17	26	0.9%	280%	-30%	10%	-57%
144	SURNA INC	SRNA	0.08	17	16	228	0.1%	73%	-72%	49%	1%
145	SHARC INTL SYS INC	INTWF	0.06	2	6	39	0.0%	374%	-73%	16%	-74%
146	AFFINOR GROWERS INC	RSSFF	0.02	2	2	100	0.0%	244%	-42%	15%	-48%
Medical Cannabis											
				133,05	161,15	1,47					
147	ABBVIE INC	ABBV	89.97	0	6	9	0.5%	3%	-30%	90%	-2%
						1,50					
148	FSD PHARMA INC	FSDDF	5.93	47	8,931	6	0.0%	1057%	-42%	4%	-100%
				106.0							
149	GW PHARMACEUTICALS PLC	GWPH	7	3,258	2,729	31	2.3%	85%	-15%	15%	9%
150	TILRAY INC	TLRY	17.88	1,499	2,111	101	1.8%	493%	1%	0%	-75%
151	GREEN THUMB INDUSTRIES INC	GTBIF	7.98	1,027	1,708	207	0.1%	109%	-8%	7%	-38%
152	ARENA PHARMACEUTICALS INC	ARNA	46.39	2,324	1,603	50	0.6%	39%	-24%	39%	19%
153	APHRIA INC	APHA	5.15	1,296	1,324	252	1.8%	113%	-27%	19%	-9%
154	TRULIEVE CANNABIS CORP	TCNNF	10.30	369	1,232	110	0.2%	58%	-35%	38%	27%
155	HARVEST HEALTH & RECREATION	HRVSF	2.20	216	776	287	0.1%	393%	-7%	2%	-86%
156	CARA THERAPEUTICS INC	CARA	16.98	792	604	47	1.7%	62%	-28%	31%	31%
157	COLUMBIA CARE INC.	COLXF	2.30	496	456	216	0.0%	214%	-30%	12%	
158	ORGANIGRAM HOLDINGS INC	OGI	2.52	393	395	156	1.4%	236%	-20%	8%	-30%
159	CORBUS PHARMACEUTICALS HLDGS	CRBP	5.12	331	284	65	1.0%	78%	-18%	19%	-12%
160	LIBERTY HEALTH SCIENCES INC	LHSIF	0.44	154	157	342	0.2%	111%	-42%	28%	-34%
161	ITEM 9 LABS CORP	INLB	1.01	64	151	147	0.0%	603%	-14%	2%	-92%
162	PHARMACIELO LTD	PHCEF	2.20	140	140	64	0.1%	353%	-14%	4%	
163	CANSORTIUM INC	CNTMF	0.43	38	133	195	0.0%	488%	-20%	4%	

164	ALEAFIA HEALTH INC	ALEAF	0.48	129	125	272	0.1%	369%	-4%	1%	-55%
165	TPI/PALLA PHARMA LTD	TPE-ASX	0.72	91	111	126	0.0%	38%	-24%	39%	-5%
166	CANNTRUST HLDGS INC	CTST	0.86	122	101	141	0.8%	1079%	-13%	1%	-82%
167	CURE PHARMACEUTICAL HLDG COR	CURR	2.70	102	97	38	0.2%	116%	-56%	33%	80%
168	MEDICAL MARIJUANA INC	MJNA	0.02	84	90	3,654	0.2%	355%	-13%	4%	-69%
169	22ND CENTURY GROUP INC	XXII	1.06	133	90	126	2.0%	172%	-34%	16%	-57%
170	ONE WORLD PHARMA, INC.	OWPC	1.90	85	85	45	0.0%	163%	-59%	27%	62%
171	WEEDMD INC	WDDMF	0.65	63	84	96	0.1%	156%	2%	-1%	-32%
172	TETRA BIO-PHARMA INC	TBPMF	0.38	81	77	211	0.0%	135%	-64%	32%	-38%
173	PHARMAGREEN BIOTECH INC.	PHBI	1.01	75	75	75	0.3%	247%	-40%	14%	-41%
174	CARDIOL THERAPEUTICS INC.	CRTPF	3.01	78	70	26	0.0%	232%	-46%	17%	
175	VIREO HEALTH INTERNATIONAL	VREO-CA	0.91	22	69	85	0.2%	465%	-92%	16%	688%
176	ZYNERBA PHARMACEUTICALS INC	ZYNE	6.19	144	66	23	7.5%	166%	-56%	25%	108%
177	GENEREX BIOTECHNOLOGY CORPORATION	GNBT	0.66	31	60	48	0.6%	397%	-11%	3%	-35%
178	PHARMACYTE BIOTECH, INC.	PMCB	0.05	60	59	1,328	0.4%	53%	-29%	36%	22%
179	BOTANIX PHARMA LTD	BOT-ASX	0.06	61	58	973	0.2%	220%	-25%	10%	28%
180	MEDLAB CLINICAL LTD	MDBBF	0.29	62	55	215	0.0%	18%	-13%	43%	-6%
181	EMERALD HEALTH THERAPEUTICS	EMHTF	0.23	35	54	156	0.5%	1451%	-11%	1%	-89%
182	BENCHMARK BOTANICS INC	BHHKF	0.32	55	43	143	0.0%	50%	100%	67%	120%
183	KHIRON LIFE SCIENCES CORP	KHRNF	0.68	73	40	108	0.1%	385%	-13%	3%	-40%
184	OPIANT PHARMACEUTICALS, INC.	OPNT	14.90	61	39	4	0.3%	22%	-33%	60%	3%
185	MGC PHARMACEUTICALS LTD	MGCLF	0.03	38	36	1,367	0.0%	81%	-96%	54%	9%
186	THC GLOBAL GROUP LTD	HDRPF	0.26	36	32	137	0.0%	54%	-4%	7%	-24%
187	EMERALD BIOSCIENCE INC	NMUS	0.21	29	31	134	0.1%	445%	-7%	1%	-46%
188	AXIM BIOTECHNOLOGIES INC	AXIM	0.39	25	30	63	0.1%	541%	-9%	2%	-48%
189	AVICANNA INC.	AVCIF	1.34	30	30			163%	-67%	29%	
190	LEXARIA BIOSCIENCE CORP	LXRP	0.37	29	28	79	0.1%	353%	-5%	1%	-60%
191	ZELDA THERAPEUTICS LTD	ZLDAF	0.04	28	26	759	0.0%	116%	-42%	26%	4%

192	GOLDEN LEAF HOLDINGS LTD	GLDFF	0.02	17	23	870	0.1%	726%	-32%	4%	-82%
193	RHINOMED LTD	RHNMF	0.13	22	21	169	0.0%	358%	-65%	15%	3%
194	INMED PHARMACEUTICALS INC	IMLFF	0.18	31	20	172	0.1%	253%	-7%	3%	-30%
195	THC BIOMED INTL LTD	THCBF	0.11	16	19	146	0.0%	405%	-23%	5%	-54%
196	BOD AUSTRALIA LTD	BDA-ASX	0.23	21	19	91	0.0%	122%	-31%	20%	-18%
197	PREMIER HEALTH GROUP INC	PHGRF	0.21	17	17	63	0.0%	270%	-16%	6%	-60%
198	PIVOT PHARMACEUTICALS INC	PVOTF	0.12	20	15	171	0.0%	358%	-86%	19%	-45%
199	CRESO PHARMA	CPH-ASX	0.08	14	15	174	0.3%	429%	-2%	0%	-77%
200	CANNABICS PHARMACEUTICALS	CNBX	0.12	15	12	134	0.1%	335%	-12%	4%	-60%
201	AUSCANN GROUP HLDGS LTD	ACNNF	0.12	37	12	317	0.0%	383%	-7%	2%	-70%
202	CANNTAB THERAPEUTICS LTD	TLFTF	0.34	9	9	25	0.0%	342%	-27%	7%	-52%
203	PREVECEUTICAL MED INC	PRVCF	0.01	3	7	396	0.0%	2400%	-94%	4%	-76%
204	TREE OF KNOWLEDGE INTL CORP	TRKWF	0.03	6	7	220	0.0%	1076%	-25%	2%	-84%
205	CANADA HOUSE WELLNSS GRP INC	SARSF	0.02	5	7	194	0.0%	489%	-75%	13%	-81%
206	CANN GROUP LTD	CNGGF	0.27	39	6	142	0.0%	592%	-3%	1%	-82%
207	THERAPIX BIOSCIENCES LTD	TRPX	1.10	6	6	6	1.0%	370%	5%	-1%	-66%
208	RELEVIM TECHNOLOGIES INC	RLLVF	0.02	3	5	131	0.0%	267%	-31%	10%	-69%
209	NANOSPHERE HLTH SCIENCES INC	NSHSF	0.04	5	5	108	0.1%	785%	-42%	5%	-73%
210	CANNPAL ANIMAL THE	CP1-ASX	0.08	7	5	93	0.0%	80%	-4%	5%	-21%
211	AURA HEALTH INC	LMLLF	0.02	1	3	83	0.0%	1481%	0%	0%	-91%
212	INTEC PHARMA LTD	NTEC	0.48	17	3	35	1.4%	1827%	-15%	1%	-94%
213	WAYLAND GROUP CORP	MRRCF	0.01	1	3	73	0.8%	11582%	-99%	1%	-98%
214	VODIS PHARMACEUTICALS INC	VDQSF	0.03	2	3	60	0.0%	296%	0%	0%	-47%
215	WIZE PHARMA LTD	WIZP	0.24	3	3	11	0.5%	408%	-58%	13%	-72%
216	VERITAS PHARMA INC	VRTHF	0.15	2	2	12	0.0%	581%	-46%	7%	-80%
217	ALLIANCE GROWERS CORP	ALGWF	0.01	1	1	86	0.0%	3050%	-7%	0%	-82%
218	ABATTIS BIOCEUTICALS CORP	ATTBF	0.00	2	(1)	353	0.1%	1900%	-44%	2%	-92%
219	XPHYTO THERAPEUTICS CORP.	XPHYF	0.72	34				5%	-93%	95%	

220	INSYS THERAPEUTICS INC	INSY	0.05	4	(66)	75	0.1%	13707	%	-38%	0%	-99%
221	BLUEBERRIES MEDICAL CORP	BBM-CA	0.07	8		108	0.4%	812%	-90%	10%	886%	
222	CANNARA BIOTECH, INC.	LOVE-CA	0.10	0				163%	-27%	14%		
223	ORION NUTRACEUTICALS INC	ORI-CA	0.04	0		49	0.1%	794%	-70%	8%	-100%	
224	CANN GLOBAL LIMITED	ASX-CGB										
Real Estate & Investors												
225	COMPASS DIVERSIFIED HOLDINGS	CODI	24.35	1,459	2,190	60	0.4%	4%	-52%	92%	96%	
226	FRANKLIN STREET PROPERTIES CORP.	FSP	8.46	907	1,853	107	0.3%	6%	-31%	83%	36%	
227	INNOVATIVE INDUSTRIAL PPTYS	IIPR	73.21	868	708	12	3.4%	91%	-42%	32%	61%	
228	CANOPY RIVS INC	CNPOF	0.92	143	114	191	0.1%	418%	-15%	4%	-67%	
229	FIRE & FLOWER HOLDINGS CORP.	FFLWF	0.68	90	90	133	0.1%	121%	-17%	12%		
230	C21 INVTS INC	CXXI-CA	0.51	42	80	82	0.2%	270%	-33%	11%	-11%	
231	CANNEX CAPITAL HOLDINGS INC	CNXXF	0.40	49	53	125	0.1%	470%	-30%	6%	-42%	
232	CANNAPHARMARX, INC.	CPMD	1.65	60	69	36	0.0%	81%	-33%	29%	-3%	
233	FIRST COLOMBIA DEVELOPMENT CORP. / REDWOOD GREEN CORP.	FCOL	0.65	69	65	105	0.0%	54%	-98%	65%	6400%	
234	ICC INTERNATIONAL CANNABIS CORP.	WLDCF	0.02	16	37	706	0.1%	2310%	-22%	1%	-91%	
235	AUSTRALIS CAPITAL INC	AUSCF	0.34	58	40	170	0.0%	224%	-27%	11%	-37%	
236	SMART CANNABIS CORP.	SCNA	0.00	23	24	4,880	0.0%	879%	-27%	3%	-78%	
237	LEVIATHAN CANNABIS GP INC	LVCNF	0.30	25	29	95	0.0%	587%	100%	15%	#####	#
238	CANNABIS STRATEGIC VENTURES	NUGS	0.05	9	27	188	0.1%	5260%	-14%	0%	-97%	
239	GENERAL CANNABIS CORP.	CANN	0.63	25	26	39	0.5%	338%	-20%	6%	-58%	
240	MJ HARVEST INC	MJHI	1.45	28	28			383%	-55%	13%		
241	TIDAL ROYALTY CORP.	TDRYF	0.05	15	14	293	0.1%	720%	-79%	10%	-84%	
242	INVICTUS MD STRATEGIES CORP	IVITF	0.10	13	21	125	0.1%	849%	-25%	3%	-82%	
243	LGC CAPITAL LTD	LGGCF	0.03	19	22	561	0.0%	502%	100%	17%	-73%	
244	JUSHI HOLDINGS INC.	JUSHF	1.35	124	18	14	0.3%	86%	-89%	51%	5986%	
245	NABIS HOLDINGS INC.	INNPF	0.04	5	9	110	0.1%	1767%	1%	0%		
246	TARGET GROUP INC	CBDY	0.02	12	11	569	0.0%	643%	-35%	5%	-80%	
247	CORDOVACANN CORP	LVRLF	0.22	9	11	41	0.0%	309%	-43%	12%	-70%	

248	VENTURA CANNABIS & WELLNESS	CVHIF	0.19	6	9	35	0.1%	291%	-22%	7%	-19%
249	FINCANNA CAPITAL CORP	FNNZF	0.06	6	5	99	0.0%	136%	-17%	11%	-20%
250	SOL GLOBAL INVESTMENTS CORP	SOLCF	0.33	16	51	23	0.3%	834%	-14%	2%	-59%
251	HEMP NATURALS, INC.	HPMM	0.04	12	12	329	0.0%	9701%	-46%	0%	-96%
252	JETBLACK CORP.	JTBK	0.05	3	3	67	0.1%	1804%	-38%	2%	-66%
253	CROP INFRASTRUCTURE CORP	CRXPF	0.01	2	5	171	0.1%	3083%	-79%	2%	-96%
254	CANADABIS CAPITAL INC	CANB-CA	0.13	6	7	43	0.0%	291%	-32%	10%	-67%
255	REDFUND CAP CORP	PNNRF	0.06	3	3	47	0.0%	1298%	-84%	6%	-79%
256	VENCANNA (TOP STRIKE RES CORP)	TPPRF	0.01	2	(1)	170	0.0%	911%	0%	0%	-90%
257	ASCENT INDUSTRIES CORP.	PGTMF	0.03	0	0	2	0.0%	478%	100%	17%	-77%
258	LIBERTY LEAF HOLDINGS LTD	LIBFF	0.05	7	1	31	0.1%	248%	-55%	18%	215%
259	BELGRAVIA CAPITAL INTL INC	BLGVF	0.01	3	(4)	402	0.0%	310%	-74%	19%	-54%
260	QUINSAM CAPITAL CORP	QCAAF	0.07	8	(21)	113	0.0%	291%	100%	26%	-61%
261	CANNABIS GROWTH OPRUNITY	CWWBF	0.52	8	(27)	16	0.0%	284%	100%	26%	-26%
262	CAPTOR CAP CORP	CPTRF	0.22	8	(20)	39	0.0%	1053%	-93%	8%	-76%
263	MMJ GROUP HLDGS LTD	MMJJF	0.11	24	(43)	224	0.0%	110%	-43%	28%	-32%
264	BOUGAINVILLE VENTURES INC	BOG-CA	0.01	1		59	0.0%	946%	-1%	0%	-55%
265	YIELD GROWTH CORP	BOSS-CA	0.16	0				350%	-23%	6%	-100%
Technology, Ancillary Products and Services											
266	KUSHCO HOLDINGS INC	KSHB	1.59	170	197	107	0.4%	354%	-21%	5%	-70%
267	TILT HOLDINGS INC	SVVTF	0.28	69	177	305	0.1%	982%	-39%	4%	-90%
268	MEDICINE MAN TECHNOLOGIES IN	MDCL	2.95	118	103	40	0.3%	41%	-64%	61%	134%
269	AKERNA CORP.	KERN	11.10	122	99	11	1.7%	555%	-72%	11%	10%
270	NEXTECH AR SOLUTIONS CORP	NEXCF	1.36	58	57	43	0.3%	75%	-75%	50%	89%
271	HELIX TCS INC	HLIX	0.54	50	54	93	0.1%	511%	-24%	4%	-40%
272	CANNABIX TECHNOLOGIES INC	BLOZF	0.29	30	23	105	0.2%	445%	0%	0%	-71%
273	NAMASTE TECHNOLOGIES INC	NXTTF	0.21	64	23	300	0.1%	494%	3%	-1%	-63%
274	VEXT SCIENCE INC.	VEXTF	0.63	12	12			171%	-64%	27%	
275	LEAFBUYER TECHNOLOGIES INC	LBUY	0.14	11	10	79	0.2%	1154%	-41%	3%	-69%

276	NUGL INC	NUGL	0.17	8	8	46	0.1%	1353%	-45%	3%	-91%
277	CANNVAS MEDTECH INC	CANVF	0.02	9	8	358	0.0%	4067%	-95%	2%	-54%
278	YPB GROUP LTD	YPB-ASX	0.00	5	6	1,694	1.7%	424%	-2%	0%	-77%
279	LIFT & CO CORP	LFCOF	0.07	3	3	41	0.0%	730%	-26%	3%	
280	GLOBAL CANNABIS APPLICATIONS	FUAPF	0.02	2	2	101	0.1%	390%	-38%	9%	-66%
281	ADVANTIS CORP	ADVT	0.00	1	2	978	0.0%	3991%	-91%	2%	-96%
282	BRAINGRID CORP.	BGRD-CA	0.00	0	0	1	0.0%	4819%	-1%	0%	54%
283	GLOBAL HEALTH CLINICS LTD	LRSNF	0.01	0	(0)	49	0.0%	6709%	-61%	1%	-93%
284	CB2 INSIGHTS INC	CBII-CA	0.07	6		80	0.5%	416%	-42%	9%	
Testing											
285	PSYCHEMEDICS CORP	PMD	8.59	47	46	6	0.1%	129%	-17%	12%	-46%
286	EVIO INC	EVIO	0.05	1	15	29	9.0%	1711%	7%	0%	-87%
287	FLUROTECH	FLURF	0.16	7	5	46	0.0%	218%	-94%	30%	1460%
US - Cultivation, Processing (and Dispensing) - MSO & SSO											
288	CURALEAF HOLDINGS INC	CURLF	5.40	1,973	2,671	476	0.1%	117%	-26%	18%	-13%
289	CRESCO LABS INC	CRLBF	6.00	404	856	122	0.4%	140%	-26%	15%	-51%
290	ACREAGE HOLDINGS INC	ACRGF	6.41	436	546	69	0.8%	368%	-40%	10%	-66%
291	VILLAGE FARMS INTL INC	VFFIF	5.99	314	348	52	0.8%	202%	-51%	20%	85%
292	IANTHUS CAPITAL HOLDINGS INC	ITHUF	1.31	225	328	172	0.3%	366%	-19%	5%	-68%
293	AYR STRATEGIES INC.	AYRSF	8.65	128	208	20	0.0%	128%	-13%	9%	-18%
294	FLOWER ONE HOLDINGS INC	FLOOF	0.71	126	191	177	0.2%	295%	-30%	9%	-33%
295	MARIMED INC	MRMD	0.52	113	154	219	0.3%	935%	-1%	0%	-84%
296	4FRONT VENTURES CORP.	CNXXF	0.40	49	53	125	0.1%	470%	-30%	6%	-42%
297	SUNNIVA INC	SNNVF	0.21	8	51	38	0.3%	1947%	-40%	2%	-91%
298	TERRA TECH CORP	TRTC	0.18	20	51	115	0.6%	968%	-15%	2%	-69%
299	CITATION GROWTH CORP	MRPHF	0.14	16	22	62	0.1%	656%	-10%	2%	-42%
300	GABRIELLAS KITCHEN INC	GABLF	0.07	13	18	176	0.0%	405%	-14%	3%	-76%
301	CHEMESIS INTERNATIONAL INC	CADMF	0.06	7	16	93	0.5%	2767%	-17%	1%	-90%
302	KAYA HOLDINGS INC	KAYS	0.06	10	15	188	0.4%	133%	-10%	7%	-53%

303 [KOIOS BEVERAGE CORP](#)

KBEVF	0.11	9	6	77	0.1%	540%	-8%	1%	-48%
--------------	------	---	---	----	------	------	-----	----	------

304 [BODY AND MIND INC](#)

BMMJ	0.48	49	0	19	0.3%	461%	-26%	5%	528%
-------------	------	----	---	----	------	------	------	----	------

Important Disclosures

Analyst Certification

I, Peter Wright, certify that the views expressed in the research report accurately reflect my personal views about the subject securities or issues. I also do not receive direct or indirect compensation based on my recommendations or views.

This report has been issued by Intro-Blue, LLC, in consideration of a fee payable. Fees are paid upfront in cash without recourse. Intro-Blue, LLC may seek additional fees for the assistance with investor targeting, access, and further investor preparation services, but does not get remunerated for any investment banking services. We never take payment in stock, options, or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the Intro-Blue analyst at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Intro-Blue, LLC shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out of or in connection with the access to, use of or reliance on any information contained in this note.

No personalized advice: The information that we provide should not be construed in any manner whatsoever as personalized advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Intro-Blue's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Intro-Blue has a restrictive policy relating to personal dealing and conflicts of interest. Intro-Blue, LLC does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees, and contractors of Intro-Blue may have a position in any or related securities mentioned in this report, subject to Intro-Blue's policies on personal dealing and conflicts of interest.

Copyright: Copyright 2019 Intro-Blue, LLC (Intro-Blue).

Intro-Blue is not registered as an investment adviser with the Securities and Exchange Commission. Intro-Blue relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a) (11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Intro-Blue does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell, or hold that or any security, or that any particular security, portfolio of securities, transaction, or investment strategy is suitable for any specific person.