



2023 CCX Bulk Wholesale Cannabis Pricing Report

The Canadian Cannabis Exchange

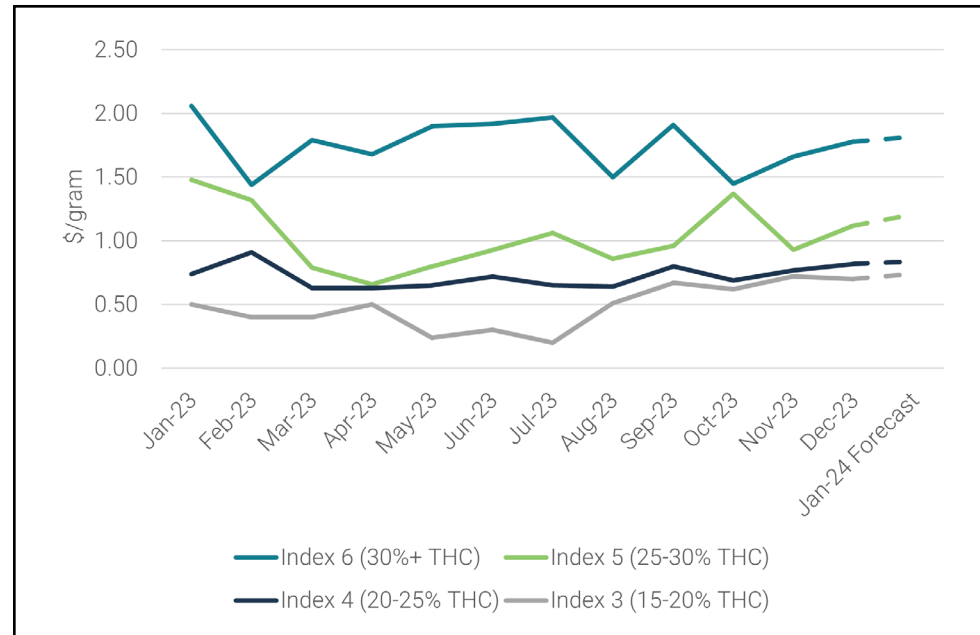
2023 CCX Bulk Wholesale Cannabis Pricing Report

Dry Flower Analysis by Index | Trim | Extracts

Table of Contents

2023 Infographics	3
2023 Canadian Wholesale Cannabis Market Review.....	4
2023 Dry Flower Analysis by Index	5
2023 Trim Market Overview	7
2023 Extracts Market Overview	7
2024 Outlook Canada	9
Featured Listings	10
2023 Cultivar Overview	11
Cannabis Regulatory: Looking Back - Looking Forward.....	13
Featured Article Aelius: The Art of Spectrum Selection.....	14
Equipment Listings	15
2023 Pricing Tables	18

2023 Flower Weighted Average Settled Price, by Index (\$/gram)



Source: Canadian Cannabis Exchange

Executive Summary

Over 2023 Canadian bulk wholesale cannabis pricing remained low but gained momentum towards the end of the year, a trend that is expected to continue into 2024. Entering 2023, flower prices rose significantly in January and February (\$1.25/gram and \$1.11/gram respectively) before dropping to the \$0.80/gram-\$0.99/gram range over April-August. As forecasted the market started to experience a tightening of supply in the latter part of the year and prices responded by strengthening, particularly in Index 5 (25-35% THC) which settled at \$1.12/gram in December. As many cultivators struggled to find profitability due to rising input costs, lowering retail prices, and regulatory challenges many reduced their growing volume or facility shutdowns/ went bankrupt.

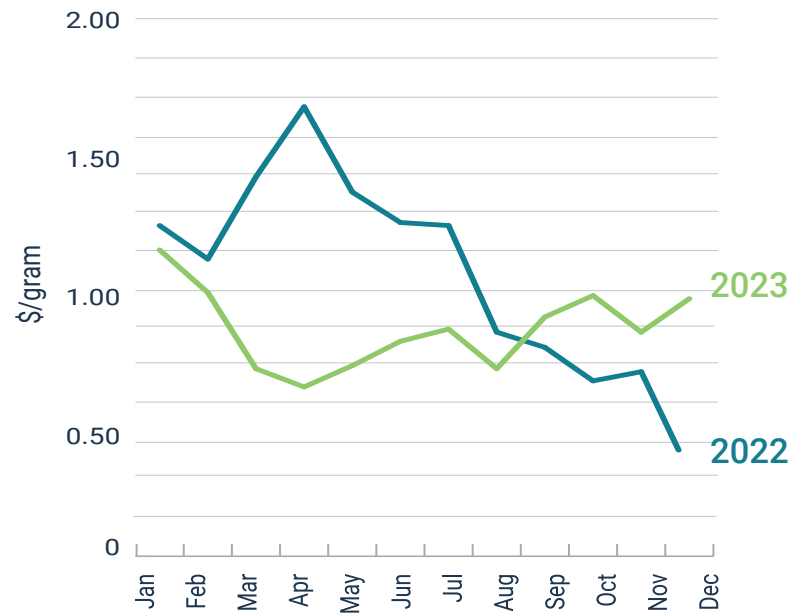
2024 domestic supply is expected to tighten as existing challenges persist, as well as increasing volume moves into international medical markets. The largest driver of prices rising throughout 2024 will be a continued reduction of growing space across Canada driving a supply tightening. If indoor grow space reduction continues to decrease at current rates, average flower pricing should increase to \$1.80/gram by the end of 2024.

Although CCX has forecast wholesale prices to increase in 2024 and consolidation is likely in the long term, in the near term the market is expected to remain highly fractured and competitive. In such a market, nimble LPs that focus on core competencies, operational efficiencies, improving yields, and diversifying sales into new global markets are growing market share and finding margin.

2023 Canadian Average Wholesale Flower Price



Dried Flower Weighted Avg. Price (\$/gram), by Month 2023



Top Cultivars in 2023



By Volume Traded:
Mandarin Cookies

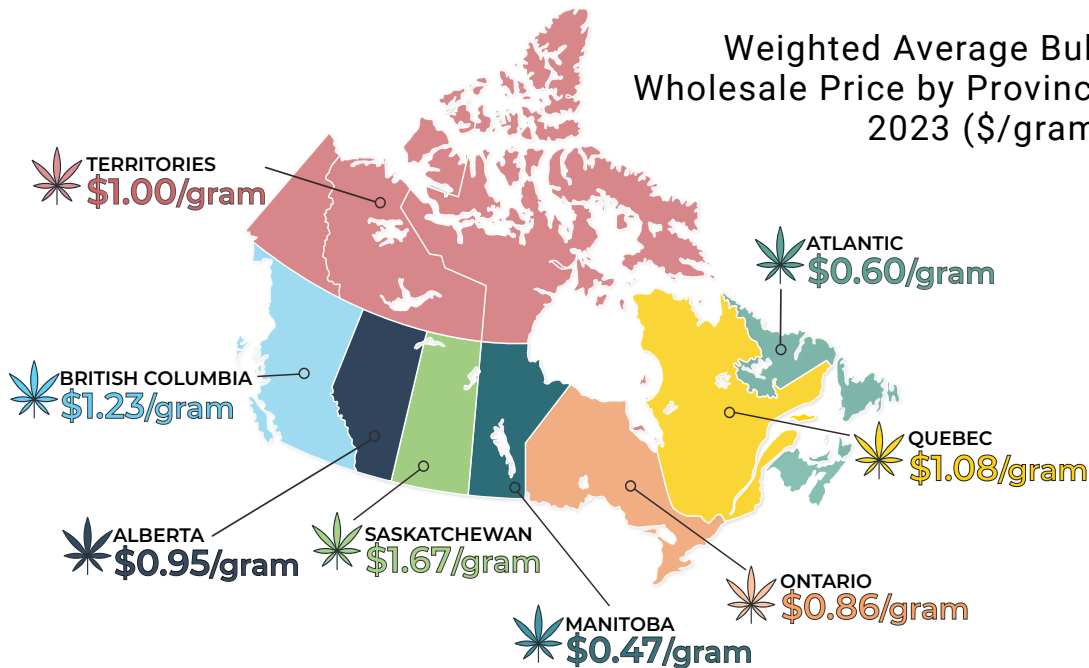


By Settled Price:
Gas Face - \$3.15/gram

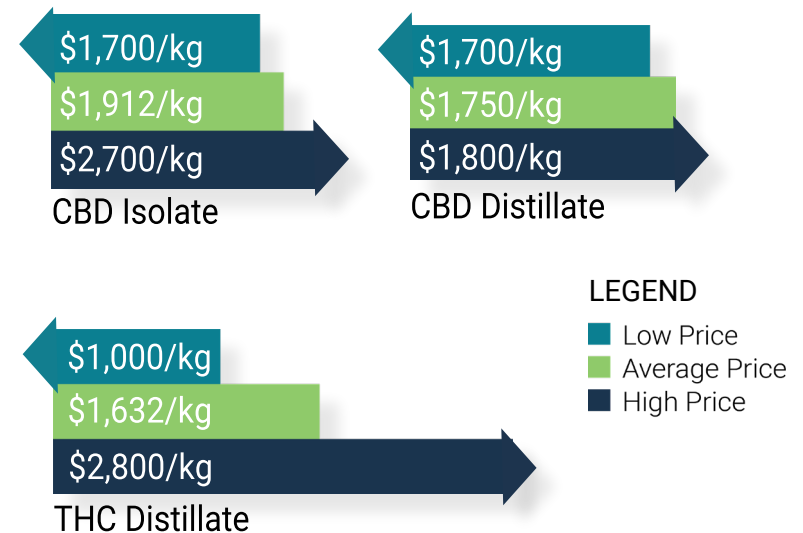


By Potency:
Space Guavaz - 33.66% THC

Weighted Average Bulk Wholesale Price by Province 2023 (\$/gram)



Canadian Extracts & Concentrates 2023 Pricing



2023 Canadian Wholesale Cannabis Market Review

Over 2023 the Canadian cannabis market struggled due to rising input costs, lowering retail prices, and regulatory challenges that drove facility shutdowns and bankruptcies. Despite market challenges, several LPs have continued to experience market growth and fight through by focusing on operational efficiencies, improving yields, and diversifying sales into new global markets.

Table 1: Average Settled Price by Index in 2023

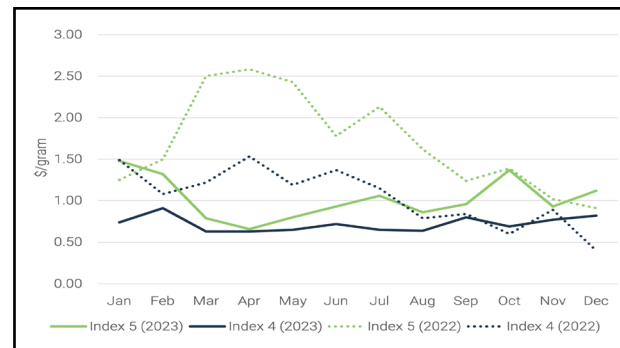
Flower \$/gram	2022 Wtd Avg. Price	2023 Wtd Avg. Price	2024 Forecast
Index 6 (30%+)	1.99	1.73	2.15
Index 5 (25-30%)	1.56	0.98	1.65
Index 4 (20-25%)	1.00	0.71	1.05
Index 3 (15-20%)	0.29	0.45	0.80
Average: Index 3-6	1.32	0.96	1.46
Trim /gram	2022 Wtd Avg. Price	2023 Wtd Avg. Price	2024 Forecast
Index 3 (15-20%)	0.11	0.08	0.09
Index 2 (10-15%)	0.10	0.06	0.07
Index 1 (0-10%)	0.09	0.04	0.05
Average: Index 1-3	0.10	0.06	0.07
Extracts \$/kg	2022 Wtd Avg. Price	2023 Wtd Avg. Price	2024 Forecast
THC Distillate	1,810	1,631	1,900
CBD Isolate	3,120	1,912	1,900

Source: Canadian Cannabis Exchange

Entering 2023, flower prices rose significantly in January and February (\$1.25/gram and \$1.11/gram respectively) before dropping to the \$0.80/gram-\$0.99/gram range over April - August. As forecasted the market started to experience a tightening of supply in the latter part of the year and prices responded by strengthening,

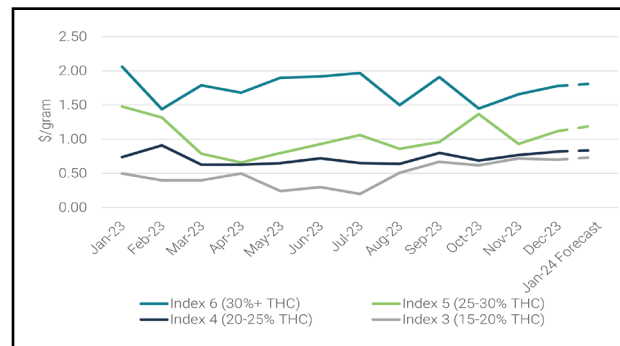
particularly in Index 5 (25-35% THC) which settled at \$1.12/gram in December.

Chart 1: Dried Flower Index Prices (\$/gram), 2022 vs. 2023



Source: Canadian Cannabis Exchange

Chart 2: Flower Settled Price (\$/gram)

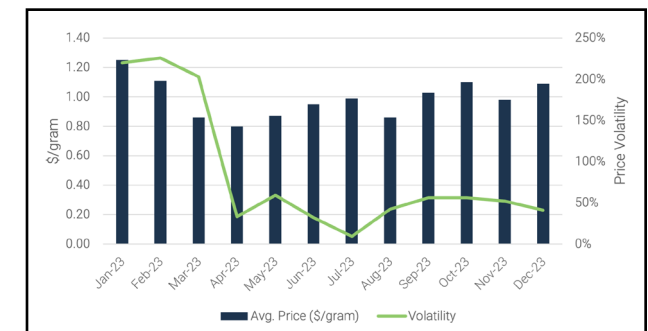


Source: Canadian Cannabis Exchange

Appreciating market prices over the second half of 2023 marked a stark difference compared to 2022. Over November and December 2022 the average price for flower fell to \$0.85/gram and \$0.55/gram respectively. The price compression was largely driven by the liquidation of vaults, which was not replicated in 2023.

Pricing volatility leveled off in 2023 after a strong pricing start in January which drove pricing volatility over 200% (Chart 3). By contrast, over the remaining three quarters, average pricing leveled off, with an average price volatility of 42%. A sustained reduction in volatility has improved the reliability of CCX price forecasting and empowers LPs to make better-informed decisions about their purchasing and sales needs.

Chart 3: Flower Settled Price (\$/gram) vs. Price Volatility, by Month



Source: Canadian Cannabis Exchange

The age of flower has continued to play a significant role in market pricing in 2023. Throughout the year, recently harvested flower (within 4 months) captured a significant premium of 61% or \$0.44/gram.

Table 2 provides more insight into the sliding price scale based on age of flower. In 2023, flower sold within 2 months of harvest captured an average premium of 52% or \$0.52/gram as compared to flower which sold within 2 to 4 months of harvest. Average pricing continued to decline with age over 4 months, but the degree of discounting was more muted.

Table 2: 2023 Flower Weighted Avg. Price (\$/gram) by Age of Product, Dried Flower Index 4-6

Dried Flower Index	Harvest Age				
	0 - 2 months	2 - 4 months	4 - 6 months	6 - 12 months	12+ months
Index 6 (30%+)	\$2.12	\$1.54	\$1.35	\$1.25	\$1.09
Index 5 (25-30%)	\$1.52	\$1.01	\$0.89	\$0.76	\$0.51
Index 4 (20-25%)	\$0.94	\$0.78	\$0.69	\$0.75	\$0.42
Average: Index 4-6	\$1.52	\$1.00	\$0.87	\$0.78	\$0.49

Source: Canadian Cannabis Exchange

Trim method also played an important role in flower market pricing in 2023, although its impact was not uniform across all products, as illustrated in Table 3. The first significant difference is that the premium for hand-trimming (or hand-finishing) over machine trimming was much more pronounced in recently harvested flower.

The premium for hand vs. machine trimmed was \$0.75/gram for flower under 4 months in age. The premium shrunk to \$0.22/gram for flower over 4 months since harvest.

Premiums were paid for hand-trimming or hand-finishing in aged flower as well, but only for Index 5 and Index 6 product. Presumably, these pricing differences relate to the intended use cases for the product – “jar grade” flower tends to be nicely manicured, higher potency (25%+ THC), and recently harvested, whereas aged flower often finds its way into pre-rolls, large format value bags, milled SKUs, and may even be

used for extraction.

Table 3: 2023 Flower Weighted Avg. Price (\$/gram) by Age of Product and Trim Method, Dried Flower Index 4-6

Dried Flower Index	Harvest Age					
	Over 4 months			Under 4 months		
	Hand Trim	Machine w/ Hand Finish	Machine Trim	Hand Trim	Machine w/ Hand Finish	Machine Trim
Index 6 (30%+)	\$1.42	\$1.04	\$0.46	\$2.07	\$1.47	\$0.85
Index 5 (25-30%)	\$0.88	\$0.80	\$0.59	\$1.50	\$0.92	\$0.92
Index 4 (20-25%)	\$0.56	\$0.67	\$0.57	\$0.91	\$0.88	\$0.63
Average: Index 4-6	\$0.80	\$0.79	\$0.58	\$1.54	\$0.98	\$0.79

Source: Canadian Cannabis Exchange

2023 Dry Flower Analysis by Index

Index 6 (30%+ THC) settled at \$1.78/gram in December, 7% higher than November’s \$1.66/gram, but still 11% below the \$1.99/gram average from 2022. Index 6 was among the most stable flower indices in 2023, settling monthly between \$1.44/gram and \$2.06/gram.

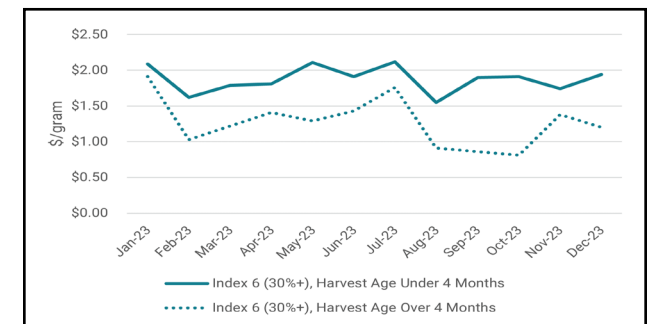
Index 6 was introduced for the second half of 2022 and traded on a minimal basis, with just a handful of transactions settled each month, but the average monthly volume transacted in Index 6 rose by 164% in 2023. Such an increase may be attributed to more cultivators dialing in their operations to maximize THC concentration however lab testing bias may also be playing a role.

Throughout 2023, average pricing for Index 6 varied relative to the proportion of aged flower (4+ months post-harvest) transacted each month as shown in Chart

4. On average, Index 6 flower under 4 months since harvest traded \$0.70/gram higher than flower older than 4 months. The spread increased to 85% in Q4-23 as several significantly older lots traded dragging down the average price.

CCX forecasts that the overall average price for Index 6 will continue to gradually rise in 2024, with average pricing eclipsing \$2.15/gram by mid-year and hitting \$2.40/gram by year-end. Scarcity of supply will continue to play a role in driving prices higher, as 30%+ THC remains an exceptional threshold for dried flower.

Following the OCS announcement that it would begin spot-testing “high THC” flower lots in January 2024, expect more buy-side competition for Index 6 flower, with an enhanced focus on the testing labs providing the COAs.

Chart 4: Weighted Avg. Price (\$/gram) by Age of Product, Dried Flower Index 6

Source: Canadian Cannabis Exchange

Index 5 (25-30% THC) achieved a weighted average price of \$1.12/gram in December, rising 20% from November's \$0.93/gram average.

Following strong performances in January (\$1.48/gram) and February (\$1.32/gram), Index 5 was much weaker through mid-year, settling between \$0.66/gram and \$0.93/gram driven partially by an influx of aged product (4+ months post-harvest). The price spread between recently harvested product and aged product widen to 90.6% in Q2.

Index 5 monthly prices strengthened through H2 in 2023 and is forecasted to continue in 2024, pushing \$1.45/gram by mid-year, and \$1.70/gram by year-end.

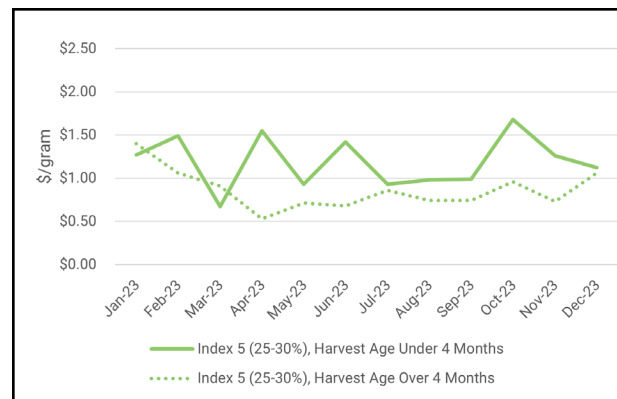
The declining price reversed course in Q3 and Q4, averaging \$0.95/gram and \$1.15/gram respectively. Buy-side competition increased as recently harvested and high-quality indoor lots suitable for buyers' existing SKUs became scarce. Concurrent with the price rebound, the spread between recently harvested and aged product narrowed to 26.0% in Q3 and 7.4% in Q4, as available volumes of aged flower grew smaller.

Bracing for year-end inventory liquidations experienced in 2022, CCX had tempered its price forecast for Q4-23, expecting Index

5 to remain around the \$0.95/gram level through year-end. However such "fire sales" did not recur in Q4 and Index 5 continued to build on its price momentum, trading at an average of \$1.15/gram in Q4, 21% higher than the Q3 average.

Heading into 2024, CCX forecasts that Index 5 will continue its ascent as supply continues to tighten, pushing \$1.45/gram by mid-year, and \$1.70/gram by year-end.

Chart 5: Weighted Avg. Price (\$/gram) by Age of Product, Dried Flower Index 5



Source: Canadian Cannabis Exchange

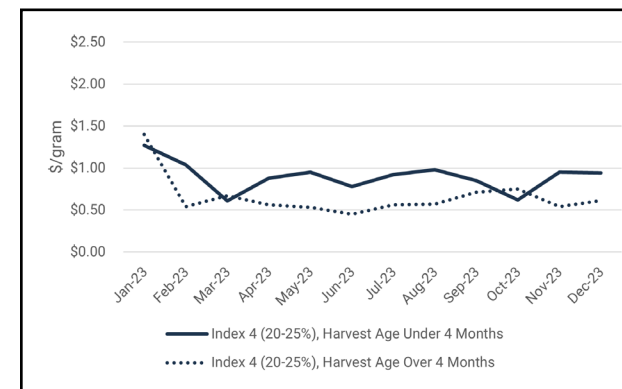
Index 4 (20-25% THC) settled at \$0.82/gram in December, an increase of 7% from November's \$0.77/gram, and in alignment with CCX's Q4 forecast. Index 4 was quite stable throughout 2023 relative to the other dried flower indices, settling between \$0.63/gram and \$0.82/gram eleven out of twelve months. As Index 4 comprises approximately one-third of all flower trading volume, this has had a stabilizing effect on the average market price.

Recently-harvested Index 4 product fetched a \$0.20/gram premium over aged product in 2023, considerably less than the premiums realized in Indices 5 and 6, which were \$0.30/gram and \$0.53/gram, respectively. Many jar-grade SKUs require 25%+ THC, reducing competition for Index 4 flower, so the freshest lots do not necessarily command top-dollar.

Index 4 pricing was very stable in 2023 relative to the other dried flower indices, settling between \$0.63/gram and \$0.82/gram. Forecasted to rise above \$1.15/gram in 2024.

Through 2024 CCX expects that Index 4 will realize modest, stable monthly gains, and is forecasting the average price to hit \$0.95/gram by the end of Q2, and \$1.15/gram by the end of the year.

Chart 6: Weighted Avg. Price (\$/gram) by Age of Product, Dried Flower Index 4



Source: Canadian Cannabis Exchange

Index 3 (15-20% THC) settled at \$0.70/gram in December, a decrease of 3% from November, but a massive 141% higher than the 2022 weighted average price of \$0.29/gram. The 2022 average was particularly low, driven by a surge in aged Index 3 inventory that was made available at year-end, causing the Q4-22 average price to fall to \$0.15/gram. By contrast, listing volume did not surge in late 2023, and Index 3 reached its 2023 peak during the fourth quarter, averaging \$0.69/gram.

As supply tightens, Index 3 is expected to increase in price over 2024 to \$0.90/gram by the end of the year.

In addition to a higher average price in the fourth quarter, upper and lower price bounds were much higher in Q4-23 compared to Q4-22. In Q4-23, Index 3 traded between \$0.30/gram and \$1.00/gram, compared to between \$0.12/gram and \$0.70/gram during Q4-22.

Index 3 comprised approximately 19% of dried flower trading volume in 2021 and in 2022, but fell to just 5% in 2023, ceding ground to higher-THC Indices 4-6. As such, Index 3's role in price discovery has diminished.

Expect to see Index 3 pricing appreciate in 2024, though to a lesser extent than in Indices 4-6. By mid-year, CCX forecasts Index 3 will reach \$0.80/gram, and \$0.90/

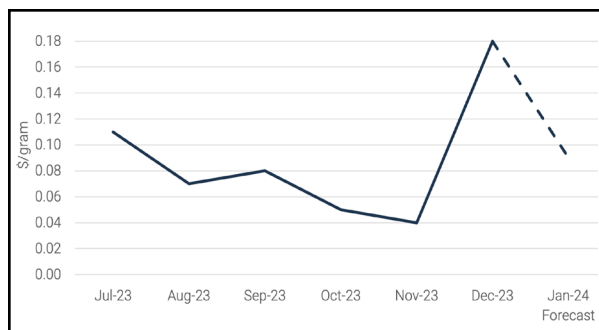
gram by the end of the year. A risk to this forecast would be a sudden surge in listing volume, particularly if that volume is for older product, as there are fewer buyers seeking to procure sub-20% THC flower.

2023 Trim Market Overview

The market for trim weakened in 2023, with a weighted average price of \$0.07/gram, 30% lower than the 2022 average of \$0.10/gram. The strongest prices, between \$0.12/gram and \$0.25/gram, were achieved in strain-specific lab tested trim, with mixed and untested trim lots trading between \$0.02/gram and \$0.10/gram (avg. \$0.05/gram).

Trim trading became more infrequent in 2023 and the average transaction size fell from 234 kg to 164 kg. As extracts prices have declined considerably and demand for such products has been sporadic, extractors have pared production and are holding less inventory. Reduced demand for trim (as inputs) is an expected consequence.

Chart 7: Average Trim Settled Price (\$/gram)

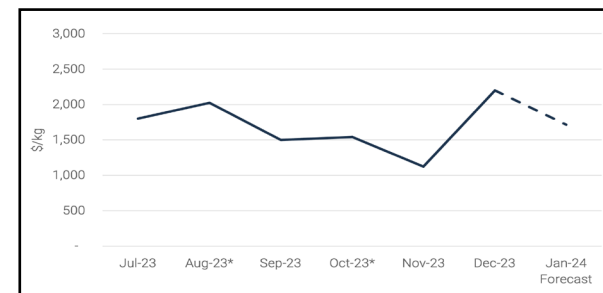


Source: Canadian Cannabis Exchange

2023 Extracts Market Overview

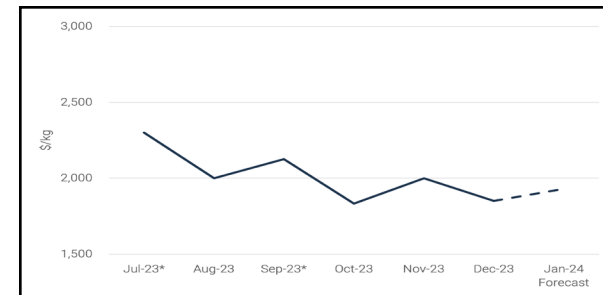
The extracts market saw prices rebound in Q1-23 following a dismal close to 2022, where most products within the category transacted at or near all-time lows. The market corrected downward in Q2-23 and prices largely stabilized over the latter half of the year.

Chart 8: THC Distillate Settled Price (\$/kg)



Source: Canadian Cannabis Exchange

Chart 9: CBD Isolate Settled Price (\$/kg)



Source: Canadian Cannabis Exchange

THC Distillate settled at \$2,200/kg in December, rising 96% from November's \$1,122/kg price, and marking the highest settlement price since Q1-23, when THC Distillate settled between \$2,239/kg and \$2,500/kg. Lower THC potency product had weighed on the November average, but THC Distillate pricing was depressed through

much of 2023, averaging \$1,631/kg, 10% lower than the 2022 average of \$1,810/kg, and a massive 63% decrease from the 2021 average of \$4,353/kg.

Contrary to the bullish forecast for dried flower, CCX expects that prices for THC Distillate will hover around current price levels (\$1,800-\$2,000/kg) through 2024.

As prices for extracts have become more stable and predictable, extractors have been better able to forecast revenues. Being mindful of changing input prices, though, is critical to making reliable business planning decisions.

Consider fresh frozen cannabis, which can be used in a wide variety of extraction applications. Fresh frozen cannabis is currently priced at about \$0.12/gram, equaling the 2022 market low established in November when dried flower prices were also floundering. Table 4 illustrates the average margin that an extractor can expect to achieve currently, based on the following assumptions:

- 30% labour and other COGs
- 20% yield from dried flower input
- \$0.12/gram fresh frozen flower

At a price of \$1,800/kg, the average operational margin for wholesale 87% THC Distillate would be 37%.

Table 4: High Level Extracts Margin Model

Assumptions:	
1kg Wholesale Extract: 87% THC Distillate	\$1,800
Labour and Other COGs	30%
5kg of Fresh Frozen Flower (20%+ THC) \$0.12/gram	\$600
Total Input Costs	\$1,140
Margins:	
Margin (\$/kg)	\$660
Margin %	37%

Source: Canadian Cannabis Exchange

Contrary to the bullish forecast for dried flower, CCX expects that prices for THC Distillate will hover around current price levels (\$1,800-\$2,000/kg) through 2024. As dried flower prices rise, prices for trim, fresh frozen and extraction grade flower will in turn increase, squeezing extractors’ margins.

Narrowing margins will cause some extractors to curtail production, and as supply tightens, expect to see THC Distillate prices rebound, rising to \$2,250/kg by year-end. A risk to the forecast is unknown levels of inventory at large processors that could potentially flood the market.

CBD Isolate settled at \$1,850/kg in December, a decrease of 8% from the November average of \$2,000/kg. Compared to most other wholesale cannabis and extracts, CBD Isolate prices were quite stable in 2023, transacting between \$1,800/kg and \$2,700/kg.

Over the second half of the year, the market narrowed further, transacting between \$1,800/kg and \$2,000/kg. Stable, predictable pricing has enabled processors to make more timely decisions vis-a-vis inventories of input materials and inventories of saleable extracted products, improving operational efficiency.

CCX expects prices for CBD Isolate will remain between \$1,800/kg and \$2,000/kg into at least mid-2024. Moderate price appreciation is possible in the latter half of the year, but price levels are not expected to exceed \$2,250/kg, as growth in demand for CBD products remains measured.

Infused pre-rolls continue to capture a growing proportion of retail consumer spending, and as such, demand for 2.0 extracts such as hash, shatter, diamonds, and live resin has grown. Trading activity remains sporadic, and prices were generally lower in 2023 than in 2022, but prices did not compress to the extent that they did in dried flower or traditional extracts.

Table 5: 2.0 Extracts Settled Price (\$/kg)

Period	Hash	Shatter	Diamonds	Resin	Rosin
Q1-2023	3,035	4,281	6,250	5,000	10,167
Q2-2023	2,833	3,825	7,500	4,000	-
Q3-2023	4,588	-	-	-	9,500
Q4-2023	4,500	3,160	-	4,000	-

Source: Canadian Cannabis Exchange

2024 Outlook Canada

As expected 2023 saw a decrease in persistent oversupply as more LPs reduced or ceased cultivation activities as well as strong growth in international exports. Through the first six months of 2023, the total indoor cannabis growing area in Canada was reduced by 4.0% on a net basis and this reduction is expected to continue through the rest of the year. From its peak in May 2020, indoor cannabis growing area has fallen by a cumulative 29.2%.

A main driver of prices rising throughout 2024 will be a continued reduction of growing area across Canada. In Chart 10 there are 3 price scenarios forecasted by CCX for 2024. If indoor growing area reduces by 17.3% from mid-2023 to the end of 2024, the “High” scenario, the

overall average flower price rises to \$2.05/gram. The last time average flower pricing reached that level was April 2022.

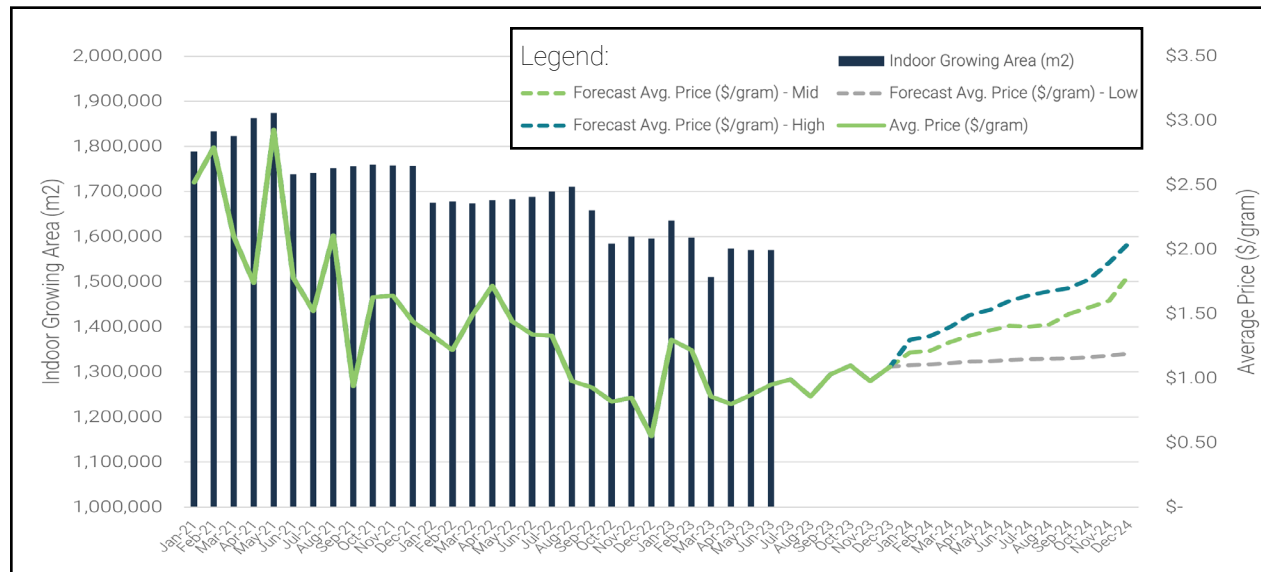
The “Mid” scenario, and most likely scenario, is based on an 11.6% reduction of indoor space from mid-2023 to the end of 2024, keeping pace with the reduction of indoor grow space in 2022 and 2023. The “Mid” forecast would result in prices rising to \$1.80/gram by the end of 2024.

The “Low” scenario is based on a 5.8% reduction of indoor space from mid-2023 to the end of 2024. This would mean that fewer facilities would shut down and scale back growth space than in 2023, which is not likely based on the profitability and health of the LP’s balance sheets across the Canadian market. Based on this assumption, however, prices would largely stagnate over 2024.

Another factor that will also drive prices higher over 2024 is the continued growth in global cannabis exports from Canada. Flower export volume surged to over 153,000 kg through the first eleven months of 2023, more than double the export volume from all of 2022. CCX forecasts that exports are likely to scale again in 2024, close to 2023 levels, as new countries legalize and strong market growth continues in existing markets.

The “Mid” CCX forecast scenario is based on an 11.6% reduction of indoor space from mid-2023 to the end of 2024, keeping pace with the reduction of indoor grow space in 2022 and 2023. This reduction in grow space should result in average prices rising to \$1.80/gram by the end of 2024.

Chart 10: Price Forecast Scenarios 2024 Licensed Indoor Growing Area vs. Average Wholesale Flower Price (\$/gram), 2021-2024



Source: Canadian Cannabis Exchange

Risk to the export market growth for Canadian LPs includes a tightening regulatory environment, import duties and taxation, and competition from other regions such as Colombia and South Africa.

Although CCX has forecast wholesale prices to increase in 2024 and consolidation is likely in the long term, in the near term the market is expected to remain highly fractured and competitive. In such a market, nimble LPs that focus on core competencies, operational efficiencies, improving yields, and diversifying sales into new global markets are growing market share and finding margin.

Featured Listings



LIBERTY HAZE

Lot #	THC (%)	CBD (%)	Terpenes (%)	Available Volume (kg)	Harvest Date	Opening Price
3GMH	30.23	0.07	4.25	23.02	Nov 14 2023	\$2.25/g



DEVIL DRIVER

Lot #	THC (%)	CBD (%)	Terpenes (%)	Available Volume (kg)	Harvest Date	Opening Price
927A	30.01	0.04	1.72	11.00	Nov 12 2024	\$2.35/g



SLURRICANE PANCAKE BUBBLE HASH

Lot #	THC (%)	CBD (%)	Terpenes (%)	Available Volume (kg)	Harvest Date	Opening Price
001	61.30	0.29	2.75	12.10	N/A	\$5,000/kg



FLAPJACKS #2

Lot #	THC (%)	CBD (%)	Terpenes (%)	Available Volume (kg)	Harvest Date	Opening Price
25	26.87	0.06	1.37	18.00	Nov 1 2023	\$2.65/g

2023 Cultivar Overview

Top 20 Cultivars by Traded in 2023

Cultivar	Type	Avg THC %	Avg CBD %	Avg Terpenes %	Avg Price (\$/gram)
Mandarin Cookies	S	26.14	0.05	1.61	0.59
Sun County Kush	I	26.66	0.08	2.33	0.99
Garlic Breath	H	26.89	0.10	3.00	0.73
Gelato Mint	H	22.48	0.02	2.68	0.44
Pink Cookies	H	25.25	0.07	3.12	0.80
Peanut Butter Cake	H	29.15	0.10	2.68	0.72
Apple Fritter	H	22.53	0.04	2.14	0.55
Panda Puff	H	26.36	0.06	-	0.83
Crossbow	H	26.19	0.07	3.03	0.98
G13 x Chemdawg 91	H	28.98	0.09	5.16	1.81
Early Lemon Berry	H	26.03	0.02	2.33	0.38
Blackberry Gelato	H	24.79	0.07	1.53	0.79
Banana OG	H	25.67	0.06	-	0.97
Green Crack	H	22.31	0.05	2.59	0.50
Frosted Cookies	H	31.93	0.04	3.18	1.92
Chatterbox	H	31.45	0.03	3.03	1.85
Miami Spice	H	19.74	0.06	2.07	0.46
Black Mountain Side	I	32.79	0.04	4.24	1.62
LA Wedding Pop	H	25.20	0.05	2.90	0.87
Blueberry Fuego	H	23.90	0.09	2.30	0.91

Source: Canadian Cannabis Exchange

Hybrid - H Indica - I Sativa - S



#1
Mandarin Cookies
2,159 kg



#2
Sun County Kush
1,689 kg



#3
Garlic Breath
1,202 kg

2023 Cultivar Overview

Top 10 Cultivars by Settled Price

*min. 50 kg Traded

Cultivar	Type	Avg THC %	Avg CBD %	Avg Terpenes %	Avg Price (\$/gram)	Max Price (\$/gram)
Gas Face	H	36.28	0.08	3.02	3.09	3.15
Mimosa Evo	H	29.99	0.04	3.23	2.45	3.00
Kush Mints	H	30.32	0.07	2.59	2.00	3.00
Haze #91	I	29.65	0.00	3.52	2.75	2.75
Mango Sour	S	25.13	0.04	3.43	2.19	2.35
Flawless Victory	H	30.04	0.08	2.64	1.88	2.30
Peppermint Kush	H	31.55	0.04	2.00	1.96	2.15
Chatterbox	H	31.45	0.03	3.03	1.85	2.09
Singapore Sling	S	27.89	0.06	2.44	2.00	2.00
Frosted Cookies	H	31.93	0.04	3.10	1.92	2.00

Source: Canadian Cannabis Exchange

Hybrid - H Indica - I Sativa - S

Top 10 Cultivars by THC Potency as Tested by High North Laboratories



Cultivar	Type	THC %	CBD %	Terpenes %
Space Guavaz	H	33.66	0.13	3.76
Jet Fuel	H	33.32	0.10	2.19
Black Mountain Side	I	31.82	0.11	3.72
Kush Mints	H	31.25	0.08	3.38
Jet Fuel Funk	H	31.17	0.10	3.89
Black Mountain Side	I	31.14	0.00	5.78
Chatterbox	H	30.82	0.00	2.59
Space Guavaz	H	30.61	0.00	3.89
Kush Mints	H	29.49	0.14	2.56
Garlic Breath	H	29.40	0.22	3.40

Source: Canadian Cannabis Exchange

Hybrid - H Indica - I Sativa - S

#1



Gas Face
\$3.15 / gram

#2



Haze #91
\$2.75 / gram

#1



Space Guavaz
33.66% THC

#2



Jet Fuel
33.32% THC



Cannabis Regulatory: **Looking Back – Looking Forward**

By George Smitherman
Cannabis Council Canada

When I was preparing to write this piece, I started with a review of the CCX report from last year to guide me. Beyond the informative data about market trends my eye was really drawn to the survey responses from more than 60 LPs. For standard size LPs when asked about barriers to profitability references to government taxation and regulation stood as the most significant barriers. With that in mind, the questions ‘how did we fare in 2023?’ and ‘what are our prospects for positive change in 2024?’ emerged.

One thing I know for certain is that given the extent to which we face regulation from the national Cannabis Act and provincial versions that regulate the way cannabis is to be distributed and sold, means there are a lot of different governments capable of making regulatory and policy changes at any given time. During 2023 we have seen quite a few such changes. Ontario has been active with adjustments to mark ups, a testing regime for high THC products and passed changes that will allow retailers to have two times as many stores as was allowed previously. Meantime Alberta recently made regulatory proposals that addressed cannabis purchases at festivals and impacted the cost of adding SKUs for producers and processors amongst other changes.

It is important to note that with one National law and 13 Provincial and Territorial interpretations we have a lot of potential points of impact. On the other hand, that demands more and more from us in terms of being able to present cohesive proposals for change. That is why it is so important that each of us make ADVOCACY a bigger part of our 2024 game plan.

At the National level 2024 gets underway with at least 3 key items to look out for starting with the 2024 Federal budget. If you haven’t already taken the opportunity to let your Member of Parliament know that you expect changes to address the financial shortcomings of the legalization framework then now is the time to do so. With proposals to adjust the Excise rate, alter the operations of the burdensome Excise stamp and reduce regulatory fees, not to mention numerous suggestions for regulatory changes like that which limits per pack THC on edibles to 10 MG, Finance Minister Chrystia Freeland has a lot of chances to show that she gets it.

By late March 2024 we expect that the final report of the Cannabis Act Review (CAR) will be tabled in the House of Commons and the Senate. Proposals that we have advanced on behalf of the sector range from addressing the 10 MG limit as noted above as well as key initiatives that would enhance our ability to communicate with clients about the attributes of our products as well as aligned approaches that would rationalize current approaches to packaging and labeling.

While any recommendations in the CAR report are non-binding on the Government we already

know that a Regulatory reform package will be released for consultation during 2024 building upon the input sought by Health Canada during 2023. Those regulatory changes are further down the path in terms of process than changes that might be proposed related to the CAR.

Now in case all of these processes are sounding a little overwhelming and you wonder how on earth in the midst of everything else you are already responsible for anyone can expect you to be making regulatory change proposals – well, that is where the concept of Stronger Together comes in. At the Cannabis Council we already have dozens of companies engaged in the work of developing and submitting proposals and we would be that much stronger with your participation!

If you are interested to find out more, contact George@Cannabis-Council.ca or click [here](#) to access C3 Memberships

In the meantime, one thing we can all do to become stronger is commit to the development of relationships with the politicians at all levels of government who regulate us. Because remember All Politics is Local!



George Smitherman
President and CEO
Cannabis Council of Canada

Sponsored Article from Aelius LED:



The Art of Spectrum Selection

As technology continues to reshape the way we cultivate, the precision LEDs provide has become increasingly more valuable to indoor farmers worldwide. Whether your goal is to enhance photosynthesis or influence flowering and fruiting, the spectrum you select has a profound impact on every stage of plant development.

LOOKING TO NATURE

When it comes to bringing out a plant's genetic potential, cultivators can learn a lot from nature. While no artificial light source can truly mimic the even distribution found in the sun, adjustments to wavelength combinations can produce spectrums that deliver a very similar (and often improved) outcome. LED technology can now enhance PAR levels you would find from the sun and create a tailored approach to a perfect day - allowing cultivators to choose a spectrum and lighting schedule specifically designed to complement their crop.

SPECTRUM DYNAMICS

LEDs have made their name on the ability to add and remove different light wavelengths and experiment with infinite spectrums. The significance of blue-rich spectrums becomes evident during the seedling and vegetative stages of plant growth. The blue light keeps internodal spacing tight and promotes robust lateral growth, fostering a sturdy and compact

structure in the plant. Alternatively, red-rich spectrums excel in flowering and fruiting stages. The red light allows the plant's focus to shift to optimizing biomass production which encourages the development of broad leaves and dense flowers and fruits – leading to a more abundant harvest.

Aelius LED's XRF spectrum, available in the Matrx 420F, 630F and 730F, as well as the Aelius 300, is designed to provide the right balance of blue rich and red rich light needed to optimize a full grow cycle for most crops.

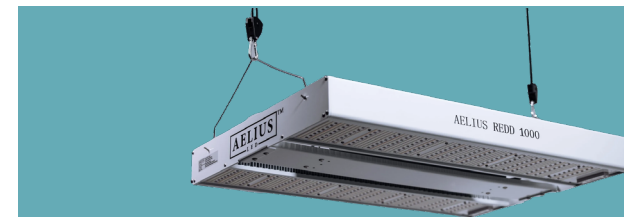
DIVING DEEPER INTO LED INNOVATION

The introduction of far-red light during the flowering or fruiting stage marks a significant leap forward in horticulture. Red rich light within the wavelength range 700nm to 760nm acts as an illusion, tricking the plant into thinking it is being grown in a shaded environment which triggers larger and faster development as the plant frantically searches for sunlight.

Aelius LED has taken full advantage of this phenomena to create their REDD spectrum. The Aelius REDD, Matrx REDD and the Aelius 300 REDD all come equipped with this fiery proven spectrum. The far-red along with a heavy red-blue ratio means that this spectrum will produce fantastic results. Plants grow taller and faster, and pack on the biomass - often finishing in a shorter time than other spectrums would with the same cultivars.

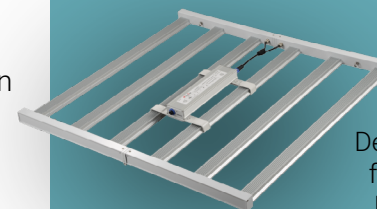
As research continues to unravel the science behind LED spectrums, it becomes clear that the careful orchestration of LED spectrums is not just a science, but an art.

For more information please click [here](#).



Aelius REDD 3.0

The Aelius REDD is a top-tier commercial-grade fixture with exceptional efficacy and features our proven far-red spectrum. Featuring large metal heat sinks for climate control and a powder-coated aluminum frame, it offers a strong and clean look.



Matrx REDD 3.0F

Designed for lower ceiling flower spaces, the Matrx REDD 3.0F is sure to set your canopy apart. Six sleek light bars ensure even coverage of its unique far-red spectrum.

DESCRIPTION	PRICE
Aelius REDD 3.0	\$1,100.16 CAD - \$1,385.64 CAD
Matrx 420F	\$680.69 CAD
Matrx 630F	\$822.75 CAD
Matrx 730F	\$890.91 CAD
Matrx REDD 3.0F	\$1,134.86 CAD

* all products are NEW

DESCRIPTION	PRICE (CAD)
Twister T4 Trimmer	\$12,860.40
Twister T2 Trimmer	\$21,295.05
Twister BatchOne Go Trimmer	\$3,495.45
Twister BatchOne Trimmer	\$35,857.50
Twister B4 Bucker	\$31,854.90

** all products are NEW*



Twister T4 Trimmer

- Lightweight
- Portable with its two-piece design
- Adjustable feet to allow incline
- 304 stainless steel tumbler
- Nitrided steel blades

Twister B4 Bucker

The Twister B4 is the world's fastest medical cannabis buckler, equipped with the industry's most powerful motor and gearing system. Capable of delivering the safest, most efficient process possible, without the need for down-time and stoppages.



STM Launchpad Weighing Module

STM's LaunchPad Pre-Roll Scale can weigh up to 72 joints all at once in a matter of seconds. It can operate either independently or more effectively as an integral component of STM Canna's comprehensive pre-roll workflow system.



Mini-RocketBox PLUS+ Pre-Roll Machine (84mm)

The Mini-RocketBox PLUS+ commercial pre-roll machine is the industry leader which combines power, efficiency, and versatility to maximize pre-roll production output. Capable of producing a blistering 143 pre-rolls in 45 seconds or less.

DESCRIPTION	PRICE (USD)
Mini-RocketBox PLUS+ Pre-Roll Machine (84mm)	\$6,600
RocketBox 2.0 Pre-Roll Machine (453-ct 84mm)	\$20,267.50
STM Atomic Closer	\$49,000
STM Launchpad Weighing Module	\$35,000
STM Revolution 2.0 Commercial Cannabis Grinder	\$17,545

** all products are NEW*

DESCRIPTION	CATEGORY	MANUFACTURER	QTY	LISTING PRICE (CAD)
Swiftly Bagger 3600 Pouch Fill & Seal System	Packaging Equipment	WeighPack	1	\$350,000
M108S Wet/Dry Trimmer	Trimmers	Mobius	1	\$32,500
Longs Peak Automated Rosin Press	Other Processing Equipment	Pure Pressure	2	\$14,000
Crude Hog Dual Filter Table	Other Processing Equipment	Infinity	1	\$21,000
MCF1 Semi-Automatic Filling Machine	Vape Cartridge Filler	Thompson Duke	1	\$7,462
C1D1 Extraction Booth	Other Lab Equipment	Precision Extraction	1	\$65,000
Aura Elite Ductless Fume Hood	Other Lab Equipment	Mystaire	1	\$9,800
P1000 Lite Short Path Distillation	Other Extraction Equipment	Prescott	1	\$121,000
20L Industrial Rotary Evaporator	Evaporators	Heidolph	1	\$99,161
12L Benchtop Distillation Unit	Evaporators	Lab Society	1	\$36,000

Longs Peak Automated Rosin Press

The ultimate pneumatic rosin press, built for true commercial capabilities, and now with a fully automated upgrade option. If you're looking for an industrial rosin press that will revolutionize your operation, the Longs Peak is it.



20L Industrial Rotary Evaporator

- Excellent user safety with high-impact transparent PMMA door
- Non-fogging safety glass and metal frame guard hood provides excellent user protection
- The evaporation flask is illuminated during operation for increased visibility





R45 Blixer

- Tilting mechanism, at more than 90°, for effortless emptying of your preparation.
- Removable, exclusive to Robot Coupe, for easy cleaning.
- 100% stainless-steel bowl-base assembly with fine-serrated edge for working with small and large quantities. Dismountable and adjustable.



Vape Cartridge Filling and Capping Kit

Designed to optimize low-volume product filling (up to 5ml) for maximum efficiency, the RoboCAP RL-300 Volumetric (VF) utilizes backpressure, heat and volumetric displacement to guarantee a +/- 2% filling accuracy with the same speed and consistency as other RoboCAP systems.

DESCRIPTION	CATEGORY	MANUFACTURER	QTY	LISTING PRICE (CAD)
Ducted Fume Hoods	Other Lab Equipment	Air Master Systems	3	\$14,030
Reach In Refrigerator	Freezers and Freeze Dryers	Nexel	1	\$2,647
R45 Blixer	Shredders & Sifters	Robot Coupe	1	\$16,100
Complete Chocolate Line	Confection Equipment	Selmi	1	\$195,000
FireMixer-14 Electric Cooker Mixers	Confection Equipment	Savage Bros	4	\$66,000
3HP Stainless Steel Hammermill	Shredders & Sifters	Colorado Mill Equipment	1	\$15,000
Pre-Roll Machine	Pre-Roll Machines	Apollo	1	\$110,000
Premium Media Preparator	Tissue Culture	Lab Associates	1	\$75,000
Vape Cartridge Filling and Capping Kit	Other Processing Equipment	ATG	1	\$46,000
Buckmaster Pro	Buckers	Trinator	1	\$13,500

LEGEND SP - Settled Price MoM - Month over Month *Price shown is indicative as no trades were executed in that period

Market Flower Pricing 2023 (\$/gram)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN-24
THC Index	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	Forecast
15 - 20% 3	0.50	0.40	0.40	0.50	0.24	0.30	0.20	0.51	0.67	0.62	0.72	0.70	0.74
MoM Δ	-	-20.0%	-	25.0%	-52.0%	25.0%	-33.3%	155.0%	31.4%	-7.5%	16.1%	-2.8%	5.7%
20 - 25% 4	0.74	0.91	0.63	0.63	0.65	0.72	0.65	0.64	0.80	0.69	0.77	0.82	0.84
MoM Δ	-	23.0%	-30.8%	-	3.2%	10.8%	-9.7%	-1.5%	25.0%	-13.8%	11.6%	6.5%	2.4%
25 - 30% 5	1.48	1.32	0.79	0.66	0.80	0.93	1.06	0.86	0.96	1.37	0.93	1.12	1.21
MoM Δ	-	-10.8%	-40.2%	-16.5%	21.2%	16.3%	14.0%	-18.9%	11.6%	42.7%	-32.1%	20.4%	8.0%
30% + 6	2.06	1.44	1.79	1.68	1.90	1.92	1.97	1.50	1.91	1.45	1.66	1.78	1.82
MoM Δ	-	-30.1%	24.3%	-6.1%	13.1%	1.1%	2.6%	-23.9%	27.3%	-24.1%	14.5%	7.2%	2.2%
Average	1.25	1.11	0.86	0.80	0.87	0.95	0.99	0.86	1.03	1.10	0.98	1.09	1.15
	-	-10.7%	-22.9%	-7.3%	8.9%	10.1%	3.5%	-13.0%	20.2%	6.8%	-11.4%	11.7%	5.2%

Source: Canadian Cannabis Exchange

Market Trim Pricing 2023 (\$/gram)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN-24
THC Index	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	Forecast
0 - 10% 1	0.05	0.05	0.07*	0.05	0.07*	0.05	0.05	0.05	0.09*	0.06*	0.04	0.05*	0.06
MoM Δ	-	-	40.0%	-28.6%	40.0%	-28.6%	-	-	80.0%	-33.3%	-33.3%	25.0%	20.0%
10 - 15% 2	0.15*	0.14*	0.10*	0.03	0.09*	0.09*	0.05*	0.05*	0.08	0.06*	0.02	0.06*	0.06
MoM Δ	-	-6.7%	-28.6%	-70.0%	200.0%	-	-44.4%	-	60.0%	-25.0%	-66.7%	200.0%	-
15 - 20% 3	0.20*	0.19*	0.10	0.03	0.12*	0.10*	0.12	0.12	0.12*	0.05	0.10*	0.18	0.12
MoM Δ	-	-5.0%	-47.4%	-70.0%	300.0%	-16.7%	20.0%	-	-	-58.3%	100.0%	80.0%	-33.3%
Average	0.05	0.05	0.10	0.04	0.09*	0.05	0.09	0.09	0.08	0.05	0.03	0.18	0.08
	-	-	100.0%	-60.0%	125.0%	-44.4%	80.0%	-	-11.1%	-37.5%	-40.0%	500.0%	-55.6%

Source: Canadian Cannabis Exchange

Market Extracts Pricing 2023 (\$/kg)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN-24
Product	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	Forecast
THC Distillate	2,500	2,350	2,239	1,400	1,062	1,580	1,800	2024*	1,500	1541*	1,122	2,200	1,715
MoM Δ	-	-6.0%	-4.7%	-37.5%	-24.1%	48.8%	13.9%	12.4%	-25.9%	2.7%	-27.2%	96.1%	-22.0%
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN-24
Product	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	Forecast
CBD Isolate	2,660	3,279*	2,400	2,200	2,200	2,256	2,300*	2,000	2,125*	1,832	2,000	1,850	1,930
MoM Δ	-	23.3%	-26.8%	-8.3%	-	2.5%	2.0%	-13.0%	6.3%	-13.8%	9.2%	-7.5%	4.3%

Source: Canadian Cannabis Exchange

Methodology

Pricing

The report includes two different pricing methodologies:

1. **Settled Price:** The weighted average of all transacted deals in each index in the given period. If no deals were transacted, "No Trade" will be shown.
2. **Indicative Price:** Weighted average of all bids, offers, and transacted prices in each index in the given period. To eliminate outliers and obtain true market values, the highest and lowest prices are removed from bids and offers.

Indicative pricing can be used to understand the pricing the market expects and leveraged in planning and evaluation models

Effective June 2023, the average Settled Price for Dried Flower will be calculated as follows: 16% Index 6, 44% Index 5, 28% Index 4, and 12% Index 3. This change is more representative of recent historical activity in the market.

Index Ranges

THC Index Values: Flower

Index	THC %
1	0-10%
2	10-15%
3	15-20%
4	20-25%
5	25-30%
6	30%+

THC Index Values: Trim

Index	THC %
1	0-10%
2	10-15%
3	15-20%

References

1. <https://open.canada.ca/data/en/dataset/1f8d838e-f738-4549-8019-edfc0d931cd7/resource/f34a50c5-bbb5-40a1-ae40-bf2a94b338bc>
2. <https://www150.statcan.gc.ca/n1/pub/71-607-x/2021004/exp-eng.htm>
3. <https://dealtracker.viridianca.com/viridian-deal-tracker/capital-raises/>
4. <https://investors.organigram.ca/press-releases/organigram-reports-fiscal-2023-results>
5. <https://mjbizdaily.com/unpaid-cannabis-regulatory-fees-continue-to-climb-in-canada/>
6. <https://mjbizdaily.com/canadian-cannabis-insolvencies-persist-in-2023/>

Canadian Cannabis Exchange Ltd ("CCX") disclaims any and all warranties, express or implied, including, but not limited to, any warranties of merchantability or fitness for a particular purpose or use as to the information, prices, indices, assessments and other related information, graphs, tables and images ("Data"), or the results obtained by its use or as to the performance thereof. Data in this publication includes independent and verifiable data collected from actual market participants. Any user of the Data should not rely on any information and/or assessment contained therein in making any investment, trading, risk management or other decision. Canadian Cannabis Exchange, its affiliates and their third-party licensor do not guarantee the adequacy, accuracy, timeliness and/or completeness of the Data or any component thereof or any communications (whether written, oral, electronic or in other format), and shall not be subject to any damages or liability, including but not limited to any indirect, special, incidental, punitive or consequential damages (including but not limited to, loss of profits, trading losses and loss of goodwill).

Confidentiality

This report and any information enclosed within the report contains restricted, privileged and confidential information and are therefore intended for distribution to authorized persons only. If you are not the intended recipient of this document, you must not disseminate, modify, copy/plagiarize or take action in reliance upon it, unless permitted by CCX. None of the materials provided on this file may be used, reproduced or transmitted, in any form or by any means whatsoever, including but not limited to electronically, mechanically, by way of recording or by the use of any information storage and retrieval system, without written permission from Canadian Cannabis Exchange.

You may view or otherwise use the Data in this publication only for your personal use or, if you or your company has a license for the Data from the Canadian Cannabis Exchange and you are an authorized user, for your company's internal business use only. You may not publish, reproduce, extract, distribute, retransmit, resell, create any derivative work from and/or otherwise provide access to the Data or any portion thereof to any person (either within or outside your company, including as part of or via any internal electronic system or intranet), firm or entity, including any subsidiary, parent, or other entity that is affiliated with your company, without the Canadian Cannabis Exchange's prior written consent or as otherwise authorized under license from the Canadian Cannabis Exchange.

Any use or distribution of the Data beyond the express uses authorized in this paragraph above is subject to the payment of additional fees to the Canadian Cannabis Exchange.

For all other queries or requests pursuant to this notice, please contact CCX via email at info@canadiancannabisx.com.