



Preparing Canada for the Next Wave of Cannabis Commercialization

Welcome to extraction...the lynchpin for cannabis consumer packaged goods. With edibles, concentrates and topicals regulated to be available in market this fall, the cannabis CPG market will be infused with opportunity.

Closing out Industry Day at O'Cannabiz in Toronto this past Spring, I moderated a panel, "The Extract Explosion: Cannabis Evolves to the Next Level" featuring Emily Nathanson (HAL Extraction), Eric 'Swiss' Wilhelm (ExtractionTek Solutions), Phil Kwong (3 Carbon Extraction) and Rosy Mondin (Quadron Corp).

Speaking with this team of experts who operate in Canada and the US, it is clear the industry is still in its infancy and in a state of playing "catch up" with its potential.

Since the panel, Canada has set guidelines for the second wave of legalization, which brings with it cannabis edibles and other extraction-based products like concentrates for vape pens and topicals. These products will be legal to produce and sell by October 2019, however products will most likely hit the market as early as December 2019.

Additionally, Health Canada has opened the door to the public for a consultation on potential market for cannabis health products that would not require practitioner oversight. These products would be for human and veterinary uses, and could be sold at stores outside of the current licensed retail locations.

Once the second wave of legalization hits, it is expected that concentrates will command a significant market share, which is in line with trends seen in both Colorado and California. While demand for dried flower will remain, the market of new users and discreet requirement consumers will lean into products that are derived from extracted cannabis. For this market to mature and for the true potential of cannabis commercialization to occur, companies will need to have a strong understanding of product development and cannabis extraction.

Whether it surrounds companies who are currently in, or are looking to get into the cannabis space we will certainly continue to see M&A opportunities, especially around R&D, to help build out the next suite of consumer packaged goods (CPG).

The major takeaways from the panel identify where cannabis extraction currently is and what needs to be done to bolster the industry.

Health and Safety Standards

When you're moving from dried flower into any transformed product, safety standards are paramount.

"We're using high-pressure or flammable solvents," said Wilhelm during the panel discussion. "When it comes to safety, that should be anyone's number one concern."



Although there is some debate about the level of safety between different manufacturers and methods, Wilhelm said a lot of that is marketing hype.

“All methods carry their own risks, they are all laboratory processes,” said Wilhelm, noting that regardless of the method used, all equipment should be held to a level of engineering standards ensuring a safe design, as well as creating a proper lab environment, SOPs and proper training a to get and keep the systems running.

Kwong, who began experimenting with extracts to help manage his symptoms from Multiple Sclerosis, said that all equipment should be held to a medical standard.

One issue within the industry is that there is currently no standardization for equipment, nor is there an equipment registry. There is also no unified regulatory body governing extraction.

Mondin noted that components of machines are not standardized either. For example, some fittings wear out faster than others. This is problematic for machines that need to get taken down for cleaning often, as worn out parts can lead to machine failure.

EU-GMP

In order to export product overseas, SOPs, facilities and equipment must meet a minimum standard set out by the European Union Good Manufacturing Practice (EU-GMP).

Legalization at the federal level puts Canada at an advantage to our neighbors in the south, as many companies here have already secured international deals.

However, as Nathanson pointed out, “due to how the cannabis industry is viewed in the US, it’s not recognized at a federal level, so GMP standards haven’t really been talked about.”

Forward-thinking industry players in the States are applying EU-GMP standards, but it is certainly not the status quo as exporting is not currently viable in the US, even across state lines.

However, this lack of standardization will have implications on global expansion.

Automation

Automation takes out a lot of risk factors and contamination issues, but as Mondin pointed out, “there are some things a machine can’t do.”

While Mondin believes that we’ll eventually see more automation from pre-processing to loading the equipment to taking it through different processes, she doesn’t see full automation as the way to go.

“You need people to do analytical, on the ground thinking,” said Mondin.

Wilhelm also noted that a challenge with automation is “the need for eyes” on the product going in, since the plant matter taken from the same phenotype and same grow may still see some variation. He sited product quality and development as being “best served by trained operators.”

Repetitive, mostly unchanging tasks such as material prep and packaging are the best places for automation, said Wilhelm.



Longer or larger scale processes are better served by automation. Wilhelm noted that hydrocarbon extractions have a fast cycle and are relatively simple systems to operate. In such cases, it can be more expensive to implement automation than to rely on people.

Regulating Extractions in the Cannabis Industry

Nathanson reminded the audience that regarding extraction processes, “what we’re doing in the cannabis industry is not revolutionary.”

These are processes that have been used in a variety of industries such food and beverage and cosmetics.

Nathanson expressed concern over the stigma facing the cannabis industry, noting that the regulations are more stringent than there would be in other industries

Education is a big factor leading to some challenging regs. Nathanson notices a lack of education in both the US and Canada in terms of how extraction facilities work and regulators are up against something that is very new to them.

The use of hydrocarbons for cannabis extraction is particularly burdened by stigma, even though large-scale extraction for products such as canola use the hydrocarbon hexane.

Classifications for hydrocarbons already exist for food, medical and the environment. Kwong said we need to look at existing industries and apply relevant lessons to help build the cannabis extraction industry. And moreover, Canada needs to be in a position to develop products that offer optimal value and efficacy to best serve consumers and the global marketplace.

Getting Ready

Extraction technology is not new and is already applicable to many everyday uses, like menthol infusions and aerosol sprays.

Across the board, extraction is used in many industries, all which have demonstrated a commitment to health and safety when it comes to both product development and employee working conditions. With best practices and standards already in play, it begs the question as to why Canada is still trying to catch up?

The answer: Regulations and licensing. While access to medical cannabis has been legal in Canada since 2001, extracting cannabis for medical use was only implemented in 2015 and CO2 was the only permissible solvent.

Since then, ethanol and hydrocarbons have been added to Health Canada’s list of permissible solvents, which opens the door to more product options, better production rates, and allows cannabis to be more in line with the practices in other industries.

As we prepare for the second wave of the Cannabis Act, allowing for edibles, concentrates and topical product development and sale, we will begin to understand why multiple methods of extraction and different types of solvents all have a place in cannabis. Health Canada has established stringent rules, which will affect product development. – At least in phase one of this



second-wave. With all the barriers, it will be interesting to see which brands are innovative when it comes to designing smart and purposeful products.

Canada's lead on legalization positions us to stake claim for innovation and improvement of products for which there is already a consumer demand. For this to happen, market collaboration, industry standards, education, ongoing policy amendments, training and licensing are all required for the business of cannabis extraction to see its full potential.

While supply and selection are expected to be limited in the beginning, a progressive model coupled with innovation will surely continue to bring about a valuable and robust suite of extraction-based cannabis consumer packaged goods.

Author's note: 3 Carbon Extraction is a client of CBD Strategy Group.