



Benchmark Report

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A Note From the Editors

THE NEW NORMAL: IMPORTANCE OF DATA AND TECHNOLOGY

By Sigfried Legeay & Jonas Bahceli

2020 may have been one of the most traumatic experiences many individuals and companies have ever had to face. In a very short period of time, we had to adapt our lives, the way we work, our business models and forecasts.

The mathematical statistician, Nassim Nicholas Taleb, had theorised such an event in a 2007 essay called 'The Black Swan'. According to the author, you can characterise it as a metaphor for any occurrences that come as a surprise, have a major effect, and are often inappropriately rationalised after the fact, with the benefit of hindsight.

The reader will agree that we are currently living an outlier era for modern societies; and usually, when such disruptive events occurs, things tend to go back to a 'New Normal'. We are indeed assisting to a paradigm shift and as businesses, but also individuals, we have to be adaptable and resilient. **Continues on pg. 4...**

About the Editors



Jonas Bahceli has given himself the mission to provide the most accurate database for the cannabis wholesale industry in order for Canxchange clients' to have an edge compared with the rest of the industry. His analytical skills and ability to sense market trends makes his opinion highly valuable for the industry. He is assisted by Sigfried Legeay who provides mathematical expertise in order to extract the best possible elements from the data currently available.

A Note From the Editors

THE NEW NORMAL: IMPORTANCE OF DATA AND TECHNOLOGY

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Continued from pg. 3.

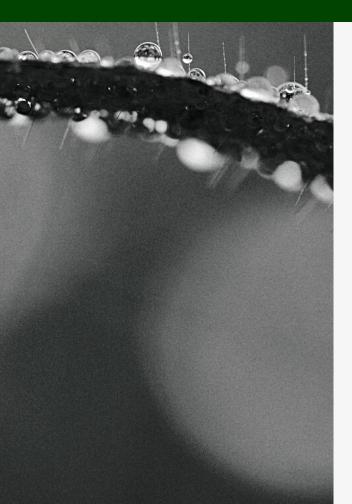
The importance of technology and data was already fundamental for any sector and industry before the pandemic. Business ventures cannot function without having access to data. These pieces of information are necessary understand our environment, our direct and indirect competition, our customers, the macro/micro economic conditions we are currently facing and to anticipate areas of growth and trends.

The above statement is even more relevant for the Cannabis industry in general (Hemp & Medical). Our industry is growing exponentially in a very volatile environment. Farmers, producers, extractors and also service providers, have to navigate and steer their ships having very low visibility on the market and with a constant uncertain legal environment.

At Canxchange we are committed to providing our customers and the wider industry with market insight and data to help better inform our peers.

Methodology

THE CANXCHANGE DATA ANALYSIS APPROACH



Introduction to Data Analysis

The core concept in data analysis is not only to have access to the resulting numerical value, but it is also important to understand the reasoning behind the figures. How and why the publisher followed its path in building the report is fundamental to understand.

Our data analysts spent months observing the market and client transaction behaviours as well as interacting with hundreds of market participants and stakeholders. These observations helped us better understand key market metrics with regards to questions the industry has about demand, supply and price.

Method

In our benchmark report, we provide data analysis the different product on categories available to trade on our platform (biomass, seeds. isolates. distillates). The Canxchange approach is to offer a perspective from the sell side of the industry, along with market insight on the direction that specific product lines could be heading. This includes price movements over an extended period of time as well as future demand/supply projections for the relevant products. The traditional price analysis takes into consideration the account costs, as well as supply and demand. The CBP adds to the product potency approach, comparing product price vs potency.

Our Data Analysis Includes

- Canxchange Benchmark Price (CBP)
- Weighted average prices per CBD% for different products
- Median lowest and highest sell orders
- Geographical breakdown of products provenance
- General trends on price and volume
- Product analysis
- Price per kg or L

CanXchange Benchmark Price (CBP)

AN EFFICIENT WAY TO CALCULATE ACCURATE PRICES

The Canxchange Benchmark Price (CBP) is one of the tools we provide our customers with in order to share an accurate calculation of the natural price expected by wholesalers.

Canxchange has decided to focus on the market's most sought after products where a large amount of data is available. With the industry growing and business accelerating, our mission is to cover as many products as possible over the coming months whilst keeping an eye on market innovation (new products, new trade units, new comers).

In order to build the Canxchange Benchmark Price (CBP), we retained the following methodology:

- We proceed with a data cleaning and make sure that we isolate non relevant occurrences (outliers, database errors).
- Then we standardise the data to make sure each component is comparable and interchangeable.
 We retained for that stage the methodology of calculating the weighted average 1% price potency of each product.

- As we assume that the price sellers charge will also be subject to the quantity they offer, we also take into account the relative quantity of kg/L for an order, in respect to the total kg/L for that product line.
- The 1% price potency of that specific order is then multiplied by the relative quantity in order to give us the relative price, with respect to the total quantity.
- The sum of the relative price of all orders then gives us the final CBP value.

For each product we also adjust the CBP into different kg/L categories, in order to account for outliers (ex. CBD Whole flower categories: <100kg, 100-1'000kg, >1'000kg)

Market Tips and Insight

BY GEORGE POPOV - CANXCHANGE TRADING AND SALES EXPERT

CBD Whole Flowers

Currently a highly sought after product. Despite some controversial usage, the market has a lot interest to find high quality flowers from top varieties in order to manufacture the best possible extracts. Whole flowers seems to be the hot product of the moment but some future concerns can be raised. With the potential authorisation of growing and the distribution of flowers in France, we could see a large increase in the EU supply of whole flowers. Without a significant increase in demand we will likely we see a drastic decrease in the price of flowers. Also, there is a current debate on whether whole flowers should actually be chopped because of its similarities to high THC products.

CBD Hemp Flowers

Large players across the market provided an increased amount of supply over the last year which lead to a price collapse across the low quality (low potency) biomass scope. This situation has impacted small farmers and could potentially continue to affect them if they cannot scale or pivot towards higher range products. There is however a potential growth window that we have identified and it lays with fiber and stalk products. They are in very high demand from big corporations entering or willing to enter the market. According to our research, the supply available is counterbalanced by a demand that is at least x10 higher than is currently being produced.

CBD Crude Oil

A very popular product within the consumer space with hundreds of brands selling their products across retailers and pharmacies in different European countries. In the UK particularly, there has been a lot of interest in this product on the consumer side as it can be used to treat various conditions, however there have been serious concerns raised by UK authorities about the percentage of THC of the oils sold in the retail market as an investigation highlighted that the oils for sale were way above the legal THC limit. The oils are also used in the production of other extracts such as distillates, possessing a function in the B2B market.

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Market Tips and Insight

BY GEORGE POPOV - CANXCHANGE TRADING AND SALES EXPERT

CBD Isolate

Locations with cheaper production costs in the Americas and Eastern Europe have had to drastically reduce the price of isolates. If we compare prices to 2019, Isolates are currently four times lower than there were then. That being said, prices seem to have stabilised at €750/€800 per kg. In order to regain four digit prices, it will most likely require higher demand and important stock outputs.

Hemp Seeds

Whilst seeds for nutritional purposes have been increasing in price with the harvesting season coming along, feminised varieties for cloning have seen less demand than anticipated. This may be a sign of optimistic market growth expectations or of a current surplus. It will be fundamental to follow the demand for cultivation seeds in the upcoming planting season in order to get a better vision of producers anticipations.



CBD Whole Flowers

PRODUCT DATA

The whole flower is the remaining material (stalks & leaves) after the flowers and/or seeds have been harvested from the plant. Canxchange publishes the Canxchange Benchmark Price (CBP) expressed as the weighted average of 1% of CBD Whole Flowers.

Price & Volumes Data

CBD Whole Flowers € per kg: €560.45

CBP: €65.73

CBP (<100 kg): €139.35 CBP (<100-1000kg): €114.24

CBP (>1000kg): €52.58

Average CBD content: 6.84%

Average sell order mass: 944.79kg

Lowest sell order mass: 2kg

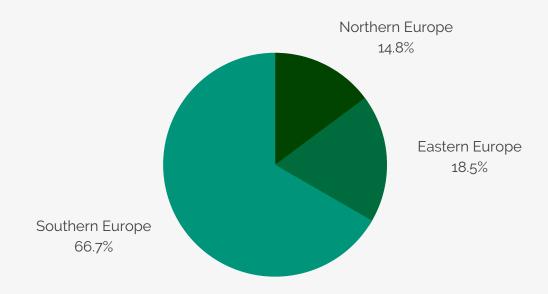
Highest sell order mass: 15,000kg

Price & Volumes Trends

Prices: **Up**

Volumes: Neutral

Geographical Breakdown



CBD Hemp Biomass

PRODUCT DATA

Hemp biomass is the whole plant milled into fine material. Canxchange publishes the Canxchange Benchmark Price (CBP) expressed as the weighted average of 1% of CBD Hemp Biomass.

Price & Volumes Data

CBD Hemp Biomass € per kg: €2.38

CBP: **€1.13**

CBP (<5,000kg): €1.54 CBP (>5,000kg): €1.12

Average CBD content: 2.74%

Average sell order mass: 20,660.55kg

Lowest sell order mass: 1kg

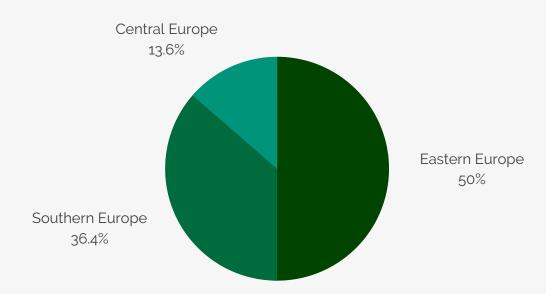
Highest sell order mass: 200,000kg

Price & Volumes Trends

Prices: **Down**

Volumes: Neutral

Geographical Breakdown



Crude CBD Oil

PRODUCT DATA

Crude CBD Oil is the primary hemp extract from the plant which is later used to create distillates and isolates. Canxchange publishes the Canxchange Benchmark Price (CBP) expressed as the weighted average of 1L of Crude CBD Oil.

Price & Volumes Data

Crude CBD Oil € per L: €954.47

CBP: **€237.05**

CBP (<100L): €69.65 CBP (>100L): €243.82

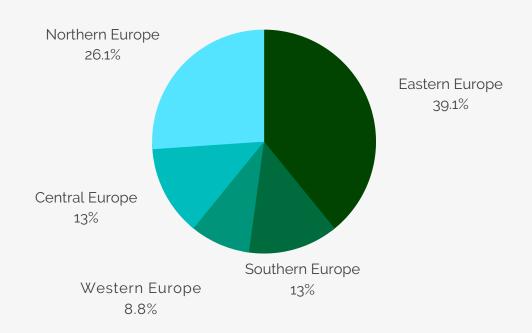
Average CBD content: 9.26%

Average sell order mass: 188.08L Lowest sell order mass: 5.5L Highest sell order mass: 10,000L

Price & Volumes Trends

Prices: **Neutral**Volumes: **Neutral**

Geographical Breakdown



CBD Isolate

PRODUCT DATA

CBD Isolate is a crystal-like powder extract from hemp biomass, used to produce cosmetics and vapes. Canxchange publishes the Canxchange Benchmark Price (CBP) expressed as the weighted average of 1 kg CBD Isolate.

Price & Volumes Data

CBD Isolate € per kg: €1082.63

CBP: €10.74

CBP (<100kg): €2,492.58 CBP (>100kg): €1,876.58

Average CBD content: 99.25%

Average sell order mass: 1,025kg Lowest sell order mass: 50kg Highest sell order mass: 1,000kg

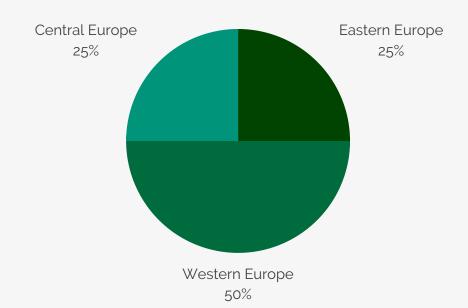
Price & Volumes Trends

Prices: **Down**

Volumes: **Neutral**

*On the Canxchange side we see the marketing pricing between €750 and €850 per kg however the sellers do not seem ready to adjust their prices accordingly as of yet.

Geographical Breakdown



Hemp Seeds (Food)

PRODUCT DATA

Hemp seeds (food) can be used for nutritional purposes, so they are edible and used to make milk, oil, protein powder and so on. Canxchange publishes the Canxchange Benchmark Price (CBP) expressed as the weighted average of 1% kg of hemp seeds (nutritional).

Price & Volumes Data

Hemp Seeds (Food) € per kg: €0.00008

CBP: **€1.81**

CBP (<10,000kg): €3.78 CBP (>10,000kg): €2.33

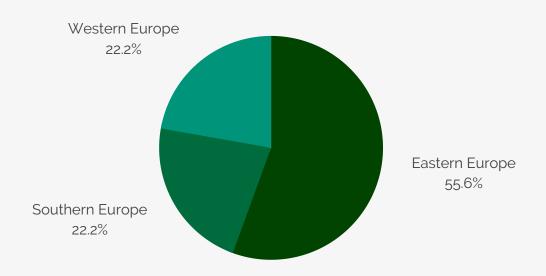
Average CBD content: n/a

Average sell order mass: 37,445kg Lowest sell order mass: 2,650kg Highest sell order mass: 100,000kg

Price & Volumes Trends

Prices: **Up** Volumes: **Up**

Geographical Breakdown



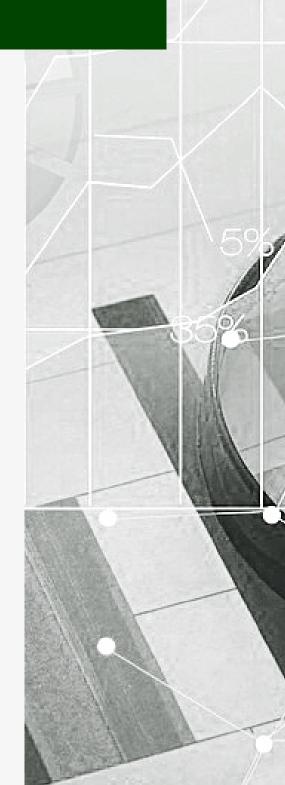
About Canxchange

OVERVIEW & CONTACT INFORMATION

CanXchange has developed the first European trading platform for physical hemp and CBD products, aiming to connect industry professionals and help them transact in a transparent, fast and secure way. Canxchange is headquartered in London, England.

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