

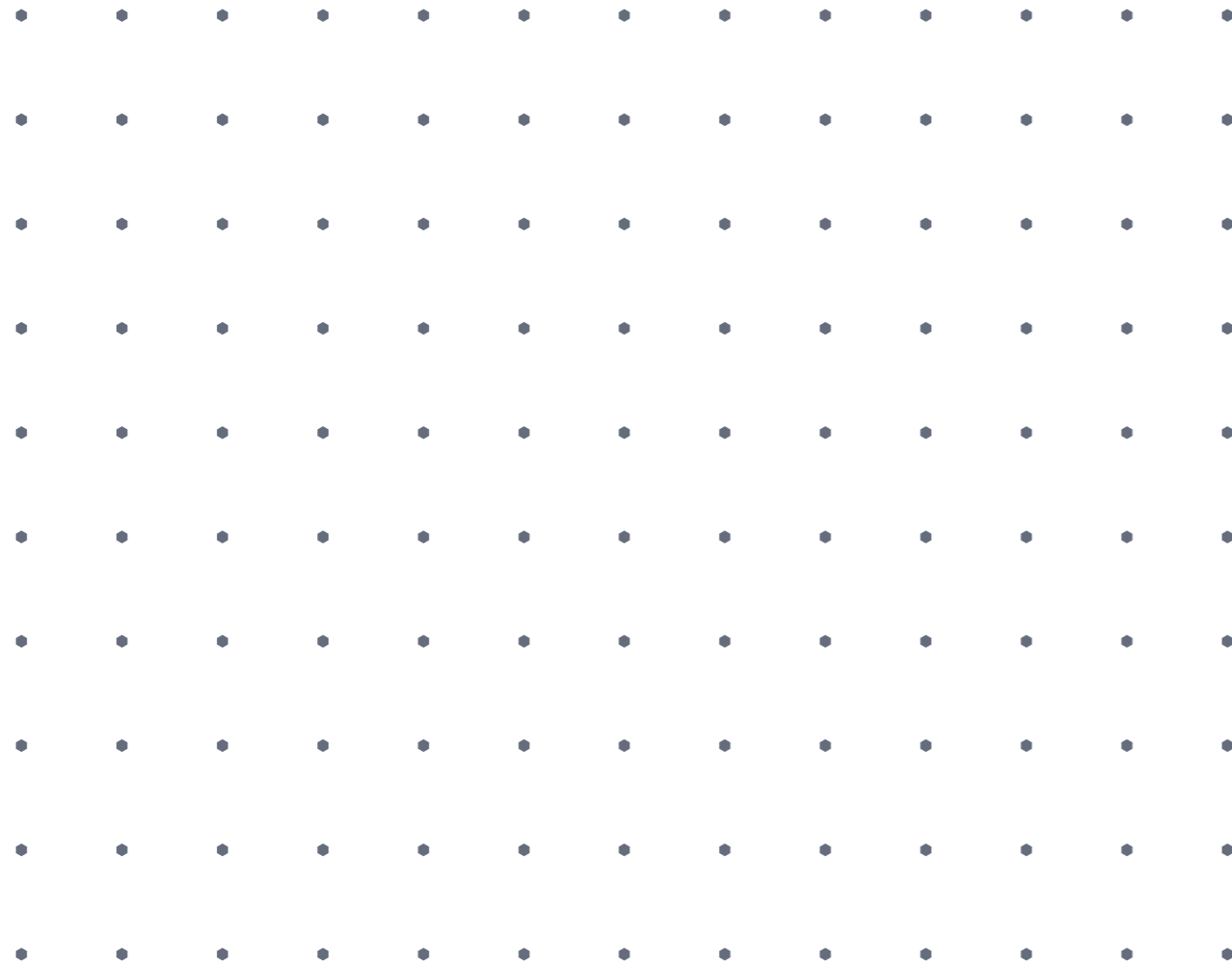
The Latin America and Caribbean Cannabis Report

Second Edition

NOVEMBER 2020



About Prohibition Partners



Unlocking the potential of cannabis.

Empowering our partners to make better business decisions.

ABOUT US

Prohibition Partners unlocks the potential of cannabis through data, intelligence and networking. We provide strategic solutions to an international client base of investors, operators, blue chip companies, FMCG brands and government bodies.

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Will Sloane
Head of Growth



We are
what we do,
especially
what we do
to change
what we are.

”

Eduardo Hughes Galeano
Uruguayan writer and journalist (1940–2015)

EDITORIAL



Hector Gomes de Sousa

*LAC Analyst
Prohibition Partners*

Latin America and the Caribbean (LAC) holds a special place in the minds and hopes of everyone that is involved in the cannabis sector around the planet, including the team here at Prohibition Partners.

The cannabis plant has featured in the history of the region since the colonial era when African slaves brought cannabis seeds to the continent. As usage spread to indigenous populations and production flourished across the continent, consumption of cannabis often became the subject of prohibition as a form of oppression against the unprivileged layers of society, to be followed by a war on drugs, which left scars across the region and has been questioned by many. However, cultivation and use have continued in LAC, leading to an amazing know-how with regards to the genetics and varieties of the cannabis plant in the region, which is helping to shape LAC's potential in this sector today.

Since Uruguay's pioneering legalisation of cannabis in 2013, followed by Colombia in 2016, the LAC region has been at the centre of international interest due to its favourable climate, fertile soils, low labour costs and

large domestic population. A number of large operations have been set up, although commercial success has been limited due to tough regulatory requirements on both sides of the Atlantic as well as slower investment into emerging markets following the poor Q3 2019 results of large cannabis players in Canada.

Nevertheless, the disruptive potential of the region both as a supplier and a consumer market is undeniable. Through leveraging LAC's competitive advantages and the growing trends in telemedicine and last-mile delivery in an increasingly digitalised and urban society, the potential is exciting, particularly when taking into account the potential of hemp in sustainability and regeneration. We at Prohibition Partners are firmly committed to helping the local cannabis and hemp industry to develop and grow. For this reason, we have decided to establish an office in São Paulo, Brazil, where I am based, and from this city we will continue to strengthen our presence in the region and help local operators, investors and regulators succeed in this exciting sector with a promising future.

Regards,
Hector Gomes de Sousa
Prohibition Partners LAC Analyst

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Definitions



LAC region:

Throughout this report we refer to the Latin America & Caribbean region as LAC. We include in this definition all the countries in the American continent south of the United States, from the Bahamas and Mexico to Argentina and Chile.

Pharmaceutical cannabis

- Formulated, processed, or synthetic cannabis sold as finished products, which have undergone full medical trials, and hold (in one or more geographical areas) a medical marketing authorisation* e.g. Cesamet®, Marinol®, Syndros®, Sativex®, Epidiolex® and any derived generic medicines; or
- Cannabinoid-based API (Active Pharmaceutical Ingredient), which is registered as an API in a medicinal product holding marketing authorisation* in one or more geographies, to be manipulated and/or compounded by a magistral pharmacy to produce a cannabinoid-based medicine.

Medical cannabis

- Cannabinoid-based medicine not holding marketing authorisation and therefore sold as an unlicensed medicine supplied through health systems and prescribed by a doctor; or
- An API to be manipulated and/or compounded by a magistral pharmacy in order to prepare a cannabinoid-based medicine without marketing authorisation (unlicensed).

Medicinal cannabis

Term used to indicate all cannabinoid-based therapeutic products (medical + pharmaceutical).

Adult-use or recreational cannabis

Adult-use cannabis refers to the use of cannabis for reasons other than medicinal, i.e. recreational purposes. The term adult-use is used to emphasise the fact that where cannabis is legalised, it is intended for consumption by legal adults only and for reasons more broad than recreation, including, for example, increasing physical performance, engaging in creative activities and for spiritual purposes.

Industrial hemp

Industrial hemp refers to cannabis plants cultivated for high yields of materials such as fibre and oil, with low concentrations of psychoactive compounds. Materials derived from hemp have a wide range of uses as constituents in consumer goods, including paper, textiles, biodegradable plastics, building materials, health food, and fuel. Industrial hemp can also be used to produce CBD products such as oils, tinctures and food. For the purposes of this report, industrial hemp includes hemp-derived CBD.

CBD

Cannabidiol (CBD): one of the main cannabinoids which can be either synthesised or derived from the *cannabis sativa* plants. CBD exhibits wide-ranging properties potentially useful for health & wellness including anti-anxiety, anti-inflammatory, anti-pain, and neuroprotective effects.

THC

Tetrahydrocannabinol (THC): the main psychoactive cannabinoid of cannabis. THC is considered the primary source of the 'high' produced by ingesting cannabis. Evidence suggests that THC exhibits medicinal properties that are useful in treating chemotherapy-related nausea, pain, and spasticity. THC can also be synthesised and in general is more widely controlled than CBD.

* For countries that have classified cannabis as a non-medical product to be used in healthcare (such as Brazil), we consider all cannabis products as medical cannabis unless they have undergone extensive clinical trials with successful application for a medical marketing authorisation in another country.

Key Facts



Population 2020: 655 million
Expected 2030: 711 million

Urbanisation 2020: 85% (highest worldwide)

Total GDP 2019: US\$5.6 trillion

Total GDP PPP 2019: US\$10.58 trillion

GDP per capita 2019: US\$8,335

GDP PPP per capita 2019: US\$16,040

GDP PPP per capita estimated 2030:
 US\$18,400

GDP expected fluctuation due to COVID-19:
 5% to 10% decrease

Main trading partners: China, EU, US

Foreign Direct Investment 2019:
 US\$184.287 billion (up 13.2%)

Main Foreign Direct Investment sources:
 EU, US, China

Venture Capital Investment 2019:
 US\$4.9 billion (up 142% from 2018)

Land used for agriculture: 12%

Share of total farming land worldwide: 23%

Agriculture as part of GDP: 4.9%

Estimated legal cannabis & hemp cultivated area (hectares): 12,000–15,000*

Workforce per hectare needed:
 10–17 workers

Cost competitiveness:
 80% cheaper than North American markets

INCB THC Quota 2020:
 56.5 tonnes (Colombia)

Registered seed genetic varieties: ~341

Expected hemp exports 2020: ~50–60 tonnes and 30 million hemp seeds.

Expected cannabis exports 2020: ~2–3 tonnes

Total legal cannabis users (medical, adult-use), estimation for 2020: ~80,000**

Total medical cannabis patients, estimation for 2020: 40,000–60,000

Total potential patients, estimation 2025:
 >4,000,000

Cannabis users estimation, legal and illegal market: 5.4% (~35 million users)

LAC cannabis industry, estimated market value 2020: US\$168 million

LAC cannabis industry, estimated market value 2024: US\$824 million

Pharmacies per capita: ~3,500

Pharmacy chain market share:
 Intermediate – from 30% to 60% – growing

Telemedicine check-ups January to July 2020: ~3 million (growing fast)

Pharmaceutical expenditure 2019:
 US\$157 billion

* Might include land with permits ready to be cultivated during 2020.

** Some figures are based on estimations from publicly available sources.

Cannabis is legal at some level in:

- CANNABIS IS LEGAL AT SOME LEVEL
- MAIN PRODUCERS
- LARGEST MARKETS
- NEW PLAYERS
- POTENTIAL NEW PLAYERS
- MOST DEVELOPED REGULATION

Source: Prohibition Partners



Introduction

Cannabis has been present in LAC for centuries. With pioneering legalisation originating from Colombia and Uruguay, joined in some degree by Argentina, Brazil, Chile, Ecuador, Paraguay, Peru, Jamaica, Trinidad and Tobago, and St Kitts, who are all following the path of decriminalisation and with many taking steps towards full legalisation, the ripple effects have been spreading in the region for some years. However, this reform has proved to be slower than anticipated. At the end of 2019, as the fortunes of the wider global cannabis industry started to turn, we saw foreign investment stripped back in the region, to be followed by a renewed interest at the present time.

As 2020 started to unfold, several projects were affected by COVID-19, impacting the region considerably. Some developments have been progressing slower than expected or have been postponed, mainly when it comes to legislation and regulation, but this has not stopped the region's development, with local companies obtaining EU-Good Manufacturing Practice (GMP) certification, several industry players organising online events related to the LAC industry, countries approving favourable legislation, and increased media coverage of cannabis developments in the region. Much is expected for the last months of 2020 and early 2021, with countries discussing recreational approval and a growing interest not only in the hemp industry but also in the sustainability element of its cultivation along with cannabis.

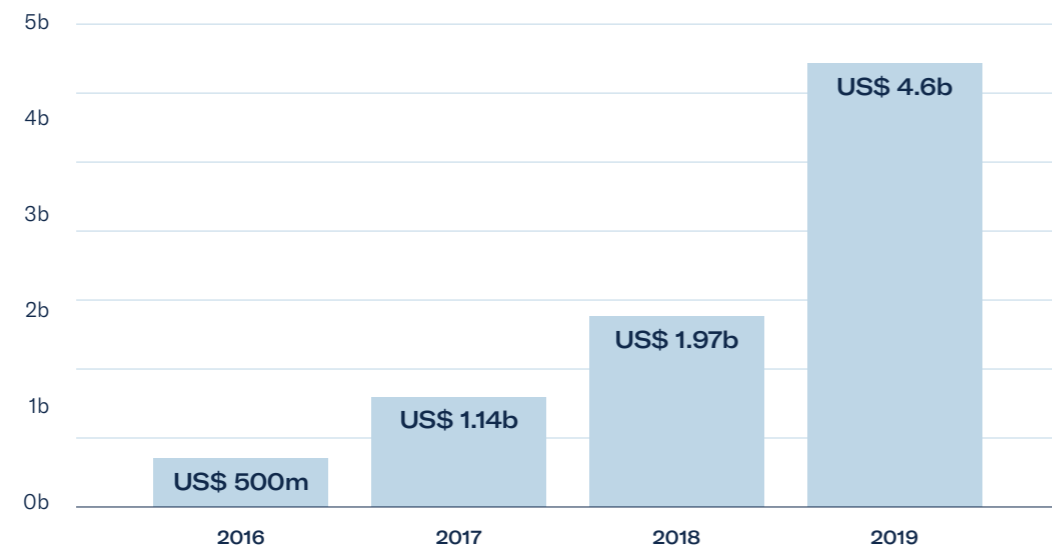
There are high hopes for this region, with unmatched cost-benefit possibilities, a strategic location and an internal market that could lead to high demand from a population expected to surpass the 700 million mark during the current decade.

LAC also benefits from low-cost labour and construction costs, meaning that the overall cost of production can be up to 80% lower than that of North America. For example, Asocolcanna, the Colombian Association of Cannabis Industries, reports that a gram of cannabis buds is worth between US\$0.5 and US\$0.8 in Colombia, whereas in Canada the same amount can cost US\$2.14. Growing cannabis in LAC is therefore a high-yield and high-margin package, and the region is fast recognising its own potential to become a major player in the hemp and cannabis industry worldwide. Besides foreign direct investment (FDI) from developed countries in Europe and North America, especially the strong Canadian investment in the cannabis industry in the region, it is also worth paying attention to the growing Chinese-Latin American trade relationship, which has increased exponentially over the last few years, particularly in the agricultural sector. Total trade between the two has increased from US\$17 billion in 2002 to over US\$315 billion in 2019. With a surging interest from China in producing CBD products outside of its own borders in order to supply the US market, as well as the US-China trade war and associated tariffs, we can expect important Chinese investment in the cannabis and hemp industries in LAC.

Venture capital investment in the region has been increasing substantially since 2016, with Brazil being responsible for over 55% of this investment, followed by Mexico with 20%. This

increase has been reflected in Brazil with the rise of the 'Agrotech 4.0' sector, understood as the incorporation of technology into farming enterprises.

Venture Capital Investment LatAm 2016-2019



Source: Private Capital Investment in Latin America (LAVCA), 2020

As one of the main agricultural bread baskets for the world, accounting for over 84% of total agrifoodtech venture capital investment in 2019 according to *AgFunderNews*, Latin America is widely expected to be at the heart of global cannabis supply, with its low-cost, high-yield dynamic being increasingly sought after by an industry that is desperately seeking to cut costs amid debt problems and some tumbling stock prices. Three quarters of LAC spans the tropics, offering 12 hours of daylight, high levels of rainfall, and warm temperatures all year round in some areas of its equatorial nations. Agriculture is a major industry sector in LAC thanks to these growing conditions, which makes the region a natural frontrunner for outdoor cannabis cultivation – a significant competitive advantage over the likes of Canada, which in 2019 was a global leader in cannabis production because of its liberal legislation and first-mover advan-

tage. However, Canada's associated subarctic temperatures mean that cannabis cultivation in Canada is restricted to indoor grow-houses, making it a much more expensive crop, a factor that contributed to some of the financial issues faced by North American companies towards the close of 2019. With sustainability increasingly dictating the future for all industries, cultivation that is less dependent on artificial lighting and heating has obvious advantages and constitutes a competitive advantage for the region.

Last but not least, the veterinary and pet care sector potential is very interesting. South America alone has the largest horse population worldwide, with over 15 million, and the region has over 100 million domestic dogs. LAC showed a steady increase in pet care during the last decade and market projections for the industry reach over US\$12 billion for 2021.

It is also worth paying attention to the growing Chinese–Latin American trade relationship, which has increased exponentially over the last few years, particularly in the agricultural sector. Total trade between the two has increased from US\$17 billion in 2002 to over US\$315 billion in 2019.



PHARMIN



PHARMIN AND REMEDERI JOINING FORCES TO SERVE THE BRAZILIAN MARKET

Pharmin, a Uruguayan vertically integrated company based in the free-trade area Zona-merica, is happy to announce its partnership with Brazilian strategic regulatory partner ReMederi, aiming to bring its high-quality cannabis products to the largest Latin American market from January 2021.

Since its creation in June 2019, Pharmin has paid close attention to quality, aiming to bring the best available products to its B2B consumers. The company, a result of international cooperation, experienced entrepreneurs, and a diverse and talented team, is led by its CEO Ana Kobalia. The company will carry out cultivation operations in a GACP certified, 2.3-hectare hydroponic greenhouse with over 40 tonnes of annual capacity. The extraction process and the preparation of finished goods to be exported to Brazil would be conducted in a GMP certified laboratory with an ultra-low-temperature ethanol extraction process. The seed-to-sale traceability business model allows all parties involved to build relationships of mutual trust and transparency. Flexibility, quality and reliability are the key drivers of Pharmin's growth.

Following a clear trend of growth, in August 2020 Pharmin obtained the necessary licences from the Institute of Regulation and Control of Cannabis (IRCCA), which allowed its cutting-edge pharmaceutical-graded production line to become operative in Q4 2020, manufacturing and distributing non-psychoactive (CBD) products, with the aim of export-

ing EU-GMP certified psychoactive (THC-containing) products in the first quarter of 2021.

ReMederi, founded in 2019 by Fabrizio Postiglione, a specialist in the cannabis market with years of experience in Brazil, Europe and the US, is a company that operates as a strategic regulatory partner to open up the Brazilian market to international innovations with regards to medical cannabis products. The mission is clear: to make pharmaceutical-grade cannabis products more accessible to the Brazilian market through competitive prices. ReMederi's slogan *Rethink your Medicine* envisions a future where medical cannabis treatments in association with Integrative Medicine will improve health & wellness and reduce the use of opioids and benzodiazepines.

The partnership between Pharmin and ReMederi comes naturally: being neighbours that have close historical and cultural relationships with southern Brazil, both countries are members of Mercosur, the largest trade bloc in Latin America.

The Brazilian market has a potential of two million patients plus who could be treated with medical cannabis. ReMederi is the operational key player for **Pharmin's goal to become the main distributor of pharmaceutical-grade cannabis products in Brazil**, connecting potential laboratories that need reliable B2B cannabis products with flexible conditions, which only a company working in an international tax-free zone can offer.

Pharmin's B2C strategy focuses on innovation in a different line of products, crafted exclusively for the Brazilian market, which makes pharmaceutical-grade cannabis products more accessible through competitive prices, complemented by legal advice from local lawyers.

ReMederi will be able to offer full support for the purchase of products, with the added benefit of providing free legal advice and can work with both health insurance providers and SUS, the Brazilian publicly funded healthcare system.

The key to the success of this partnership lies in ReMederi's development of a specific go-to-market strategy for Pharmin in Brazil, while also leading its execution. **The first phase** focuses on the B2C market, providing education on and launching innovative products to help treat various ailments, for example different kinds of infection, pain, neural diseases and psychiatric disorders. ReMederi will offer support in delivering the cannabis products straight to the patient's home through the exceptional importation procedure.

The second phase focuses on selling reliable B2B cannabis products for the industry and pharmaceutical network.

"We see the partnership as a great social gain because it is a fusion of high quality with affordable prices, and a range of differentiated products" said Fabrizio.

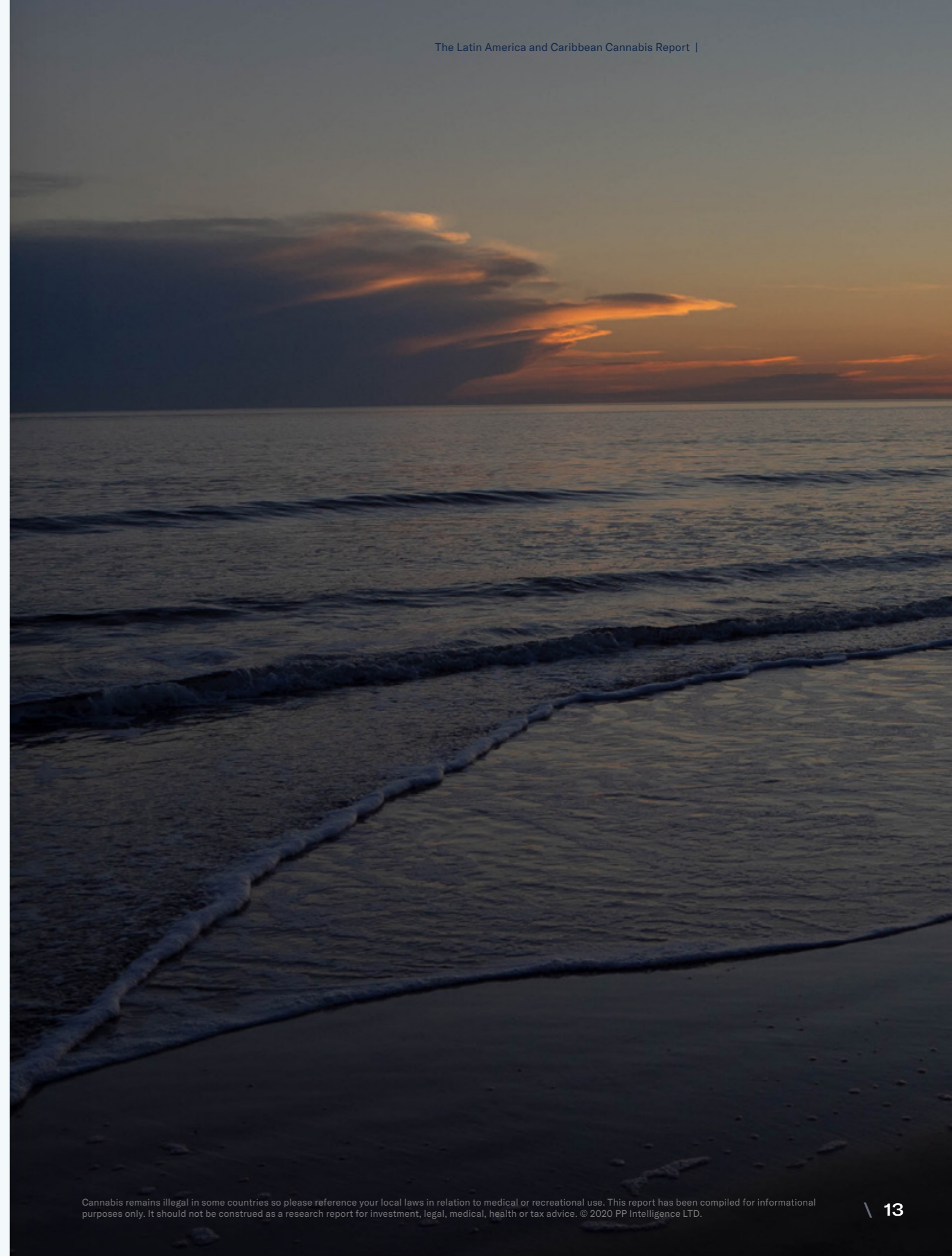
Patients will benefit from safe treatment and in the future from innovative products such as the combination of cannabinoids with terpenes. Brazilian laboratories will have access to a quality input supplier, which **will encourage the development of cannabis products in Latin America, no longer being dependent on Europe or the US.**

Anvisa, the National Health Surveillance Agency, has stated that 10 million patients could benefit directly from medicinal cannabis in Brazil. Today, in the legal market, we have only 10,575 import authorisations and

the vast majority of these are limited to treating epilepsy, autism and anxiety, according to official numbers.

The potential of the Brazilian market is clear as is the quality of Pharmin's production. Leveraging these regional synergies will bring high quality healthcare to Brazilian patients.

To find out more about us, click here
<https://www.pharmin.com/en>



Background and State of the Art

HISTORY OF CANNABIS IN LAC: A GLANCE INTO ITS ROOTS

LAC has a long history when it comes to cannabis and hemp, intertwined with the colonisation process of the continent, both its introduction and its prohibition.

Cannabis was introduced into the region in the 16th century, along with many other plants. As part of the increasing exchanges that came with the European colonisation process, the plant and its consumption were relatively common during the late 16th to the 18th centuries. In Brazil, it was mostly brought by slaves from today's Angola, and for several centuries it was grown and consumed mostly by the Afro-Brazilian and indigenous populations, having a strong presence in the rituals of religions, such as Candomblé and Umbanda. Later on, in the first half of the 19th century, the then capital city of Brazil, Rio de Janeiro, prohibited the use of the plant, mostly due to pressure from the Catholic Church and to the underlying force of racism towards the non-white population, particularly those of African heritage. A similar process took place in several Caribbean islands, with seeds being brought from Africa or from Brazil.

In Mexico, hemp was cultivated since the early 16th century as an important agricultural commodity, while the medical uses of cannabis were known at least since the early 18th century. In later years, cannabis use was to be an important element in the prohibition of

the plant in the US as part of an anti-Mexican feeling in the south due to historical conflicts.

During the colonial period, hemp was cultivated to produce clothing and shipping accessories, as well as being used for ropes and other accessories in the mining industry, a crucial sector during the first centuries of colonialism.

Hemp cultivation played an important role in the industrial reconstruction of Chile after the war of independence.

Later on, in the 19th and 20th centuries, a trend towards prohibition and the persecution of those who used cannabis and hemp gained force, mainly fostered by the new world ruling classes and religious elite with their interests in the cotton industry and conservative approach. Although relegated to the illegal market, cannabis production flourished as LAC became an international supplier of illicit drugs, suffering for years with a war on drugs and the consequences of illegal trafficking, which therefore reinforced the negative stigma attached to the plant.

The 21st century brought with it the beginning of the cannabis comeback, with Uruguay legalising its use in 2013, and others following the decriminalisation and legalisation trends.

2013–2018: YEARS OF OPENNESS AND GLOBAL POSITIONING

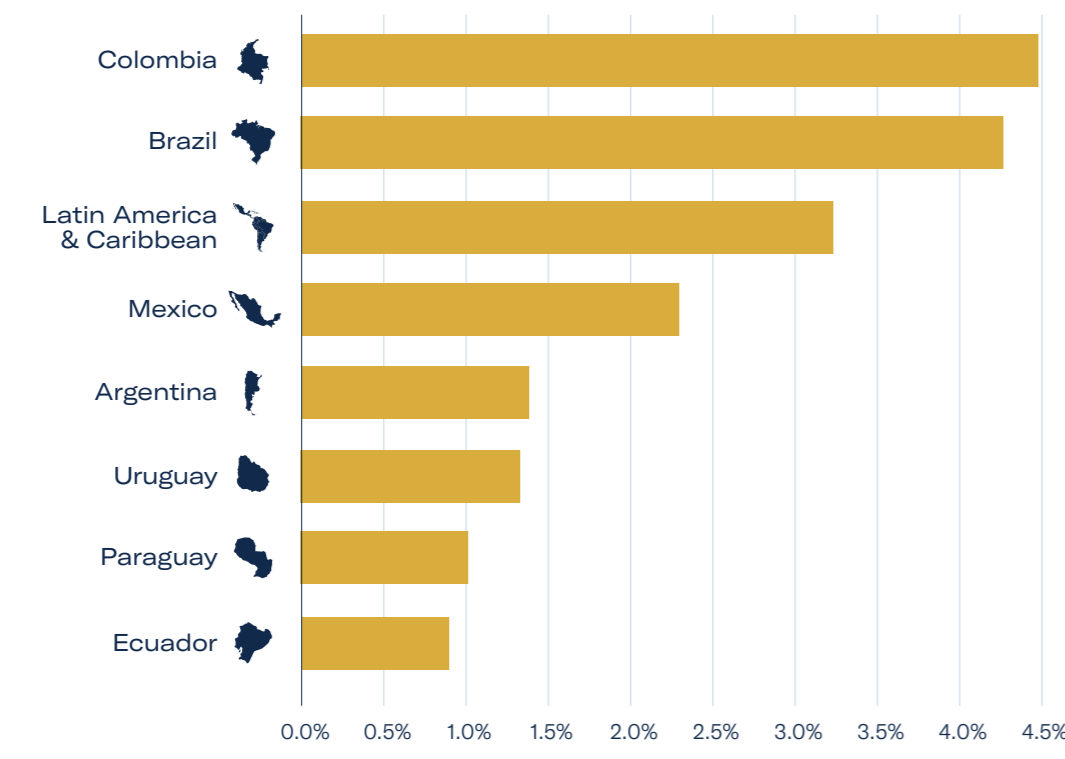
The years that span 2013 to 2018 could be considered as the rebirth of the cannabis and hemp industries in LAC. With legalisation in several countries, led by Uruguay and Colombia, the region received media coverage for the possibilities it offered. An emerging industry started to gain shape and attracted the attention of international investors.

Several companies established themselves in the region, mainly Canadian Licensed Producers (LPs) looking for emerging market opportunities. Despite the amount of investment, many of the approved laws lacked properly oiled regulation, and the supply chain, both at national and international levels, was inadequate to transform the potential into effective market presence and industry expansion – also limited due to a relatively unprepared global context in a still emerging industry.

2019: SOME DEVELOPMENT, BIG REALITY CHECK

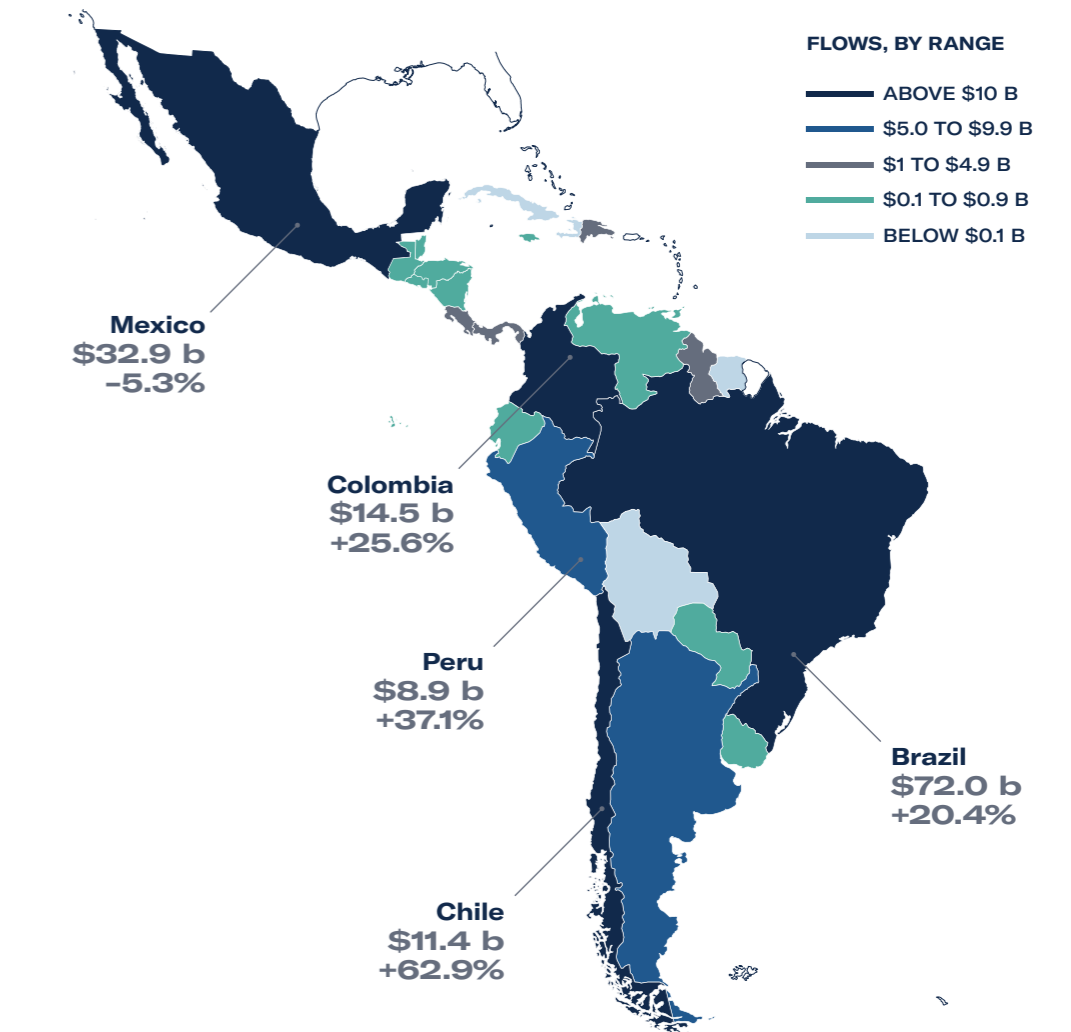
Over the first three quarters of 2019, as foreign investors sought to quickly establish themselves in the emerging LAC market through strategic mergers and acquisitions (M&A), partnerships, joint ventures (JVs) and agreements, foreign investment increased and made up a significant share of Gross Domestic Product (GDP) for some countries. However, towards the end of 2019 it became evident that optimism had outpaced the reality of the opportunity as the slow pace of regulatory change in the region saw investors strip back their investments; in the face of mounting losses, they were forced to focus on near-term revenue generation in regions with more clear-cut legislative progress. Nevertheless, FDI in the region increased considerably in 2019, signalling a trend towards increased foreign investment in LAC beyond the cannabis industry.

Foreign direct investment as part of GDP (%), 2019



Source: World Bank, 2020

FDI flows, top 5 host economies 2019



Source: UNCTAD, 2020

Some of the most interesting events that took place during 2019:

In terms of legislation:

- Peru completed the process for cannabis product legislation in February.
- Argentina: owing to the fact that Argentina's provinces have some autonomy on the matter, Jujuy became the first Argentinian province to start cultivation.
- August saw the St Kitts and Nevis government decriminalise small amounts of cannabis for medicinal and other purposes.

- In September, the Ecuadorian National Assembly approved the production, commercialisation, use and consumption of cannabis for medicinal or therapeutic treatment as well as the cultivation of hemp.
- In mid-July, a Salvadoran lawmaker, Francis Zablah, introduced a bill to legalise cannabis for medical use in El Salvador, as well as aiming to legalise domestic production and imports for this purpose.
- August saw cannabis advocates petition the Trinidad and Tobago parliament to enact already existing medical cannabis legislation. In November, the government of

- Trinidad and Tobago brought two cannabis reform bills before parliament – one to decriminalise low-level possession and another to legalise cannabis for medical and religious purposes.
- In October, Paraguay's congress passed a bill making it possible to import cannabis seeds and grow the plant for medical uses, having authorised the importing of cannabis oil in May under the control of the health ministry.
 - In November, the first Latin America Hemp Summit took place in Montevideo, Uruguay attracting guests from over 22 countries.
 - December also saw Uruguay's Senate pass a new bill to regulate medical cannabis. Despite being legal since 2013, it had been mired by inadequate supply thus the bill was introduced to promote and regulate the population's access to cannabis and cannabinoid-containing medical products, and it was approved unanimously.

In terms of companies:

- Canopy Growth extended Latin American operations with Spectrum Cannabis Peru.
- AusCann set up a JV in Chile.
- Khiron Life Sciences established a merger in Uruguay and a Memorandum of Understanding (MoU) with Dayacann in Chile.
- Players Network had agreements in Jujuy, Argentina.
- Future Farm expanded operations in Puerto Rico.
- NanoSphere invested in Mexican hemp products.
- PureHarvest set up a JV with regards to Colombian cultivation.
- Next Green Wave had a stake in a Colombian subsidiary.

- GNCC Capital Inc. acquired BioCann Pharma SAS in Colombia.
- Weekend Unlimited acquired R&D Pharma's Jamaican assets.
- Tilray acquired Alef BioTechnology in Chile.
- SLANG Worldwide became involved in a Puerto Rican venture.
- General Cannabis invested in Planthro Inc S.A.S. in Colombia.
- CannAmerica introduced a Mexican facility.
- MYM increased its stake in Colombia's Orgánica.
- Blueberries Medical acquired BBV Labs in Argentina.
- MGC established operations in Brazil.
- Plena Global ventured into Peru.
- Vireo Health expanded into Puerto Rico.
- Capita Verde made an import and distribution deal in Mexico.

Simultaneously, certain events showed that, despite high aspirations, the speed and continuity of new developments are not always what is best for the industry, for several reasons.

The 2019 reality check

Over the course of 2019, there were endeavours to bring the region in line with Canada by reducing the legislative barriers in LAC; however, despite some key legislative achievements taking place, regulatory progress proved to be slower than expected.

Examples of the challenges faced by the LAC industry in 2019:

- Mexico announced its intention to legalise recreational cannabis in February but then missed an important deadline owing to the unpredictability of its legislative process.

The deadline was extended to 30 April 2020, but was then postponed due to the COVID-19 pandemic.

- June 2019 saw Colombia's Constitutional Court overrule a ban on the public consumption of cannabis; however, the country was struggling to unlock its export potential owing to the high level of red tape around standards and certification.
- Although cannabis was decriminalised in 2015, Jamaica did not approve regulations to facilitate the export of medical cannabis in line with the new legislation. In May 2019, the Minister of State for the Ministry of Industry, Commerce, Agriculture and Fisheries declared that by the end of the year, regulations would be in place for investors in the local medical cannabis trade to comfortably access international markets. However, this was not achieved in 2019.

Towards the end of 2019, it became evident that LAC's potential in the global cannabis market was proving slow to materialise as a result of a lack of regulation following the legislation and an unprepared international market in an overall emerging industry.

This financial tremor saw many of the major producers in North America take the decision to concentrate their efforts and funding on near-term revenue projects, with many of the Latin American subsidiaries and projects paying the price as a result of restructuring and redundancies. This was evidenced by Canopy Growth's decision to cull 15% of its workforce in LAC, with Spectrum Therapeutics in Argentina feeling the force of cuts to overheads to ensure the company could focus on commercial sales going into 2020.





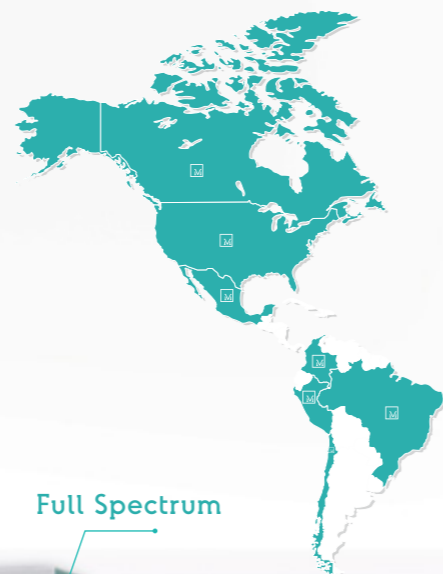
VerdeMed

Bringing cannabinoid-based pharmaceuticals to doctors and patients in Latin America



A Canadian company with an international footprint. R&D and production in Canada and USA, with best in class technologies and operations

Boots-on-the-ground in Latin America with extensive and deep knowledge of the regulatory framework of each market



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2020: COVID-19, EU-GMP AND A CONSOLIDATION TREND

Despite 2020 being impregnated with COVID-19 all over the world, including LAC, which negatively affected the industry in various ways, some events are worth highlighting, as they demonstrate a solid interest in the industry and in the region. In fact, the pandemic, which sadly is still affecting so many across the world, has brought strengthened attention to the hemp and cannabis industries via consumer interest as well as an increase in the interest of the production sector in sustainability and healthcare.

Some achievements so far in 2020 go beyond symbolic open doors that until recently were considered closed, which is creating a renewed ripple effect in the region, attracting interest to the industry from governments, local and international companies and investors; of note, there is an emerging trend towards intra-Latin American deals.

Some 2020 events worth highlighting:

- In January, Brazil's regulatory body, the National Health Surveillance Agency (ANVISA), updated regulations, allowing for faster prescription verification and the use of proxies by patients for importing companies.
- In February, the Paraguayan authorities awarded the first medical cannabis production licences to 12 companies, many with capital from the US and Brazil.
- In March, three Mexican Senate committees approved a cannabis legalisation bill, but voting by the full chamber and other government authorities is still pending.
- In April, the first Brazilian pharmaceutical company received authorisation for the nationwide sale of its cannabis-based product in pharmacies for five years.
- In May, Uruguay-based Fotmer Life Sciences exported a record shipment of 1.5 tonnes of cannabis to an unknown buyer in Portugal. This brought attention to the certification debate, as the company, despite having Good Agricultural Collection Practices (GACP) and local GMPs, does not hold EU-GMP certification, which is the main requirement for European markets.
- In May, the Argentine company Cannava, in a Public-Private Partnership (PPP) between the Jujuy province (northwest) and American Green Leaf Farms, announced its first extract production.
- In May, a cannabis-focused clinic opened in South America's financial centre São Paulo, following the opening of a similar clinic in Rio de Janeiro in December 2019.
- The Latin American Industrial Hemp Association (LAIHA) was founded in May. Based in Brazil, it has members from Brazil, Colombia, Paraguay and Uruguay. It aims to unite the continent's stakeholders to regularise and explore the hemp potential of the region.

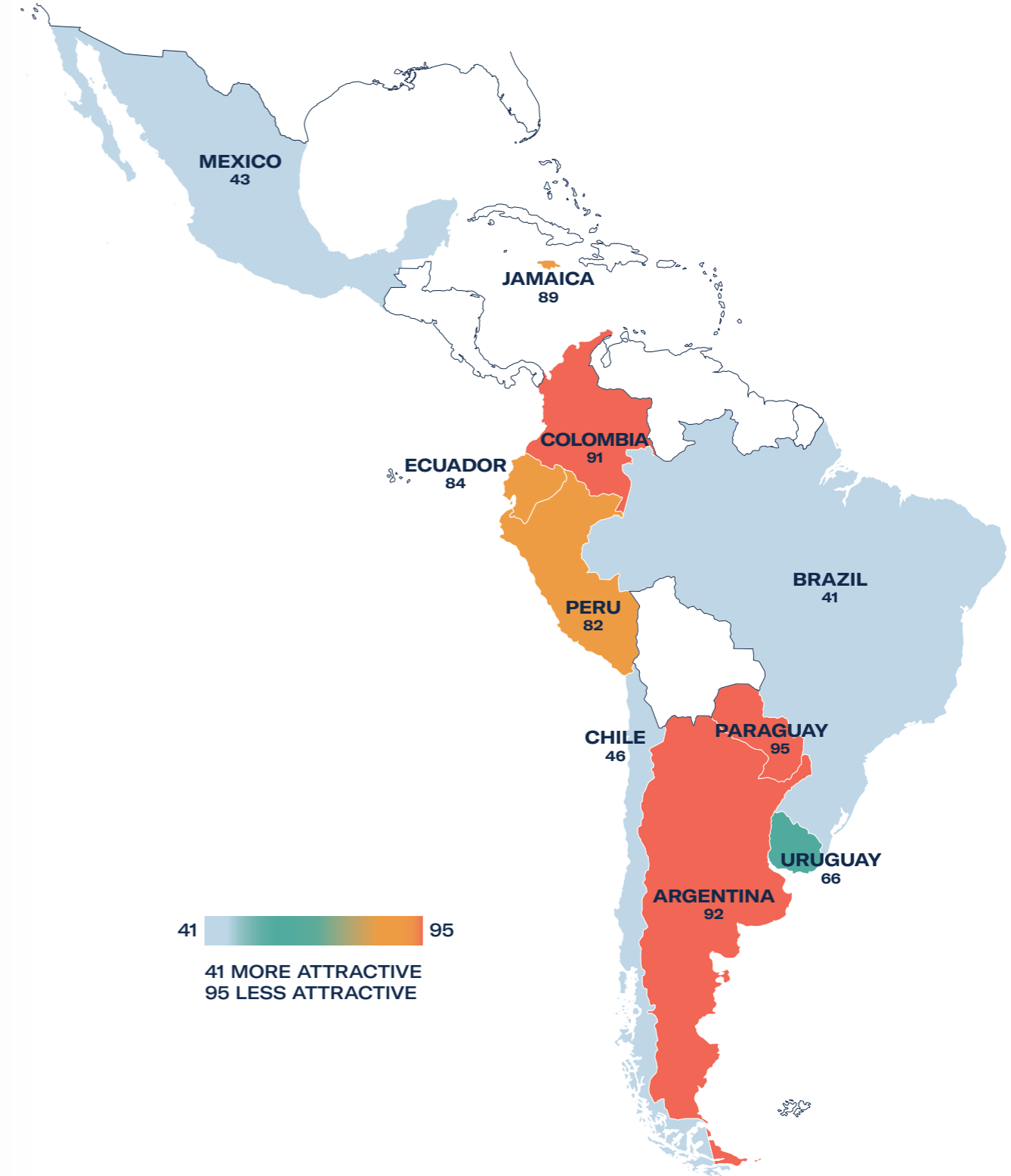
Some achievements so far in 2020 go beyond symbolic open doors that until recently were considered closed, which is creating a renewed ripple effect in the region, attracting interest to the industry from governments, local and international companies and investors; of note, there is an emerging trend towards intra-Latin American deals



- In May, the Jamaican authorities established temporary cannabis export and import regulations, including the possibility of online cannabis sales during the COVID-19 period.
- In June, a new online system was launched by the Colombian National Food and Drug Surveillance Institute (INVIMA), aiming to accelerate the number of cannabis-related licences.
- In June, Colombian-based Clever Leaves received its EU-GMP certification, awarded by the Croatian Agency for Medicinal Products and Medical Devices (HALMED), achieving a much-desired milestone by local producers.
- In June, Colombian-based Khiron Life Sciences announced that it was to be the first company authorised to sell high-THC and high-CBD cannabis for medical use in Colombia.
- In June, the Ecuadorian legislative changes related to cannabis and hemp came into force, starting the countdown for a regulatory framework expected in October 2020.
- In June, Uruguay-based Uruguay Can launched the first cannabis-related blockchain worldwide, aimed at tracking both medical and recreational cannabis.
- In July, the first cannabis-focused laboratory in Brazil, Ease Lab, received a venture capital round for financing of R\$3 million (US\$0.55 million) led by Next A&M Ventures.
- In July alone, three foreign companies received approval to register their products in Peru as a result of the progressive and industry-friendly legislation.
- In July, the Argentine government allowed for home cultivation and the production of cannabis-based over-the-counter (OTC) products by local dispensing pharmacies.

- In July, Uruguay-based UCAN completed its first shipment of 50 kilograms of cannabis flower to Switzerland.
- In August, as COVID-19 was still affecting the region, the increasing trend towards telemedicine became a major focus in several LAC countries and is prevalent post-COVID in countries such as Brazil, Chile, Colombia and Peru.
- In August, a proposed law aimed at legalising cultivation of cannabis and hemp as well as domestic production was submitted to the Brazilian Congress. The proposed law removed user cultivation, possibly aiming to achieve broader support.
- As COVID-19 hits the region, media coverage increases considerably regarding the economic opportunities that cannabis and hemp offer as a means to recover from the economic impact of the pandemic.
- Costa Rica announced plans to vote on the legalisation of hemp and cannabis cultivation, bringing a modern and eco-friendly new player into the industry.
- In August, President Mario Abdo Benítez of Paraguay signed a decree declaring hemp a 'crop of national interest', which signalled a clear intention to help this industry grow.
- In September, the Colombian government declared medical cannabis a Project of National and Strategic Interests (PINE or Proyecto de Interés Nacional Estratégico).

Regional score of the 2020 Global Attractiveness Index (GAI)



Source: The European House – Ambrosetti, 2020

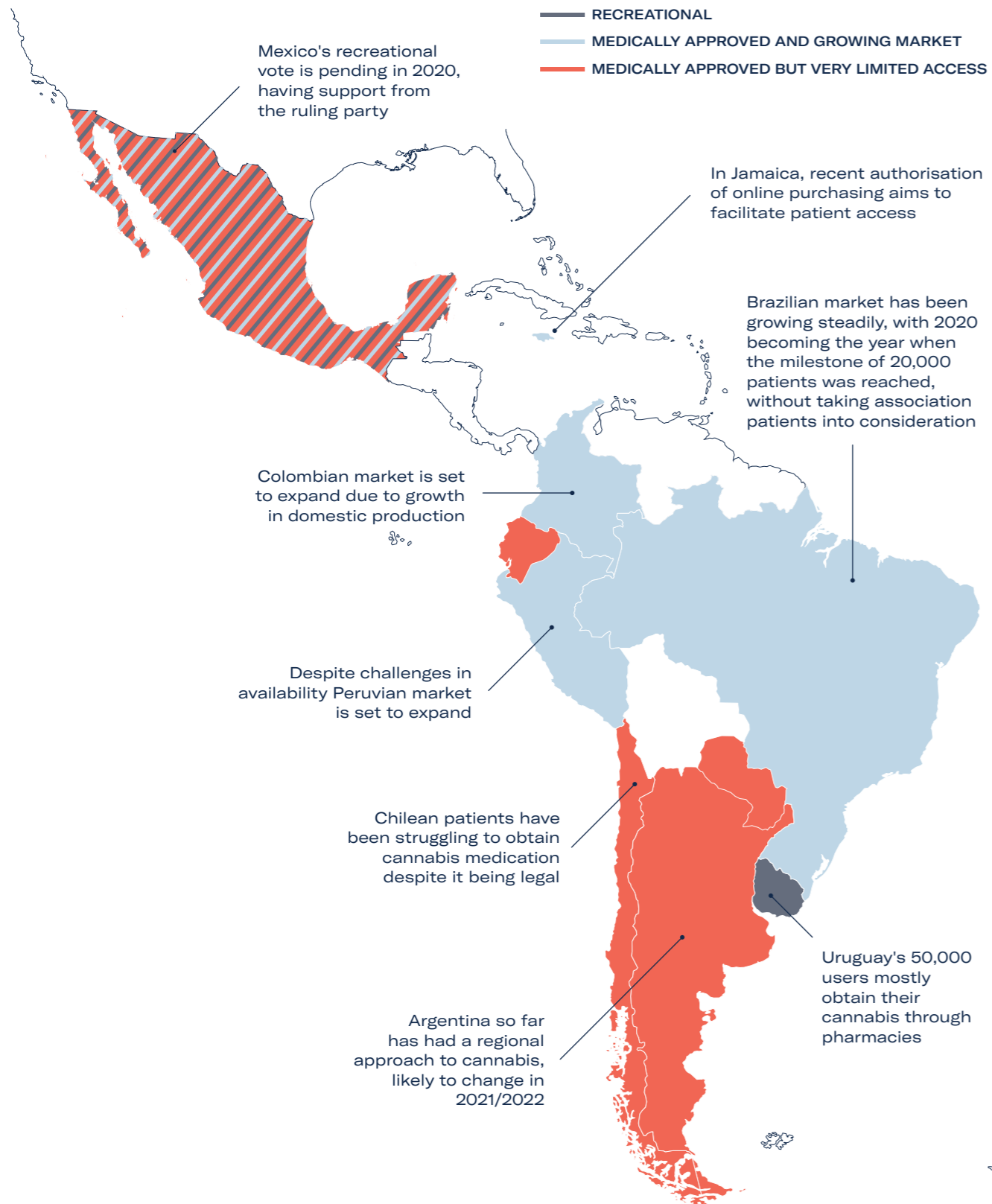
2021: PROGRESS AND LOCAL DEMAND

As 2020 is still unfolding, it is very likely that 2021 will start quite differently from previous years in various aspects, ranging from the organisation of society, to the way we work, study and communicate, and the way we access healthcare, with emerging industries seen as important to help overcome the COVID-19 crisis. Despite the uncertain atmosphere of 2020, some trends have started to consolidate, and important developments and milestones for the cannabis and hemp industries can be expected in LAC.

- As existing frontrunners Colombia and Uruguay step up their game, we can expect an increase in exports to the European market and increased hemp-related exports to both the EU and North America.
- As the local markets develop, we will see an increase in intra-Latin American business deals and co-operation, led by Colombian companies entering South American markets such as Brazil, Ecuador and Peru.
- Genetics and intellectual property (IP) will play an increasingly important role in the hemp and cannabis industry, particularly in the seed trade.
- Following Ecuadorian regulations, which are expected to be published during the last months of 2020, we can expect the country to become a major competitor in the industry, particularly when it comes to cultivation.
- The Brazilian market will start to become increasingly competitive as more companies are able to introduce their products into the region's biggest market and as local pharmaceutical companies develop and register more products.
- As a result of the pandemic and the approaching deadline for the Sustainable Development Goals (SDGs), we can expect increased attention to be paid to the sustainable and environmentally friendly options in terms of cultivation, extraction, manufacturing and waste management of cannabis products.
- Hemp is expected to attract increasing attention due to the region's potential for its cultivation and the sustainable uses it offers in the textile, construction, medical, paper and cosmetic industries.
- Also in line with the sustainability focus, the Environmental, Social and Corporate Governance (ESG) criteria for investments are likely to permeate the whole industry and associated industries worldwide, including LAC.
- Argentina is expected to boost its local cannabis industry following legal changes in 2020, while industry evolution in the largest regions, Brazil and Mexico, will depend on the legislative and regulatory updates that are expected in the last quarter of 2020.
- As recreational talks develop in Colombia and Mexico, we can expect at least one LAC country to join those select group of countries that permit recreational cannabis.
- Besides cannabis, studies and interest in psychedelics are growing in a region that is home to several plants that have potential in this industry and in a region that has indigenous traditions in and knowledge of these plants.
- **Last but not least, growing demand for a local market can be expected to emerge, shifting the attention from an export-only economy to an industry that will pay increasing attention to tapping into the local market opportunities, facilitated by a highly urbanised population, a high pharmacy-chain market share, a wide availability of delivery services and a growing telemedicine trend in a highly digitalised society.**



Status of patient and user accessibility to cannabis in Latin America and Jamaica



Source: Prohibition Partners



Hemp, Sustainability, Genetics and Recreational Cannabis:

Four Sources of LAC's Potential

HEMP

Hemp, locally known as *cânhamo* in Portuguese and *cáñamo* in Spanish, has played an important role in the history of LAC. From being one of the main fabrics used during the colonisation era and being widely cultivated in several countries, particularly in Argentina, Brazil, Chile and Mexico, some Latin American countries still cultivate hemp today. It is a trend that has been slowly growing in recent years and has a promising future for the years to come, as hemp demand is expected to grow substantially during this decade (including CBD from hemp, seeds for food and beverages, and fibre for the textile, paper and construction industries), boosted by hemp's properties in terms of sustainability.

It is impossible to talk about hemp in LAC without highlighting Chile, where hemp has always played a vital role in the agricultural industry. With Chile being the main supplier for centuries for other Latin American countries as well as for Spain, its hemp has been considered the best quality worldwide and has ranked several times among the top exports of the Andean country during its history, particularly in the context of World War 2.

In the midst of the hippie movement and the global ban on hemp, plus the growth of the plastic industry, hemp cultivation in Chile suffered from market and political pressures that came to an end with the prohibition of hemp about 50 years ago. Today, hemp cul-

tivation is not allowed in Chile, but its latent potential is there, and 2019 witnessed the re-introduction of hemp-based dietary products by the hand of Pronatura Ltda. The company declared in September 2019 its will to bring the hemp industry back to Chile, to boost its cultivation and exports and reposition the country as a global hemp leader.

In the rest of LAC, interest has been renewed in the hemp industry, particularly in Colombia and Uruguay. Both countries are today considered to be years ahead in the cultivation and use of hemp for medicinal purposes. For example, in Colombia, only one licence is required for hemp cultivation, a much simpler bureaucratic process when compared to the licensing for cannabis cultivation.

This trend was followed by Paraguay, which in October 2019 passed a law allowing for the cultivation of hemp up to 2 hectares per family, with estimates from Paraguayan authorities of about 25,000 families interested in the business. Despite the exclusivity for small producers, companies from America and Brazil, two countries with large investments in Paraguay, have shown interest. It is important to highlight that Paraguay is often portrayed as one of the main sources of illegal cannabis in the southern South America market. Following this initial opening to the industry, the country awarded 12 vertical integration licences in February 2020, exclusively for existing pharmaceutical companies, which include authorisation to cultivate plants that contain less than 0.5% THC. The law requires producers to donate at least

2% of their production to governmental authorities for free public distribution.

Mexico, another potential big player in the hemp industry, is on the path to legalisation, which is expected soon, but the proposed law has been criticised as unfavourable to hemp, treating cannabis, with elevated THC content, the same as hemp.

In Brazil, hemp cultivation is forbidden, receiving the same legal treatment as cannabis. Despite this, increased media coverage over the last months has shed light into the willingness of several players to have it regulated.

Brazil has a strong and innovative agro-industry, and a bill to authorise cannabis and hemp cultivation is awaiting a final

vote in congress by late 2020. The country's cultivation potential was placed under the spotlight after a 2019 study, from local start-up ADWA, found that 80% of Brazilian soil is of a good enough quality for hemp cultivation. This has been drawing further attention from investors worldwide.

In the island of Puerto Rico (not considered for this report due to being an unincorporated territory of the US, yet located culturally and geographically in LAC), the United States Department of Agriculture (USDA) approved in July 2020 the local production of hemp. The local government of the island has awarded over 30 cultivation licences, and aims for a total cultivation of about 7,285 hectares.

Cultivation conditions for cannabis and hemp in LAC



Source: Prohibition Partners consultation (primary source)

More recently, in May 2020, LAIHA was founded. Based in Brazil and with members from Brazil, Colombia, Paraguay and Uruguay, it aims to unite the continent's stakeholders to regulate the status and perception of hemp in the continent, unite its supply chain, and explore its cultivation and industrial potential in Latin America. Its founder, Lorenzo Rolim, has declared that agricultural leaders in the region can soon gain the knowledge to become top hemp producers, particularly Argentina, Brazil and Mexico. The region's potential goes beyond the raw material; finished products intertwined with existing important industries such as livestock, which is an industry under pressure to become more sustainable and fairer, could benefit from hemp investments and synergy.

Key figures

AVERAGE LEAF OUTPUT PER HECTARE

400 kg

AVERAGE SEED OUTPUT PER HECTARE

900 kg

MAIN PRODUCERS 2020

Colombia, Paraguay, Uruguay

POTENTIAL FUTURE PRODUCERS

Argentina, Brazil, Chile

SUSTAINABILITY

Interest in sustainability in several areas has been growing steadily over the last few years, an interest that has been boosted due to the COVID-19 crisis. This can be seen in the fi-

nancial and productive sectors, where ESG is gaining more of the spotlight as a key element for future investments, particularly as we approach 2030 and the deadline for SDGs.

The 17 Sustainable Development Goals



Source: United Nations

The hemp and cannabis industries have also been influenced by this growing interest, which comes as no surprise, particularly as hemp is known for being a regenerative plant, requiring for example about 75% less water for its cultivation compared to cotton, a difference of trillions of litres of water per year, just for T-shirt production.

Today, cotton represents over 75% of the global fabric industry, therefore hemp offers a production possibility, being competitive and much more sustainable. Several brands are starting to take advantage of this, which also has positive impacts in terms of marketing for the growing sector of conscious consumers.

Another area where sustainability and hemp are coming together is in the construction industry, with products such as hempcrete, which is a combination of hemp and other materials to create solid, sustainable bricks for houses and other buildings. Hempcrete is carbon negative, light, isolant, and has an average duration of about 100 years, after which it can be used as land fertiliser. This would seem to represent a definite opportunity for an industry that makes up about 40% of total CO2 emissions worldwide. Hempcrete use in LAC has been growing in Costa Rica since 2018, and has received recent attention in the media in Brazil, Chile and Mexico.

The cannabis industry is today facing challenges worldwide when it comes to waste

management, with laws such as the 50/50 in Colorado, which requires cannabis operators to mix the plant leftovers with other materials before disposal, proving to be counterproductive, doubling the amount of waste that is being sent to landfill and increasing the ecological impact especially as those plant leftovers could be used for other industrial applications. Learning from these waste-management regulations in more developed markets such as North America offers leapfrogging possibilities for LAC producers, current and future.

Smarter solutions and stronger regulations are expected for the years to come, and despite sustainability of cannabis and hemp being in the initial stages, several individuals involved in the sector in LAC have reported an increasing interest and attention to this vital side of the business, shifting the view from a mere cost to a real benefit.

In LAC, companies such as Yvy in Uruguay are adopting sustainable cultivation practices, and Canadian company Kindness 3D are making prostheses with cannabis packaging waste, already used in Brazil and Costa Rica, amid a growing focus on sustainability. Khiron in Colombia is moving in the same direction, with the announcement that a solar energy park will generate 40% of its energy requirements in Doima, reducing CO2 emissions by 570/year.

Currently, biomass leftovers are not allowed to be used for other purposes in Peru, where they have to be incinerated, nor in Uruguay, one of the region's top producing countries, but talks have been taking place around allowing the leftovers to be used to produce other materials, mainly paper and construction materials.

In Colombia, some companies are increasingly interested in biofuel production from hemp seeds – a seed weight is about 30% to 35% oil – as an eco-friendly alternative to fossil fuels. The country is currently LAC's top palm oil biofuel producer and despite its recent growth, the industry is perceived as highly damaging to the environment. Companies

such as the Colombian/American H.E.M.P. Fuel Group aim to cultivate by 2025 about 20,000 hectares for hemp-based biofuel production. Other countries are aiming to join the hemp-based biofuel industry, such as Ecuador, a country with a strong energy sector in fuel oils, which has recently joined the group of countries in which cultivation is legal.

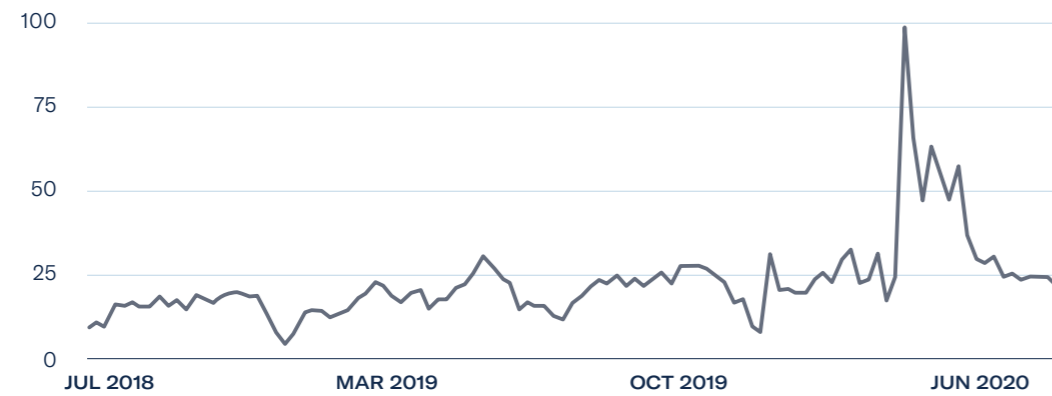
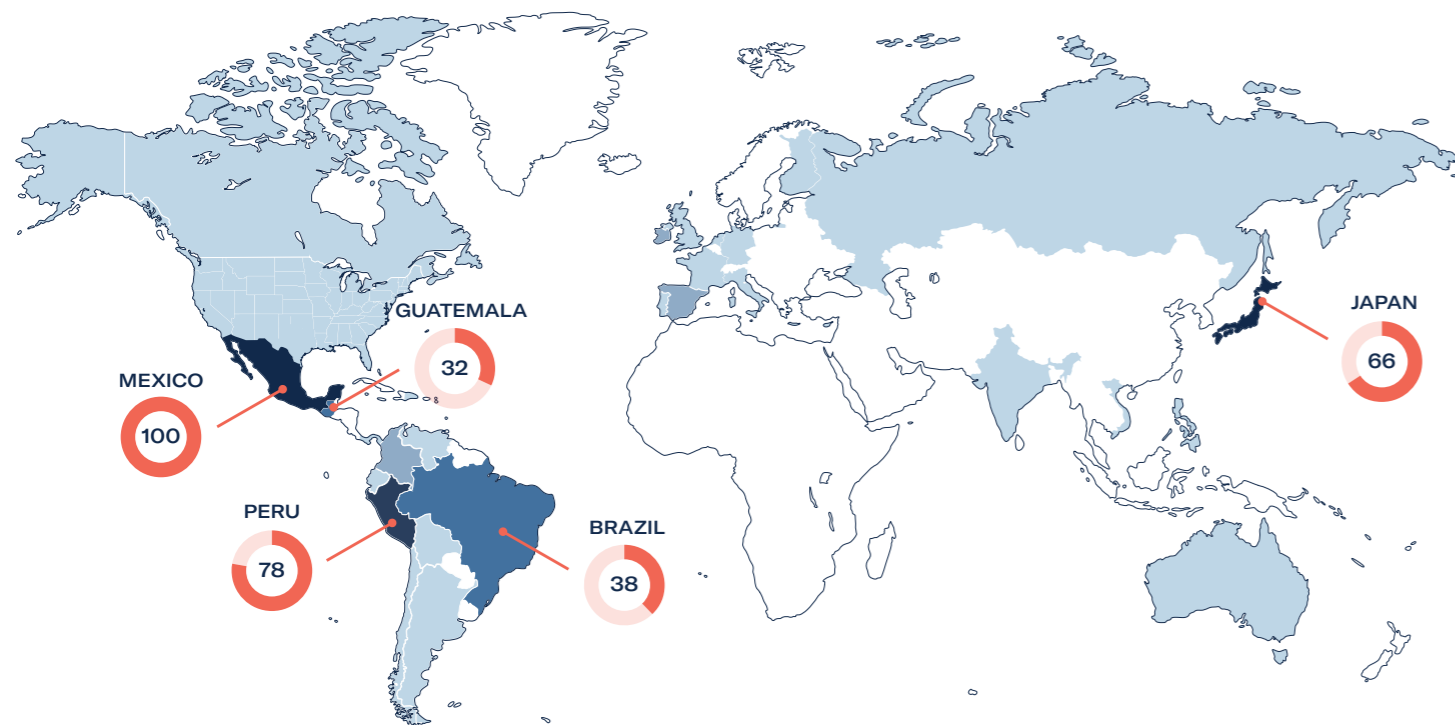
Also in Colombia, the company Orinoco Hemp is emerging as one of the largest carbon-negative hemp cultivation projects in LAC. The company has received support from British renewable energy companies and Chinese hemp technological companies.

In Brazil, the company Reserva is already well known for its textile products based on hemp, marking them as sustainable and eco-friendly, which allows the company to tap into the conscious consumer. Also, discussions around cultivation legalisation could benefit from a national agrotech trend, locally known as 'agriculture 4.0', which is bringing several technological advances to the agricultural area, including sustainability-related advances.

In terms of sustainability and the hemp industry, all eyes are now on Paraguay, where licences for cultivation are faster to obtain compared to its neighbours. The country is currently the base for a biodegradable plastic project where 300 hectares are already planted through Canadian technology, which has been bought with the help of LAIHA.

Hemp cultivation, with its land detoxifying properties, offers interesting business opportunities that go hand in hand with sustainable and environmentally friendly growth, and this potential is naturally awakening the interest of many producers and investors in Latin America.

Top five countries, searches for ethical consumerism, 2020



Source: Google Trends, August 2020

The trend towards sustainable consumption in LAC is clear. Data from Google Trends shows that the research for 'ethical consumerism' has been steadily on the rise for the last few years, with a clear peak since COVID-19. Interestingly, the top five countries where research for this topic has taken place includes 4 LAC countries, as can be seen in the above illustration.



EXPERT INTERVIEW



Juan Mato

Director of Sustainability,
LAIHA & 613 Partners

My name is Juan Mato. I am a geologist by training and an environmental and sustainability consultant by profession. I have worked on five continents and have helped different companies to develop their sustainability area and to be able to monetise their positive environmental impacts, promoting Socially Responsible Investing (SRI) and the use of environmental, social and governance parameters (ESG). Since 2018, I have led the sustainability team of the Colombian consulting firm 613 Partners, both in Colombia and Ecuador, from which we advise our clients, both from the public and private sectors, in matters of ecological footprint, carbon footprint, water footprint, management, waste treatment and energy efficiency. My objective is to promote the use of industrial hemp as a tool to achieve the SDGs (2030) in the Latin American region.

What are the trends that we can expect to observe in relation to hemp cultivation and sustainability issues in Uruguay and Colombia in the coming months?

In Uruguay, flower exports to Europe will continue. In Colombia, groups like 613 Partners are certifying high-quality seeds for flower and will soon be stabilising industrial hemp at 12 / 12h cycles of natural light. Regarding sustainability, there is still a long way to go; however, in Colombia the impact funds based on ESG that are promoting projects within the sector are growing, which implies positive progress in this matter.

What will be the attitude of countries such as Colombia and Uruguay to the growing wave of legalisation in other countries of the region, for example Ecuador and Peru?

Colombia seems to be reacting to Ecuador's new legislation and updating its legislation to allow the export of flowers and biomass, until now prohibited. With regards to Uruguay, it remains firm in its initial model and the maturity given by being the pioneer country – it is currently in internal debates regarding medical use within the country.

What is the interaction like between the cannabis sector and Mercosur, and what possibilities are there for the future within the commercial bloc?

For now, it is not very integrated. Colombia stands out from all for levels of foreign investment. The sleeping giant, which is Brazil, is yet to arrive and until now has been limited to importing CBD from countries such as Colombia. The Latin American Industrial Hemp Association has been having several conversations with Mercosur to try to find that union within the sector and promote those agreements between countries that facilitate commercial transactions.

In your opinion, what has been the greatest advance in the region on cannabis issues during 2020?

The irruptions, first in Paraguay and more recently in Ecuador, have generated many expectations due to the strong support at the government level and the presentation of favourable legislation. Both could become im-

portant players. It is also worth highlighting the start of exports from Colombia and Uruguay.

Beyond Europe with cannabis, where is the Latin hemp industry looking in terms of exports?

The US by proximity and, by the number of investors from the countries in the region, in the background could be Canada.

Is sustainability emerging as an additional cost in the production chain in the cannabis and hemp industry or the opposite?

At the moment it is still seen as an additional cost. It is still necessary for the industry to take sustainability and responsible and sustainable investment based on ESG criteria seriously. The next step is to educate the industry on the benefits of carrying out projects by implanting the foundations of sustainability and showing how to monetise them and the attraction that this can generate at both national and international investment level. The potential is there, but for the moment the industry is more focused on executing its projects and making its investments profitable.

GENETICS, SEEDS, AND INTELLECTUAL PROPERTY

Genetics plays an important role in the cannabis industry, both for the possibilities it offers in terms of variety, productivity, quality and resilience, but also when it comes to traceability. Nowadays, most legal markets limit the genetic sourcing to a select group of countries, namely Bulgaria, Canada, Israel, Spain and the US, with Colombia joining the game as a major supplier to the region and beyond.

The international regulators have been paying attention to this emerging trend, with the World Intellectual Property Organization (WIPO) participating in a cannabis panel during the Brazilian Association of Intellectual Property congress that took place in August 2019.

Despite representing an important business opportunity, the seeds and genetics side of the industry has been underexplored and underestimated. This has started to change, in particular in LAC with the Colombian legislation, one of the world's most advanced when it comes to genetic IP. The Colombian particularity is not mere luck; it is the result of centuries of plant interbreeding, particularly in the second half of the 20th century, as the country was a centre for illegal cultivation.

Colombia is the only country in the world with a fully developed regulatory regime for IP and phytosanitary approval for cannabis seeds, meaning there are no grey legal areas, allowing for seed export.

By mid-2020, Colombia finalised its regulatory framework for cannabis seed exports, allowing for over 29 million cannabis seeds to be exported to the US (mainly Colorado) and to the UK, at a total value of US\$14.5 million. Exports of Colombian seeds are expected in Q4 and 2021 to several other countries in LAC and beyond.

The Colombian Agricultural and Livestock Institute (Instituto Colombiano Agropecuario, ICA) controls the production of certified and selected seeds and supervises import processes and seed research units. The seeds are produced by conventional and non-conventional methods of improvement, such as genetically modified organisms (GMO), which have been deliberately altered by the introduction of genetic material and the manipulation of its genome by genetic engineering techniques for planting. The ICA has been a pioneer in the genetic aspect of cannabis, a process previously contested by local producers as the process can take more than one year; however, it is now rendering new business opportunities.

By December 2019, the ICA had awarded about 337 genetic seed certificates, and had received over 1,100 applications.

Gmiracle, a Colombian company that has been involved in genetic testing for hemp cultivation in Colombia out of a 3-hectare facility, is just one company that has been awarded a certificate. The company is also undergoing genetic research projects with Colombian universities and is aiming to achieve new strains.

Also of interest is the work being developed in Colombia by Sierra Genetics, currently focusing on in-vitro propagation of fully characterised germplasm. Through a strategic partnership, the company has gained expertise in tissue culture preservation and genetic tracking, including a targeted panel of markers developed as an individual barcode to enable the tracking and authenticity of cannabis cultivars.

In Uruguay, there are a limited number of genetic varieties, which allows for easy traceability. Patents related to botanic or vegetal products are not allowed.

In Peru, newly approved regulations allow for seed importation from Colombia and the US exclusively, a process being managed by the National Service of Agri-Food Health and Quality (SENASA).

In Jamaica, it is possible to register a new seed with a genetic variation, but its export is not allowed for the time being.

The practice of applying for and obtaining patents has not been common in the cannabis and hemp industries worldwide until recently, when patents have been obtained mostly as an investor-attracting strategy. Besides patents, 'breeder rights' exist in some countries, particularly Colombia and Jamaica. Please find below an overview of the patents and 'breeder rights' in LAC.

- **Plant and seed:** a 'rights of the breeder of new plant varieties' can be obtained from the ICA in Colombia. The plant must be easily distinguishable from others, stable, and its characteristics, homogeneous across all plants from the same category. This permit is valid for about ten years and gives exclusivity to the original producer. It is important to note that botanic IP filings are challenging as they often fall into categories not suitable for IP registry.
- **Extract:** if an extract is modified at a molecular level, it can be considered for a patent.
- **Medical product:** most medical products qualify for a patent as long as they are innovative and comply with the required criteria and protocols.

Country-by-country updates:



Brazil:

Local pharmaceutical company Prati-Donaduzzi tried to patent cannabinoids in an oily solvent; however, the patent was denied by the National Institute of Industrial Property (INPI) for the lack of novelty. Brazil is known as one of the more challenging countries regarding pharmaceutical-related patents, with ANVISA having the right to carry out preliminary checks before the Brazilian Patent and Trademark Office awards a patent, one of the reasons for the country being placed on the 'Priority Watchlist' of the United States Trade Representative (USTR) and the Pharmaceutical Research and Manufacturers of America. Several laws, including the *2015 Biodiversity Law*, are relevant when thinking about IP and Brazil.



Colombia medical patents:

Colombia is generally perceived as a reliable country in terms of complying with international pharmaceutical laws. The country has enjoyed a growing trend in IP related filings since 2011, according to WIPO. One patent for a cannabis-based medical product appears to be registered as of August 2020.



Colombia industrial patents:

In November 2019, the company Nextleaf announced that it had been granted a licence by the Superintendency of Industry and Commerce – the Colombian government agency that administers IP rights. In Colombia, industrial design filings grew from 143 in 2009 to 417 in 2018.



Mexico:

Mexico comes across as the Latin American country with the most cannabis-related patents and ranks 12th globally for the same. The country's regulator, the Federal Commission for the Protection against Sanitary Risk (COFEPRIS), awarded 38 permits for cannabis-based products in 2018 alone, including food, supplements, beverages, cosmetics and raw materials – all of them for low-THC products (<1%). From 2015 to 2019, over 120 cannabis-related patents were filed in Mexico, positioning the country as an attractive market in the field of cannabis-related IP.



Peru:

The Andean country has 14 patents for medical products from a total of 7 companies, a number that places the country in the spotlight and at the crossroads of cannabis and IP. This matches the country profile in terms of IP filings, which have shown a steady increase in this area since 2009.



Uruguay:

As of August 2020, two registrations for patents relating to cannabis and hemp products were listed in the Uruguayan registry of patents: one from Orochem Technologies and one from Canopy Growth, both filed as 'inventions'. Opposite to Colombia, Uruguay does not show significant progress when it comes to IP filings in recent years, rather showing some decrease in terms of trademarks and industrial design, according to WIPO, and the National Directorate of Industrial Property (DNPI) does not allow for cannabis-related advertising.

Companies with variety registries in Colombia as of September 2020

Twenty-four companies have variety registries in Colombia:

Agroidea, Aprocor, Avicanna Santa Marta Golden Hemp, Blueberries, Breedco - ColombianBreeD, Colombian Organics, Earth Healing Colombia, Ecomedics, Ecocannabis, FCM Global, Foliumed, Khiron, ZOMAC Laboratory of Biotechnology and Biomineral Planter, LaSanta, Medcolcanna, Medicamentos de Cannabis, NiSierra, PharmaCielo, Planta Vida, Plantas Medicinales de Colombia, QualCann, Ronald Yusti, Wellness Pharmaceutical, and One World Pharma



Of these, only three hold export permits:

Avicanna Santa Marta Golden Hemp
Breedco ColombianBreeD
One World Pharma



Companies that are able to export by having a research unit:

Ecomedics
FCM Global
Medcolcanna
Medicamentos de Cannabis
PharmaCielo
QualCann



Companies that are permitted to export seeds from Colombia:

Avicanna Santa Marta Golden Hemp
Breedco - ColombianBreeD
Ecomedics
FCM Global
Medcolcanna
Medicamentos de Cannabis
One World Pharma
PharmaCielo
QualCann

Minister of the National Anti-Drug Secretariat (SENAD), Arnaldo Giuzzio Benítez, declared in August 2020 that Paraguay is studying the possibility of regulating recreational cannabis cultivation so that the product can be legally exported.

RECREATIONAL

The LAC has a long-term relationship with (illegal) cultivation, export and use of cannabis for recreational purposes, which is in part responsible for some of the stigma associated with the region. Ironically, it was this illegal cultivation that allowed the region to gain valuable know-how and genetic varieties that now represent a competitive advantage.

Adult use of cannabis varies across the region, with Chile being the country with the highest reported consumption in 2019 at 15.10%, according to the United Nations Office on Drugs and Crime (UNODC), which translates into over 250,000 active cannabis users, ranking third worldwide after Israel and the US and before Canada.

The *Law 20.000* modification, which covers psychotropic consumption, has been proposed repeatedly without any success.

Currently, the use of legal recreational cannabis in LAC is limited to Uruguay and is restricted to Uruguayan nationals. Access is allowed via cannabis clubs, pharmacies or home cultivation, all three requiring a permit from the Institute for the Regulation and Control of Cannabis (IRCCA). In July 2020, declarations from the authorities in Uruguay have been reported as signalling a willingness to loosen the restrictions and red tape around recreational permits.

In Argentina, there has been movement towards the modification of the *Penal Law 23.737* of 1989 and supporters took to the streets in January 2020, calling for recreational approval, which was backed by over 28 cannabis organisations.

Recreational use is currently awaiting a vote by the legislature in Mexico, which, if approved, would mean Mexico would become the largest market for cannabis worldwide.

In Colombia, talks aimed at legalising recreational use have been recurrent, some proposals aiming to modify the Constitution's *Article 49*, which concerns healthcare and drugs. The focus is on giving local farmers at least 35% of cultivation licences in order to avoid the industry being controlled by large corporations. In July 2020, a new draft legislation proposal was introduced for discussion, aiming for a vote before June 2021. This proposal survived a congress debate in September 2020 by just one vote.

In Paraguay, where most of the illegal cannabis in South America is cultivated, estimated at 7,000 hectares approximately, the Minister of the National Anti-Drug Secretariat (SENAD), Arnaldo Giuzzio Benítez, declared in August 2020 that the country is studying the possibility of regulating recreational cannabis cultivation so that the product can be legally exported.

In Jamaica, recreational cannabis is not allowed, but it has been reported that possession below two ounces (~56 grams) often leads to relatively affordable fines of approximately US\$5. Information with regards to the Jamaican authorities' plans on legalising recreational cannabis was unavailable at the time of writing.

In other relevant LAC markets such as Brazil, Ecuador and Peru, recreational discussion and approval are not likely in the foreseeable future.



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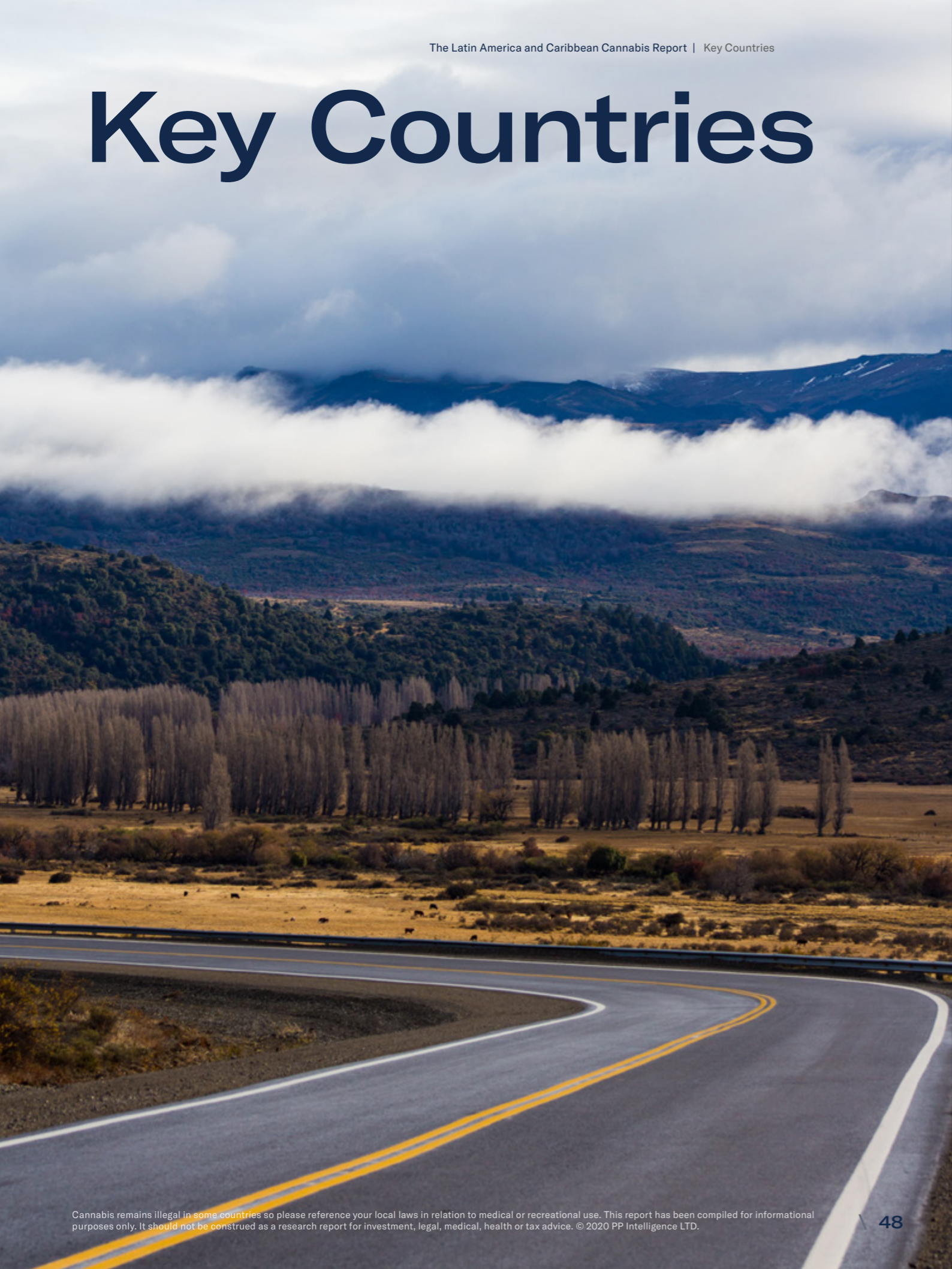
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Key Countries



LAC State of Affairs



Source: Prohibition Partners

All eyes are on Brazil, Ecuador, Jamaica, Mexico and Peru as these countries look for dynamic change in Q4 2020 and 2021, largely as a result of the legislative processes initiated in 2019, which faced resolution and implementation challenges in 2020. Colombia continues to attract significant levels of foreign investment but is facing competition from Uruguay, which has also embarked on its own export programme, although it has been slow to get off the ground considering the country was the first to legalise cannabis, in 2013. With complicated regulations delaying Colombia from fulfilling its ambitions of being the largest producer and exporter in the region, it must move quickly to extend its lead, as the newcomers on the market are likely to have identified some of the pitfalls that Colombia has faced in getting its product to market, and could quickly eclipse the country's early-mover advantage.

Based on legislation, industry development and market size, we have selected a group of frontrunners in LAC. Together, these countries represent by far the highest production capacity, with over 80% of the LAC population and GDP.



Colombia - a Pioneer and a Hub for Global Investment



Legal status:

Medical: Recreational:
 Cultivation: Export:

Companies in the cannabis and hemp industries*: **>400**

Number of cultivation licences: **543 (including cannabis, hemp and seeds)**

THC threshold: **1%**

Ease of doing business (WTO) ranking 2020: **67**

Average time to open a business (working days): **10**

Average farmland price (hectare): **US\$2,500–US\$5,000**

Total farmland: **40 million hectares**

Patients 2020: **>3,000**

People per pharmacy: **~2,400**

Pharmacy chains market share: **>61%**

Regulatory bodies

- **Colombian National Food and Drug Surveillance Institute (INVIMA)**
- **Colombian Agricultural and Livestock Institute (Instituto Colombiano Agropecuario (ICA))**
- **Ministry of Health and Social Protection of Colombia**
- **Ministry of Justice and Law**

Average time for licence obtention: **6 months****

Most relevant legislation and regulation:

- **Law 1787 (2016)**
- **Decree 613 (2017)**
- **Decree 1884 (2018, invalidated in July 2020)**
- **Decree 1156 (2018)**

Corporate tax: **32%**

Relevant groups:

- **Asocolcanna (Colombian Association of Cannabis Industries)**
- **Federación Colombiana de Cannabis y Cáñamo (FEDECANNABIS)**
- **Cámara Colombiana de Cannabis**
- **Asociación de Usuarios de Marihuana Medicinal de Ibagué**

Trading blocs: **The Pacific Alliance, The Andean Community, Latin American Integration Association (ALADI)**

FTAs: **Canada, Chile, EFTA, EU, Israel, Mercosur, US, Caribbean Community (CARICOM)**

Population 2020: **51 million**
 Expected 2030: **56 million**

GDP PPP per capita 2019: **US\$15,541**
 Expected 2024: **US\$19,677**

Foreign Direct Investment 2019: **US\$14,493 million**

Value of greenfield investment 2019: **US\$6,772 million**

Environmental Performance Index 2020: **50**

Global Attractiveness Index 2020: **91**

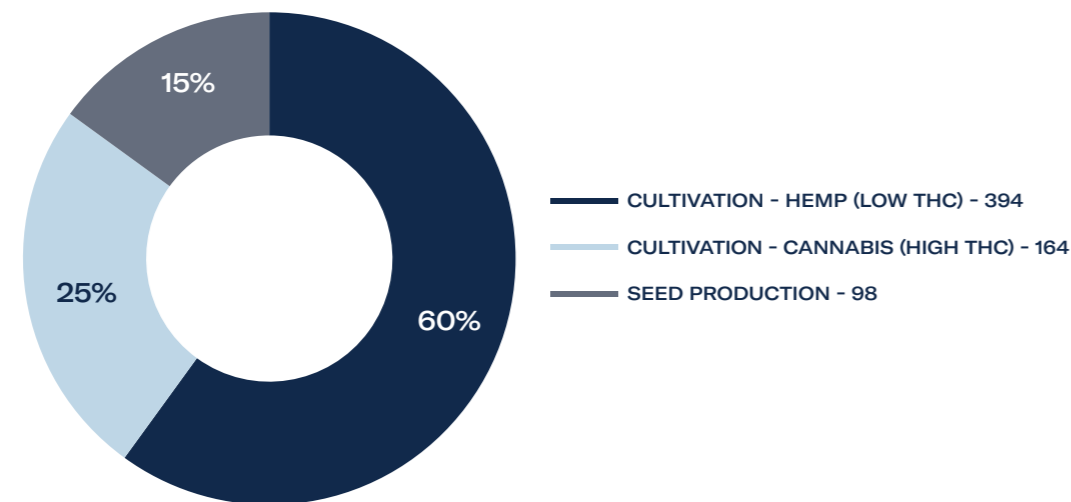
* An aggregate of cultivators, producers, brokers and other companies in the business.
 **The new INVIMA online system, approved in June 2020, aims to reduce time to 30 days.

Colombia decriminalised the possession of small amounts of cannabis and other illicit drugs in 2012 and legalised medical cannabis in 2016 – and while home cultivation for personal use is allowed, recreational cannabis remains illegal to date. Reform is, however, expected in the near term.

In June 2019, Colombia’s Constitutional Court overruled a ban on the public consumption of cannabis. It ruled that certain portions of President Iván Duque’s 2017 *Police Code*,

which banned public cannabis consumption among other things, were unconstitutional, as they violated citizens’ fundamental rights instead of protecting public and children’s safety as the code was supposed to. This allowed the country to put in place the legal framework and labour costs needed to make medical cannabis production profitable, with an export quota second to none – representing more than 25% of the world’s total cannabis that can be traded worldwide.

Cultivation licences by category



Source: Ministry of Justice and Law, 2020

Colombia has benefitted from ideal growing conditions and know-how of specialised agricultural products – being the second highest flower exporter worldwide after the Netherlands, with investment-friendly international regulations and an early-adopter advantage. The country has subsequently attracted the most foreign investment commitments in the LAC being the second-biggest region globally after the US for global cannabis investment projects in 2019.

Asocolcanna’s associated companies have invested more than US\$600 million building medical cannabis facilities in Colombia. The Andean country has a competitive price advantage due to relatively affordable land, low wages and a strong farming background and know-how.

Asocolcanna reports that most of the investment in Colombia’s legal cannabis industry is derived from Canada, followed by the US and the EU, with 70% of medicinal cannabis companies in Colombia being foreign-owned and 30% accounted for by national investors.

RECENT ACTIVITY IN COLOMBIA

Today the country offers several opportunities for the cannabis industry, particularly in terms of genetics, IP, seed exports, cultivation and an emerging local market and demand from patients. The uses for cannabis and hemp in the cosmetic industry also offer interesting business opportunities – in a country with a strong skincare and haircare culture, the cosmetics industry is projected to grow at 4.1% until 2025. The cannabis cosmetics sector can benefit from considerably lower regulations when compared to other cannabis products, signalling an emerging industry being already leveraged by companies such as Khiron with its KUIDA product line – expanding in Latin America – as well as Avicanna and Breedco.

The medical cannabis patient base is growing and is expected to continue doing so, particularly due to magistral prescriptions and the opening of clinics by local company Khiron in Bogota, which aim to treat over 120,000 patients. As of September 2020, Khiron had prescribed for about 2,000 patients in Colombia that year, 1,000 patients being given prescriptions in August alone, a clear signal of a growing local market and the use of telemedicine for prescription in tech-friendly LAC.

The Colombian local market for both OTC and medical cannabis is expected to grow considerably in 2021 through wider availability and more competitive pricing. This is due to increased domestic production and the leverage of existing distribution systems, such as that of unicorn delivery company Rappi, which had already partnered with companies such as Khiron and other cosmetics companies that sell CBD products by leveraging Rappi’s wide distribution network across the country.

- In September 2020, Khiron announced it had surpassed 3,000 patients in Colombia, of which approximately 1,000 were new patients from the previous month, signalling the potential of the market as well as the company’s focus on Colombian patients.
- Clever Leaves announced its EU-GMP certification in July 2020, becoming the first Latin American company to obtain a key to the European markets. The company also made it to the news for reaching a supply agreement with Spectrum Therapeutics in May 2020.
- In July 2020, the creation of FEDECANNABIS, a national association of cannabis and hemp companies, aimed at grouping small and medium producers, was announced.
- As of September 2020, Colombian companies have exported over 29 million cannabis seeds to Denver, Colorado, and the Colombian authorities are closing agreements with other phytosanitary authorities in LAC and beyond to provide seeds. This indicates an emerging business opportunity for Colombian companies that have followed the request from ICA to have their growing process fully tracked in order to register genetic varieties.
- Decree 1884, from 2018, which established penalties and confiscation for cannabis users in public spaces, was invalidated in July 2020 by the Council of State of Colombia, its highest judicial authority, bringing back the recreational debate.
- In July, Pideka S.A.S., fully owned by Inaki Farms, announced its first full-spectrum cannabis oil for both human and veterinary use in Colombia. The company also announced the first cannabis export from Colombia to Mexico, which was for R&D purposes, specifically cannabis-related treatments for COVID-19.

- In June 2020, a new online system from INVIMA to manage cannabis-related licences aimed to reduce waiting times from an average of 12 months to 30 working days.
- Khiron Life Sciences announced in June 2020 that it would be the first company authorised to sell high-THC and high-CBD cannabis for medical use in Colombia.
- In June 2020, the local government authority in Antioquia announced it was considering opening state-run cultivation, extraction and manufacturing facilities.
- Colombian-Canadian growers PharmaCielo exported derivatives to Switzerland in the summer of 2019, after three years in business. In January 2020, the company announced that it had received the global Good Agricultural Practices (GAP) certification for its propagation, flowering and medical cannabis production operations.
- Three of the largest cultivators, Clever Leaves and PharmaCielo from Colombia and Khiron from Canada, have a combined production capacity of almost 1,000 tonnes.
- In April 2020, Khiron announced a supply partnership with Venezuelan retail pharmacy group LOCATEL with pharmacies in Colombia, Venezuela and Florida, US.
- Clever Leaves, which has US investors, and runs its farm in the central province of Boyaca as well as a laboratory outside of the capital Bogota, sent 360 grams (12.7 ounces) of dried cannabis to Canada in February 2019, making it the first Colombian cannabis company authorised to export cannabis to Canada. It claims to be the first Colombian company certified by leading regulatory agency INVIMA to produce medical cannabis at a pharmaceutical level.
- In July 2019, Clever Leaves sent a 6,000-bottle shipment of supplements to London.

- January 2020 saw Mota Ventures Corp announce that its wholly owned subsidiary, Ihuana S.A.S., had completed its 2,000-square-foot R&D facility in Guasca.
- In 2018, Chemesis International invested more than US\$10 million in La Finca Interactiva, a Colombian company. By late 2019, Chemesis issued an update on La Finca and completed its agronomic evaluation programmes in the first quarter of 2020. This represents an important milestone for the business as it works to register its own genetics as IP, which will help the company to achieve its ambition of becoming a global seed supplier with a stable revenue stream.
- Santa Marta Golden Hemp, a Colombian company with the full set of licences, sold 60% of its shares to Canadian firm Avicanna in August 2018. One year on in 2019, Avicanna announced that Santa Marta Golden Hemp had exported its first batch of purified cannabidiol from Colombia to Canada for scientific research.
- Canadian company Khiron has been selling cannabis-based cosmetics since December 2018 and, in January 2019, undertook a joint venture with Dixie Brands in order to bring branded cannabis-infused products to LAC.

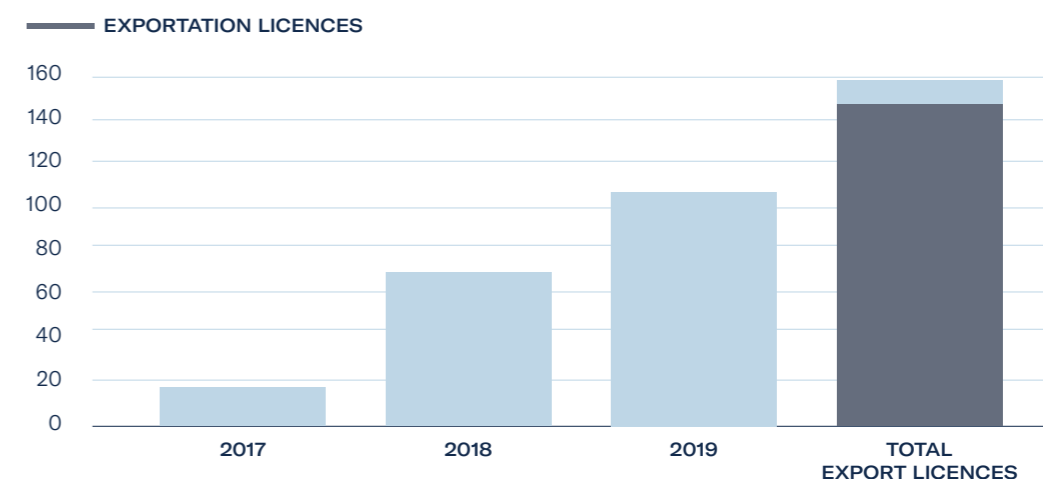
INCB 2020 QUOTA RAISES INDUSTRY OPTIMISM

Despite the International Narcotics Control Board (INCB) 2019 quota for commercial and scientific purposes being revised downward in 2019, the quota given for 2020 represents another boom for foreign investors. The INCB quota for 2020 of 56.5 tonnes represents

around a fifth of global supply of high-THC medical cannabis based on a total global quota of 258 tonnes and is the highest annual cannabis quota in Colombian history.

Production licences have been on the rise since 2017. As of March 2020, there were 171 such licences, of which 159 included export authorisation.

Colombian Cannabis Derivates Production Licence Increase 2017–2019



Source: Asocolcanna, 2020

INVESTMENT HURDLES STILL REMAIN

Even though Colombia has a production capacity of thousands of tonnes as well as the regulatory framework to be able to deliver a considerable global and domestic supply, the restrictions on production that are bound up in the complex licensing and registration process, as part of the country's desire to achieve GMP, have hampered Colombia's legal cannabis output.

The rush towards benefitting from the possibilities the cannabis industry offers has led many in the industry to purchase land in areas with an inappropriate climate for cultivation, a situation from which the industry has now learned.

Today, there are four main types of licence for cannabis and hemp entrepreneurs:

- **Licence for the manufacture of cannabis derivatives**, issued by the Ministry of Health and Social Protection
- **Licence for the use of the seed for sowing**, issued by the Ministry of Justice and Law
- **Licence for the cultivation of psychoactive cannabis plants**, issued by the Ministry of Justice and Law
- **Licence for the cultivation of non-psychoactive cannabis plants**, issued by the Ministry of Justice and Law.

Industry requirements:

- Legal cannabis growers must obtain permissions from bodies ranging from agricultural and medical authorities to the anti-narcotics police and drug regulators.
- In terms of security, growers are required to have cameras, high electric fences around crops, and regular contact with the police. The movement of plants to the laboratory is monitored by satellite and sometimes accompanied by bodyguards. Workers at the farm sign in with their fingerprints.
- Authorities take between 12 and 18 months to award licences, and growers must then wait between 3 and 6 months to obtain yearly permissions that establish the size of their crops and regulate the production of derivatives, for example oils and creams. The new online system approved by INVIMA in June 2020 aims to drastically reduce the waiting time.

Consequently, at the end of July 2019, there were only five fully registered cultivars in Colombia. Indeed, the reason that Canopy Growth's Spectrum operation downsized in Colombia was because Canopy's subsidiaries were unable to meet strict local regulatory requirements for registered cultivators. As of May 2020, about 240 cultivars were registered with the ICA.

Strict export requirements and a lack of processing expertise and infrastructure are also hampering investment opportunities, with laboratories, expertise and pharmaceutical research infrastructure coming slowly to the scene. The lack of access to a legal banking system is also affecting investment opportunities. Colombian banks are notoriously conservative, and harsh penalties for money laundering have made them overly cautious of the cannabis sector. According to Asobancaria – the Colombian banking association – some of its members had presented 'real worries' about the cannabis sector and reaffirmed that each financial firm should form its own internal policies based on its appetite

for risk. The banks expressed concern over possible fictitious exports of cannabis, the potential for fake licence acquisition and for the entrance of criminal elements along the value chain. The main concern, however, was that company policies should comply with Colombia's Money Laundering and Financing of Terrorism risk management regime, which is aimed at preventing money laundering and financing of terrorist groups. Ongoing political turbulence combined with proposed regulatory reforms to *Decree 613* of 2017, which will affect export into free trade zones, also threaten to exacerbate the issues associated with operating in Colombia.



EXPERT INTERVIEW



Lucas Nosiglia
 CAO,
 Avicanna

A seasoned entrepreneur and executive with experience across Europe, North America and South America, Lucas has been at the forefront of Avicanna's LatAm operations since the company's inception in 2016. His former involvements in management consulting, corporate finance and healthcare have been key in establishing and operating the company's Colombian subsidiaries, including two fully operational cultivation and extraction projects that act as Avicanna's supply chain, Santa Marta Golden Hemp and Sativa Nativa. Lucas's experience from working at Deloitte along with his management capabilities and leadership values are at the core of his success in leading Avicanna's largest teams. Lucas graduated with an Honours degree from the Faculty of Economics at the University of Buenos Aires, the top academic institution in Latin America, and holds a master's degree in Finance from the EADA Business School in Barcelona, Spain, combined with an MBA from Pepperdine University, California.

What is your role at Avicanna and what is the company doing in Latin America?

I'm a President of Avicanna Latin America and an Officer of Avicanna Inc. Avicanna is a diversified and vertically integrated Canadian biopharmaceutical company focused on the research, development and commercialisation of plant-derived cannabinoid-based products for the global consumer, medical, and pharmaceutical market segments. We operate every vertical of the medicinal cannabis value chain,

from genetic development and cultivation to extraction and API commercialised through our AUREUS Santa Marta brand, as well as manufacturing our final product lines PURA H&W (dermacosmetics) and RHO Phyto (phytotherapeutics) for commercialisation.

What are the main challenges faced by Colombian cultivators and how different are they today when compared to 2019?

Our main challenges are those of most pioneers and first movers, including going through the required regulatory and commercial steps to commercialise cannabis derivatives in a highly regulated and stigmatised sector.

Although there are always advantages to being an early mover, the current COVID-19 situation brings forward the demand for revenue generation, which also requires the government to adapt the regulatory pathway to help the sector achieve these milestones. The outcome so far is positive as we have been able to accelerate certain commercial efforts, including the successful export of non-psychoactive API and seeds both domestically, in Colombia, and to international markets, including the US.

Moving forward, Colombia has a great opportunity to develop a real domestic market to help stabilise the industry but faces a challenge to overcome its reliance on export in a regulated market, making initial steps for the sale of psychoactive derivatives as API or final products difficult. We are currently aiming to commercialise psychoactive API and final products by the end of H2 2020.

What role does sustainability play in the cultivation of cannabis?

Adaptation to the ecosystem at all levels is a key element of our strategy in Colombia. Nature and our community are our main partners in our cultivation projects, making sustainability a key driver in our decision-making process. We leverage the Sierra Nevada's optimal microclimate to grow cannabis in the foothills given the low relative humidity, constant airflow, moderate temperatures and 12-hour sunlight. Over the past three years, we had focused on finding the best genetics for our microclimate, working on an interdisciplinary basis with growers, agricultural engineers and scientists on our breeding programme, resulting in a wide range of seed offerings not only for the nascent LAC markets but also for US and EU clients.

We employ organic cultivation techniques and are one of the only companies in the region with USDA NOP organic certification. Avicanna also rated the highest amongst global cannabis companies participating in the SAM Corporate Sustainability Assessment (CSA) issued by S&P Global in 2019.

Is there a local market demand possibility in Colombia, or is it set to be an export-only country?

The industry is still in the early stages; however, we definitely see local demand for both CBD and CBG isolates, especially for the consumer products industry. At the moment the actives are most commonly purchased for pilot production but we recognise the opportunity for

industrial production. Also, as THC quotas are being granted and our medical programme is getting started, we see demand for phytotherapeutics under magistral formulas, which leverages Avicanna's advanced formulations and the R&D efforts the company has been making since inception. This further validates that the domestic market will definitely play a role in our global strategy given the robustness of the Colombian regulatory framework. Finally, we are seeing the potential in pharma and phytotherapeutic designations for indication-specific cannabis drugs, which has been our end goal.

In your opinion, which countries can challenge Colombian ambitions as one of the top cannabis cultivators worldwide?

I believe Colombia has two big advantages: regulation and weather conditions (which come with high quality and low cost).

Uruguay is a similar example of this; however, the regulatory framework requires time and political alignment to be executed in a coherent way. This allows for regulation and control at each stage of the value chain, from natural processes of the plant adaptation, which cannot be accelerated to final product registration as there's a requirement to go through all regulatory stages that require technical validation through R&D, such as product stability. As for the rest of the world, Africa and Asia could also be very significant players, leveraging on their weather conditions and large-scale farming. We are happy to see this happening as we consider this an opportunity to work collaboratively through our genetics platform.

Are the production costs, today considerably below that of Canada or Europe, sustainable in the long run?

Absolutely, even in the earlier years where we were developing and optimising our methodologies, our costs were US\$0.10/gram vs. the Canadian cost of roughly US\$1/gram. After three years of efficiencies we are seeing costs as low as US\$0.03/gram with potential for even larger reductions with scale up.

What are the latest technological trends in the cultivation of medical cannabis?

We try as much as possible to leverage organic farming and sustainable techniques. We consider the quality and performance of the genetics as a first step, particularly with cannabinoid yield and agronomic performance, which require time and expertise. We focus on genetic sequencing through our partnership with University of Guelph in Canada, to better define the genetic profile for our breeding plan, which we believe should be a good practice of the industry moving forward. We conducted several R&D experiments on the productivity of each cultivation model and analysed data to make decisions on scalability while also ensuring our genetics perform well at every stage. This includes working with genetics expressing rare cannabinoids, such as CBG, and adding landraces to our breeding plan, which will not need any supplemental lighting in the vegetative stage for large-scale farming. As we scale up, we are planning to add machinery and world-class farming, security and pest-control technology, especially for our outdoor programmes, which will further optimise our processes.

How does the seed registration at ICA play a role in terms of business opportunities?

It is definitely a key advantage as it ensures trackability and it comes from a federally registered cultivar with all phytosanitary requirements of the Colombian authorities. While some countries of the region are starting to legalise cannabis cultivation, we consider this to be a competitive advantage to secure early stages of the cultivation cycle, which are normally the most sensitive ones. This will be well addressed by not only selling seeds but also adding technical support during the process.



EXPERT INTERVIEW



Sebastián Gámez
COO,
Breedco

Sebastián is deeply versed in infrastructure, technology, and domestic and international regulatory frameworks in the pharmaceutical industry and has worked for world-leading companies, including Sanofi-Aventis, Roche, ASPEN and Stendhal. Sebastián has extensive experience analysing regulatory bottlenecks, production chains and markets. He leads Breedco's team and is in charge of the production chain, ensuring standardisation and regulatory compliance.

Tell us a little about Breedco's experience with organic farming.

The Colombian government has moved forward with this in terms of registering organic products specifically for the cannabis industry. I, myself, know about Israeli, Dutch, American and several other products, which are to be considered organic, and they have been registered within no less than two months. Colombia's biggest issue is still with the heavy metal presence, not in the product stem cells and not in the organic production, but the big issue is to be located on a very clean spot since we have many crops of sugarcane and corn using pesticides brought by the wind, therefore we need to take wind conditions and even bird migration into consideration. So, if you are intending to lower your costs and plant directly into the ground, well, you need to have a suitable study, a very detailed study, which analyses the air, the soil and the water because otherwise you'll get cross-contamination. So, the organic crop is a must, we understand it and luckily we've

got companies like Control Union, which is a key player in terms of certifying the GACP standards already in place here in Colombia, and they started operations.

What are the main challenges for growing and processing cannabis products in Colombia today?

Colombia's located in the tropic and everybody believes we are a Caribbean country, which at some point is true, but our capital is located 2,600 metres above sea level, very cloudy, no solar radiation and everyone believes Bogota is just Cartagena! Our country tends to be very humid and that's one of the main bottlenecks in terms of reaching the standards, at least on the microbiology side. That's one of the key bottlenecks all the companies have to face because they did not consider this, and then they have to start using dehumidifiers, and if you just go to the United States, you'll find that energy, it's cheaper than Colombian energy. So, in order to be very competitive, your company has to choose your spot very carefully. Obviously, we considered relative humidity, even bird migration, because birds migrate from Chile to Canada in millions. Groups of 5 million to 20 million, all of them carrying plagues within their legs... and if you've got a group of 20 million birds located 5 kilometres away or 10 kilometres away from you... some other farmer using pesticides, he can deal with that, but not you, because you are using organic products.

What attention to sustainability issues is Breedco giving throughout the production chain?

We have a cluster here in Valle del Cauca and we discuss those topics every week, ushering the way chain production needs to be built and what the requirements are, understanding that we begin with the clone or seed cultivation, extraction, transport, airports, and dealing with police, etc. A company part of this cluster called Kure... they developed amazing products. Now, even though we are not exporting on our side, the six companies which are members of this cluster are helping Kure to export.

What makes Colombia different on the issue of cannabis seed genetics and how does this impact the industry?

Since Colombia's got a problematic background, the Colombian government is complying with every international treaty. Let's say not just the INCB's treaties but also the intellectual property related to genetics signed by Colombia. Now, if you go to many countries, and it happened to me, many of the companies I visit, whenever I ask them, 'Did you register your genetics?' They tend to tell you, 'No.' Let's say Canada, Jamaica and many others.

The process is quite complex. If you are, let's say, a biologist in the Amazon and you discover a new variety, you cannot just register it, even less make products for human consumption. Even if it is a strain from the same plant, this different starting can cause cancer and the other doesn't. So, the government needs tests.

I understand that in order to develop the industry even faster, some countries didn't pay attention to this part of the registration process, but the Colombian government was very strict and all the Colombian companies were complaining because we are talking about a plant and it takes ages.

You can only register ten cannabis varieties at the same time. Ten varieties may take about a year, the process is complex, but it's a very stringent process in which the government is highly involved.

I start planting my seeds and then the ICA comes almost every week and takes measurements of my plants, and they measure how high they are, how tall they are, the size of the leaves, etc. And they start looking at them, and then let's say when our plants are one metre tall they start comparing the plants, and if they see that, let's say, Breedco or any other company tried to register one variety but then you've got a plant which is 1 metre 80 centimetres tall and another 1 metre 90 centimetres tall, the ICA will tell you straight away: 'I am sorry, but this isn't one variety. Your strains are two varieties so you cannot register that because it isn't standardised.' Same for different THC or CBD levels.

What is the difference between the 'legalisation' of grey market seeds in Colombia compared to Jamaica and Canada?

Colombia is the only country doing this process and, basically, following international treaties. We are the only country giving sanitary certifications, which is the reason why Colombia exported 29 million seeds to Denver, Colorado. Now, that's the biggest seed export being made ever in history, and the reason why is because Colorado's sanitary agency understands what we did and they allow the Colombian seeds to come in. Now, we already entered into agreements with Uruguay, Peru, Ecuador, and 12 other countries. Now, the UK is following several others, and before, this was a big pain for all of us at some point because one trial – spending one year also analysing statistics, cannabinoids and all of that – may cost around US\$100,000 dollars, but this strategy by the Colombian government is clearly starting to pay off now and we understand its importance.

So, my comparison or my analogy will be that Colombia is the new Netherlands of the seeds, and I'm not comparing the Netherlands because it tends to consume cannabis – no. The Netherlands produces most of the world's rose strains, tulips, and many types of flowers, and they are the bank seed of the world. Now Colombia is starting to become one of the key actors in terms of strains.

What is, on average, the seed productivity per hectare per year?

One hectare (10,000 square metres) is able to produce 16 million seeds every three months, so about 64 million seeds, per hectare, per year.



EXPERT INTERVIEW



Juan Manuel Galan
Former Senator,
Colombia

Juan Manuel Galan, former Senator and author of the Cannabis Law in Colombia

How do you see Colombia today in the cannabis industry compared to 2018? How has it evolved and what have been the main challenges?

The first thing I see as a revolution from 2018 is the transition towards a new government, and the new government took a very long time to engage in supporting the new industry of medical cannabis. I think we have a lot of companies trying to get licences, and there was a traffic jam in the institutions responsible for dealing with these licence approvals, and that took a lot of time to be given. And I think there is a green fever in Colombia. Not only in Colombia – the whole world. But in Colombia there is a green fever and people thought at the beginning that it was very easy to produce medical cannabis... that it was sufficient to have land to cultivate the land. And then very rapidly to get rich. And it took a lot of time for people to realise that in order to get the quality levels that medical cannabis deals with, you need to invest a lot of money, you need to take a lot of time in research, innovation, science and you need to have certified seeds. You need to have good cultivation practices and good manufacturing practices. You need to meet the standards. These are very high as a pharmaceutical product.

What are you most proud of regarding the implementation of the legislation you authored?

Well, the thing that makes me more proud, I think, is that we opened the door for a new drug policy in Colombia, and we are a country that has suffered for many, many years, and the world knows the violence of the war on drugs, the costs, social costs, health costs, environmental costs of engaging in the war on drugs. So, if we are able to move even further in this direction of building a new policy on drugs based on evidence, based on the lessons learned from the previous experience of the last 50 years of the war on drugs. Since President Nixon, at the beginning of the 70s, declared the war on drugs, I think we have accomplished a big step towards a new drug policy, based on evidence and not based on the failed war on drugs.

How is Colombia different, in terms of advantages and disadvantages, from other countries emerging in the cannabis industry?

I think Colombia has advantages still on its geographical position, its climate, its light conditions, sun conditions and the low cost of the labour and the production costs. I think the path that we framed originally and the level of quality control ... of not being like a machine of marijuana for the world or for the big companies in big countries... but to produce a new export that is not a raw material, that is not like the products that we have been exporting traditionally like coffee, flowers, coal, and oil, which are raw materials without any other value. With cannabis, we had an opportuni-

ty to change the story of our exports. We can have a product with added value. We research innovation and science, which is very important. And I think we have advantages in terms of our scientific community, our universities, our capacity from the academic sector to investigate, to do research, to know even better the cannabis plan and its properties and the effects on human health, and disadvantages. I think, bureaucracy, regulatory regimes, which are very counterproductive with a lot of paperwork, discourages many, many people from getting involved in this business... and other disadvantages... I think it could be the public sector, the government. We need to unify in one institution, the main regulatory framework and leadership, so the industry has a clear view of the legal security and for the investors, and also to share the industry opportunities with small growers. I think we need to... the government needs to stimulate small growers to get together in associations of small growers and to partner with big growers, big companies and share experiences... and not everyone competing for themselves. But I think the reputation of the industry is a very important aspect and is a common ground for all the members of this industry.

How do you feel about the Latin American cooperation and business opportunities in this industry in the near future?

I think the Latin American market, if developed in cooperation among countries, has a huge advantage and big opportunities to be a key player in the global cannabis industry, not only for medical uses, but for adult users. But we need to get together as countries and build bridges in cooperation, agreement among governments, among the industries. So we are unified in a common ground. So we share experiences, we share lessons learned, and we put together resources to do research and to do more investigation and more academic clusters, academic networks and research development, inno-

vation in the industry and mainly if we bet on quality. Quality is the main purpose and is the main asset that we need to take care of if we want to get further and further in this industry.

What is your advice to companies, from Colombia and abroad, planning to enter the cannabis and hemp sector today?

The main advice is that companies need to understand that, of course, in a global market, in a capitalistic market, they need to compete among each other, but they also need to co-operate with each other. I don't think they have to compete as they are competing right now to be the first on these... the first one, that is, in order to get more value for their shareholders. And I think they need to put resources together. In research, development and corporate social responsibility, in supporting smaller growers and also building common projects on research, which I think are very useful for the industry, and also push forward the case at the federal level in the United States, the European Union. If they are together, if they co-operate, they will be stronger in order to push for policy changes that are favourable to this industry. And I think the hemp industry has a huge opportunity in Colombia, especially in regions like Valle del Cauca, where traditionally you find the sugar growers. I think sugar growers could have a pilot or an experiment to replace some hectares of sugar cultivation with hemp cultivation. That would be a very interesting project to develop and also to replace other crops like coca, which is illicit right now, with hemp, and supporting small growers to get involved to find buyers also. Because this industry has a huge challenge, not only in offering product, but also in finding buyers throughout the world and buyers locally. So the industry gets the dynamics and the support it needs to be sustainable. And not being only a green fever, a temporarily green fever, but to be in the middle term and long term a viable industry.

Brazil - A Different Path Towards Cannabis Legalisation



Legal status:

Medical: **Recreational:**
Cultivation: **Export:**

Companies in the cannabis and hemp industries*: **<20**

Ease of doing business (WTO) ranking 2020: **124**

Average time to open a business (working days): **17**

Average farmland price (hectare): **US\$1,800–US\$7,000**

Land suitable for cannabis and hemp cultivation: **7 million square km (80% of country)**

Patients July 2020**: **+17,991**

Prescribing doctors July 2020: **1,190**

Cannabis Associations: **23**

Estimated Association Patients 2020: **~20,000**

People per pharmacy: **2,812**

Pharmacy chains market share: **~32%**

Regulatory bodies

- **Brazilian National Health Surveillance Agency (ANVISA)**
- **Ministry of Agriculture, Livestock and Supply (MAPA)**

Most relevant legislation and regulation:

- **RDC 335/2020 – regulation from ANVISA**
- **RDC 327/2019 – regulation from ANVISA**
- **RDC n° 327/2017 – regulation from ANVISA**
- **PL 399/2015 – proposed bill to allow for domestic cultivation**
- **Law n° 11.343/2006**

Corporate tax: **34%**

Relevant groups:

- **LAC Industrial Hemp Association (LAIHA)**
- **Legal Network for the Reform of Drug Policy (REFORMA)**
- **Several patient associations**

Trading blocs: **Mercosur, Latin American Integration Association (ALADI)**

FTAs: **Chile, China (under negotiation)**

Population 2020: **216 million**
Expected 2030: **238 million**

GDP PPP per capita 2019: **US\$17,016**
Expected 2024: **US\$19,751**

Foreign Direct Investment 2019: **US\$71,989 million**

Value of greenfield investment 2019: **US\$30,814 million**

Environmental Performance Index 2020: **55**

Global Attractiveness Index 2020: **41 (1st in LAC)**

*An aggregate of producers, brokers and other companies in the business.

** Not including members of cannabis associations with cultivation permits.

The Brazilian relationship with cannabis, known locally as *maconha*, an anagram of *cânhamo*, which means hemp in Portuguese, can be traced to the colonial period, with seeds brought to the country by African slaves, therefore becoming integrated in Afro-Brazilian as well as indigenous traditions. It has been persecuted by the authorities for centuries, a situation that has started to change in some degree, with updated legislation, regulation and some judicial system support.

For several years its planting has been prohibited, despite the country having had considerable illegal cultivation projects, particularly in the northeast region known as *polígono*.

After legalising the medical use of cannabis in 2015 and with the subsequent regulation in 2017 from ANVISA, Brazil looked like it might be next in line to become a significant legal cannabis producer; however, despite some changes to the law, the lack of opportunity for domestic cultivation has dampened prospects in the country, while the domestic market has been developing timidly but steadily, with the first national cannabis-based product introduced into the market in May 2020. Currently, as the market evolves despite the limitations, *PL 399*, a bill that aims to allow for cultivation in Brazil (not by individuals), is awaiting its vote in congress in October 2020. Furthermore, the opening of specialised clinics in the country's main cities, São Paulo, Rio de Janeiro and Porto Alegre, indicates a trend towards a renewed interest, despite the opposition of the conservative government.

Brazil is by far the largest market in LAC, offering many possibilities ranging from cultivation and manufacturing, to a large consumer market of patients and consumers of other products obtained from cannabis and hemp. It is estimated that the Brazilian medical cannabis user base could reach close to 3 million people in the next few years.

The country has had a different approach to the legalisation of cannabis, mainly thanks to the sprouting of several associations nationwide, such as Associação Bra-

sileira de Cultura e Educação (ABRACE), in the north-eastern state of Paraíba, operating since 2017 and having judicial authorisation to cultivate and extract medical cannabis. The total number of associations in Brazil now is estimated at 23, treating about 20,000 patients with THC and CBD.

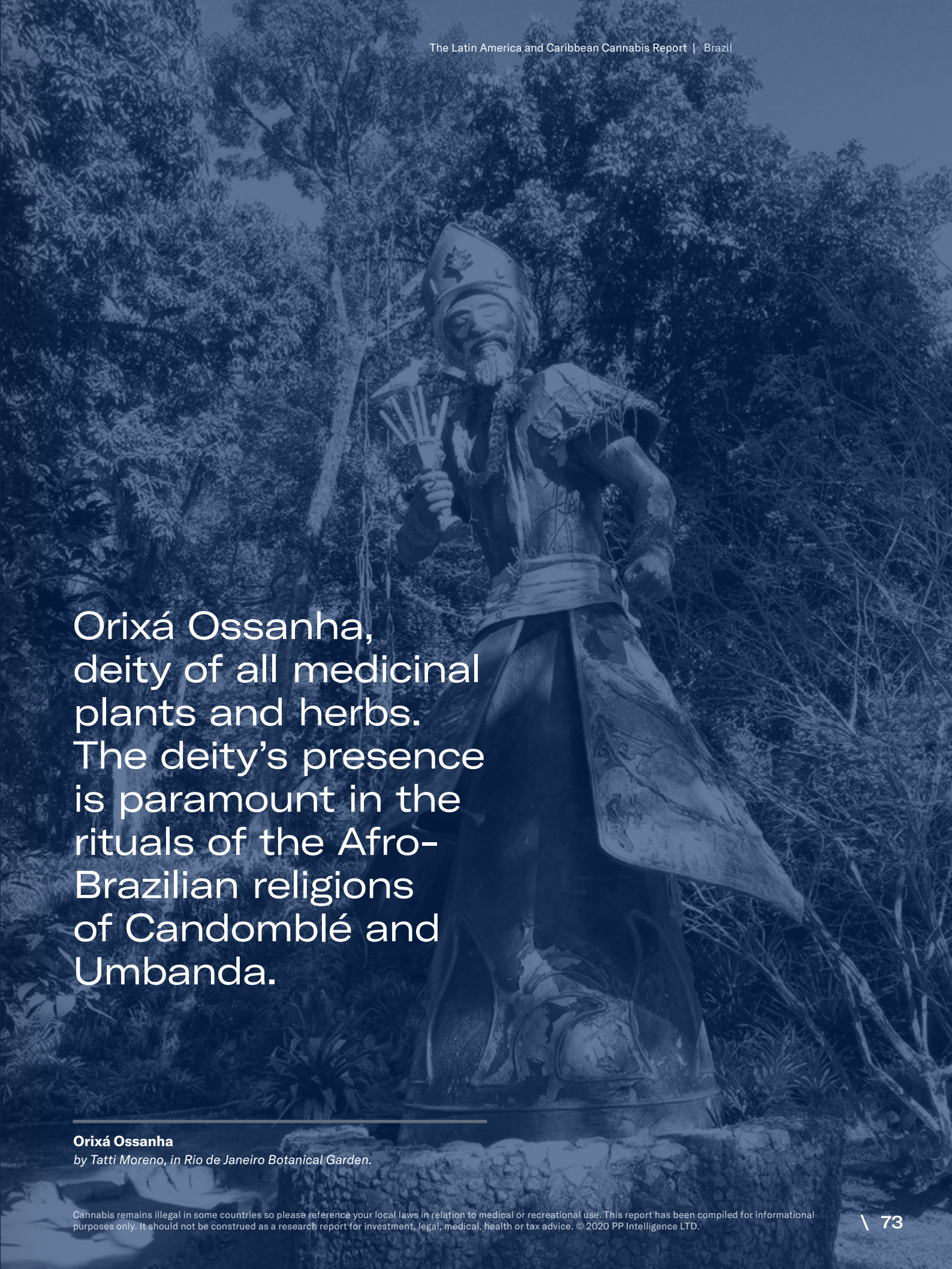
This number is likely to keep growing, as there has been a permissive attitude from the authorities, while also offering interesting business opportunities around the production, transport and use of cannabis. These associations also offer legal help, counsel and a sense of belonging for the community, as well as medical support from affiliated doctors.

These associations have emerged in parallel with some justice permits for home cultivation as well as a growing market of patients who have prescriptions and ANVISA approval for the import of CBD and THC medical cannabis, supported by Brazilian brokers such as Dr. Cannabis and INDEOV, among others, who are also providing educational services for patients and doctors.

Patients in Brazil, the first being Anny Fisher in 2014, a child from Brasilia suffering from the CDKL5 syndrome, are authorised to use CBD and THC products to treat conditions such as epilepsy, anxiety disorders, depression and multiple sclerosis. The regulation does not limit the conditions that can be prescribed for, being used for both physical and mental health problems according to the doctor's discretion, yet those doctors who are prescribing are requested to keep track of the treatment and patient's progress.

'Staying in touch with the medical communities, understanding the patients' needs and knowing the healthcare system's characteristics of each country are essential for defining the product portfolio and carrying on a successful market strategy.'

Fabio Lampugnani, Managing Director Latin America, VerdeMed



Orixá Ossanha, deity of all medicinal plants and herbs. The deity's presence is paramount in the rituals of the Afro-Brazilian religions of Candomblé and Umbanda.

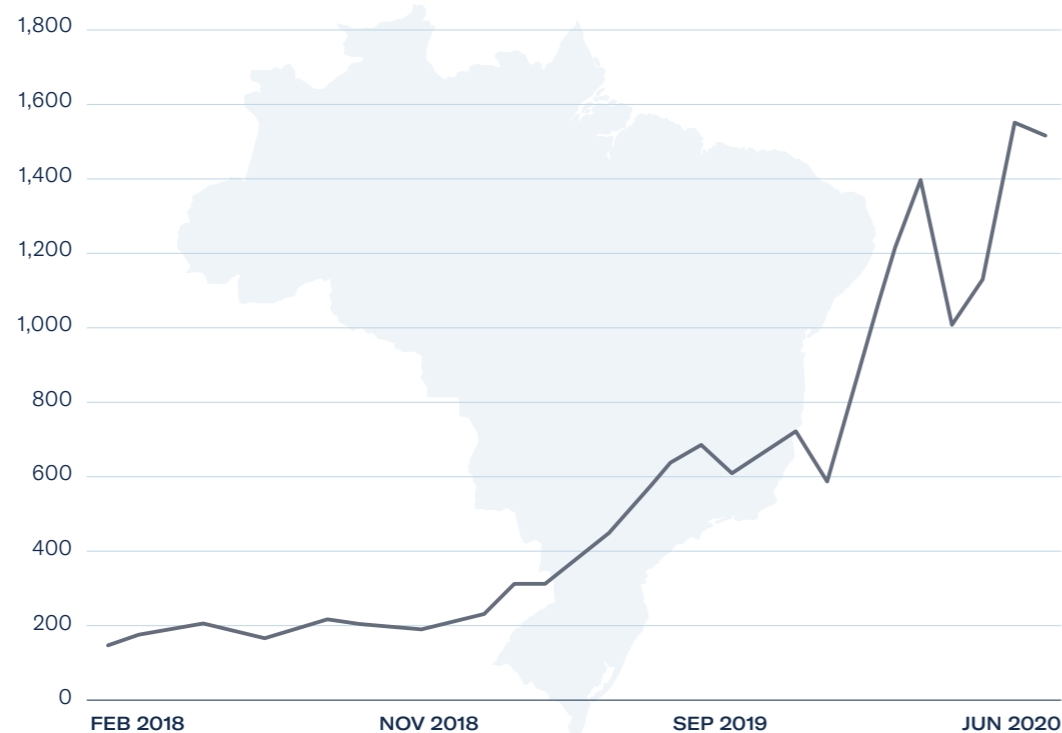
Orixá Ossanha
by Tatti Moreno, in Rio de Janeiro Botanical Garden.

Under this restricted allowance, Brazil supported the largest number of cannabis patients in LAC, with over 18,000 authorisations made from 2014 to August 2020, with roughly 50% of those prescriptions given in 2020 alone, according to data from ANVISA. The Brazilian Health Regulatory Agency oversees most of the medical-cannabis-related issues, while the Federal Council of Medicine (Conselho Federal de Medicina, CFM) serves as the independent agency responsible for regulating the medical profession. Prior to December 2019, in order to access medical cannabis in Brazil, patients had to apply for a federal authorisation to import non-registered products. If successful, the patient received authorisation for up to one year. Once authorised, patients could buy the product directly – without any intervention from ANVISA – typically online. Importing in bulk or reselling was not allowed. Prior to the Decem-

ber 2019 regulation change, no pharmacies or dispensaries of any kind could distribute any medical cannabis.

Under this system, prescriptions range in price from R\$1,500 to R\$2,000 (US\$270 to US\$360), meaning that cannabis prescriptions are only possible for those from wealthier backgrounds, therefore contributing to more patients looking to the associations previously mentioned.

Monthly Medical Cannabis Patients Brazil 2018–2020 (excluding Association patients)



Source: ANVISA

‘The therapeutic use of cannabis has been a reality in Brazil since 2015, when ANVISA regulated individual imports, but the need for democratisation of access is latent. If we consider the refractory cases of 5 of the main indications for the use of cannabis: autism, epilepsy, Alzheimer's disease, Parkinson's disease and pain, we have more than 10 million Brazilians who do not have their therapeutic needs met. Due to the seriousness and urgency of safe solutions, the education of society and its health professionals is essential for a better quality of life for patients, caregivers and family members.’

Dr Carolina Nocetti, first Brazilian medical cannabis specialist and InterCan founder

NEW REGULATIONS FOR 2020

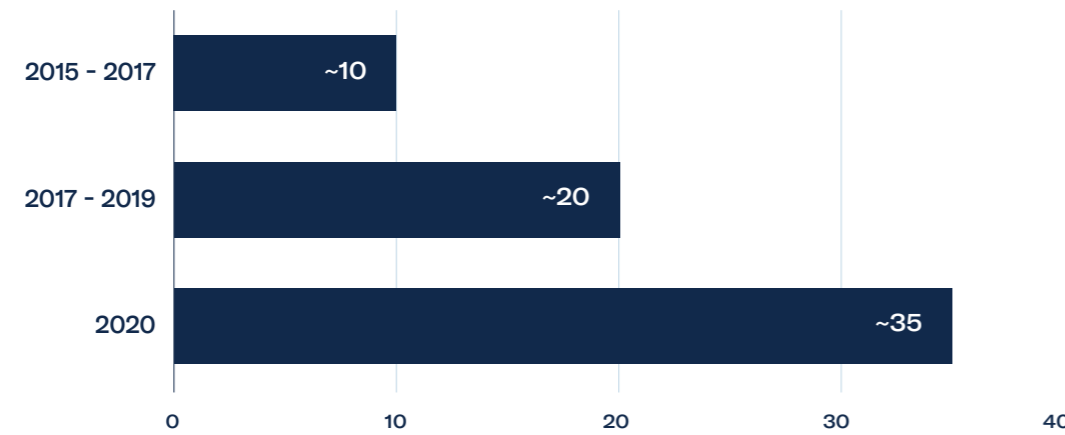
In December 2019, ANVISA approved regulations for launching medical cannabis sales in the country. The new regulations, which came into force in March 2020, allow sales of products with THC levels above 0.2% to terminally ill patients or to those who lack alternative treatment options. Other patients will have access to medical cannabis products with THC levels below 0.2%. ANVISA's former Chief Executive, William Dib, estimated that 13 million Brazilians could benefit from the expansion of the country's medical cannabis programme, particularly in a country where 50% of the population, about 105 million people, live with some sort of chronic pain or medical condition that could benefit from cannabis treatment. This will see Brazilians able to buy products derived from cannabinoids in drugstores. The regulatory framework sets a comprehensive procedure for the manufacture and import of cannabis products for medical purposes as well as requirements for commercialisation, prescription, dispensing, monitoring and supervision, now allowing for bulk amounts instead of product by product as it used to be.

The new regulations categorise cannabis products in three ways:

- Cannabis-based medicines** are registered like any other medicine, for which efficacy and safety need to be proved. So far, that includes only GW Pharmaceuticals' Sativex, sold under the name of Mevatyl in Brazil.
- Registered cannabis products with 'sanitary authorisation'**, the new category created by ANVISA in December, came into effect in March 2020. These do not require proven efficacy via clinical trials during the first five years but must be registered, and a stability test for 12 months for the sub-tropical 4B zone must be submitted.
- Authorisations granted case-by-case to import non-registered cannabis products** also do not require clinical trials. This system has been in place since 2014.

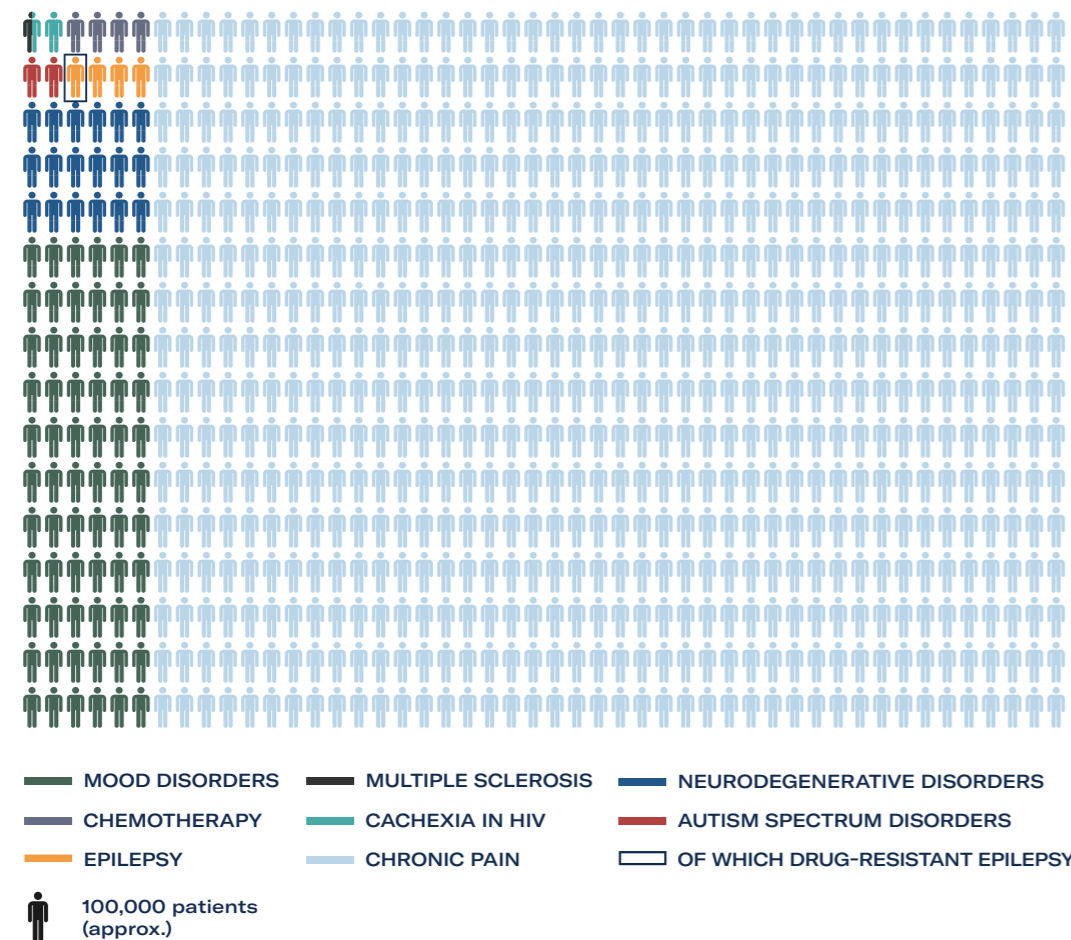
Medical Cannabis in Brazil

CANNABIS ASSOCIATIONS INCREASE IN BRAZIL 2015-2020



Source: Estimates from Prohibition Partner's primary sources in Brazil

PREVALENCE OF MAIN CONDITIONS CANNABIS IS PRESCRIBED FOR



Source: Prohibition Partners

LATEST DEVELOPMENTS IN 2020

- The Brazilian Health Minister declared in September 2020 that the project to incorporate cannabis-based products into the public pharmacy networks of the Sistema Unico de Saude (SUS), equivalent to the British National Health Service (NHS), will be a reality by February 2021, bringing cannabis products, subsidised by the government, to the world's largest public universal healthcare system and serving 80% of the population, 150 million people.
 - **In September 2020, São Paulo-based Entourage Phytolab, a cannabis R&D company, announced a discovery that allows patients to increase their CBD absorption two-fold, meaning the same therapeutic effect is possible with half the dose. The results were obtained in Phase 1 of the product tests, and the aim is to reduce treatment prices by up to 60%.**
 - In September 2020, it was announced that Medipharm Labs Inc. had signed a two-year supply partnership for GMP-certified formulated premium cannabis oil with Rio de Janeiro-based XLR8 Brazil, pending ANVISA's authorisation. The products will include a CBD-THC 20:1 oil and a balanced 10:10 oil.
 - The judicial authorisations for cultivation, the growth of the associations and the new regulations received international media coverage in August when the media named the Brazilian process 'the quiet legalisation of cannabis'.
 - A total of 42 home or association cultivation permits were awarded via the justice system from January to July 2020, a 200% increase compared to 2019, even in the midst of the COVID-19 pandemic.
 - In July, it was reported that waiting time for import authorisation from ANVISA had been reduced significantly to about ten working days.
 - In June, it was reported that cannabidiol product was being sold in a pharmacy in Belo Horizonte city at R\$2,400 (above the monthly minimum wage), and the news on Instagram reached audiences nationwide despite the advertising prohibition.
 - In June, the Congress in the state of Rio de Janeiro, among the country's most populated and developed states, approved, by a large majority, medical cannabis cultivation and research projects.
 - In May, a cannabis-focused clinic opened in the country's biggest city, São Paulo, while another one opened in September in the south's biggest city, Porto Alegre.
 - In April, a local pharmaceutical company in the Parana state, Prati-Donaduzzi, obtained the first authorisation from ANVISA for the national production of a cannabis-based product. The product is THC free, containing CBD in a 200mg/ml presentation. The product was, as of April, on Clinical Trials III in partnership with a local university in the city of Ribeirao Preto, in São Paulo state.
 - In April, the hemp cultivation debate returned to the news with two companies trying to obtain a justice authorisation to set up hemp farms.
 - Since March, cannabis-based products have been allowed by ANVISA to be freely sold in pharmacies across the country following ANVISA's resolution from December 2019.
- Regulatory guidelines to navigate for those looking to capitalise on this opportunity:
- From April 2020, companies are able to apply for a 'sanitary authorisation', to import in bulk, manufacture and distribute cannabis products.
 - Only pharmacies will be allowed to sell 'authorised' products to patients.

- Manufacturing authorisations will be granted only to companies that import the raw material.
- Importing ‘the plant or its parts’ remains prohibited.
- Sales of approved products must start within one year of authorisation being granted; otherwise, approval could be cancelled.
- Extreme marketing restrictions apply, including a ban on commercial names for the products. Advertising of any kind is prohibited.
- Only products for oral or nasal use are allowed.
- Flower is prohibited, even if it is pulverised – only finished products are allowed.
- Brazilian rules do not allow for any magistral manipulation of cannabis products by pharmacies, being a finished-product market only.
- GMP is a requirement for all new ‘sanitary authorisations’. The new regulations state that until December 2022, ANVISA will accept GMP certifications issued by health agencies of Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S) countries. After December 2022, only ANVISA certifications will be allowed. Those companies selling medical cannabis products in Brazil with a GMP certification from another country must obtain an ANVISA certification if they intend to continue selling after 2022. For commercialisation, ANVISA’s good storage and distribution practices certification is required.

The decision to prohibit domestic cultivation of medical cannabis means that the country will be heavily reliant on imports, a clear opportunity for foreign players. Most imports are supplied from the US by various companies, including Isodiol, Charlotte’s Web, Bluebird

Botanicals and Elixinol. Exports from Canada are hampered by regulations prohibiting bulk exports between the two countries, and Health Canada requires an export permit for each shipment, for which it charges about 600 Canadian dollars.

Following the change in regulations, in February 2020 ANVISA approved the import of Khiro’s medical cannabis products, to be imported on an individual patient basis. Flora Growth Corp. made moves to capitalise on the regulations by creating a Brazilian subsidiary, Flora Brazil.

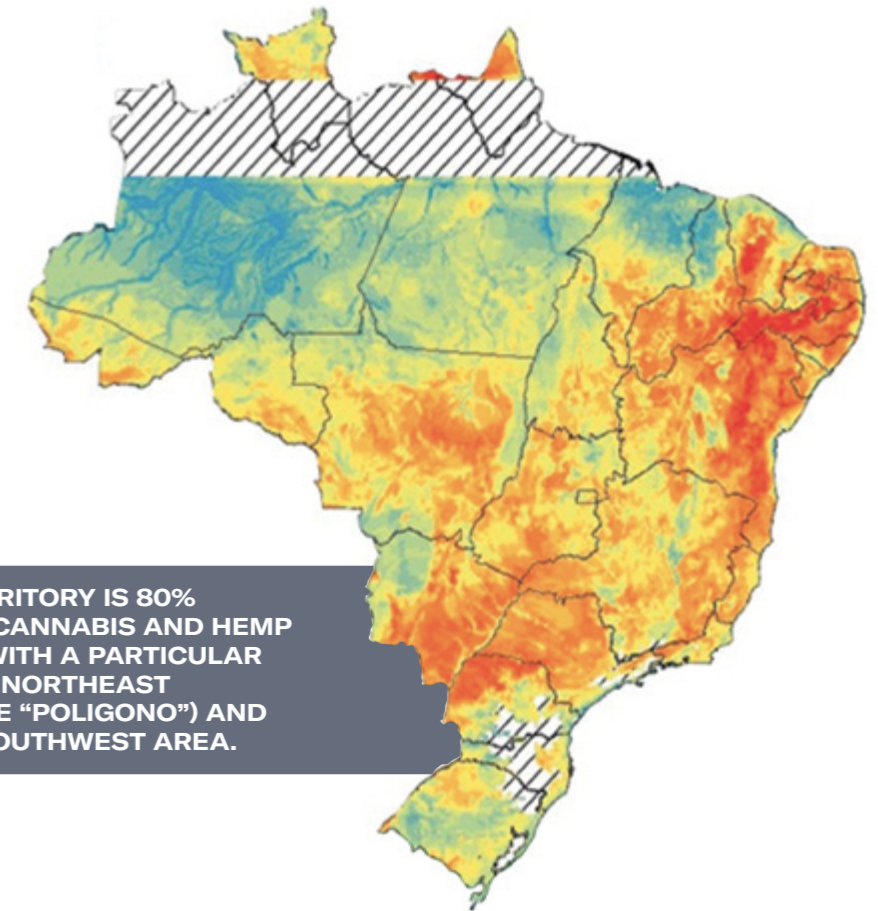
HEMP CULTIVATORS COULD GAIN A FOOTHOLD IN BRAZIL’S MEDICAL CANNABIS INDUSTRY

Despite the decision to block the cultivation of cannabis in Brazil, a judge from the Federal District Brasilia officially did approve one company, Schoenmaker Humako Agri-Floriculture, part of the Terra Viva group, to legally import and grow industrial hemp seed with a THC concentration below 0.3% in Brazil. It is hoped that this ruling will see the Ministry of Agriculture provide for the inclusion of industrial hemp or hemp on the National Cultivar Register list and allow the company to use this hemp to ‘supply the pharmaceutical industry’, but this decision was overruled by the Brazilian government, and therefore cultivation on a large scale does not take place anywhere in the country as of September 2020.

Yet, with the proposed law PL399, if approved now or in the future, the country holds great potential to cultivate, as shown by local start-up ADWA in collaboration with the Federal University of Viçosa in the state of Minas Gerais.

Brazilian open sky cultivation potential by local start-up ADWA

HIGH POTENTIAL  LOW POTENTIAL  NOT SUITABLE



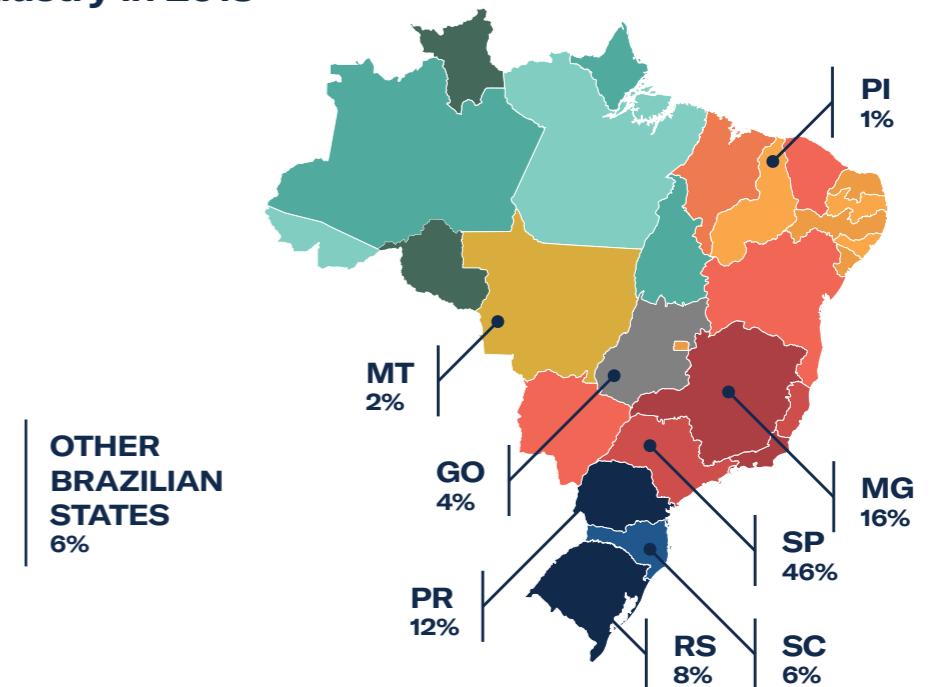
Source: Brazilian start-up ADWA Cannabis, 2020

The cultivation and manufacturing potential in Brazil could be leveraged by its growing venture capital scene, with about 55% of the venture capital funds in LAC going to Brazilian start-ups, according to LAVCA, and a strong start-up entrepreneurship and know-how in Agrotech, which comes naturally in a country with a strong agricultural sector. This agricultural innovation, known as ‘Agrotech’ and ‘agro 4.0’, has a clear concentration in the state of São Paulo, home to over 45 million people and known as Brazil’s engine due to its concentration of 34% of the country’s GDP, plus most of the country’s industry by far, particularly in terms of chemicals, phar-

maceuticals and agriculture. Its capital, São Paulo city, the largest city in the southern hemisphere, is the centre of an affluent and growing macro-metropolis reaching over 33 million people, is home to 63% of the multinationals in Brazil, and is considered the 10th richest city in the world by the Global City GDP rankings 2008–2025.

São Paulo city, the largest city in the southern hemisphere, is the centre of an affluent and growing macro-metropolis reaching over 33 million people, is home to 63% of the multinationals in Brazil, and is considered the 10th richest city in the world by the Global City GDP rankings 2008–2025.

Map of start-up distribution in the agricultural industry in 2018



Source: AgTech Garage, 2019 (Abbreviations for Brazilian states PI = Piauí, MT = Mato Grosso, GO = Goiás, MG = Minas Gerais, SP = São Paulo, PR = Paraná, SC = Santa Catarina, RS = Rio Grande do Sul.)

SECTORS TO WATCH

Telemedicine has been a growing trend in the country since direct consultations with patient-doctors were approved in the midst of the COVID-19 crisis – about 1.7 million consultations were carried out from January to July alone, and the figure is growing exponentially.

As one of the largest countries in the world and being the fourth internet market world-wide, Brazil has an appeal that goes well beyond the medical area. Industries such as cosmetics offer a promising business area, in a country where beauty plays an increasingly important role in the economy, and in which about 9.4% of the world’s total expenditure on cosmetics takes place. Brazil is expected to soon overtake Japan as the second largest market in the beauty and cosmetics industry. In terms of pet care and veterinary products, the country offers a wide range of possibilities. With a large dog and cat population, the country’s growing middle-class expenditure

in pet care (including veterinary check-ups, medication, food and toys) has been growing steadily, closing 2019 with a total of R\$34 billion (US\$8.7 billion), a 3% increase compared to the previous year in a country with over 55 million dogs and 24 million cats. The country’s growing equestrian businesses also offer interesting opportunities, boasting the world’s third largest horse population in the world, with a particular focus in southern and southeast Brazil.

Home to one of the largest breweries and beverage producers in the world, Ambev, the country could offer interesting business opportunities in terms of beverages and edibles if there is a legislative change to allow for it, the company having already introduced cannabis businesses into their Canadian operations. Brazil has a developed manufacturing, supply chain and distribution network, which could translate into a new segment in a country where special beer consumption has shown a double-digit growth in recent years.

EXPERT INTERVIEW



Emilio Nabas Figueiredo

President,
REFORMA

Emilio Figueiredo, a lawyer since 2004, has worked in law and cannabis in Brazil for ten years and is on the executive board of Rede Reforma, being a recognised defender of people who use and grow cannabis, mainly for therapeutic purposes. He is also a legal adviser for associations that support the therapeutic use of cannabis and for public and private initiatives that seek national production of cannabis while observing its social and environmental impact in Brazil, through Social Synapse. Emilio has a law degree from PUC-RIO (2003) and a postgraduate degree in Social Responsibility and the Third Sector, from the UFRJ Institute of Economics (2013). He was a student in the 'Drug Policy Reform' programme at the Transnational Institute in Amsterdam (2014); graduated in Political Innovation from the Academia Innovación Política (2017) and is currently doing a master's degree in the Postgraduate Programme in Justice and Security at the Institute for Comparative Studies in Conflict Management at the Universidade Federal Fluminense as part of the PsicoCult research group investigating the participation of lawyers in producing the legal truth about cannabis in Brazil.

What is the role of the associations in the Brazilian medical cannabis context?

The role of associations is to organise within a network and serve people who use cannabis as a therapeutic tool, in many cases meeting the demand for access to cannabis medicine and fighting for rights collectively. I believe that, considering that we have around 40 associations registered or in the registration phase, they gather around 20 thousand members. The role of the reformation, on the other hand, is to bring together lawyers, preparing legal professionals for the debate on drug policy, especially on cannabis. The reform also promotes strategic litigation (cause lawyering) and advocacy for drug policy in line with human rights.

What are the main underlying forces stopping widespread access to medical cannabis in Brazil?

I believe that the main forces hindering the wide access for social sectors are dominated by the moral panic created by the prohibition-based drug policy. The main examples are the sectors linked to Christian religions, therapeutic communities and security forces.

What do you think will be the main trends in the medical cannabis sector in the country during 2021?

I believe that the main trends for 2021 are the domestic cultivation of cannabis that has not stopped growing for over ten years, and also the cultivation of hemp as a pharmaceutical input and, of course, the associations that are increasingly structured to serve their

members with the cultivation and preparation of cannabis medicine.

What are the main business opportunities in the current situation?

I believe that the main opportunities are linked to the cultivation of hemp as a productive matrix for various sectors such as biochemistry with the pharmaceutical and cosmetics industry, sectors such as textiles, cellulose and civil construction. I also see great prospects for the sectors of fertilisers and cultivation technology, and services such as consulting and software, mainly related to traceability and certification.

Regarding the proposed law 399/2015, do you think that allowing for home-grown cannabis would impact product prices significantly in the coming years?

Yes, I see that a good way to control abuse in pricing is to allow people to grow at home, because if the product on the shelf is inaccessible there will always be the possibility for the patient, alone or with some help, to grow and prepare their own medicine, as I have seen in countless cases throughout Brazil in the treatment of various diseases.

Is there in the proposed law 399/2015 any aspect regarding environment and sustainability on cannabis and hemp cultivation?

Unfortunately, this was not a focus in this first version of the text; however, I believe that considering the great regeneration capacity of well-cultivated cannabis, this will be an intangible well explored by the initiatives,

because in addition to generating an immediate product, it is also based on the sustainability tripod with footprints positive for the environment, healthy human relations and positive results in economic terms.

Is there a possibility for some states or municipalities (such as Rio de Janeiro, São Paulo, or Sergipe) to have much more liberal laws without an updated national legislation?

As a rule, it is not possible, as the issue involving drug policy is a federal matter; however, we saw here in Rio de Janeiro the approval of a law to promote research on cannabis that creates a favourable environment for local scientific production.

EXPERT INTERVIEW



Viviane Sedola
CEO,
Dr. Cannabis

My background is in public relations and I've been in the digital space for more than ten years. When I realised that people were not accessing cannabis in Brazil because they lacked quality scientific information, I knew I could help to solve the problem.

Fast forward three years, I became an authority in the Brazilian cannabis market. I participated as a guest speaker at public hearings on medical cannabis in the Federal Senate, Chamber of Deputies and the Legislative Assembly of São Paulo, was a speaker in Israel and Panama and in many parts of Brazil.

And, last year, the *High Times* magazine honoured me at the Female 50 event as one of the 50 most influential women in the cannabis market in the world, being the only Latin American one. So, it's been quite a journey and there is still a lot to come.

What is the role of Dr. Cannabis in Brazil? Can you tell us about the company and its mission?

Since 2018, Dr. Cannabis has been creating relevance and authority in the Brazilian medical cannabis market. Today we are a community of more than 30,000 patients and 3,000 doctors interested in the subject, being educated, prescribing and treating ourselves with cannabis-based products. Our mission is to give access to legal medical cannabis through our digital platform.

The company actively participates in working with the leading national media and political contacts to reduce friction and bureaucracy in the medical use of cannabis in Brazil and LAC. We hosted the Digital Medical Congress in the beginning of August with more than 15,000 participants, who had access to 20 hours of lectures from highly qualified speakers such as Prof Raphael Mechoulam and Prof Lumir Hanus, totally online and for free. Now we aim to educate and train more professionals of the industry to grow locally.

Why aren't more Brazilians accessing medical cannabis?

First of all, they lack information about cannabis and the legal way to access it. There are too few doctors prescribing, and finally prices are still high for the average population. We notice a constant price reduction and a fast process to import these products, but medical cannabis will be truly accessible when it is produced and grown in Brazil.

What are the main challenges when it comes to importation?

Patients have to import for themselves, so shipping costs are high and cannot be shared since authorisation is issued for each individual and importation must be destined for the patient's home address. Currency exchange is also a hassle and product prices can vary a lot. Lastly, once you decide to buy, you still have to wait five to six days for your product to arrive. It is common that patients interrupt their treatment during the shipping period.

Do you foresee many Brazilian companies importing raw material to manufacture finished cannabis products in the near future? If so, which are the most likely sources of raw material importation?

Raw material for cannabis-based products in Brazil must be produced under GMP certification issued by specific countries/health agencies, according to ANVISA, the National Health Agency in Brazil. What we see now is a 'gold rush' from Brazilian cannabis companies, to find the suppliers who meet these criteria. The most reasonable countries to source from would be Colombia, but INVIMA's (their health agency) GMP is not accepted by ANVISA, or Uruguay, but no extraction is happening in the country and dried flowers cannot be imported to Brazil.

It is urgent to promote regulatory harmonisation in LAC so we can have lower prices. For now, it seems that US and European suppliers are more likely to be ready to source to Brazil.

What is the role that doctors play in the access to medical cannabis in Brazil?

Cannabis is regulated as medicine in Brazil, so doctors are fundamental in the process. Today less than 1% of all 400,000+ doctors in the country actually prescribe cannabis. On the other hand, ~50% of the Brazilian adult population are living with some kind of chronic pain or disease.

So, education is urgent and Dr. Cannabis is focused on covering that gap by training doc-

tors and connecting them with thousands of patients who reach out to us looking for treatment.

Do you believe that if the proposed law 399/2015 is approved, we will see a significant change in the price range of available cannabis products in the near future?

We have seen many regulations around the world overtaxing cannabis production and having legal products with a non-competitive price, so the illegal market keeps growing. Brazil now has the opportunity to learn from other countries and do it better in a way to overcome the time lapse we are in. It is unlikely the law will be approved as it is presented now, but if we can source raw material in national ground, I believe the scenario will trend to price reduction.

It is understood that there is a significant difference in CBD vs THC prescription in Brazil. Why is that?

THC is scheduled as a psychoactive compound, so prescriptions are due in 30 days after being signed by the doctor and must be retained when the product is dispensed in drugstores. CBD and/or THC <0.2% are controlled substances and can be prescribed with a different kind of document due in 60 days and all other criteria apply as well.

EXPERT INTERVIEW



Fabio Lampugnani
Managing Director LATAM,
VerdeMed

Fabio has over 20 years of international experience (Europe, US, LAC, Middle East and Northern Africa), in retail, turnaround and business model innovation. LinkedIn: <https://www.linkedin.com/in/fbiolampugnani/>

Can you tell us a little bit more about VerdeMed and its presence in Latin America?

VerdeMed is organised in two business units, VerdeMed Care (www.VerdeMedcare.com), the branded medicinal cannabis division, and VerdeMed Pharma (www.VerdeMed.com), the pharmaceutical division. We have running operations in Canada (headquarters and product development), in the US (production) and in Brazil, Chile, Colombia, Mexico and Peru (sales). The international footprint allows us to access advanced know-how and technology for product development, a cost-effective supply for production, and a deep understanding of LAC's uneven and quickly changing regulatory landscape. In Brazil, Mexico and Peru we are a licensed pharmaceutical company.

What do you consider to be the main challenges to operating in Latin America today?

For an almost utterly regulated market, it is of fundamental importance to understand the regulatory framework of each country and to anticipate future changes, co-operating closely with the national regulatory agencies and legislators. This allows VerdeMed to design and continuously adapt the corporate strategy, doing business with cannabis products that are adequately regulated in

each country. VerdeMed is always positioned for what is coming next, the new regulatory changes and opportunities.

Also, staying in touch with the medical communities and understanding the patients' needs and each country is essential for defining the product portfolio and carrying on a successful market strategy. Finally, it is crucial to have an organisation able to solve daily operational issues, such as international logistics.

What are you most excited about regarding VerdeMed presence in the region, particularly in Brazil?

We are finally at a stage where we can make substantial steps towards achieving VerdeMed's mission: bringing affordable cannabinoid-based products to doctors and patients in LAC.

The present phase is importing products from the US and Canada with the Named Patient business model, which has allowed us to sell CBD-based products in Brazil and Chile and recently to launch the first high-THC product.

But we are very close to starting a second phase, with pharmaceutical products registered in Brazil and Peru (where we already submitted two dossiers) and topicals products registered in Colombia. That means a broader availability of products for patients and doctors and it opens the way for the third phase for local production, which will reduce prices for the patients, an important variable to be considered in Brazil and Latin America.

With growing attention to sustainability, particularly amid COVID-19, how does VerdeMed have sustainability present in its operations?

We always try to keep in mind an important question: 'Why do we do what we do?' And we try to answer considering the value we create not only for our shareholders – that, of course, must be repaid for the trust they put on us – but also for all stakeholders, understanding that profit is the consequence of such value creation.

This way of defining purpose clarifies that businesses exist to serve society and not the other way around, and the link to sustainability becomes clear.

For a company operating in pharmaceutical cannabis in Latin America, it is essential to have the financial resources for funding investments. Which phase is VerdeMed in?

Correct. For increasing sales in our branded medicinal division, we must count on financial resources for working capital and marketing, while for the pharmaceutical division, investment in R&D and clinical trials is fundamental.

We already went through a seed round and a Series A equity round, and we are now going through a Series B (US\$6 million) that will lead us to the IPO, expected for early 2022. We are working daily with this goal in mind.

What is the actual product portfolio and what will its evolution be?

VerdeMed Care at the moment counts on a product portfolio of seven SKUs (oral solutions, softgels and oral sprays), divided into three lines (isolate CBD, full spectrum, high THC). We are completing the portfolio with a new line of topical products containing other cannabinoids than CBD.

VerdeMed Pharma is registering the first two products, a CBD oral tincture and a CBD/THC oral spray. We have already developed the formulation of a pill for insomnia treatment, and we are developing formulations for the other four products.

Jamaica – Embedded in its Culture, Challenges to Exportation



Legal status:

Medical: **Recreational:**
Cultivation: **Export:**

Companies in the cannabis and hemp industries*: **30**

Ease of doing business (WTO) ranking 2020: **71**

Average time to open a business (working days): **3**

Time to obtain a cannabis-related licence: **up to 2 years**

Average farmland price (hectare): **US\$4,000–US\$7,500**

Cannabis users 2020**: **~200,000**

People per pharmacy: **~4,900**

Regulatory bodies

- **Cannabis Licensing Authority (CLA)**

THC threshold: **1%**

Most relevant legislation and regulation:

- **Dangerous Drug Amendment Act (DDA)**

Relevant groups:

- **The Ganja Growers and Producers Association (GGPAJ)**
- **Cannabis Commercial Council**

Trading blocs: **CARICOM**

Corporate tax: **25% (listed companies); 35% (unlisted companies)**

Foreign Direct Investment 2019: **US\$665 million**

Value of greenfield investment 2019: **US\$929 million**

Population 2020: **3.05 million**
Expected 2030: **3.55 million**

GDP PPP per capita 2019: **US\$10,068**
Expected 2024: **US\$11,717**

Environmental Performance Index 2020: **66**

Global Attractiveness Index 2020: **89**

*An aggregate of cultivators, producers, brokers and other companies in the business

** Includes medical and religious users

Jamaica is globally known for its relation with cannabis, particularly due to its importance in the Rastafari and Reggae cultures, being firstly introduced to the island by East Indian indentured servants, which explains the Hindi origin of the word ganja.

In 2015, the country amended its so-called *Dangerous Drugs Act*, which prohibited and punished cannabis cultivation, distribution and consumption, to establish the CLA and develop a regulated industry. In 2016, authorities finalised regulations and began accepting business licence applications. Jamaica awarded its first medical cannabis business licence the following year. The first dispensary opened in March 2018, but progress has been slow and only a small number of cultivators and retailers have become operational under the scheme so far.

In June 2020 and as a signalling will from Jamaican authorities to listen to the complaints of the players, the CLA allowed for online cannabis sales and licence requests, aiming to keep the industry operative in the midst of the COVID-19 pandemic. However, in July 2020 the GGPAJ declared the cannabis project in the country 'a failed experiment', mainly due to considering the CLA policies as restrictive and draconian, according to declarations at the GGPAJ Joint Executive and Seventh Ganja Stakeholders Meeting. Their complaints also gave a strong focus to the limitations for local small farmers.

Despite a generalised idea of not having a regulatory framework for exportation, which has led to cannabis businesses abandoning the island, Jamaica's agriculture minister stated this year that companies have been able to export since late 2018, referring to the 15 export authorisations given. However, the lack of a permanent clear regulation for exporting remains a major concern for the industry players.

FOREIGN INVESTORS HAVE THE CAPITAL TO MOBILISE IN JAMAICA

As of July 2020, the CLA had issued 67 production licences, 21 at the 'granted stage', which comes before fee payment, and over 300 applications were conditionally approved. Hundreds more are in the queue, with a high proportion of these derived from foreign investors.

In terms of exports, 15 licences have been granted by the CLA, and local producers have exported to Australia, Canada, the Cayman Islands, Israel and Zimbabwe. Among these exports there were 534 kilograms of dried cannabis products (which includes flowers, buds and seeds), 0.6 litres of resin oil and 17.5 litres of cannabis tinctures.

The CLA declared in September 2020 its will to facilitate exportation before regulation approval, with the future export licensees being guided by interim measures published by the CLA, measures which will become the cornerstone of potential future final regulations. Canadian giants have been quick to establish their place in this key cultivational region, and some are still present despite the 2019 exit of several players. Canopy Growth, Aphria, The Green Organic Dutchman, Global Canna Labs and the Jamaican Medical Cannabis Collective all operate in Jamaica in some capacity, although under the country's programme they must have a local partner who holds majority control over the business.

This influx of foreign operators is a tension source locally, as the costs to enter the market have been prohibitive to the vast majority of locals, particularly in light of the lack of access to banking and the need to cover the start-up costs associated with gaining a licence. A grower's licence costs US\$300 for an individual, for a business the initial cost is US\$500 and depending on the type of licence acquired, the annual fee can be up to US\$10,000. In keeping with the trend across the Americas, with the exception of Canada, banking issues and a lack of capital have hampered progress

in Jamaica's burgeoning legal cannabis industry as the banks in the region fear sanctions from their correspondent US banking relationships. Despite being assessed by the CLA as 'fit and proper' to do business in the local regulated cannabis industry, at least 238 business interests in the sector had been shut out of the banking system at the close of 2019. Even the CLA was unable to open a bank account previously.

In order to break the deadlock, Dermon Luke Spence, permanent secretary in the Ministry of Industry, Commerce, Agriculture and Fisheries, has lobbied the US authorities to address the problem. Furthermore, the US House of Representatives passed the *Secure and Fair Enforcement Banking Act* in September, which seeks to amend federal law to allow for banks and other financial institutions to work with state legal cannabis businesses. Allowing a legal and frictionless flow of capital to the region will go a long way in allowing the industry to get off the starting blocks and to create a more even playing field in terms of encouraging and supporting domestic capital flow for local start-ups.

ALTERNATIVE DEVELOPMENT PROGRAMME TOO SLOW TO ADDRESS THE DOMESTIC POVERTY TRAP

Another facet of the Jamaican cannabis programme that has been designed to protect and boost local participation is the Alternative Development Programme (ADP), which was supposed to be implemented in 2017 by the CLA. As a result of the complications of land registry and illegal cultivation, however, this instead took the form of very limited pilot schemes in localised areas. The programme aims to prevent and eliminate the illicit cultivation of plants and channel them through legal streams by assessing the challenges that traditional small farmers, with little or no funding support, encounter in accessing the regulated market. However, the scheme has been dubbed as 'inadequate' by critics, who feel it has been an afterthought and does not take

into account the lack of land ownership that is associated with the plight of the Rastafarians and the Maroons. Some of the pilot projects that have been implemented have been slow to get off the ground, and participants have resorted to crowd-funding in order to ensure the farms meet government standards. However, in January 2020 the Jamaican government 'officially' rolled out the ADP as a one-year pilot project, benefitting a group of farmers in Accompong, St Elizabeth.

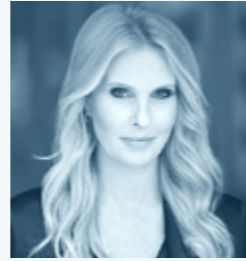
BUREAUCRACY IMPEDES JAMAICA'S PLACE IN THE EXPORT RACE

Another barrier to industry has been the delay in the rules for exporting cannabis, which had been expected to be published in 2019, but were delayed until March 2020 and have been postponed again in the face of the COVID-19 pandemic. The export regulations are intended to give the CLA oversight for the import, export, transit and trans-shipment of cannabis and its extracts, making Jamaica one of only ten countries in the world with an export regime for cannabis. With this framework, the government is looking to stamp a place for Jamaican cannabis in the international marketplace and to maximise the leverage of the heritage of Jamaica's cannabis strains internationally, since the domestic market will be too small to sustain the local industry.

BEYOND THE BUREAUCRACY...

The US State Department estimates that Jamaican farmers cultivate 37,000 acres of illicit cannabis every year. Combined with the cultural expertise and understanding that the island has to offer the cannabis industry, the scope of its licence categories to accommodate both small and large cultivators, regulations that allow a wide breadth of products, and no licence caps, Jamaica is clearly a hot contender in the race to establish itself in the global cannabis economy and as a centre for cannabis excellence.

EXPERT INTERVIEW



Diane Scott
Group Chair & CEO,
JMCC

Described by *Forbes* as the company's 'savvy CEO', Diane Scott brings over 20 years of global experience in the C-suite of enterprises in global emerging industries to her role as Chair and CEO of the JMCC Group. The Jamaican Medical Cannabis Corporation (JMCC) is the premier provider of Jamaican medical cannabis products and related services to the world and is led by an international team of executives, scientists, agronomists, quality controllers and other professionals from a variety of highly regulated industries.

Named as one of North America's top female CEOs in the industry in 2019 by *MJ Business*, Diane helms a rapidly growing business with contracted revenues from customers in Australia, Canada and Germany, and guides the company's continuing international expansion. Under her leadership, JMCC has experienced exceptional growth and is currently on-plan to deliver one million square feet of medical cannabis cultivation in 2020 – of which the contracted yield take-up is more than 80% of full production. Diane is an adviser to several companies and non-profit groups, and is an Activator at SheEO, a global community of radically generous women supporting women-led ventures. In that capacity, Diane invests in women-led enterprises around the world. Diane is a regular speaker on the international stage, on various topics, including regulatory developments and patient access to medical cannabis, venture capital success and investing for societal impact.

In addition to her JMCC role, Diane is also the co-founder of SX2 Ventures, an international venture capital firm based in London, which focuses on innovation and value creation in the human care sector, investing in life sciences, longevity, specialised care and emerging market healthcare solutions. SX2's founders share the belief that business and capital must always benefit humanity: hence, every investment by SX2 has a strong social 'give-back' component.

What is the role of JMCC? Can you tell us a bit more about your mission and activities? JMCC is a global medical cannabis company, headquartered in Toronto, Canada and with our cultivation and production operations in Jamaica. Our mission is simple: to be the leading global provider of Jamaican medical cannabis products and services to the world. To achieve that, we own every step in the process, from grow to delivery.

JMCC's Source division brings together Jamaica's optimal climate and rich cultivation history via our Farmers' Collective and the scientific excellence of our partners at the University of the West Indies and the Scientific Research Council with our own highly experienced local Agronomy team to deliver medical-grade cannabis – both dried flower and full-spectrum raw extracts that are unrivalled for their quality, distinct flavours and optimised medicinal profiles.

Launched this year, JMCC Scientific is the natural next step in our company's evolution, to utilise our GMP-certified, organically grown, Jamaican-sourced cannabis to produce best-in-class liquid cannabis medical products for patients worldwide. And that is why JMCC was the only company to be specifically invited to participate in the UK's Project Twenty21, as its exclusive supplier from the Caribbean region.

Leveraging 30 years of in-depth experience, best practices, global scale and economics, and long-standing relationships with leading transportation companies worldwide, JMCC Distribution can ensure our clients' medical cannabis products reach their customers swiftly and securely, via GDP-compliant distribution centres in Jamaica, Australia and the EU. ('GDP' or 'Good Distribution Practices' describes the standards that a wholesale distributor must meet to ensure that the quality and integrity of medicines are maintained throughout the supply chain.)

What is the situation of the cannabis industry in Jamaica today?

Jamaica's medical cannabis industry has recently experienced some consolidation, with some larger foreign players (particularly from Canada) withdrawing from their Jamaican operations/partnerships as they rationalise their operations to adapt to the over-supply situation back home and the correction in the market over-valuations of some companies in Canada. Other players, including JMCC, are increasing their investment in Jamaica, believing

that the island's ideal climate, rich cultivation history, its technical and scientific expertise and other strengths make it a strong contender as a world leader in medical cannabis. (Note that JMCC does not participate in the local market; we grow only for export.)

What are the main challenges faced by local growers and patients?

For smaller local growers, the main challenge remains the cost of entry into the industry, costs associated with meeting security and other requirements, licensing, etc. The Jamaican government, through the Cannabis Licensing Authority, is trying to address this challenge. For example, farmers with less than one acre of land will pay the lowest category of fees; smaller farmers may apply for a deferment or waiver of the licensing fees; and special provisions have been made for co-operatives to participate in the industry. The Cannabis Licensing Authority is in the process of consultation for a proposed Transitional Permit for Small Farmers to enter the ganja industry at a reduced cost. And the Ministry of Industry, Commerce, Agriculture and Fisheries is engaging communities of traditional ganja farmers as participants in an ADP, which significantly reduces the compliance cost for each individual farmer and waives the licensing fee.

JMCC is helping a bit in this regard, via our own Farmers' Collective. For other members of Jamaica's industry, those growing for export, there are additional challenges, such as growing to international medical quality stan-

dards such as GMP and the increased cost of sales in doing business internationally.

There are no major barriers for patients in Jamaica who want to use medical cannabis – just a doctor’s prescription is required. Jamaican citizens are also allowed to grow up to five plants for personal use.

In your opinion, what are the main challenges and opportunities for existing and potential future business on the island?

We see no limit to the business opportunities in medical cannabis for Jamaica as it enjoys so many competitive advantages: an ideal climate, unique landrace varieties, a well-educated and talented workforce, technical and scientific expertise as well as a history of medical cannabis research (e.g. several patented products and two FDA-approved clinical trials for treatments for acute myeloid leukaemia and pancreatic cancer), a robust regulatory system and a supportive government. Its main challenges are to attract more foreign investment to develop its industry, prove to the world that it can produce cannabis that meets global standards for quality and safety, and advance to producing innovative, value-added cannabis-based medical products.

Having a cultural background, which sets Jamaica apart from its LatAm neighbours, how is the emerging cannabis industry on the mainland perceived in Jamaica?

Due to Jamaica’s long history in growing cannabis and households using it for medicinal purposes for generations, as well as its religious significance for Rastafari and even the country’s legacy reputation as a source of high-quality illegal marijuana, there is a sense, among many Jamaicans, of national pride in the plant, even a sense of ‘ownership’, I’d say, especially for its local varieties like Lamb’s Bread and Pearl. But many Jamaicans of our acquaintance realise that cannabis was introduced to the island only a few hundred years ago, during the colonial period – as in countries like Colombia and Mexico – and that it’s been grown and used in many countries around the world for centuries. In my view, the perception of the emerging industry on the mainland (and here, I take

it, you mean Latin America) would be one of healthy competition.

Can we expect significant changes in the regulations towards exports in the near future?

We expect that Jamaica’s final export regulations will not depart significantly from the interim measures it has already announced. They’re just ‘fine-tuning’ them. The pandemic has slowed that process somewhat but I expect we’ll see final regs by the end of the year.

The CLA declared in September 2020 its will to facilitate exportation before regulation approval, with the future export licensees being guided by interim measures published by the CLA, measures which will become the cornerstone of potential future final regulations.

Argentina – Cannabis Debate Spreading from Jujuy to Tierra del Fuego



Legal status:

Medical: Recreational:
Cultivation: Export:

Companies in the cannabis and hemp industries*: ~10

Ease of doing business (WTO) ranking 2020: 126

Average time to open a business (working days): 12

Average farmland price (hectare): US\$4,000–US\$25,000

Cannabis cultivated area 2020: 35 hectares

Patients July 2020: unknown

Cannabis associations 2020: 15

People per pharmacy: 3,675

Pharmacy chains market share: 15%

Regulatory bodies

- National Administration of Drugs, Foods and Medical Devices (ANMAT)
- National Scientific and Technical Research Council (CONICET)
- National Agricultural Technology Institute (INTA)
- National Institute of Seeds (INASE)
- National Service of Agri-Food Health and Quality (SENASA)
- Specific province administrations

Most relevant legislation and regulation:

- Law n° 27.350
- Resolution No. 133/19
- Decree 138/2017

Corporate tax:

30% (25% from 2021 onwards)

Relevant groups:

- Cannabis Medicinal Argentina (CAMEDA)
- Asociación Civil Acción Cannabica (Acannabica)
- Mamá Cultiva
- Cannabis Confederation
- Emprendedores Cannábicos Unidos de Argentina (ECUA)
- Latin America Industrial Hemp Association (LAIHA)
- Argentine Chamber of Cannabis (ARGENCANN)

Trading blocs: Mercosur, Latin American Integration Association (ALADI)

FTAs: Chile

Population 2020: 45.3 million
Expected 2030: 53.5 million

GDP PPP per capita 2019: US\$19,971
Expected 2024: US\$22,854

Foreign Direct Investment 2019: US\$6,244 million

Value of greenfield investment 2019: US\$4,115 million

Environmental Performance Index 2020: 54

Global Attractiveness Index 2020: 92

*An aggregate of cultivators, producers, brokers and other companies in the business.

In 2017, the Argentine Senate passed a bill making medicinal cannabis legal, in line with other Latin American countries such as Chile, Colombia, Mexico and Uruguay. The cultivation, sale and possession of cannabis for recreational purposes remain illegal, apart from some ongoing PPP projects in some provinces. A provincial law passed in October 2018 created a state-owned company, Cannabis Avatãra Sociedad del Estado (Cannava). The organisation subsequently signed agreements with foreign companies to supply cannabis materials, including:

- Chilean-based Laboratorios Knop to produce on state-owned land and export to Chile
- Green Leaf Farms (subsidiary of Nevada-based Player's Network), 'to supply the country with all the needed oils to conduct its clinical trials'
- Aphria 'to enter into a cooperation agreement regarding the cultivation of cannabis'
- Blueberries, a publicly listed company with primary operations in Colombia, to create a joint venture 'to develop and cultivate cannabis'.

Given the potential that exists in the country for cultivation and supply combined with a significant amount of commercial interest, Argentina is expected to join the recreational legalisation trend in the near term. Owing to the fact that Argentina's provinces have some autonomy on the matter, in March 2019 the country further solidified the opportunity for in-country medical cultivation, after newly announced deregulation guidelines and approval of seed imports in the Jujuy Province, which has become the first to start cultivation. In order to access medical cannabis, qualified patients have to enrol in the National Registry of Patients on Cannabis Treatment (RECANN) and continue the process through ANMAT. It is possible to import cannabis-based medicines, using the Exception Access Regime to Unregistered Medicines (RAEM-NR), for refractory epilepsy patients only. Following the trend in Brazil, Argentina has also seen an increasing

number of associations of cannabis users as non-governmental organisations (NGOs), while the country has become more open to the discussion of cannabis as a treatment, leading to the first nationwide cannabis event to take place in the country in October 2019, named Expo Cannabis, which attracted over 60,000 participants – double the number expected by the organisation. The elderly who are looking for alternative treatment for their medical conditions made up about 40% of that number. The ongoing year has been one of steadily promising news about one of the largest markets in LAC with a higher than average GDP per capita and where some estimates indicate that the potential numbers of patients could reach up to 400,000 in the southern part of the country. In March 2020, Alberto Fernandez, the Argentine president, suggested that there was interest in a much more liberal approach, similar to that of Canada, Uruguay and some US states, increasing the chances that, with the current political situation, nationwide cultivation and recreational approval will take place in late 2020 or during 2021.

In May 2020, the company Cannava, a PPP between the Jujuy province (northwest) and American Green Leaf Farms, reported that it was about to produce its first extract, while other provinces, such as Mendoza, Corrientes, and San Juan, have showed some interest in developing a local cannabis industry. In July 2020, the country's health minister announced a planned regulatory change, aiming to allow domestic cultivation for RECANN enrolled patients, and the production of oils and OTC products by local pharmacies. The government also announced an expansion of the qualifying conditions to enrol at RECANN, previously limited to refractory epilepsy. Also in July 2020, it was reported that the Jujuy province is planning to increase the area allocated for cultivation from the current 35 hectares to 500 hectares in the next few years. In September 2020, the president of the Argentine Chamber of Cannabis (ARGENCANN) published an article asking for more governmental attention to the opportunities offered by this emerging industry and for help to establish a US\$1,000 million exporting opportunity in the next decade.



EXPERT INTERVIEW



Pablo Fazio
President,
ARGENCANN

Pablo Fazio is a political scientist and serial entrepreneur. After a stint in the public sphere, he found himself working in the private arena, having developed multiple ventures in various industries. Perhaps the most relevant was the launch of the pioneering beer company Otro Mundo, in 2005. For more than three years, Pablo has been promoting various initiatives in relation to the cannabis industry, including the founding of the Argentine Cannabis Chamber, of which he is President.

Taking into account the movement in LatAm in relation to cannabis and hemp, can you tell us a little more about the situation today in Argentina in this sector?

Argentina is waiting for the publication in the Official Gazette of the new regulation of *Law 27,350 / 17 (Medicinal Use of the Cannabis Plant and its Derivatives)*. It will make it possible to take the first steps towards the implementation of the cannabis economy in our country, and will enable the initial conditions for the promotion of research and industrialisation projects by the private world in medicinal matters.

Additionally, the Ministry of Productive Development and the Ministry of Agriculture, Livestock and Fisheries are analysing a new productive regulatory framework for cannabis that will imply its industrial uses, which could perfectly be a hemp law, which means enabling the production of generics with concentrations of THC below 1% on dry weight.

The Argentine Chamber of Cannabis (ARGENCANN) has been contributing its vision, its perspective, and providing the greatest collaboration to see it come true.

Why have we not seen Argentina enter more into this sector, as happened, for example, in Uruguay and Paraguay?

In 2017, Argentina passed a very restrictive law and regulation, only oriented to scientific research in relation to refractory epilepsy, and to guarantee free compassionate use for patients who require access to phytopreparations. There was no space or legal framework for any type of initiatives by companies and entrepreneurs, leaving important investment and business opportunities aside.

The state-centric idea of cannabis production by provinces and municipalities has delayed progress by 10 years and ignores the central role of the State, which is that of articulator, facilitator and organiser, its main responsibility being to generate incentives suitable for private companies to find the right environment to develop their activities and create value and jobs. This situation was an obstacle to the start-up of countless projects. Since the new authorities took office in December of last year, we observed a very visible change, a broader view and the enhancement of this development agenda – understanding the opportunity that the cannabis industry represents for Argentina. We hope for a very different time and that much of the energy that was slowly withheld will begin to awaken with a framework of public and regulatory

policies appropriate to the undeniable reality that this industry represents in global terms.

Can you talk a bit about ARGENCANN? What are its objectives?

ARGENCANN is the response of the entrepreneurial and cannabis entrepreneur ecosystem in Argentina to the enormous amount of difficulties, delays and obstacles involved in launching any project in our lands since 2017. It is a horizontal and inclusive call made by a group of companies, in understanding the need to come together to generate a space for sectoral representation and collective muscle, in the conviction that only with collaboration, synergy and teamwork could we achieve this. Our mission is to influence the generation of public and regulatory policies to launch the cannabis economy in our country.

We are a nascent sector that has a shared vision, that envisions its opportunity in the world, that has the enthusiasm and knowledge to do so. We just have to give ourselves a legal framework and legal security. If we succeed, the companies and entrepreneurs of cannabis in our country will give ample samples of what we are capable of doing.

Looking a bit to the future, when can we expect Argentina to enter as a major player in the cannabis and hemp sector?

Argentina is an agro-industrial and agri-food country that has all the conditions to become a global player of importance due to geography, climate, installed capacity, domestic market, human resources and a vibrant entrepre-

neurial community. We can position ourselves as a strategic supplier for export markets given our favourable conditions, as well as very competitive installation and production costs.

Additionally, the fact that we are the only Latin American representative in the PIC/S (Pharmaceutical Inspection Co-operation Scheme) positions our country in an outstanding way in relation to the development and commercialisation of drugs for human or veterinary use at the international level.

Thus, this green agenda for scientific, technical and economic development, which cannabis poses to Argentina, is of enormous wealth for the enhancement of business co-operation with science, academia and public-private structuring, as engines of this new industry.

Our activity can become a countrywide opportunity to face the challenges of the future, being part of an open model growth policy, which places science and technology at the centre of the scene and enables the creation of innovation and innovation cluster technologies around primary production. We can transform it into the development of intellectual property, goods and services with added value that can be exported.

Chile - Latin American Economic Miracle Missing the Wave



Legal status:

Medical: Recreational:
 Cultivation: Export:

Ease of doing business (WTO) ranking
 2020: **59**

Average time to open a business
 (working days): **4**

Average farmland price (hectare):
US\$12,000–US\$37,000

Patients July 2020, including associations:
~65,000

Cannabis associations 2020: **7**

People per pharmacy: **7,940**

Pharmacy chains market share: **72%**

Regulatory bodies:

- **Institute of Public Health (ISP)**
- **Agricultural and Livestock Service (SAG)**
- **National Agency of Medicines (ANAMED)**

Most relevant legislation and regulation:

- **Law 20,000 (2005)**
- **Law 20,500 (2011)**
- **Law 20,724 (2014)**
- **Decree 867 (2007)**
- **Decree 3 (2010)**

Corporate tax: **27%**

Relevant groups:

- **Daya Foundation**
- **CALMA**

Trading blocs: **The Pacific Alliance, Latin American Integration Association (ALADI)**

FTAs: **Argentina, Canada, China, Colombia, EU, Mexico, Panama, Peru, US**

Population 2020: **18.2 million**
 Expected 2030: **19.7 million**

GDP PPP per capita 2019: **US\$27,150**
 Expected 2024: **US\$32,364**

Foreign Direct Investment 2019:
US\$11,437 million

Value of greenfield investment 2019:
US\$8,703 million

Environmental Performance Index 2020: **44**

Global Attractiveness Index 2020:
46 (3rd in LAC)

Since 2005, Chile, with a long history related to hemp and cannabis cultivation and with the third highest cannabis consumption worldwide at 15.1%, has permitted private cannabis use but penalises sales and group usage. The legislation left out statutes for legal possession quantities, rendering the laws as challenging to execute. *Law 20,000* pushed decriminalisation further than did many other countries at the time; however, small possession and group use generated many convictions.

Almost a decade later, in 2014, the government permitted an import of Sativex (a cannabis-based mouth spray developed by the UK's GW Pharmaceuticals) for Cecilia Heyder, a lupus patient also diagnosed with cancer. The import approval coincided with decisions to permit cultivation of cannabis for medicinal use in the La Florida district of Santiago. As of August 2020, Sativex remains the only registered drug for sale at pharmacies. Patients can also import cannabis-based medicines if they have a special permit.

Some NGOs such as Daya have ongoing cultivation and patient-care projects. They oversee the plantation, and designated cancer patients have received the first medicine cultivated from the plants. When this scheme emerged, the actions violated the country's laws regarding cannabis cultivation, but ultimately spurred deregulation initiatives beyond anything legislators had yet proposed. In 2015, Chile's president, Michelle Bachelet, recently named UN High Commissioner for Human Rights, re-opened the country's drug policy debate. Bachelet signed a decree that recategorised cannabis, removing it from the 'hard drug' list, and permitted medicinal cannabis in pharmacies. The order gave the responsibility for the execution of the regulation to Chile's public health institution.

The country's legalisation laws are unclear. The drug is de facto legal but the institutions designated to regulate and control cannabis have yet to release large-scale guidelines on the control of the drug. In the past few months, legislators have again pushed for full-scale decriminalisation of cannabis, in ef-

fect making its legality official, but opposers have launched their own 'Choose to Live Without Drugs' campaign. Approximately 18 members of Chile's Congress are opposing the request to push for full decriminalisation, just as many before them have attempted. The country, with the highest per capita purchasing power in LAC, is perceived as one of the most developed and modern in the region, and is considered one of the regional leaders in terms of cannabis R&D, despite lagging behind Colombia and Uruguay. This Andean country has the potential to be one of the largest industrial cannabis manufacturers in LAC as well as a leading hemp producer.

From 2017 to 2019, the country witnessed some movement around the cannabis industry, with Tilray entering the country in 2017 and importing a bulk amount of cannabis oil, which was not completely sold and has not been seen in stock ever since.

In 2018, Daya provided raw material to produce medical products in partnership with a local laboratory, generating thousands of product sales. This ended in Q2 2019, however, without further renewal.

In August 2020, the Public Health Institute of Chile warned about a growing presence of counterfeit cannabis products, particularly those online that contained CBD. Illegal cannabis is not hard to find in the country, with it being sourced mainly from Bolivia, Paraguay and Peru, and pushed by high consumption, which has seen a 200% increase since 2008, particularly among young people (18–25 years old), according to the UN.

Whether Chile will permit full decriminalisation is unclear. As one of the first countries to relax its laws regarding cannabis, it could be left behind as other nations surge ahead with legalisation and decriminalisation legislation. Taking into account the country's history of cultivation, its purchasing power and developed industry, and with over 15% of its population using cannabis, a full and clear regulation of the cannabis industry will quickly put Chile on the cannabis map.

The country, with the highest per capita purchasing power in LAC, is perceived as one of the most developed and modern in the region, and is considered one of the regional leaders in terms of cannabis R&D, despite lagging behind Colombia and Uruguay. This Andean country has the potential to be one of the largest industrial cannabis manufacturers in LAC as well as a leading hemp producer.

EXPERT INTERVIEW



Simón Espinoza
President,
En Volá

Simón Espinoza is Chief Executive Officer of En Volá Cannabis HUB, a mainstream cannabis media, distribution, e-commerce and product development company that connects the cannabis industry (brands, products and services) with the final consumer, from factory to point of sale, through creative digital content, education of consumers and the transformation of products into commercial trends.

Simón is recognised as a successful Latin American entrepreneur and speaker, leading a team of 16 people who are part of the most important digital cannabis media of in LAC.

A best-selling author in July 2018, Simón is also a prolific writer and a trilingual journalist.

Cover of Cádiz Magazine, September 2018.

What is the current situation like in Chile in terms of medical cannabis and CBD regulation and access?

In Chile, cannabis is regulated as a controlled substance, which means that THC and CBD are still the same in terms of access for users of any kind.

Our law states that the consumption of any substance or drug, not just cannabis, is permitted as long as it is meant for personal, exclusive and immediate use. But this law does not treat cannabis as a penal law issue instead of a public health issue, which means that medical users have had to make their way through

Supreme Court sentences on their favour, stating that a given user was actually using cannabis for medical purposes.

This means that medical users in Chile are considered drug dealers unless a judge determines otherwise, and after trials in which medical treatment is interrupted, families can be exposed to tremendous violence, and liberties and rights are violated.

However, after an enormous effort from certain activist groups like Fundación Daya, Revista Cádiz, Movimental and some others, Chileans now live in a tolerant environment, in which our country, the fifth largest cannabis consumer in the world, can see its citizens using cannabis in the streets and parks.

Due to a lack of control mechanisms, CBD products are currently being sold in Chile without permission. They are more and more popular every day and a few players in the industry have gotten special permissions from our Public Health Institute and Agricultural Service to grow and process CBD products from industrial hemp. These cases are starting to flourish but are still very rare.

How many patients use cannabis in Chile today and what are the main challenges?

Fundación Daya is the main institution treating medical cannabis users, with over 63,000 patients. However, they are not allowed to supply cannabis, with some exceptions for a limited number of patients on rare occasions, so, in many situations, they become medical

consultants for patients that need to grow their own medicine.

Currently, there are over 300 informal 'dispensaries' in Chile. These cannabis clubs usually are non-profit associations that supply cannabis for patients with formal medical prescriptions.

However, it is hard to provide a formal number of cannabis patients, as they remain in a very fragile state, vulnerable to wrong police procedures and everything that comes after. Because of this, most of them choose to stay under the radar.

Many trials in the Supreme Court have set precedents, to transition to a regulation that, at the very least, ensures that homegrown cannabis is not a crime and ensures safe access for patients to their medicine.

Currently, Chile is living an amazing social mobilisation (paused by COVID but still very much alive and growing) that will lead to a referendum. I personally believe that this particular context will bring us closer to legalisation than ever before in the country's history.

In terms of cultivation, do you see the business potential of Chile in cannabis, and particularly in hemp, being explored before 2022, or do you think it will take longer?

Chile is one of the leading countries in wine and fruit exportation, due to the amazing weather conditions and the quality of the land. As in many other industries, the qual-

ity of raw materials is crucial for production. Cannabis is no exception. This gives the country an important advantage in the region and also as a world player.

We currently have a few licensed hemp companies that are manufacturing CBD products and other derivatives. We are expecting this number to increase considerably next year, to start shaping what will become one of the biggest hemp exporters in the region, which it already was, before prohibition.

Is there a concern in terms of sustainability in the discussions around the future of cannabis in Chile?

Very little yet. Since the discussion has nearly reached the Congress, it is hard to approach other subjects like sustainability. Once the fundamentals are covered, one of the biggest concerns within the local cannabis community is to have an inclusive industry that echoes their cultural context and needs.

Sustainability is a must for any new company that wants to thrive in the upcoming future. Adding social value is the very least that new consumers will demand. Cannabis consumers, being directly affected by prohibition, are often very politically involved. So, the question on how the new regulation will shape the industry is yet to be decided, but the massive cannabis community in Chile is likely to push for a socially focused regulation.

How does the country feel in terms of foreign investment in the cannabis and hemp industry?

Our start-up is one of the few cannabis companies that has searched for and found help from abroad, mostly due to the fact that we don't touch the plant. Fundraising is complicated and our country is very conservative – VC is not a real thing yet.

Therefore, the local ecosystem is very open to foreign investment and, in many cases, is presented as the only way to achieve the projected scalability. Several investment funds and family offices have targeted this uncharted portfolio with amazing results. We have this type of action happening more and more commonly.

There are also some companies that are holding hemp-growing licences and CBD commercialisation permits as their main assets. Those players have become very interesting for investors, as those same companies are the ones that will most likely unlock cannabis cultivation licences and THC commercialisation permits.

How is Chile now contributing to the Latin American cannabis scene?

We are the pioneers of cannabis in LAC. The first legal cultivation for medical patients was allowed here for Fundación Daya, in 2014, even before Uruguay's legalisation. After that, the same institution got permission for the biggest cannabis cultivation in LAC. Over 6,000 marijuana plants were guarded by Chilean police officers in 2016.

But besides the fact that the relation between cannabis, hemp and Chileans goes way back, our start-up culture is also strong. R&D companies are developing amazing new projects; entrepreneurs are connecting the supply chain of repository products; universities are creating cannabis courses for health professionals; laboratories and tissue culture are providing tools to investigate cannabinoids; medical trials are on the go, and so much more. There is truly an amazing cannabis ecosystem in Chile and we look forward to evolving the role we will play in this amazing new-born industry.



Uruguay - Small Country, Big Ideas



Legal status:

Medical: Recreational:
Cultivation: Export:

Number of cultivation licences for cannabis: **9**

Number of cultivation licences for hemp: **42**

THC threshold: **1%**

Total cannabis clubs 2019: **123**

Ease of doing business (WTO) ranking 2020: **101**

Average time to open a business (working days): **7**

Average time for cultivation licence obtention: **1 month**

Average farmland price (hectare): **US\$3,000–US\$5,500**

Total farmland: **16.4 million hectares**

Total cannabis registered users 2020: **50,659**

Pharmacy dispensing price (August 2020, per gram): **UYU60 (US\$1.41)**

Division of registered cannabis users by access method October 2020:

- **42,614: Pharmaceutical dispensaries**
- **9,106: Home grown**
- **4,939: Community club members**

People per pharmacy: **3,041**

Pharmacy chains market share: **>25%**

Regulatory bodies

- **Institute for the Regulation and Control of Cannabis (IRCCA)**

- **Public Health Ministry**
- **Ministry of Livestock, Agriculture and Fisheries (MGAP)**
- **National Secretariat for the Fight against Money Laundering and Terrorism Financing (SENACLAFT)**

Most relevant legislation and regulation:

- **Law No. 19.172**
- **Decree 371/2014**
- **Decree 372/2014**
- **Decree 46/015**

Corporate tax: **25%**

Relevant groups:

- **Asociación de Estudios del Cannabis del Uruguay (AECU)**
- **Chamber of Medical Cannabis Companies of Uruguay (CECAM)**
- **Red de Usuarios de Drogas y Cultivadores de Cannabis**

Trading blocs: **Mercosur, Latin American Integration Association (ALADI)**

FTAs: **Chile, Mexico, Venezuela**

Population 2020: **3.4 million**
Expected 2030: **3.5 million**

GDP PPP per capita 2019: **US\$25,202**
Expected 2024: **US\$30,393**

Foreign Direct Investment 2019: **US\$189 million**

Value of greenfield investment 2019: **US\$3,968 million**

Environmental Performance Index 2020: **61**

Global Attractiveness Index 2020: **66**

In December 2013, Uruguay, the pioneer, was the first country in the world to legalise recreational cannabis, starting a ripple effect throughout the world and particularly in LAC, which still continues to this day. However, it took until July 2017 for the products to go on sale, more than three-and-a-half years after Uruguay’s cannabis law had been passed. Government-run pharmacies are the only places allowed to sell recreational cannabis in Uruguay and – partly because of the restrictions facing banks – there are only 17 doing so in a country of 3.4 million people. In recent months the country has paid renewed attention to the industry, with the government considering the creation of designated dispensaries and the facilitation of exports.

Customers must register with the regulator and then are limited to buying ten grams per week. There are just four different strains available to buy, none of which is especially strong. The price – about US\$7 for a five-gram packet – is also set by the regulator. In order to purchase the product, customers enter one at a time and place a thumb and finger on a print reader to prove that they are registered to buy and have not already reached their limit for the month. Consumers must pay in cash since banks in Uruguay have encountered problems with opening accounts and carrying out transactions with cannabis businesses.

In accordance with Uruguay’s drug laws, cannabis is available to Uruguayan citizens and permanent residents 18 years of age and older. It is not available for sale to tourists. Uruguay’s cannabis law forbids cannabis use in indoor public spaces where tobacco use is prohibited. Uruguay prohibits any form of advertising or promotion. Non-medical users must register to buy cannabis and can choose only one of the three legal forms of cannabis supply: home growing, clubs, or commercial purchase.

The Uruguayan government released some updates on the industry in April 2020, three years after its regulation:

- Recreational cannabis is provided by just two companies in Uruguay, ICC

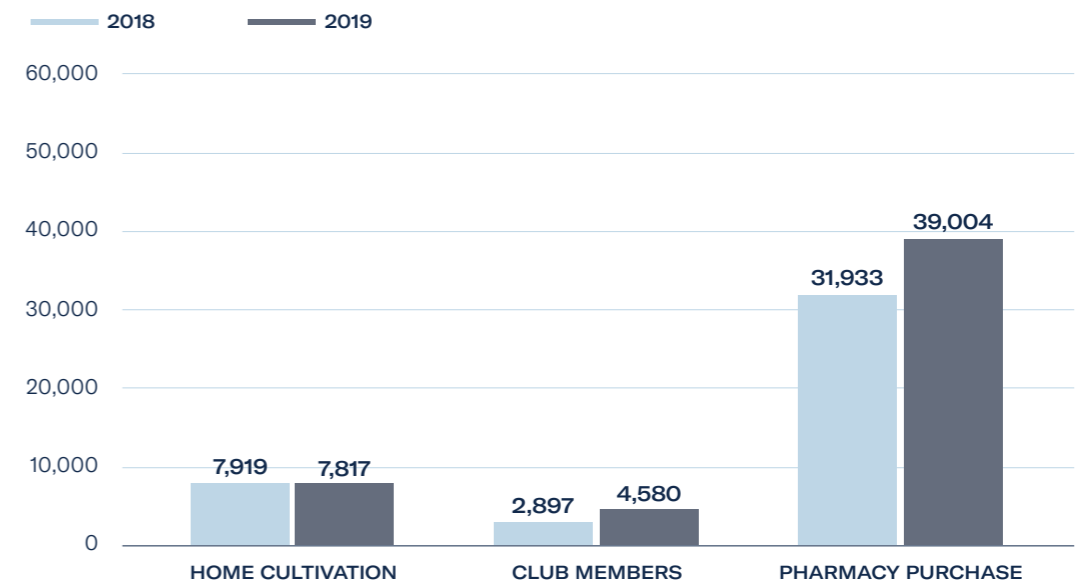
Labs, owned by Canadian LP Aurora, and Simbiosys.

- The average consumer purchases 15 grams per month, 25 grams below the monthly limit.
- Available recreational cannabis has a maximum 9% THC content – usually the products available have an 8% THC content.
- Only 20% of registered users purchase cannabis monthly using official dispensing methods.
- Seventy per cent of the sale price, fixed at US\$1.23 per gram, goes to the producer.
- Over 50% of total recreational cannabis sales take place in the country’s capital, Montevideo.

Besides its internal market and its pioneering approach to cannabis, the country is also a hub for cultivation, with several companies operating in the country with national and foreign capital, and is set to become one of the world’s largest suppliers, both of cannabis and hemp.

The cannabis and hemp industries in Uruguay have gained a new momentum in recent months, with the government signalling its willingness to make the process easier for producers, particularly when it comes to exports, and some milestones have been achieved by the industry, which is expected to export 120 tonnes of combined cannabis and hemp for a total of US\$60 million revenue in 2020 and an expected US\$500 million projected for 2022.

IRCCA Registry of Cannabis users 2018–2019



Source: IRCCA, 2020

Licences awarded by IRCCA as of October 2020

Type of Licence	Quantity
Crops (psychoactive)	11
Crops (non-psychoactive)	42
Industrialisation	13
Investigation	18
Buyers Pharmacy	42,614
Pharmacies	14
Home Cultivation	9,106
Club Members	4,939

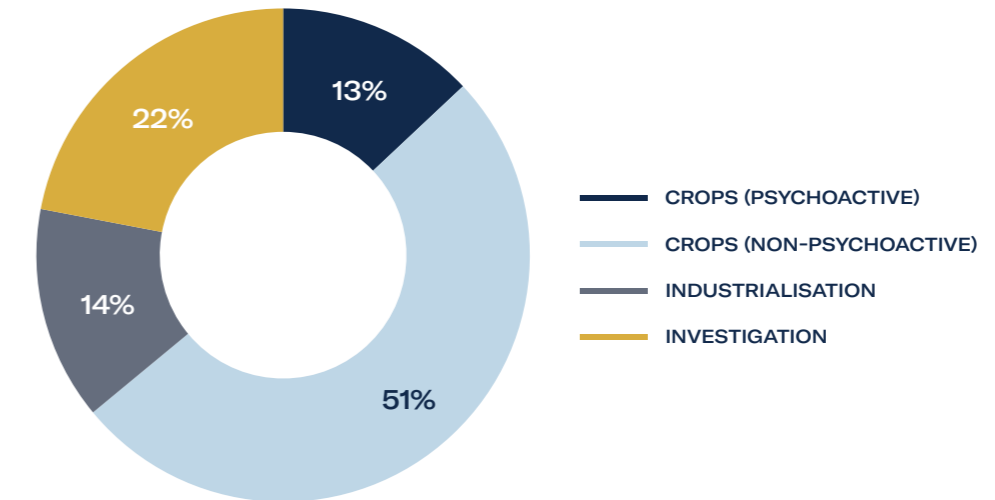
Source: IRCCA, 2020

Recent events in the cannabis and hemp industry in Uruguay:

- In September 2020, the largest cannabis processing facility in Latin America was established in the Salto department, in the northwest of the country. The facility, owned by Canadian Boreal, has 5,000 square metres, with a daily processing capacity of 20 tonnes.
- In a country with an estimated 40 tonnes of annual consumption of cannabis (from legal and illegal sources) but with just over 2 tonnes of annual dispensing, complaints from users regarding product availability at pharmacies are still commonplace in 2020, resulting in a decrease of cannabis dispensing in pharmacies in the last few months.
- Hemp-related licences are increasing exponentially, jumping from 14 licences in early 2019 to 40 in January 2020, a 185% increase in just one year.
- In August 2020, 1,300 hectares were authorised for hemp **cultivation** in the country. Of those, 560 hectares were open fields.
- Due to the emerging hemp industry, there has been a growth in interest for purchasing farmland ranging from 20 to 200 hectares, from local and foreign investors, particularly from Brazil.
- In February 2020, Uruguayan-based Ramm Pharma acquired Glediser S.A. operating as NettaLife, a cannabis-based products-for-pets producer, aiming to export its new products by leveraging the Mercosur free trade area, including Argentina and Brazil.
- Uruguayan president Lacalle Pou announced his administration's interest in reducing the red tape around exportation, and a couple of decrees aimed at facilitating this vital step were signed in August 2020.

- In June 2020, Uruguay Can launched the first blockchain for cannabis tracking, built on the Erernity platform.
- In May 2020, the biggest single cannabis flower shipment from LAC, with 1,412 kilograms, took place. It was sent to Portugal to an undisclosed buyer from the Silverpeak subsidiary in Uruguay, Fotmer Life Sciences.
- In July 2020, hemp producer Cplant shipped 524 kilograms of hemp to Switzerland, at an average price of US\$200 per kilogram, the first export of hemp from Uruguay.
- The Ministry of Livestock, Agriculture and Fisheries (MGAP) declared in July 2020 that it expected the total hemp export from Uruguay in 2020 to be between 50 and 60 tonnes, a number likely to increase in the following years. The price per kilogram for Uruguayan hemp can range from US\$200 to US\$700.
- In August 2020, Uruguayan company UCAN exported 50 kilograms of medical hemp to Switzerland, with an average THC content at 1% and CBD content at between 13% and 14%.
- There is a growing interest in the sustainability of cannabis and hemp cultivation, with companies such as YVY Life Sciences harvesting its first sustainable crops in April 2020. The company is in negotiations with Australia, Israel and Switzerland to export it.

Non-consumer licences by type, IRCCA, July 2020



Type of Licence	Quantity
Crops (psychoactive)	11
Crops (non-psychoactive)	42
Industrialisation	12
Investigation	18
Total	83

Source: IRCCA, 2020

EXPERT INTERVIEW



Rodolfo Perdomo

Foreign Trade Committee,
CECAM

Rodolfo Perdomo is Professor of Criminal Law at the University of the Republic's Law School (Uruguay), and is the author of numerous articles on doctrine and jurisprudent comments on topics of his speciality.

He has been an adviser to several state agencies, including the Presidency of the Oriental Republic of Uruguay, during the cannabis legalisation process, from 2010 to 2015, participating in various regulatory bodies in this regard. He is Managing Partner of the Boutique firm of legal services Perdomo Abogados, which focuses heavily on regulated industries, particularly the cannabis industry, and is an adviser to numerous important companies in the sector, as well as being a delegate of the Foreign Trade Commission of the Chamber of Medical Cannabis Companies of Uruguay (CECAM).

Rodolfo, seven years after the pioneering move of Uruguay back in 2013, how would you summarise the country's evolution until 2020?

I think it has been a very good evolution, without prejudice to the fact that there are many aspects that could have been better, and there are still many things to improve. After the shock that the brave step taken by Uruguay in 2013 meant in the world, a period of much study and preparation followed, in which the foundations of the evolution of the cannabis sector were laid, with the regulatory decrees of 2014 and 2015. From there, Uruguay began to receive consultations and in-

vestments from abroad in the matter, and – a milestone of great impulse to the industry – I think, it was also the courageous step taken by Canada, with the legalisation of cannabis, from 17 October 2018. That was a very strong boost in international terms for the cannabis industry, which began to look strongly to Uruguay. From there came important investments in the industry, both national and, above all, international. It is also true that there have been, and still exist, some regulatory problems since then, which have not allowed the cannabis industry in Uruguay to deploy its full potential. Currently, the Uruguayan authorities have expressed strong support for the cannabis industry and the greatest willingness to be able to release such regulatory obstacles. I believe that the future for the industry, in this sense, could not be more promising, and it will soon become one of the most growing and beneficial industries in our economy.

What are the main challenges still faced by local companies in terms of cultivation, processing and, particularly, export?

They are many, all solvable and all challenging. In terms of crops, Uruguay already has accumulated knowledge in terms of its know-how, its material means and its great lands. Uruguay has important natural agronomic conditions to be able to develop this crop. The main challenge, then, I think, is to ensure a stable, well-reputed and high-quality production volume, remaining competitive at the international level, given the growing entry of other producing countries into the world market. In terms of processing, I be-

lieve that Uruguay still has greater comparative advantages. Without going any further, just some weeks ago, the largest cannabis drying plant in all of Latin America, if not the world, was inaugurated, with GMP standards and in accordance with the highest international requirements. Its drying capacity is 20 tonnes per day, and it can be a game changer for the evolution of the sector as a whole, if we manage to properly articulate the industry. I believe that the main challenge in the matter is to develop the extractive industry, and enable the development of products for the end consumer, with CBD or other components, for example, in order to establish itself as one of the greatest contributors of added value to the industry, in the international market. Finally, export challenges are closely related to how well we meet the challenges of the previous two. In general terms, the challenge appears as that of generating international trade agreements that allow Uruguayan cannabis access to the main world markets. Being a highly regulated industry and with certain international vicissitudes, the articulation of the public and private sectors is essential to achieve it. I see the issue with great hope, because I am aware of the firm will of the authorities to cooperate with this industry. The public and private sectors are convinced, alike, that we are facing a historic opportunity that the country should not miss. And I am convinced that Uruguay will not waste it.

In the context of renewed interest by other South American countries in the cannabis and hemp industries, what can we expect from Uruguay in 2021?

I believe that 2021 is going to be propitious for a very important development of the cannabis extraction and processing industry, and that is where Uruguay can definitely surprise the world, providing all the added value that its well-trained human resources can provide. In addition, the implementation of the first cannabis exports to Switzerland, which are already being carried out by various producers, will begin to open commercial channels that will only be able to expand from now on. If we do things well, and I believe that we will,

I am convinced that 2021 could be a very important year to position ourselves as a leading country in the field of cannabis.

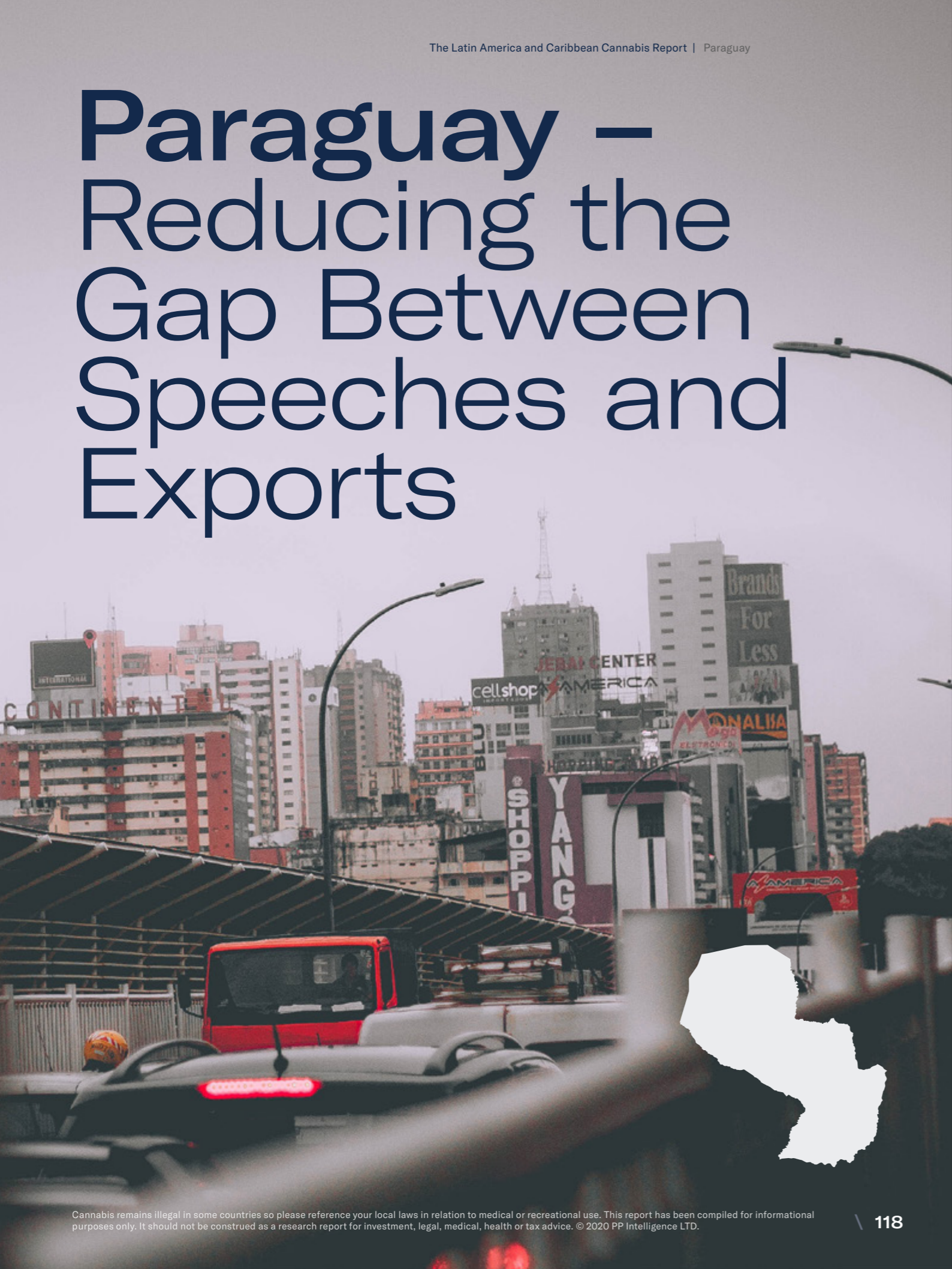
In terms of sustainability, is it taken into consideration by Uruguayan legislation and producers, especially when it comes to waste management?

Uruguay's international insertion motto is 'Uruguay Natural'. That is more than a concept; it has to do more with a way of life and with a preservation of the environment and natural resources. So, Uruguay takes the sustainability of its crops, its processes and caring for the environment very seriously. Without going any further, this year the Ministry of the Environment was created, which I believe will work strongly with the entire sector, in terms of sustainability, organic crops and, ultimately, caring for the environment. There are some initiatives to regulate processes, to be able to give a framework to that ecological sustainability, and I think that it is definitely a differential that Uruguay can contribute to the world.

Can we expect more exports to European countries in the next months from companies without EU-GMP?

It's hard to say, and ultimately it's the market that will define it. In my opinion, I believe that the orientation of production and the market is definitely towards compliance with these international standards, and towards excellence in processes and production. I believe that Uruguay's path is definitely one of high-quality standards, and the intelligent contribution of added value to final products, within a framework of a global vision of the industry. I have no doubt that we have plenty of conditions to achieve it, and I assure you that, as good Uruguayans who carry the famous *garra charrúa* (Claw of the Charrúa), we will put all our efforts into it.

Paraguay – Reducing the Gap Between Speeches and Exports



Legal status:

Medical: Recreational:
Cultivation: Export:

Companies in the cannabis and hemp industries* 17

Ease of doing business (WTO) ranking 2020: 125

Average time to open a business (working days): 20–35 days

Average farmland price (hectare): US\$1,500–US\$10,000

THC threshold: 0.5%

Total patients July 2020: 2,500–3,000

People per pharmacy: 3,000

Pharmacy chains market share: 92%

Regulatory bodies

- Paraguayan Institute of Agricultural Technology (IPTA)
- National Anti-Drug Secretariat (SENAD)
- National Service of Quality and Plant and Seed Health (SENAVE)
- Ministry of Agriculture (MAG)

Most relevant legislation and regulation:

- Law 6007/2017
- Decree N° 2725/2019
- Resolutions MAG N° 130/2020 and MAG N° 315/19
- Resolution SENAVE N° 839

Corporate tax: 10%

Relevant groups:

- Mamá Cultiva Paraguay
- Cámara Paraguaya de Cannabis Industrial
- LAC Industrial Hemp Association (LAIHA)

Trading blocs: Mercosur, Latin American Integration Association (ALADI)

FTAs: Planned with Chile, Mexico and New Zealand

Population 2020: 7.2 million
Expected 2030: 8.8 million

GDP PPP per capita 2019: US\$14,567
Expected 2024: US\$17,534

Foreign Direct Investment 2019: US\$478 million

Value of greenfield investment 2019: US\$892 million

Environmental Performance Index 2020: 73

Global Attractiveness Index 2020: 95

* An aggregate of cultivators, producers, brokers and other companies in the business.

Paraguay stepped up its game in the global export race in February 2020 when the country extended the number of licences (to import seed, cultivate, manufacture and distribute medical cannabis both domestically and for export) it granted, from the 5 expected in October to the 12 awarded. Paraguay also revealed that only pharmaceutical laboratories were permitted to apply for licences. The strategy behind this decision will mean that the country has only issued licences to companies who are already GMP-certified pharmaceutical producers, thus setting high-quality pharmaceutical standards from the outset and potentially cutting through red tape when it comes to bringing products to market – a facet which has slowed Colombia in its export plans. Thus, while Paraguay may have initially fallen behind Colombia and Uruguay in recognising the value of its position in the export market, this strategic awarding of licences could help Paraguay to better leverage its key trade relationships, such as the country's membership of the trade bloc Mercosur.

The country has a well-known reputation as the source of most of the illegal cannabis consumed in the southern half of South America, with an estimated illegal cultivated area close to 8,000 hectares and an estimated output of 30,000 tonnes per year, of which about 80% is illegally exported to Brazil and the remaining 20% to Argentina, Chile and Uruguay.

Declarations from government representatives and industry leaders during late 2019 created considerable expectations for the country's hemp cultivation potential, declaring their willingness to expand hemp cultivation in the country to 50,000 hectares in 2020 (half of the Chinese cultivated area), a milestone hard to bring to reality due to several reasons, for example the lack of qualified seed providers; however, it signals the country's goal of becoming a major producer.

Local producers are required to donate 2% of their production to the Paraguayan government for public healthcare distribution. The ongoing cultivation projects are limited to the

San Pedro, Concepción, Paraguari and Departamento Central provinces.

The country offers competitive advantages such as relatively cheap landfarm prices with a fast-developing agricultural sector, particularly in areas that border Brazil, due to a large influx of Brazilians looking for business opportunities in the neighbouring country – not without some associated tensions. Foreign investors, particularly from Brazil and the US, are looking into the opportunities offered by Paraguay, and Brazilian entrepreneurs are already operating several hemp farms in the country, describing the business environment as 'friendly and with relatively reduced red tape around the industry'. Another competitive advantage for the country is energy, with an average price of energy at US\$0.4 per kWh, one of the cheapest prices in the world. This has motivated pharmaceutical companies from Brazil such as GFB to invest over US\$5 million in the country to cultivate one hectare in order to benefit from the reduced costs and ultimately bring cheaper finished products to their clients. The company aims to invest another US\$25 million for its expansion, adding five extra hectares to its cultivated area.

Today, five companies are authorised to cultivate industrial hemp in Paraguay: Evonia, Alquimia, International Market, Healthy Grain and Irupe. Companies such as Healthy Grain are already developing a 'social seal' to create a nationwide branding campaign.

The Paraguayan laws for hemp cultivation allow for each family to cultivate up to two hectares, with an estimated number of interested families standing at 25,000 and two harvests expected per year, for which families will receive an average of US\$1,500 for each harvest.

In August 2020, Paraguayan president Mario Abdo Benítez signed a decree that places hemp as a 'national interest crop', creating conditions for industry growth in Q4 2020 and 2021, signalling a clear intention from the government to put Paraguay on the map of producers in less time than it took other South American nations to transform the idea into an export.

The country's hemp industry made it to the news in September 2020 when local company Healthy Grains S.A. announced the first export of hemp food in LAC to the US, exporting 500 kilograms of hulled seeds, 350 kilograms of powder and 150 kilograms of oil.

EXPERT INTERVIEW



Fernando Silva Facetti

Senator,
Paraguay

Senator Fernando Silva Facetti is a 51-year-old lawyer by profession and is serving his third term as an elected Senator. He is currently a member of the Senate in Paraguay, as President of the Commission for the Prevention and Fight against Drug Trafficking and Vice-President of the Legislation Commission. He is also the representative of the Senate before the Jury for the Prosecution of Magistrates. He has led the Environment Commission of the Parliamentary Confederation of the Americas (COPA) for three terms. He has been one of a group of designers to draft a large number of laws with an emphasis on financial, environmental, administrative and criminal areas. In the public field he has been a Member of the Central Bank of Paraguay (2001 to 2006) and President of the Institute of Social Security (2012 to 2013).

Can you share a little about how Paraguay stands today in relation to the nascent industrial hemp and cannabis industry?

Paraguay approved in 2017 the law creating the national programme for medical and scientific study and research of the medicinal use of the cannabis plant and its derivatives. This law establishes a regulatory framework that allows the controlled investigation and import, production, distribution and commercialisation of medicinal cannabis. Although the approval of the law was a great advance in our country, we have not yet achieved the successful application of it, which should have resulted in the promotion of research and production of medicinal cannabis by specialised

pharmaceutical laboratories and, more importantly, guarantee free access to medicinal cannabis to patients who need it. Regarding the hemp: last year, the Executive Power promulgated *Decree 2725*, by which the general conditions for the production of industrial hemp (non-psychoactive cannabis) are established. Recently promoted by the Ministry of Agriculture and Livestock in August of this year, *Decree 3999* was enacted, which created the National Programme for the Promotion, Development, Cultivation, Production, Commercialisation and Research of Industrial hemp.

These decrees, promoted mainly by the Ministry of Agriculture and Livestock, allow for the first time the importation of propagation material, experimentation in industrial cultivation, the production, commercialisation and export of industrial hemp, as well as the promotion of industrial hemp in all its production links. We can affirm that from the government we see both medical cannabis and industrial hemp as high-performance alternative products that could present a brilliant opportunity for scientific, economic and social development. However, I still see that there are regulatory deficiencies, and the many decrees and resolutions that specifically address these issues have caused confusion and subjectivity of interpretation, which has arbitrarily benefited only some sectors and this should be corrected. Undoubtedly, it must be a commitment of the State to guarantee the development of these new items with objective technical parameters that ensure the producer, researcher, investor or consumer the highest quality,

free competition and access to international markets with a differentiated product and a country brand. In my capacity as President of the Commission to Combat Drug Trafficking, we are monitoring the implementation of the regulations, requesting reports from the entities involved, listening to the experiences of those who are entering the field and analysing the different obstacles that are being encountered, all this in order to demand transparency, objectivity and technicality in the processes.

How does Paraguay seek to differentiate itself and gain space while collaborating with its neighbours?

Paraguay has unique virtues that must be harnessed. Our country has a blessed climate and soil, investment-incentive laws and guarantees, low taxes, a young workforce and, above all, a government committed to developing and promoting the cannabis industry. Our country must differentiate itself by positioning an objective and clear regulatory framework that commits the investor or producer to the development of a quality product that is recognised internationally.

In relation to the growing demands for sustainable practices and products, how does Paraguay seek to give rise to these criteria in the hemp and cannabis industry?

Paraguay is committed to the Sustainable Development Goals and these are incorporated into the government's national agenda. In addition, the environmental impact analysis requirements are established in cultivation, production and industrialisation projects, so

we can say that Paraguay complies with sustainability standards throughout the production chain.

What benefits do you expect this emerging sector to bring to Paraguayans and their fight against drug trafficking?

As is well known, currently illegal marijuana crops occur due to the lack of opportunity in the field. We believe that the incorporation of industrial hemp as an alternative crop will allow a decent source of income for small farmers, deteriorating the interest of farmers who are more vulnerable in submitting to work in clandestine crops that are in the hands of criminal groups.

Looking to the future, what can we expect from Paraguay in 2021 in this sector and what message would it give to foreign investors looking towards the country?

Both the Executive Power and the Congress are committed and willing to establish the necessary tools that guarantee quality, free competition and access to international markets. We hope to be able to strengthen the regulatory framework that guarantees the incorporation of cannabis as a star product of the productive sector, allowing the entry of new investments throughout the chain, from research, cultivation, production, industrialisation, commercialisation and export, with the predisposition of a government willing to be a strategic ally throughout the process.

Ecuador - Closest to the Sun and to Ideal Conditions



Legal status:

Medical: ✓ **Recreational:** ✓
Cultivation: ✗ **Export:** ✓

Ease of doing business (WTO) ranking
2020: **129**

Average time to open a business
(working days): **49**

Average farmland price (hectare):
US\$1,200–US\$11,000

THC threshold: **1%**

Total patients July 2020:
12,000 (including illegal market sources)

People per pharmacy: **2,092**

Pharmacy chains market share: **>53%**

Regulatory bodies

- **National Agency for Health Regulation, Control and Surveillance (Arcsa)**
- **Agency for Regulation and Control of Phyto and Zoo Health (Agrocalidad)**
- **Ministry of Health**

Most relevant legislation and regulation:

- **Article 364 of the Ecuadorian National Constitution**
- **Código Orgánico Integral Penal (COIP) - article 127**
- **Ley Orgánica de Agrobiodiversidad, Semillas y Fomento de la Agricultura Sustentable (Loasfas)**

Corporate tax: **25%**

Relevant groups:

- **Agrupación de Familias por el Cannabis Medicinal**
- **Ecuador Canabico**
- **Mujeres Canabicas**
- **Ecuacáñamo**

Trading blocs: **The Pacific Alliance (advanced negotiations), The Andean Community, the Latin American Integration Association (ALADI)**

FTAs: **Chile, EU, Mercosur, US (planned)**

Population 2020: **16.9 million**
Expected 2030: **21.1 million**

GDP PPP per capita 2019: **US\$11,798**
Expected 2024: **US\$13,143**

Foreign Direct Investment 2019:
US\$966 million

Value of greenfield investment 2019:
US\$706 million

Environmental Performance Index 2020: **56**

Global Attractiveness Index 2020: **84**

In September 2019, the Ecuadorian National Assembly approved legislation for the production, commercialisation, marketing, use and consumption of cannabis for medicinal or therapeutic treatment. The law also removed hemp from the list of prohibited plantations. Ecuador defines medicinal or 'non-psychoactive' cannabis as a dry-weight product with a THC content of less than 1%. Rather than the plant being sectioned under the Ecuadorian Organic Integral Criminal Code, it is now fully registered as a crop under the National Agrarian Authority. To administer cannabis in Ecuador, the government has asked doctors to gauge the patient's needs. Doctors have been given strict guidelines for administration.

Government institutions have not yet commented on how importation and production of medical cannabis will be regulated under the new norms. However, the sowing, cultivation, harvest, industrialisation, storage and dispensing of medical cannabis are expected to fall under the jurisdiction of Arcsa, Agrocalidad, Ministry of the Interior, Ministry of Health, Ministry of Environment, the cantonal decentralised autonomous governments (GADs) and Ministry of Defence.

Discussions in the run-up to legalisation suggested that it would be the Ministry of Health in charge of granting licences, which will last five years. They will be delivered exclusively to legal persons, as well as co-operatives and associations dedicated to the production of medicines or natural products processed for medicinal use. These entities must submit a production project that contains the specifications of place of production, type of seed and stock, the technology to be used, number of plants to be used, products to be obtained, and description of the production line, among other details. It is expected that all operators will be required to have internal and external security and control protocols that will be approved by the Ministry of the Interior. Also, a waste treatment plan will need to be approved by the GADs and the Ministry of Environment.

A potential sticking point to domestic participation, which seems endemic across the region, is the likely requirement that licence holders must declare and demonstrate the legality of the origin of the funds for the execution of the project, complying with this and other applicable regulations for the prevention of money laundering.

ECUADOR TO RIVAL COLOMBIA'S DOMINANCE?

Like Colombia and Peru, Ecuador is a nation with a strong agricultural background, rich volcanic soil, cheap labour and with all the benefits of being located on the equator and with good sunlight conditions – the country's volcano Cotopaxi is famous for being closer to the sun than Mount Everest is due to its location on the planet. Cannabis cultivation can be achieved all year round and is expected to achieve nine harvests per year.

Ecuador also has strong exportability, having already established a trade deal with the US. Furthermore, the country is not land-locked, and with several busy ports it is a prime candidate as a global export hub, with an existing and well-established flower cultivation and export market from its fertile Andean valleys, which could translate into know-how regarding delicate agricultural production, storage, transportation and export, as has been the case of Denmark and the Netherlands in Europe.

The speed at which the country's framework is put into place combined with the level of complexity of the regulations are likely to determine just how much of a threat to Colombia and Uruguay this relative newcomer will be.

Current laws in Ecuador permit personal consumption of cannabis, allowing people to carry up to ten grams. At present, the sale of cannabis is illegal. In September 2019, Ecuador's government voted in favour of legislation to make medicinal cannabis legal. The

Plenary of the National Assembly approved the reform of the COIP, which allows the production, commercialisation, distribution, use and consumption of cannabis for medicinal or therapeutic uses in the country. Of the 130 assembly members, 83 voted 'yes', with just 23 against the motion. Possession of up to ten grams of cannabis for personal consumption is legal in Ecuador, although its sale is prohibited. The current cultivation plan aims to start the cultivation pilot projects with 200 hectares of low-THC cannabis.

The new legislation regarding hemp gave a timeline for the Ministry of Agriculture and Livestock to manage its cultivation licences, regulations and guidelines within four months of the law's enactment, which took place in June 2020, therefore we can expect important regulatory updates by September or October 2020 and five types of licences:

1. Import and production of hemp plants, seeds or cuttings
2. Plant breeding and/or scientific research and germplasm banks
3. Hemp cultivation
4. Production of derivatives and industrialisation of products derived from hemp
5. Commercialisation.

Despite the lack of proper regulation, the cosmetics industry has already launched hair care products containing CBD.

The food industry, both human and animal, also offers interesting opportunities, as edibles with less than 1% of THC will be freely sold according to the new legislation.

The country aims to have between 40,000 and 50,000 industrial hemp cultivated hectares between 2030 and 2035, with expected three to four yearly harvests. The COVID-19 impact on the floriculture sector, which led 17% of the flower cultivated area to disappear, is expected to serve as a development opportunity for the emerging sector.

EXPERT INTERVIEW



Photo: Diario El Comercio, Patricio Terán

Alexis Ponce
President,
APFC Ecuador

Human rights defender, father to a girl with cerebral palsy, husband to a cancer survivor, founder of the National Association of Vulnerable Patients and Families for Medicinal Cannabis of Ecuador

What is the current situation like in Ecuador in terms of medical cannabis regulation and access?

The current situation is very positive if we contrast with Ecuador one year ago exactly – on 7 September 2019. It was not even precise when, where and how cannabis for medicinal use would be decriminalised. And even worse, it was known that three uses (palliative, therapeutic and medicinal) and industrial hemp would be approved. But, only ten days later, on 17 September – in the recent past year, we accomplished ‘the impossible’. Today, the situation is moving towards the restriction of secondary regulations that hopefully do not cut rights and underpin a new post-pandemic productive matrix, based on cannabis and hemp. Despite the typical systemic crisis and the institutional chaos of the current national state and the regime, access is increasing.

How many patients use cannabis in Ecuador today and what are the main challenges?

Quantification is impossible, just as in any country that decriminalised medical cannabis only a year ago. A couple of weeks ago, Ecuador was making palliative and therapeutic medicinal uses legal, which is much more progressive than in other nations. Statistics are still kept in the sub-registries due to the priva-

cy that has reigned, to the social shame that has prevailed (patients have now been vindicated) and to the ineffective policing of the registry system. Businesses (local and international) could possibly take some CBD to calm their anxiety about statistics, which would help them to strategise this new niche.

In terms of cultivation, do you see the business potential of Ecuador in cannabis being explored in 2021 or do you think it will take longer?

2021 will be key. The potential is already ‘enthroned’ in a good part of the business elites, who have decided to turn their past investment axis due to the pandemic and set their eyes on cannabis and hemp – for medicinal and industrial uses. This applies to the elites of the land, of commerce, of import and export, of industry, politicians, the battered health sector, patients and their families, naturopaths and informal sectors. It is convenient for the profiteers of any business and of all time, for all of them, that the potential is explored.

Is there a concern in terms of sustainability in the discussions around the future of cannabis in Ecuador?

No, for the explanation immediately above. Because no one – only very, very medieval elite groups, who identify cannabis with hell and hemp with sin – should stop a process already started. [Thanks to the selfless families and vulnerable patients who opened the gate, not the window of opportunity. This is what a Quito businessman told us as soon as we succeeded: ‘I want to express my apprecia-

tion to you, Mr Ponce, because, thanks to you, we entrepreneurs will be able to do profitable business with hemp and medicinal cannabis.’] Note that this immense vein of productive, medicinal, economic, labour and human gold that the country has just discovered (medical cannabis and industrial hemp) is like a baby born three months before the pandemic: everyone will want to take care of it, breastfeed it, dress it, warm it and watch it grow healthily, and on September 17th it will be one year old. And it is the companies, industries and investors who have to help us patients and families to blow out the candles on the cake to the one-year-old project.

How does the country feel in terms of foreign investment in the cannabis and hemp industry?

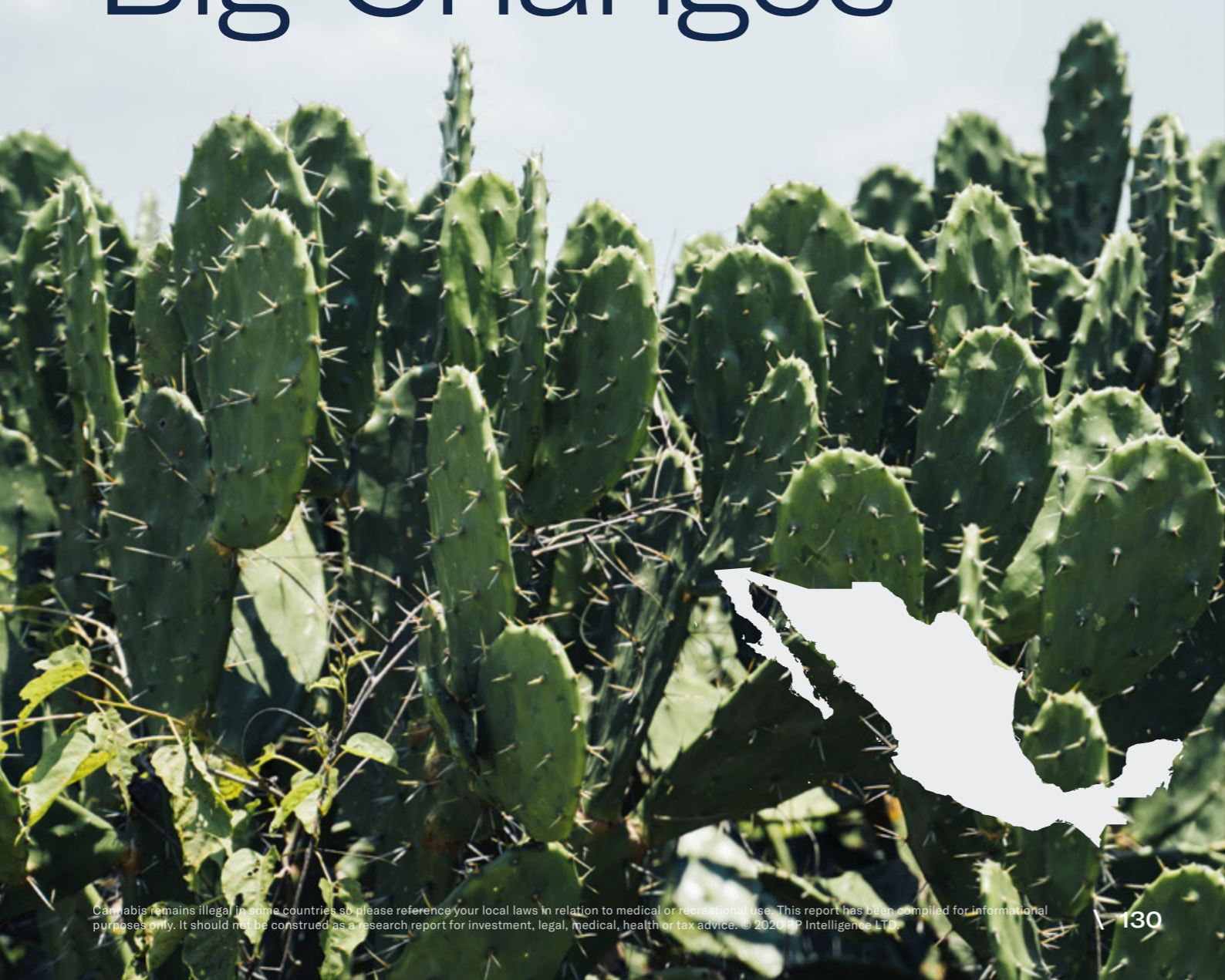
The country is not one. They are many or several (a heterogeneous mixture) in one, which do not walk at the same speed nor have the same visual power to look at the future. I can speak for certain sectors that have shown their hunger: agricultural and industrial sectors, ministers and politicians at the forefront of agriculture, livestock, trade, industries and production. We, vulnerable patients and families (in Ecuador, we are a very respectable sector due to the ethics of pain and self-denial), having put our chest to bullets before ‘cannabis’ was a decriminalised word in the institutional dictionary, gave our ‘ethical backing’, our friendlier and more human approach to corporate social responsibility. Without it, things would have been different, especially at a time of global pandemic.

Tell us a bit more about the NGO you lead for cannabis users.

It is the one that came up with the correct strategy, the struggle and the modern vision for Ecuador on 17 September 2020, to put on long pants and leave the middle ages: that is, it achieved legalisation. All respectable business, media and social sectors admit this authorship. We are the only social and civil organisation of patients and families in the entire national territory, and abroad (migrant families), organised by pathologies. Pain and love achieved this organicity. We were born in 2018. We are as young as legalisation. And as old as human suffering. That is why our philosophy was and is: ‘Cancer is owned by rich and poor. Disability is not of the left nor of the right. Epilepsy is not of Catholics or Christians or atheists or Muslims or Protestants. Pain has no ideology.’

In 2018 we said: ‘Legalisation is inevitable, come, we will win.’ And we won.

Mexico – 100 Years after Prohibition, Days Before Big Changes



Legal status:

Medical: Recreational:
Cultivation: Export:

Ease of doing business (WTO) ranking
2020: **60**

Average time to open a business
(working days): **8**

THC threshold: **1%**

Estimated total accumulated cannabis users
2017: **7.2 million**

Estimated yearly cannabis users in 2017:
1.8 million

Estimated monthly cannabis users 2017:
0.9 million

People per pharmacy: **4,159**

Pharmacy chains market share: **65%**

Regulatory bodies

- COFEPRIS
- Mexican Cannabis Institute (MCI) –
expected to be operational in 2021

Most relevant legislation and regulation:

- Law for Cannabis Regulation
- Health Law Revision from 2017

Corporate tax: **30%**

Relevant groups:

- Autocultivo Medicinal Mexico
- Asociación Nacional de la Industria del Cannabis (ANICANN)
- Grupo Promotor de la Industria del Cannabis (GPIC)

Trading blocs: **The Pacific Alliance, the Latin American Integration Association (ALADI), North American Free Trade Agreement (NAFTA)**

FTAs: **Canada, Chile, EU, Israel, Mercosur, Japan, Peru, Uruguay, US**

Population 2020: **128.7 million**
Expected 2030: **150.6 million**

GDP PPP per capita 2019: **US\$21,764**
Expected 2024: **US\$25,322**

Foreign Direct Investment 2019:
US\$32,921 million

Value of greenfield investment 2019:
US\$27,859 million

Environmental Performance Index 2020: **51**

Global Attractiveness Index 2020:
43 (2nd in LAC)

It is one century exactly (1920) since cannabis, locally known as *mariguana*, was prohibited in Mexico, after centuries of hemp cultivation and recreational cannabis use.

Today, Mexico is one of the most eagerly watched countries as a result of the Supreme Court's ruling in the autumn of 2018 that an absolute ban on recreational use of cannabis was unconstitutional. The 2018 bill, which followed the ruling, contained proposals to reform two sections of the country's *General Health Law* and allow for recreational as well as medical use of cannabis. There would also be allowances for a Mexican CBD industry, with a proposal allowing for the 'textile use of the plant'. On 3 September 2019, Senator Julio Menchaca Salazar, of the government's ruling MORENA party, introduced a bill to legalise cannabis. However, given that the final bill proposed rules on limiting foreign ownership, vertical integration and licence resale, ongoing concerns that this would restrict outside investment saw the Mexican Senate ask for an extension after failing to come to a consensus by the October 2019 deadline. On 5 March 2020, three Senate commissions in Mexico, acting together, passed legislation to legalise all forms of cannabis. The bill was then due to go to the full Senate and, once approved there, to the lower legislative chamber. The court granted an extension, until 30 April 2020, for Mexico's Congress to complete legislation, which has been postponed in the face of the COVID-19 pandemic.

The last months of 2020 are expected to bring developments to the Mexican legal landscape, as two deadlines for government decisions are expected:

- COFEPRIS, the regulatory body, had a deadline in mid-September 2020 to publish rules and regulations regarding medical cannabis, as ordered by the Supreme Court following a mother's request to the justice system. As of 21 September, no regulations had been published by COFEPRIS.
- The bill is aimed at regulating general access to medical cannabis and is waiting for

legislative body approval. A deadline has been set for 15 December 2020. Sources within Mexico report that we might get updates earlier than December.

In terms of hemp, the Latin American country has the potential and natural conditions to be a large hemp exporter, but currently industrial hemp is treated as medical hemp, with no distinction made between the industrial and the medical potential of the plant, raising criticism from the industry and potential investors.

In an attempt to bring attention to the importance of moving forward with the legislation, Mexican Senator Jesusa Rodriguez, from the ruling party MORENA, brought a cannabis plant to the Senate. The country's president, Andrés Manuel López Obrador, also known as AMLO, has been supporting the cannabis legislation.



Source: Twitter account, Mexican Senator Jesusa Rodriguez, 31 August 2020

INVESTOR POTENTIAL

Approval would create the world's largest adult-use market by population:

- Mexico has a considerably larger population than Canada (128.7 million versus 37.4 million).
- There are 15 million smokers in the country and cannabis use has been increasing steadily, reaching about 2 million declared annual users in 2017, a number likely to be higher today and taking underreporting into account.
- Adults as young as 18 (the proposed legal age in Mexico) could potentially become consumers in Mexico, giving the market an even bigger user base than those markets where the legal age is 21, which is especially interesting in a country where young people represent most of its population pyramid.
- The National Association for the Cannabis Industry has predicted that recreational use of cannabis could reach 7.2 million consumers in Mexico.
- According to the civic group México SOS, Mexico is the second-biggest producer of illegal cannabis in the world after Morocco, with the plant grown across 16,500 hectares (40,772 acres). Mexico's climate and cheap labour allow cultivation year round.
- Proximity and free trade agreements with Canada and the US set Mexico apart, disregarding the country's experience with the plant, placing the country at the top as a potential provider to its northern neighbours.

Another aspect of the legislation that bodes well for investment is the fact that, despite medicinal cannabis being legal in Mexico since 2017, the forthcoming law will only allow for medicinal cannabis patients to purchase edibles and cannabis-infused beverages. And since derivatives almost always bear considerably higher margins for growers than dried cannabis flowers, this will raise potential revenues in the medicinal segment.

INVESTOR HURDLES

The draft legislation also deems that there will be strict laws ensuring the use of plain packaging to eliminate the promotion of brand awareness. The laws will also require packaging to be childproof and to be made from sustainable materials, while also preventing:

- advertising of any kind, except for hemp-related products
- cannabis being used for cosmetic-related products
- driving under the influence of THC
- sales via online, mail, phone or similar, and any implementation of a self-service dispenser, a ban that might be reviewed after the telemedicine surge in the context of COVID-19
- the smoking or vaping of cannabis in parks or other open areas where minors could be present.

A central agency, known as the MCI, will be responsible for overseeing Mexico's legal cannabis industry. The MCI will be in charge of setting potency limits for recreational cannabis, implementing whatever legislation is passed, and issuing cultivation and/or sales licences.

Through regulating the process, the MCI will ensure that the licensees are meeting set requirements. Licences are expected to cover the areas of:

1. cultivation
2. transformation
3. sales
4. export and import: those countries and states in legal compliance with medicinal and scientific use.

The proposed law will allow for individual cultivation of up to 20 plants per year, or 480

grams per year, for recreational use, and a larger limit for medical patients plus a tax of 12% for all cannabis sales.

Since the last developments in the industry created an emerging grey market, it is very common in Mexico today to find sellers of cannabis products on social media and WhatsApp, including sellers of edibles, drinks, creams and tinctures, raising health concerns for the lack of safety protocols and control by the authorities.

Given LAC's plantation legacy, it is unsurprising that the legislation has taken steps to protect domestic economic potential. We have already seen similar efforts play out elsewhere, such as in Thailand, where foreign investment has been limited by laws put in place to prevent trademarking on products that occur naturally, in an attempt to prevent emerging economies from losing out on the revenue potential of their country's natural assets. Mexico's draft legislation gives licensing priority to low-income individuals, small farmers, and indigenous peoples in Mexico and limits foreign ownership to only 20% of the licence capital structure.

Foreign investment has already permeated the country's cannabis industry, however. For example:

- Aurora Cannabis acquired Farmacias Magistrales in 2018, giving Aurora access to 500 pharmacies and hospitals in Mexico, as well as a 12,000-square-foot pharmaceutical processing and production facility in Mexico City. Farmacias Magistrales is also the only company licensed to import raw materials containing more than 1% THC.
- Medical Marijuana Inc. has been present in Mexico since 2016 and was one of the first companies to import CBD oil into Mexico.
- Vancouver-based CannaOne partnered with Manna Health in Mexico City in March 2019 to undertake the development, launch and operation of an online CBD product purchase and delivery marketplace, using

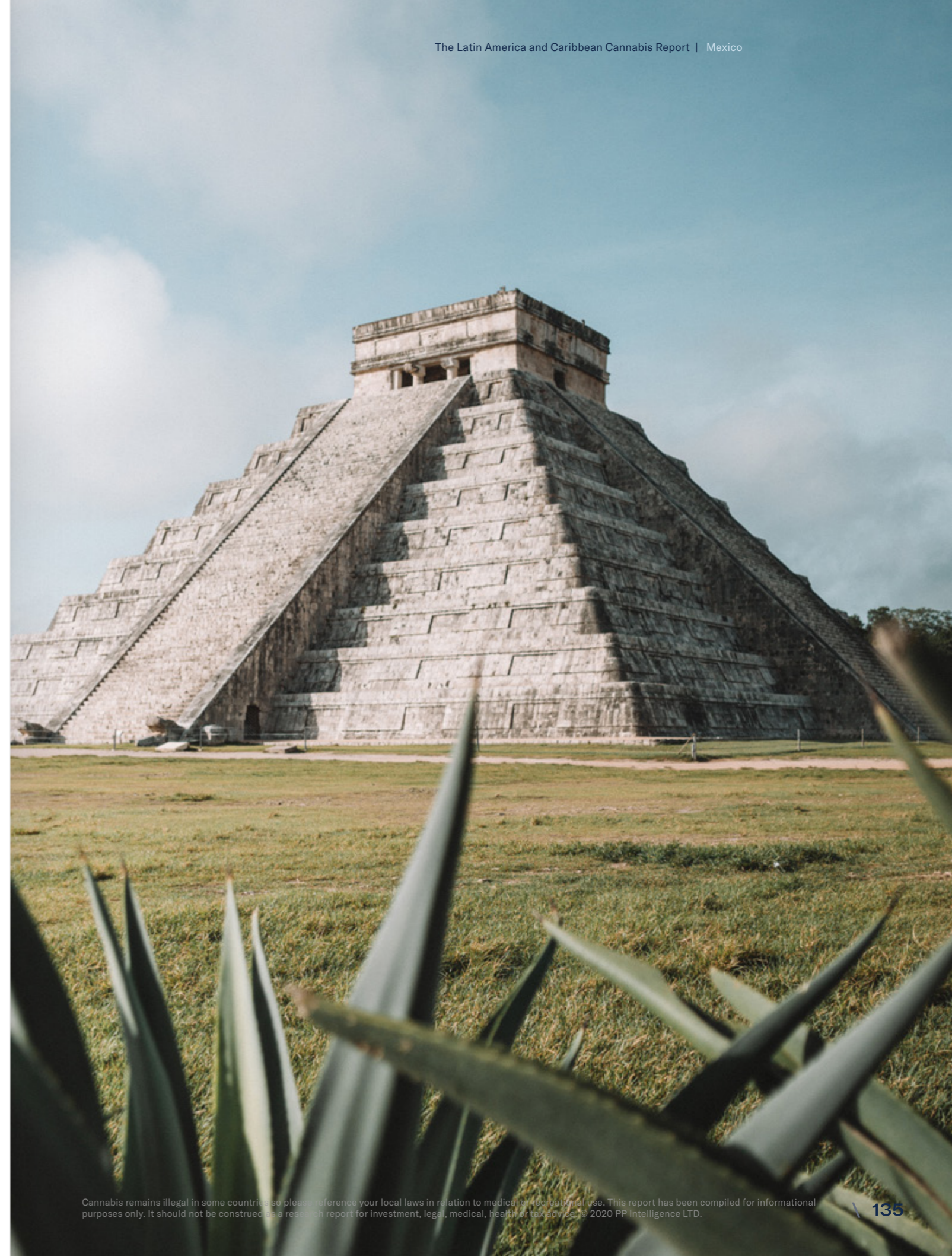
BloomKit, CannaOne's enterprise software solution. The deal has given CannaOne access to Manna Health's existing partnerships covering retail and commercial land, pharmacies, shopping malls, and tourist destinations throughout Mexico. Currently, Manna Health is approved by the Mexican government to buy, sell, lease, distribute, import, or export any products related to health & wellness.

- In January 2019, PharmaCielo Colombia Holdings S.A.S., announced its entry into the Mexican market through an equity joint venture with MINO Labs S.A. de C.V., a speciality pharmaceutical company and medical supply distributor based in Mexico.

Thus, despite the ring-fencing of domestic potential, it is already recognised that the Mexican cannabis industry will struggle to get off the ground without the trade efficiencies that come from large established multinational cannabis companies.

LACK OF CLARITY ON CBD

Another issue that has stunted some of the groundwork associated with a burgeoning cannabis industry is the lack of clarity around CBD. In October 2018, 60 product licences had been initially approved by COFEPRIS, which was expected to make cannabis products like hemp-derived CBD available on the shelves of general retailers across the nation. This approval favoured companies such as CBD Life and CBD Science, which registered the largest number of products, in addition to Medimex, Hemps Meds, Master Pharmacies, Finat Mexico, Endo Natura Labs, Kuida Life Mexico, Pharma Oil Solutions and The Clinic Pain Relief Center. However, the revoking of the guidelines on cannabis products and licensing in March 2019 in favour of a new regulatory instrument bound up in the wider cannabis legislation put this revenue potential on hold.



STAMPING OUT THE DRUG CARTELS

A significant challenge to the legal industry is the illicit market, with firmly established drug cartels a key feature of Mexico's violent gang problem. Although the government is legalising cannabis in order to cut off one of the cartel's key revenue sources and to gain tax revenue simultaneously, the lessons from Canada's legalisation programmes have shown us that stamping out the illicit market is not a straightforward undertaking – with Statistics Canada reporting in October 2019 that, one year on from legalisation, just 29% of cannabis users said they obtain all of their product from a legal source, and that four in ten Canadians bought at least some of their cannabis from illegal sources, including street dealers, giving the illicit market an estimated value of between US\$5 billion and US\$7 billion. Reuters reported in 2018 that 'the cash-rich cartels are believed by the Mexican government to generate well over US\$21 billion each year'.

Even with the illicit market, however, the investment opportunity in a legal cannabis industry remains significant. Of course, the decision on adult-use legalisation and medical and cultivation regulation has yet to be made, but with the industry expecting to be able to generate revenues of over US\$1bn all eyes will be on Mexico as the last trimester of 2020 unfolds.

Even with the illicit market, however, the investment opportunity in a legal cannabis industry remains significant. Of course, the decision on adult-use legalisation and medical and cultivation regulation has yet to be made, but with the industry expecting to be able to generate revenues of over US\$1bn all eyes will be on Mexico as the last trimester of 2020 unfolds.

EXPERT INTERVIEW



Cora Pineda
 Senator,
 National Regeneration
 Movement (MORENA)

The Senator has had a political trajectory for over 24 years, with several positions in her state of origin, Nayarit. She graduated from Law and Education and is currently a Federal Senator for the State of Nayarit (2018–2024). Previous positions include Federal Congresswoman (2009–2012), Nayarit Regional Congress Representative (1999–2002), and Tepic Municipality Mayor, re-elected (1999–2004).

What has been the biggest obstacle to legalisation in Mexico?

To a large extent, the ignorance and prejudice of sectors that still see prohibitionism as an alternative to the use of cannabis and its decriminalisation to create an industry that caters for research, medical and especially industrial use.

What is your perspective on the complaints of some sectors in relation to the undifferentiated treatment of cannabis?

In this regard, I consider that it should not be the same treatment in regulatory matters for psychoactive and non-psychoactive cannabis. I believe that its handling should be differentiated from the *General Health Law*. Without a doubt, psychoactive cannabis requires another type of regulation due to its effects, in addition to the fact that it is more oriented towards the exercise of a right to the free development of the personality, while hemp can be a trigger for the economy in the field and in other sectors such as textiles, plastics and biofuels.

Are we looking at a system that will be mostly controlled by the state, private initiative or mixed?

On the subject of regulation, it will be a system in which the health, agricultural and economic authorities would establish the legal framework under which the products derived from cannabis can be produced, commercialised and transported. Private initiative will be allowed but will be regulated by the state.

What will be the benefit to private industry with this legalisation?

Important, because new investment opportunities are opening up in a market that has had very significant growth in countries where legalisation has already advanced. What is expected is that, in these moments of crisis, there will be a significant investment that will stimulate the countryside above all and that the opportunity will be open to new businesses, for those who are interested in entering this market.

On the issue of sustainability, what are the incentives, if any, on environmental issues that legalisation provides in Mexico?

It is well known that the production of hemp, in addition to requiring a moderate use of water, does not require the use of pesticides. And its positive effect on the land, considering that it will contribute to strengthening a policy of recovery of the ecological balance where, in recent years, agriculture on many occasions has left irreparable damage to vast areas of land, with the hemp industry promoting a more rational use of natural resources and a direct benefit for producers.

Will the country be open to foreign investment for the sector?

In the legalisation process, it is considered as a product open to national and foreign private investment. It will be left to the Secretariat of Economy and the corresponding instances to clearly establish the requirements that foreign companies with an interest in participating in this industry must meet.

EXPERT INTERVIEW



Verónica Camino

Senator,
Ecologist Green Party of Mexico

Verónica Camino Farjat holds a Degree in Law from the Marista University of Mérida and a master's degree in Public Administration as well as a Doctorate in Strategic Management and Development Policies from the Anáhuac Mayab University.

She worked at the National Institute of Migration from 2004 to 2005, and from 2007 to 2008 she joined the State Center for Municipal Development of Yucatan. From 2012 to 2014 she was director of the career division of the Universidad Tecnológica del Centro in Izamal and from 2013 to 2015 she held the positions of executive secretary of the Inter-Institutional Commission for Crime Prevention and general director of the State Center for Social Prevention of Crime and Citizen Participation of Yucatan. In 2015, affiliated to PRI, she was elected Deputy to the LXI Legislature of the Yucatan State Congress on behalf of the electoral District 3 of Mérida.

In 2018, she ran for Senator under the Todos por México coalition together with Jorge Carlos Ramírez Marín, winning the 2018 to 2024 legislature. Upon assuming office, Verónica Camino joined the bench of the Ecologist Green Party of Mexico, and is a member of the Indigenous Affairs commissions; of Culture; of Economy; and Public Safety; as well as acting as secretary of the Board of Directors.

Thank you very much for your participation. What is the legal situation of cannabis in Mexico today and what changes can we still expect in 2020?

Mexico is preparing its legal framework for the entry of cannabis with the objective of being at the level of international markets and of offering national producers competitive opportunities that allow us to set up a strong, socially responsible Mexican cannabis industry. This will strengthen the social fabric as well as generate an outpouring of capital aimed at promoting the Sustainable Development Goals (promoted by the United Nations organisation), gender parity and the empowerment of indigenous communities, who are a key factor in the preservation of the environment and conservation of natural resources. By the end of 2020, regulation on the medical use and research of cannabis can be expected, while the regulations for personal and recreational consumption and its commercialisation are being prepared.

With other countries in America already advanced in cannabis issues, how will Mexico be able to differentiate itself from its neighbours in the north and south?

The geographical and climatic characteristics allow Mexico to be an ideal country for the production of cannabis. Its wide territorial extension as well as the tradition and experience of the agricultural sector will make the inclusion of cannabis cultivation in the Mexican countryside a natural step – granting advantages in production and competitiveness in relation to neighbouring countries

to the south and north, despite the fact that they appear to be more advanced in regulatory matters at the moment.

What is your perspective about the complaints of some sectors in relation to the undifferentiated treatment of psychoactive cannabis and industrial hemp?

It is a misperception derived from the misinformation spread by the propaganda of prohibitionist policies. Making an appropriate distinction between cannabis with psychoactive properties and industrial hemp is not only essential but also scientifically correct. In this way, the properties of each species, be it *ruderalis*, *sativa* or *indica*, can be identified and their benefits harnessed in the correct way. In the case of non-psychoactive cannabis, that is, hemp or *cannabis ruderalis*, the problem does not lie entirely in the suitability for human consumption but in the relationship that its production has with the environment. That is why the legislative work that is carried out should be aimed at promoting its production in agro-ecological systems instead of monocultures, in order to reduce the environmental impacts that these types of cultivation systems cause. Also, in this way, it is possible to take advantage of all the benefits that this plant grants with its repairing capacity from the soil and the production of materials derived from its transformation, which reduce the carbon footprint caused by human activities, such as ecological construction materials, biofuels, biodegradable plastics and even foods with high nutritional value.

Do you think that if recreational use is approved, it would be more controlled by the state or left more in the hands of free private initiative?

The intervention of the state will play the role of a regulatory entity that guarantees the best conditions and yields for all primary, secondary and tertiary activities involved in the production of cannabis. The free market, the quality of the products, their social and environmental responsibility, will always be the factors that will determine the success of the companies and investments that decide to stay in Mexico. The state will intervene exclusively to guarantee safety and respect for the conditions of equality and freedom of the market.

Beyond the patients – the main focus – what would be the benefits for private industry, national and international, with this legalisation?

It is important to clarify that we are not talking about legalisation but about regulation. For this reason, the State has the possibility of offering guarantees of security and equality regarding market competition for all its participants. In this way, the economic performance generated by the production and commercialisation of the plant will be reflected in an increase in the working capital in the market, which will represent the opportunity to compete freely and for attractive returns for the private sector.

In matters of sustainability, what are the incentives, if any, in environmental matters that legalisation provides in Mexico?

The National Development Plan presented by President Andrés Manuel López Obrador is oriented towards the Sustainable Development Goals, with special emphasis on respecting the environment, as well as the culture and traditions of the native peoples, where the indigenous peoples are located, agricultural and production nuclei. Indigenous communities are the leaders of the agricultural productive sector, which is oriented towards the sustainability of natural resources. On the other hand, we have a legal framework aimed at granting incentives of various types, including taxation, to companies that are socially responsible and are committed to preserving and restoring the environment.

What are the biggest challenges for this sector in Mexico?

The biggest challenge that this government will have will be to reduce the gap of social inequality and opportunities. Likewise, the great territorial extension of the country causes problems of backwardness and isolation in communities far from urban centres. We must recognise that the connection of these territories is part of the National Development Plan proposed by the president and that the project called 'Mayan Train' seeks to solve this disconnection and inaccessibility to the communities in addition to opening new trade routes for transportation and merchandise, not only within the national territory but also for international trade.



Peru – Potential New Leader Learning Fast from its Neighbours



Legal status:

Medical: Recreational:
Cultivation: Export:

Ease of doing business (WTO) ranking 2020: **76**

Average time to open a business (working days): **26**

THC threshold: **1%**

Estimated qualified patients 2020: **8,000**

Confirmed patients October 2019: **1,277**

People per pharmacy: **1,917**

Pharmacy chains market share: **95%**

Regulatory bodies

- **The Ministry of Internal Affairs - MININTER**
- **National Institute of Agricultural Innovation – INIA**
- **General Directorate of Medicines, Supplies and Drugs – DIGEMID**

Most relevant legislation and regulation:

- **Law N° 30681**
- **Decree N° 005-2019-SA**
- **Inform N° 019-2019-DSAME-DGIESP/ MINSA**

Corporate tax: **29.5%**

Relevant groups:

- **Centro de Estudios del Cannabis Perú**
- **Sociedad Médica del Cannabis del Perú**
- **Federación de Cannabis Medicinal (Fecame)**
- **Asociación Peruana de Industrias de Cannabis**
- **Buscando Esperanza**

Trading blocs: **The Pacific Alliance, the Latin American Integration Association (ALADI), The Andean Community (CAN)**

FTAs: **Australia, Canada, Chile, EFTA, EU, India (expected), Mercosur, Mexico, South Korea, Thailand**

Population 2020: **31.9 million**
Expected 2030: **36.9 million**

GDP PPP per capita 2019: **US\$15,649**
Expected 2024: **US\$19,027**

Foreign Direct Investment 2019: **US\$8,892 million**

Value of greenfield investment 2019: **US\$13,095 million**

Environmental Performance Index 2020: **90**

Global Attractiveness Index 2020: **82**

Peru first legalised medical cannabis oil in 2017 as a result of a political backlash to the raid of a small-scale cannabis production outfit, which primarily involved parents making extracts to treat their epileptic children. But it took until February 2019 for the government to publish *El Peruano*, the regulation of Law N° 30681, which legalised the medicinal and therapeutic use of cannabis and its derivatives. The legal document, *Guidelines for the Medicinal Use of Cannabis and its Derivatives*, allows companies to apply for research, wholesale import, retail and production licences. The decree specifically identifies that non-psychoactive cannabis and its derivatives are not controlled substances. This means individuals and businesses will not require licences in order to research, produce, import or commercialise non-psychoactive cannabis. Furthermore, with regions that benefit from close proximity to the equator, Peru is expected to achieve five cannabis harvests per year.

However, while this legislative progress has greenlighted industrial development in the region, it has not solved the short-term problem of patient supply, and we saw that in February 2020 Peru's only medical cannabis product went out of stock, not even three months after sales began in December 2019, meaning that there were no legal supplies of regulated medical cannabis for the domestic market.

The Peruvian General Directorate of Medicines, Supplies and Drugs (DIGEMID) agreed to pay 27,868 Peruvian soles (US\$8,390) to Anden Naturals, an Oregon-based supplier, for ten litres and began offering the oil to patients in 10-millilitre bottles for 47.70 soles upon prescription.

Under the new rules, licences will be available for research, production, import, wholesale commercialisation, seed production, and retail sales of cannabis. To obtain a licence, applicants must submit detailed information, including agricultural production plans and security protocols. Regulators also issued rules that will allow businesses with production licences to import seeds from other

countries, including Colombia. However, some regulations, including the procedures for exporting medical cannabis products to other nations, have not yet been issued.


Despite the COVID-19 pandemic, cannabis keeps gaining space in this Andean country, with relevant events taking place during the last few months. Some international LPs have already shown interest in establishing themselves in this emerging market, such as Canopy Growth via the new subsidiary Spectrum Therapeutics Peru, and Colombian Khiron Life Sciences, Canadian Plena Global Holdings, and Uruguayan-Canadian RAMM Pharma.

The regulatory body has also provided health registry approval for a few CBD products, some of them imported by Cann Farm and Spectrum Therapeutics. Products with elevated THC content are also expected to be approved soon. As of July 2020, Peruvian authorities declared that 17 products were pending authorisation from 6 companies.

As of July 2020, only one pharmacy was known to be dispensing medical cannabis – DIGEMID in San Miguel, Lima, but, as mentioned previously, the product has not been available for the whole year, being out of stock for the most part.

In September 2020, Khiron announced it was fully entering the Peruvian market and began sales of full-spectrum high CBD in private pharmacies across Peru, partnering with local pharmacy chain network Farmacia Universal S.A.S.

Similar to neighbouring countries, Peru's approach to <1% THC products as non-controlled substances opens the door to several business opportunities in a country with a higher than average regional growth and which has been consolidating itself as an exportation and free-market-oriented economy. Companies such as Futura Farms, founded by Peruvian nationals with a US\$2 million investment from an undisclosed Canadian investor, have a clear goal: to become regional leaders in hemp R&D.



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EXPERT INTERVIEW



Pablo Quiroga
CRO,
Vanguard Scientific Systems

Pablo Quiroga has 15+ years of entrepreneurial, innovation and leadership experience. Pablo was the founder of Fuelix-ir, the first personalised sports nutrition subscription-based e-commerce platform powered by individual athlete data. Pablo's expertise in data-driven business intelligence, global business ecosystems, and plant-based derivative processing continues with leadership and advisory roles in the cannabis and psychedelic mental health sectors with companies such as Vanguard Scientific Systems. Pablo's global business ecosystem is on a mission to build strategic relational bonds with entities who share common public benefit and impact North Star visions.

Pablo is marked by an unparalleled ability to drive small- to large-scale multi-disciplinary projects from launch to execution, and his origins are rooted in his academic studies of International Business, Economics, and Latin American Cultural Affairs at Rollins College. Pablo's need to push his limits right out of the gates of academia allowed his innate curiosity to explore the mining industry throughout LAC, specifically Peru. With 10+ years' experience leading teams of experts, engineers, and analysts, Pablo's understanding of political, environmental and economic factors enables Vanguard Scientific's optimal market position. As a result, Vanguard Scientific has multiple clients in Colombia and Uruguay with promising clients in Brazil, Paraguay and Peru.

Tell us a little bit about Vanguard Scientific Systems and its relationship to LAC.

Vanguard Scientific Systems designs, manufactures and sells extraction and post-processing technology. One of Vanguard Scientific's core competencies is its technological integration know-how throughout extraction and post-processing production phases. Vanguard Scientific works with companies worldwide, ranging from consumer-packaged goods (CPG) to pharmaceutical companies. In the United States, we work with clients like TILT Holdings and Ilera Healthcare. In Canada, clients include Blissco and Supreme. We also work with Releaf Europe in Holland and Panaxia Pharmaceutical in Israel. In LAC, we work with clients like Tarkus Pharma and Cana Eden. Our entire team focuses on returning added value to all of our clients by adhering to their short-term and long-term objectives.

What are the latest trends in the extraction technologies for cannabis?

Many companies are in a marathon to integrate their value chain with the objective to standardise and harmonise their supply chain from seed to shelf. Currently, the global cannabis supply chain is undergoing an industry-wide gap analysis. One of COVID's impacts on the cannabis and hemp extract supply chain was the gift of time. The economic market pressure demanded operating teams accelerate activities to bridge the gap between a company's strategy and operating model.

A processing extraction facility's value proposition is driven by its extract portfolio profile. The various phases, like material prepara-

tion, extraction, winterisation, filtration, solvent recovery, decarboxylation, distillation, remediation or isolation, empower operators with the ability to diversify their final extract varieties. Risk management is really important for processing operators' delivery of validated and repeatable quality extracts. Most operators that I speak with are enquiring about processing data analytics. The more data sources throughout the processing operations we create, the more data-driven decisions are available. With this in mind, technology automation will be a pathfinder in defining trust for our young industry's stakeholders. Automation and data security will continue to be deployed across the supply chain components, like cultivation, processing, manufacturing, distribution and retail. It's vital to understand global markets and build emerging technologies in parallel with the ever-evolving regulatory system. For example, in the United States, state regulatory bodies are working toward a state-wide processing extraction facility database, tracking all licensed processors' extraction metrics.

Customers' needs and market demands create the ideal framework for processing extraction facilities to take on early adoption of automation technology stacks, standard operating procedures, and value chain management. I get the feeling 'Cannabis 2.0' is the result of years of Minimum Viable Product model cycles across specialised business units and vertically integrated businesses. As a technology integrator stakeholder, I'm constantly exploring emerging technologies that support the innovation of supply chain value and create enhancement for the end buyer's value chain.

Vanguard Scientific's partnership with Rymedi is a great example of how software technology is utilised for leveraging the processing of extraction data to achieve a validated, repeatable, secure cannabis and hemp extract supply. Built on block chain technology, Rymedi provides a platform where chain of custody, validation and security are powered by automation. From small-scale to large-scale, cannabis producers are empowered with automation technologies built with regulation in mind ... a world where state-of-the-art technologies are used by companies with a foresight to enhance corporate, social and environmental responsibility.

What are the main challenges faced by the industry in LAC as a whole?

The root cause for LatAm's challenges in the cannabis industry is the inability to look in the mirror and see the tremendous value it holds for the planet. It's not just the cannabis industry. Tourism, fishery, agriculture and mining are just a few legacy industries that are developed in a traditional global framework rooted to short-term gains at the expense of societal impact. The return on investment in LAC is always based on the attractiveness of bottom-line margins by foreign investors who, by the way, rarely pass the economical benefits on to communities or customers.

In LatAm, restrictive access to knowledge and capital has always been an advantage for those who had access. Access is opening up. I see it in Peru and other countries. There is a new wave of Latin Americans who studied abroad in Spain, the US, Germany and other countries, exposing them to invisible global

networks while inspiring them to return home and build global business ecosystems. This new mindset is sparking cannabis-focused entrepreneurs to upstart processing facilities and vertically integrated operations in LatAm. We all know of the regional big players like Khiron and Clever, but where are the new upcoming stars? You will see them soon enough. The cannabis industry still has the ability to develop a framework in which the supply chain includes environmental and social factors in its economic model. I can expand my mind to understand why it's difficult for the mining industry to transform overnight, but the cannabis industry should build a new industry development framework. Together we can be stewards of a collective growth powered by the cannabis plant for the healing of humanity.

Peru has joined the game as a promising player for the near future. What are the strengths and weaknesses you could pinpoint about this emerging market?

Peru is one of those countries that my friends always feel so perplexed about. They don't understand why there is so much poverty in a country with abundant natural and cultural resources. I always have to tap into my historian and anthropologist mindset to retrieve a good enough answer to their questions. In the end, we always end up tipping the hat to the food. I know! Ceviche is the best! Maybe Peru's value is just to make people smile while they eat. Or is it?

Back to cannabis. Peru has one of the most developed regulatory frameworks for the medical cannabis sector in LatAm. For instance, DIGEMID approved RAMM Pharma's registration of two new forms of a product called Epifractan. This firm has its headquarters in Toronto, and already manufactures medical cannabis for sale in pharmacies in Uruguay. This means that the CBD products manufactured by RAMM Pharma in Uruguay will be imported and distributed in the Peruvian market by their Peru subsidiary Cann Farm. Peru only has one other registered cannabis-derived product, which belongs to the almighty Canopy Growth, with its headquarters in Canada. They're also waiting for an-

other extract from the Canadian company Khiron. Therefore, four products have so far been approved by DIGEMID.

Peru's regulatory system is spurring a legitimate opportunity for a downstream strategy execution. Pharmaceutical businesses are getting the lead for product distribution and commercialisation through their already established distribution centres. Peru is aligning time and effort while properly positioning in the global cannabis market landscape.

Do you foresee Peru as a potential exporter of cannabis and/or hemp raw materials or finished products before 2025?

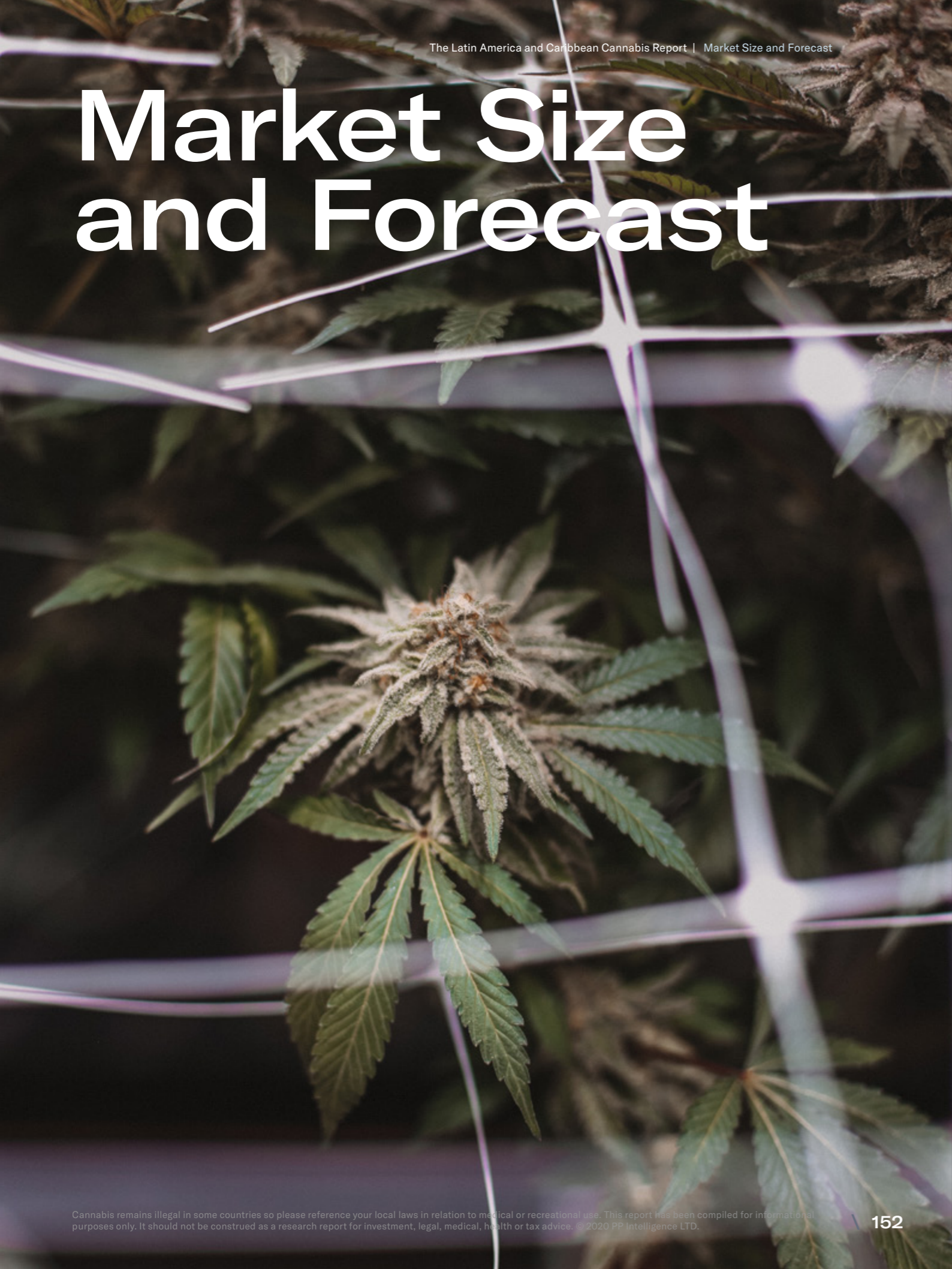
Yes. Continued market-development activities related to cultivation, processing, manufacturing, production and distribution will drive Peru's operators toward the exportation of plant derivatives. One of the key components for executing the exportation of plant derivatives is the development of cross-country strategic partnerships across LatAm nations, specifically in South America. There are interesting alliances evolving between entities in Colombia and Uruguay for example. The idea of co-operation was validated in the case of Intel, Apple and Microsoft. I think Peru has the valuable resources to bring superb expertise in processing and ingredient formulations.

Which countries in LatAm have solid extraction capabilities as of today?

Colombia is by far the leading country when it comes to processing extraction facilities. In fact, Clever Leaves was granted an EU-GMP certification for its processing facility and lab, to produce active pharmaceutical ingredients (API), semi-finished and finished cannabis products. The certification brings a unique attribute and broadens Clever Leaves' ability to serve international markets. Uruguayan companies aspire to enhance the development of processing extraction facilities. Recently, Uruguay's regulatory framework, provided by the Uruguayan governmental entities, simplified the process for Uruguayan companies to export cannabis. Continued policy updates are detrimental for future growth of capital injection towards processing and manufacturing facilities.



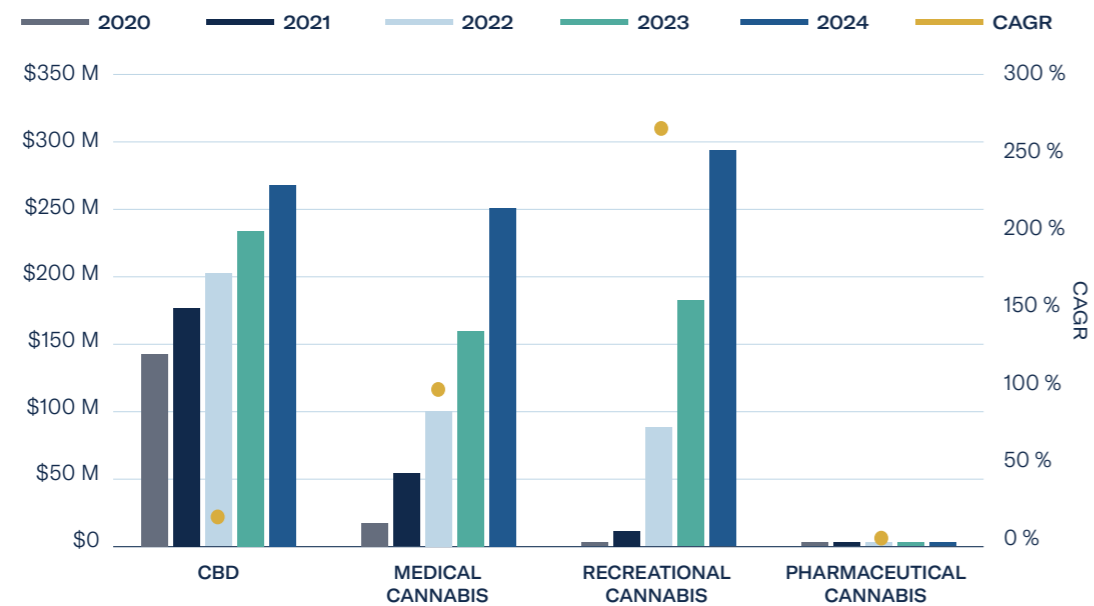
Market Size and Forecast



- 1 During 2020, Colombia and Uruguay have been exporting cannabis to the international markets. Included here are estimates about the demand for the legal cannabis schemes in LAC. They do not focus on the ability of the region to attract foreign investment and do not represent forecasts as to the value of the industry's produce.
- 2 Political and regulatory change remain the strongest economic drivers in the cannabis industry. Assumptions about the most likely date for legalisation and effective access have been estimated, but any slight changes as to the date or the scope of reforms could dramatically affect the figures shown in this model.
- 3 We expect only Mexico and a few Caribbean nations to legalise recreational cannabis in the forecasted period. However, the user base for adult-use cannabis in the region is immense and overshadows that of medicinal cannabis.
- 4 Medical markets are still nascent in LAC and it is still unclear how fast most schemes will develop. Facilitating access to high-THC products, enjoying a much wider base of therapeutic use, among other patient access reforms, will be key to unfolding the full potential of medicinal cannabis.
- 5 Hemp-derived CBD in wellness or infused products lacks significant legal certainty in most of the continent. Countries such as Colombia and Mexico have established product registration schemes, whereas other countries, for example Brazil and Peru, allow the sale of CBD under prescription only. Sales have been estimated for countries with a significant amount of retail and commercial activity, even if CBD can probably be obtained in or smuggled from other countries.

TOTAL MARKET VALUE

Total LAC legal cannabis market value, 2020–2024



Source: Prohibition Partners

The Latin American market for cannabinoid-based products is worth US\$168 million in 2020, mainly dominated by CBD sales and increasingly also by the nascent medical cannabis schemes of the continent. It is important to note the role of the region as a key supplier of raw materials: agriculture represents a major industry in the region and so the addition of this new crop to so many more Latin American countries has played to the strengths of local knowledge, climate, expertise and infrastructure: exportation will drive relevant export activity, potentially more so than local demand, which is modelled here, in some cases.

The low cost base associated with the region combined with high optimism about the prospects of legalisation delivered high levels of investment to the region in the first half of 2019. However, this fell back slightly at the end of 2019 and at the start of 2020 as the pace of legislative change lagged expectation and many of the big North American cannabis investors reined in their spending to focus

on their more immediate revenue generation options.

The investment wobble at the end of 2020 will not deter growth in the region over the long term, since there is so much potential in the region, which will be unfurled once the pace of regulation begins to pick up. With LAC lagging the pace of change in North America's legislation, we can expect for some of the trends of 2018 and 2019 to play out in LAC over 2020. Thus, we are expecting the historical red tape to take hold in LAC, which will see the required legislation eventually tweaked and put in place to create real revenue opportunities in the region. It is also expected that the gains made from the *SAFE Banking Act* in the US will have a positive effect by enabling companies in the region to access capital.

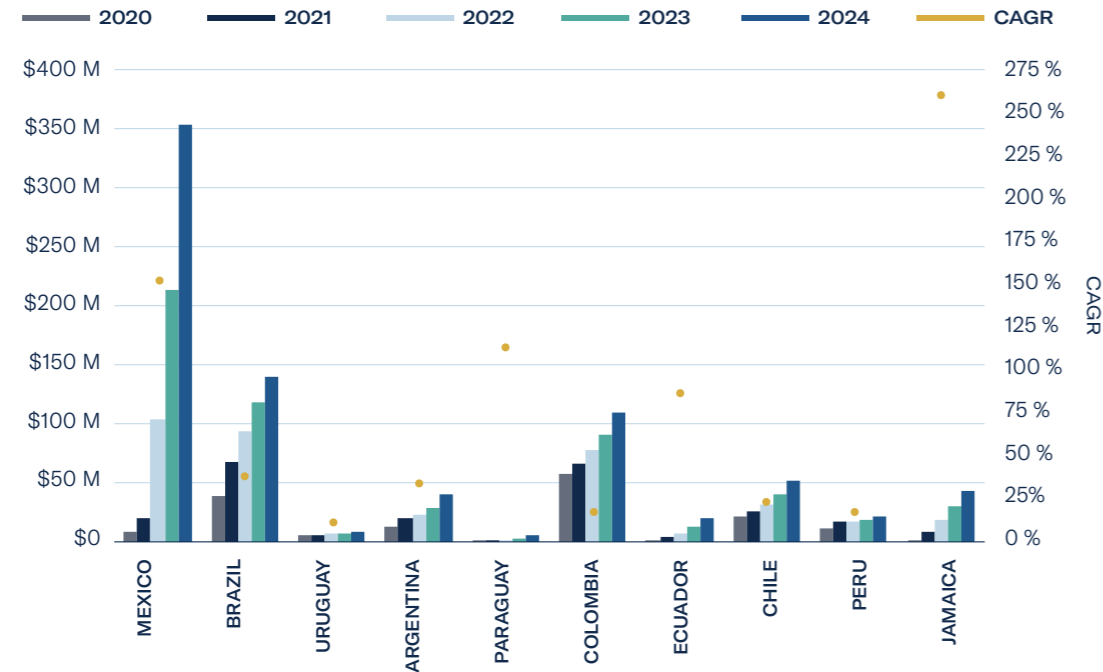
Beyond the purely medical, the infancy of the Latin American market has also opened up a significant investment opportunity for consumer goods, which has seen a growing



number of partnerships developing in the region, with Aurora and Dixie Brands establishing CBD skincare products in Colombia and Mexico, with other nations probably joining soon.

The highly anticipated legalisation of an adult-use market in Mexico will have a significant effect on recreational sales in the region.

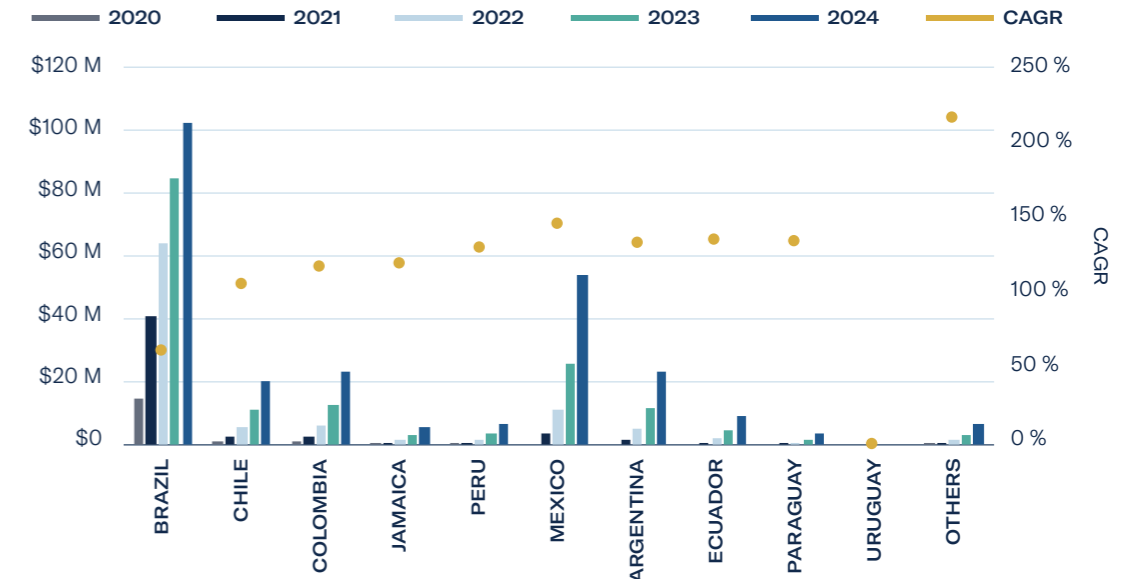
Total LAC legal cannabis market value, by country 2020–2024



Source: Prohibition Partners

Medicinal

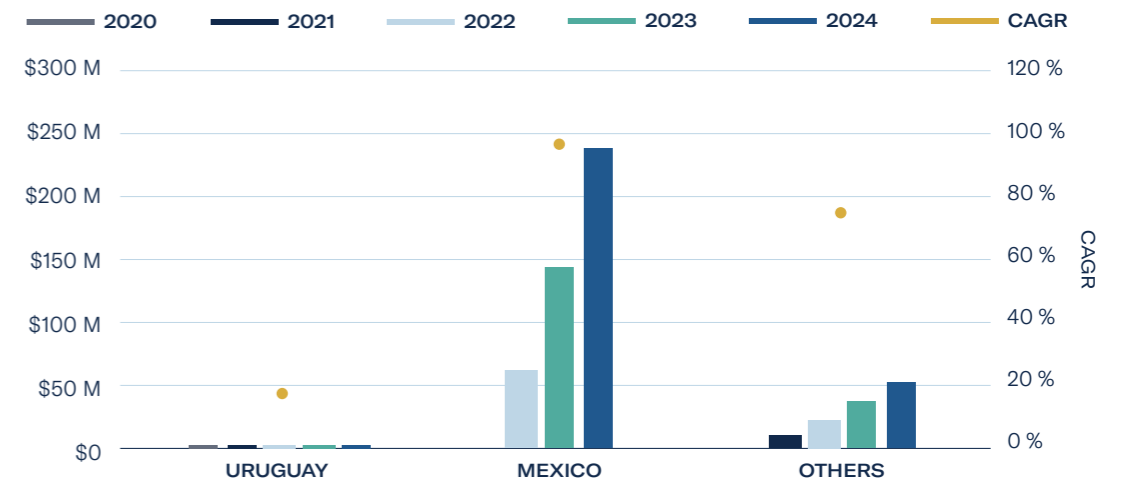
Total medicinal legal cannabis market value, LAC, 2020–2024



Source: Prohibition Partners

Recreational

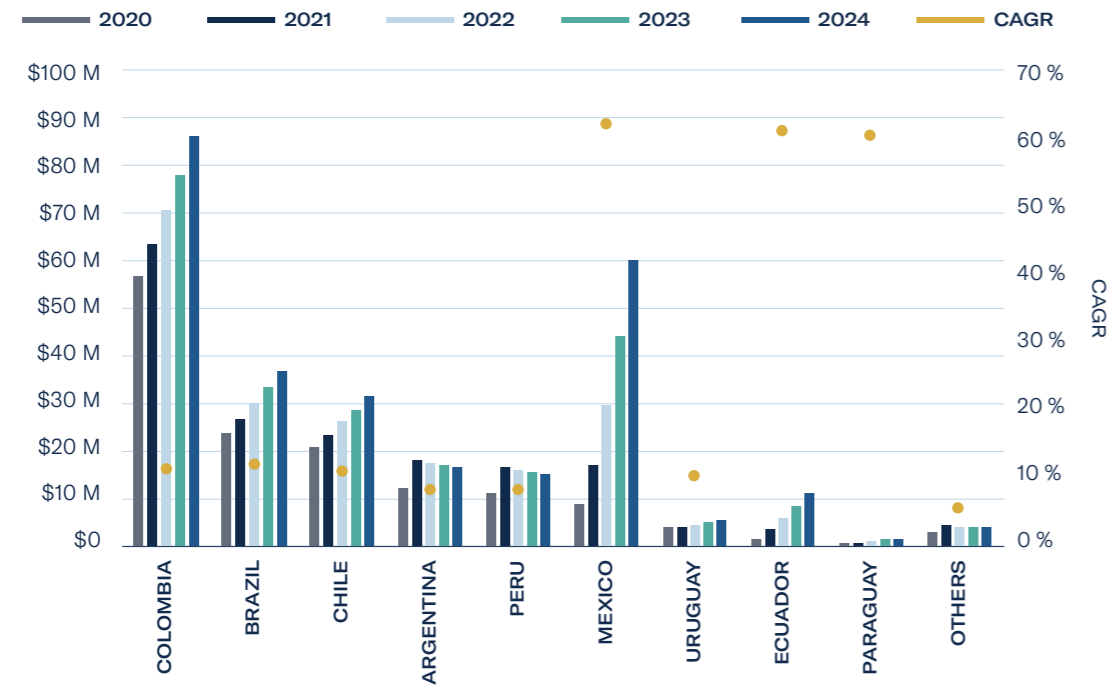
Total recreational legal cannabis market value, LAC, 2020–2024



Source: Prohibition Partners

CBD

Total CBD market value, LAC, 2020–2024



Source: Prohibition Partners



EXPERT INTERVIEW



Dep. Zoila Volio

Deputy,
Costa Rica

Costa Rican politician, agronomist and lawyer, elected as a congresswoman of the Republic of Costa Rica for the constitutional period between 2018 and 2022. Former vice-president of the National Assembly and promoter of the initiative to legalise hemp and medicinal cannabis.

Deputy, congratulations on the proposed legislation. When can we expect an update on voting and regulation?

I see a great atmosphere at the Congress. Most of my colleagues have expressed their support for the project; I know that I will have the necessary votes when the time comes. For now, we have to wait for the substitute text to be passed by the Environment Commission. My hope is that this happens this September.

What is the main goal you have in mind with the proposed law?

Many benefits are extracted from hemp and medical cannabis. In the case of hemp, it can be used both industrially and, for example, in the production of textiles, oils, lubricants, bioplastics, and also at the nutritional level in the manufacturing of these products. In the case of cannabis, because it contains the psychoactive THC, it can be used in chronic diseases such as immune problems, epilepsy, multiple sclerosis, among others.

Now, having this context in an economy as depressed as the one we have right now, it's obviously a great source of work and income that both plants would generate for Costa Rica, as

well as a better quality of life for the people who require it for the treatment of their different diseases. This cannot be overlooked.

How can Costa Rica become competitive in a market with countries such as Colombia and Uruguay having years of experience? Is there anything that would make Costa Rica stand out?

We are very similar Latin American countries, entering a large market with high demand, and we could work as a commercial bloc in a synergy.

Can we expect an emerging domestic market for medical cannabis in Costa Rica?

A medical cannabis market would be lucrative, taking into account the investments to set up the laboratories, the collection of taxes in the United States, as well as the proceeds from the sale of medicines and medical tourism.

In a country known for its progressive policies, are we going to see special attention given to the sustainability aspect of cannabis and hemp?

This congress has been characterised by the approval of environmentally friendly policies. The cultivation of hemp and medicinal cannabis will not be the exception, especially given their properties. Hemp is a weed, so it grows prolifically with little water and no pesticides. It takes up relatively little space, produces more pulp per acre than trees, and is biodegradable. It is another aspect that we are promoting, given the wear and tear of much of the cultivable soils of our country.

What's your advice to companies looking to enter Costa Rica?

Investing in Costa Rica is a great opportunity. The workforce of Costa Rica is characterised by being of the highest level, ranging from field work to the qualified technical and scientific part. We have legal security, a solid democracy, and a strong stance in the protection of human rights.

From Congress we are striving to create a bill that is friendly and attractive to investors. Once we have a solid text in the legislative stream, my advice is: be ready. Get legal guidance, investigate and make a decision, because this crop is the future of health.

SOME KEY COMPANIES IN THE LAC MARKET IN 2020

While most cannabis and hemp companies in LAC have been traditionally established as local branches of North American companies, particularly from Canada, and with a limited presence to one country in LAC, 2020 has been a year of an emerging diversification trend, with more local businesses joining the cannabis and hemp industry and companies expanding from pioneering countries, such as Colombia and Uruguay, into emerging cannabis and hemp markets such as Argentina, Brazil, Paraguay and Peru.

This section highlights a selection of companies present in LAC.

KHIRON LIFE SCIENCES

Khiron Life Sciences Corp, formerly Adent Capital Corp, is a Canada-based company engaged in the alternative medicine sector. The company is an integrated medical cannabis company with its core operations in LAC. Khiron has operations in Chile, Colombia and Uruguay, and has a presence in Mexico and Peru (as well as access to Brazil through the Mercosur Regional Free Trade Bloc). The company is fully licensed for the cultivation, production, domestic distribution and international export of both THC and CBD medical cannabis. Khiron is also heavily involved in the scientific and medical community: the company leads research and education programmes, and also owns and operates the Latin American Institute of Neurology and the Nervous System (ILANS). ILANS is a network of medical clinics that treat 119,000 patients annually. In Q1 2019, the company entered into a joint venture with Dixie Brands to bring a portfolio of cannabis-infused products to the LAC market depending on each country's regulations. In June 2019, Khiron completed its acquisition of NettaGrowth International Inc., an arm's length party, which owned the outstanding shares of Dormul S.A. (aka CannaPur). This is significant because Dormul obtained the first licence to produce medical cannabis contain-

ing THC for commercialisation in Uruguay. The company's products expanded to Brazil and Peru in the first half of 2020.

APHRIA

In total, Aphria has a footprint in 11 countries on 5 different continents. In July 2018, Aphria announced it would acquire a collection of South American cannabis companies located in Argentina, Colombia and Jamaica for US\$193 million in a deal with Scythian Biosciences, a closely related company, sometimes described as an acquisition arm of Aphria.

The deal included the acquisition of ColCanna S.A.S., a Colombian cannabis producer, licensed to harvest CBD on 34 acres of land, as well as being licensed for the import and export of CBD oil. In Argentina, Aphria took ownership of pharmaceutical importer and wholesaler ABP S.A., which is licensed to import CBD oil, while in Jamaica, Aphria gained a 49% share in Marigold Projects Jamaica Ltd., which has a licence to cultivate cannabis and to process and sell cannabis in the country's medical and nutraceutical markets.

Under the deal, Aphria was given first refusal to buy a controlling stake in a Brazilian company; however, in the spring following the acquisition, Aphria wrote down the value of its Latin American assets after Aphria conducted an impairment test on its Latin American assets, the subject of a December attack by short sellers, and determined that a CA\$50 million (US\$38 million) non-cash charge was required due to lower gross margins, lower EBITDA margins and higher-than-expected expenses.

CANOPY GROWTH (SPECTRUM THERAPEUTICS)

Canopy Growth has been a first mover in the Latin American region and has developed a fast-moving expansion strategy across the region.

- October 2016 saw Canopy Growth Corporation agree a deal with São Paulo-based Entourage Phytolab to develop medicinal products in Brazil.
- In October 2017, Canopy Growth formed a partnership with Grow House JA Ltd., which took the operating name Tweed Ltd JA, to serve the Jamaican market.
- Midway through 2017, Canopy Growth signed a deal with Cannagrow SpA in Chile to develop a pharmaceutical cannabis presence in the country. In August 2018, Canopy acquired all remaining outstanding shares of its Chilean in-market entity,
- In July 2018, Canopy LAC Corp acquired Spectrum Cannabis Colombia S.A.S. for US\$34.8 million in Canopy stock; the company was formerly known as Colombian Cannabis S.A.S. Canopy LAC's initial operations were headquartered in Huila, Colombia, where the firm is concentrating on low-cost production.
- In January 2019, the company announced that licences had been received for the production of cannabis in all 126 hectares (13.6 million square feet) of suitable growing area at the farm. Operations there have served as the firm's regional hub.
- In January 2019, Canopy LAC Corporation unveiled Spectrum Cannabis Peru S.A.C.
- August 2019 saw Spectrum assert its presence in Argentina based on an agreement to work in conjunction with UBATEC, the Technology Linking Unit that depends, among others, on the University of Buenos Aires to advance education and research on medical cannabis in the country.

• In November 2019, Canopy Growth laid off 15% of its workforce in LAC, reflecting the slow pace at which revenue-generating opportunities and regulatory structures were evolving in the region.

• In April 2020, the company secured a regional supply deal with Colombian Clever Leaves, with the latter supplying Canopy with their Colombian extraction.

AURORA

In November 2018, Aurora Cannabis Inc. completed its US\$290 million acquisition of ICC Labs, giving Aurora access to the Latin American market via ICC's processing facility in the free-trade zone of Uruguay as well as ICC's fully licensed production of medicinal cannabis in Colombia and its agreements to export cannabidiol products to Brazil and Mexico. However, in 2020, Aurora Cannabis reported a net loss of about US\$980 million for its fiscal second quarter, with a US\$138 million impairment to the intangibles line of the former operations of ICC Labs, which was growing and selling cannabis at an enormous loss when Aurora bought the company in November 2018 for US\$290 million in an all-stock deal. The write-down and subsequent cost-cutting measures adopted by Aurora bode poorly for the future of its Uruguayan division, which will likely see fewer company resources dedicated to its development.

• December 2018 saw Aurora acquire Farmacias Magistrales, which, prior to the acquisition, had recently become Mexico's first and only federally licensed importer to date of raw materials containing THC, gaining the necessary licences, facilities and permissions to import raw THC material, and manufacture, store and distribute medical cannabis products containing over 1% THC.

TILRAY

- In February 2017, Tilray received the necessary regulatory approvals in Canada and Chile to export medical cannabis for distribution to Chilean patients.
- In October 2018, Tilray announced that it had completed the acquisition of its distribution partner in LAC, Alef Biotechnology SpA, to produce and market medical cannabis-based products in Brazil, Chile and the rest of LAC.
- In December 2018, Tilray announced that Tilray LAC SpA would be launched as a wholly owned subsidiary and would import, produce and distribute Tilray branded medical cannabis products in Chile and create a hub to distribute Tilray products throughout LAC, subject to local laws.

CRONOS

In August 2018, Cronos Group Inc entered the Latin American market via a JV agreement with an affiliate of Colombian agricultural provider Agroidea S.A.S., to create a new entity known as NatuEra. The JV was created to cultivate, develop, manufacture and export cannabis consumer products in LAC and beyond. NatuEra has developed its cultivation and manufacturing operations through a custom-built facility on 207 acres located in Cundinamarca, Colombia in order to create a contract manufacturing organisation.

THE GREEN ORGANIC DUTCHMAN HOLDINGS LTD

The Green Organic Dutchman (TGOD) is a premium global organic cannabis company, with operations focused on medical cannabis markets in Canada, the Caribbean, Europe and LAC, as well as the Canadian adult-use market. The company claims to grow high-quality organic cannabis with sustainable all-natural principles.

- In June 2018, TGOD purchased a 49.18% interest in Epican, a fully integrated Jamaican cannabis company with cultivation, extraction, manufacturing and retail distribution licences. Significant progress has been made towards expanding cultivation, opening additional retail dispensaries, and establishing a leadership position in Jamaica's medical cannabis market. The company left Jamaica in May 2020.
- In October 2018, it entered into a strategic JV with LLACA Grupo Empresarial to create a 50/50 owned company to enter the medicinal cannabis market in Mexico. LLACA has developed proprietary distribution capabilities and has access to premier distributors with commercialised pharmaceutical and OTC products, providing access to 4,500 pharmacies and 3,100 supermarkets throughout Mexico. LLACA will facilitate the importation, registration and strategic distribution of TGOD-branded organic cannabis and hemp-derived medical products into the Mexican market. This distribution network meets all technical requirements of the Mexican ministries of health and finance to sell narcotics and nutraceuticals.

PHARMACIELO

PharmaCielo Ltd. is a global company privately held and headquartered in Canada. PharmaCielo Colombia Holdings S.A.S., its wholly owned operating subsidiary, is headquartered in Rionegro, Colombia. PharmaCielo received a manufacturing licence in Colombia in 2016.

It was also one of the first companies to hold licences in Colombia for cannabis with unrestricted percentages of THC and CBD. The company's operations include 1.3 million square feet of open-air greenhouses. It also supplies plant seedlings to more than 2,500 acres (108.9 million square feet) of contract growers' open-air greenhouses.

- In January 2019, PharmaCielo announced a JV with MINO Labs, a specialised phar-

maceutical company, giving the company access to the Mexican market.

- In July 2019, PharmaCielo Colombia Holdings S.A.S. announced that it had completed the necessary permit process to enable one of Colombia's first commercial exports and sales of non-psychoactive (CBD) isolate.
- In July 2019, PharmaCielo announced the completion of its acquisition of Ubiquo Telemedicina, Colombia's leading telemedicine company, with over 80,000 patients. PharmaCielo had plans to open seven clinics in seven new jurisdictions as part of the acquisition in order to rapidly expand its patient base.
- In August 2019, PharmaCielo announced that it had expanded its oil processing capabilities at its facility in Rionegro, Colombia, following the acquisition of new high-volume extractors.
- August 2019 also saw PharmaCielo announce its first commercial export of CBD isolate to Europe. It was delivered to the Swiss headquarters of Creso Pharma Ltd.
- In August 2019, PharmaCielo entered into a multi-country sales agreement with Laboratorios Adler, a Uruguay-based company that will supply PharmaCielo-produced CBD isolate, along with Creso Pharma's veterinary CBD products, for distribution in Bolivia, Paraguay, southern Brazil and Uruguay.
- On 17 January 2020, PharmaCielo Colombia Holdings received approval for exports of Colombian medicinal-grade CBD isolate in the US in an order of up to US\$3 million.
- In January 2020, PharmaCielo announced that it had entered into a three-year agreement with Canadian XPhyto Therapeutics Corp to supply at least 30,000 kilograms of medicinal-quality cannabis extract oils and isolates, including those containing THC, for the German market where XPhyto has sub-

sidaries. Exportation was due to commence in the middle of 2020.

- The company obtained a Colombian government licence to export ten tonnes of cannabis extracts in July 2020.

BLUEBERRIES MEDICAL CORP.

Blueberries is a Colombia-based fully licensed producer of naturally grown, premium-quality medicinal cannabis products. It started out in Colombia but has expanded its operations into Argentina.

The company owns 1.9 million square feet of land in Colombia. This includes the 322,000-square-foot Guatavita property, which is currently in operation, and a 1.6 million-square-foot package of land (Zipaquirá), which is available for expansion. Blueberries Medical first initiated construction of a nursery, propagation and production facility in April 2019. Currently, cannabis crops are growing in over 55,000 square feet of open-air greenhouses at the Guatavita property. The new open-air greenhouses are now complete, meaning that the company's production capacity has expanded to 139,000 square feet.

In Argentina, the company has formed a JV with an Argentinian state-owned company called Cannava Avatāra to provide all the licensing and authorisation required for cultivation, processing, extraction, and export of THC and CBD in Argentina. This JV will make Blueberries one of only three companies with Argentinian cannabis production, extraction and export rights. Through its JV with Cannava Avatāra, Blueberries Medical has access to an initial property comprising 3.2 million square feet.

From 2020, the company expected to have contract growers providing 170,000 kilograms of dried cannabis per year, scaling up to 1.5 million kilograms by 2025.

- In February 2019, CDN MSolar and Blueberries Cannabis formed Blueberries Medical Corp, which was publicly listed on the Canadian Stock Exchange.
- February 2019 also saw Blueberries Medical announce a letter of intent for a JV with India Colorada S.A.S., one of the leading Colombian artisanal brewers and the producer of the oldest craft beer in Colombia, to research, develop and commercialise non-alcoholic cannabis-based beverages.
- In July 2019, Blueberries Medical announced a partnership agreement with US distributor SLANG Worldwide to license its consumer-packaged-goods products.
- In October 2019, Blueberries announced its partnership with the Van Uden International Center for Alternative Medicine and the Juan N. Corpas University Foundation to not only facilitate the distribution of Blueberries' products to a patient network of over 12,000 but also to bridge the gap between research and clinical practice by educating physicians on the applications and benefits of medicinal cannabis treatments.

MEDCANN

Medcann is an importer, manufacturer and distributor of medical cannabis. Although the company is based in Canada, Medcann Colombia's agricultural and primary processing operations are situated in the municipality of Fuente de Oro in the Department of Meta, Colombia.

- In August 2019, Medcann Colombia was one of the first LPs to land the rights for producing and exporting THC cannabis.
- In December 2019, Medcann Colombia and Botaniki Lab, a company dedicated to the manufacturing of pharmaceutical products, medicinal chemicals, and botanicals for pharmaceutical use, signed a binding supply agreement for 600 annual tonnes of dried flowers at Botaniki Lab. Medcann will

periodically deliver non-psychoactive cannabis to Botaniki Lab, which will undertake the extraction and export of derivatives to Europe and LAC.

- Medcann is also in the process of purchasing a medications' production laboratory with GMP certification, giving it access to other markets such as Brazil and Peru.

AVICANNA

Avicanna is a Toronto, Canada-based biotechnology company focused on organic and sustainable plant-derived cannabinoid-based products. Avicanna's two majority-owned subsidiaries, Sativa Nativa S.A.S. and Santa Marta Golden Hemp S.A.S., both located in Santa Marta, are the bases for Avicanna's cultivation activities. These two companies are licensed to cultivate and process cannabis for the production of cannabis extracts and purified cannabinoids including CBD and THC.

- December 2019 and early 2020 saw Avicanna strike agreements to supply the Australian and UK markets with products grown and manufactured in its Colombian operations.
- At the end of December 2019, Avicanna entered into a credit facility with Inmobiliaria Bondue S.A.S., allowing Avicanna to borrow up to US\$5 million with less reliance on the capital markets during this period of correction in the sector.
- In October 2019, Avicanna launched its Pura Earth™ derma-cosmetics line of CBD products, which became available at approximately 59 high-end retail locations throughout Colombia, including Blind prestige beauty shops and Cromantic professional beauty markets.
- In September 2019, Bondue and Avicanna announced plans to build a new 11,000-square-foot site in a free-trade zone in Santa Marta, Colombia. The site will operate under a proposed new subsidiary, Subco,

which will be 60% owned by Avicanna and 40% owned by Inmobiliaria Bondue.

- In June 2019, Avicanna reached a manufacturing agreement with Altea Pharmaceutical SA., a Colombian company with international GMP certifications granted by regulatory authorities in Australia, Brazil and Canada. As a result, Altea Pharmaceutical manufactures Avicanna's final products in Colombia, complying with the highest global standards, while representing a substantial advance for the development of the national medical cannabis industry.

FCM GLOBAL

FCM Global S.A.S. operates as a medical cannabis company. The company produces a range of extracts, isolates, oils and micro-emulsions in support of finished goods manufacturers. FCM Global serves customers in Canada and Colombia, and in October 2017 became one of the first companies in Colombia to be awarded full medical cannabis licensing for Colombian cultivation, processing, manufacturing and export of low-THC cannabis extracts for medical and research. FCM has a 235,800-square-foot medical cannabis facility in the town of La Ceja, which was expected to have an annual production capacity of 50 tonnes of cannabis extract by 2020. FCM also owns a 450-hectare property in Natagaima, which includes 300 hectares of outdoor cannabis cultivation space with the remaining 150 hectares set aside for production and exportation infrastructure.

- In December 2019, FCM Global announced that it was to partner with CB2 Insights, a leading data-driven company focused on bringing real-world evidence-driven data from the point-of-care to the medical cannabis community.
- In November 2018, FCM set up a partnership with Canadian company Orion Nutraceuticals, giving Orion a 40% interest in FCM.



CLEVER LEAVES

Clever Leaves is a leading vertically integrated and licensed Colombian company in the production of medical cannabis, with investments around the world. In November 2019, Northern Swan Holdings, Inc., a multinational operator in the federally legal cannabis industry, and Eagle Canada Holdings d/b/a/ Clever Leaves integrated their respective operations. The combined company operates as Clever Leaves and owns 100% of Clever Leaves as well as Northern Swan's assets in Canada, Germany, Portugal and the US. The company currently cultivates over 1.8 million square feet of greenhouses under GACP in Colombia. Clever Leaves' first extraction facility is currently capable of extracting 24,000 kilograms of dried flower, and expansion was underway to increase expected extraction capacity to 324,000 kilograms of dried flower per year by mid-2020.

- In August 2020, the company announced that it was given authorisation by Portuguese authorities (INFARMED) to cultivate in the emerging South European cultivation hub.
- In July 2020, the company achieved the much-desired milestone of obtaining its EU-GMP certification in order to access the European markets.
- In February 2020, Clever Leaves launched its direct-to-business sales platform, Clever Leaves 360, which offers pharmaceutical-grade cannabis extracts and finished products fit for a broad range of industries.
- In December 2019, Clever Leaves received a quota from the Colombian Technical Quotas Group to cultivate, extract and commercialise through exported high-THC medical cannabis. This grant is believed to be the largest quota of its kind issued to a Colombian licensed producer.
- In November 2019, a deal between Clever Leaves and TruTrace allowed Clever Leaves to collect, register and track data for its cannabis plant DNA and strains.

- In November 2019, Clever Leaves received authorisation from INFARMED to start cultivation operations in Portugal.
- In September 2019, Clever Leaves was one of the first cannabis companies authorised by INVIMA to be awarded GMP certification to produce medical cannabis.
- In August 2019, its hemp oil brand, ESENIA, was one of the first hemp-based wellness products manufactured in Colombia to be imported into the UK for commercial purposes.
- In February 2019, Clever Leaves sent 360 grams of CBD-rich cannabis for research purposes to Canada. It also sent 5,500 hemp oil by-products to the UK in August 2019, and sent CBD isolate to Australia.

QUALCANN

Founded in 2017, QualCann, S.A.S. is a Colombia-based fully licensed grower, extractor and exporter of medical cannabis. The company partners with laboratories and medical importers and distributors to deliver raw materials and products based on their needs.

LASANTA

Launched in 2017, LaSanta is a pharmaceutical company with management in Canada and Colombia, and is licensed by the government of Colombia to cultivate psychoactive and non-psychoactive cannabis, to fabricate and export cannabis extracts and to trade in cannabis genetics. Its initial operations comprised 20 hectares of prime agricultural land north of the capital city of Bogota, including a 12-hectare farm with approximately 15,000 square metres of operating greenhouse. However, the company developed a further 18,000 square metres of cultivation space over 2019.

- In December 2018, Calgary-based NeutriSci International Inc. signed a deal that would see LaSanta manufacture CBD tablets

based on NeutriSci's Neurenergy tablet design, with exclusive rights to distribute in Central and South America.

LA FINCA

La Finca Interactiva-Arachna Med S.A.S. is an integrated cannabis company that was founded in 2014. The company cultivates, produces, distributes and sells cannabis products worldwide. La Finca's decentralised model empowers farmers through its non-profit hemp-growers' association. Farmers use La Finca's seed, receive training from the association and are asked to commit to sustainable agricultural guidelines put forward by the Food and Agriculture Organisation, an arm of the UN. The company already has an export licence and instead of creating a generic product for mass distribution, La Finca aims to tailor its offerings to each market's individual needs. La Finca is in partnership with the National University of Colombia and the Francisco José de Caldas District University.

- In January 2019, Chemesis International Inc., a vertically integrated US multi-state operator, acquired La Finca.
- In May 2019, La Finca received approval for three new cultivation licences for three additional farms located near Bogota, Colombia.
- At the end of 2019, La Finca reported that it was near to harvesting more than 5,000 kilograms of biomass.

HEMPMEDS

HempMeds® is Medical Marijuana, Inc.'s distribution company, responsible for bringing innovative hemp and CBD products to a burgeoning global market that is demanding access to these products. Its collection of brands includes a huge line of branded CBD products such as Dixie Botanicals, Real Scientific Hemp Oil [RSHO™], Cannabis Beauty Defined, Cibdex, and a bath and body brand called Cibaderm.

As an international company, HempMeds® and Medical Marijuana, Inc. were the first to have their RSHO™ approved for import in three Latin American countries: Brazil, Mexico and Paraguay, all of whom had previously banned all cannabis products. The company has created local operations in two of these countries with HempMeds® Mexico and HempMeds® Brasil. The current president of HempMeds® Mexico, Raúl Elizalde, was the first to obtain a permit to import hemp oil and with it treat his daughter's illness. In late November 2018, HempMeds obtained COFEPRIS permits to sell two cosmetics and three CBD-based dietary supplements.

HEMPMEDS® BRASIL

HempMeds® Brasil specialises in distribution of Medical Marijuana, Inc.'s RSHO™ products to patients in Brazil, where CBD oil is available only with a doctor's prescription. The company became one of the first to offer legal medical cannabis products in Brazil when its CBD hemp oil products were approved by the country for import by those suffering from specific medical conditions. Along with individual patients, the government in Brazil also purchases RSHO™ CBD products for patients in the country as part of its public healthcare system.

- In September 2019, HempMeds® Brasil signed a partnership agreement for Dr. Cannabis, an online marketplace that facilitates patient access to medical cannabis, to become the exclusive Brazilian reseller of the company's CBD products.

CBD LIFE

RHC Farma was founded in 2001 as a pharmaceutical company that was initially created for the purpose of developing herbal medicines and remedies; however, following the development into CBD products, it evolved to become CBD Life. In 2019, the company had 21 COFEPRIS permits for sale, and among the products on offer is mariguanol, an ointment

that is known for being sold informally on public transport such as the metro, but which the company has already patented to distribute in pharmacies.

CBD VIDA

CBD Vida, a bi-national company (Brazil and Canada), has created its own brand for the Brazilian market with its headquarters in the city of Campinas-São Paulo. The company has an extensive line of products with CBD, which it claims have a much higher absorption rate and are water soluble thanks to an advanced nanotechnology formulation. CBD Vida has a platform for communication with doctors and patients backed up with a website offering information to customers, and has its own THC line ready to offer to patients who need this type of product. CBD Vida has a strategic partnership with Sinerlog for shipping the products to Brazil, with a customs warehouse in Miami, Florida, which allows for reduced shipping times.

EASE LABS

Ease Labs is a Brazilian/Uruguayan pharmaceutical company that works mainly with Brazilian herbal medicine, pharmaceutical-standard medical cannabis and herbal extracts from Brazilian biodiversity, with offices in São Paulo, Belo Horizonte and Montevideo (Uruguay).

In 2019, Ease Labs acquired a pharmaceutical laboratory in the capital of Minas Gerais to start manufacturing products in Brazil. It has 1,450 square metres of productive area, a complete sector for quality control and microbiological control and the capacity to produce 3,600 medicines per hour – 6.5 million drugs per year, enough to supply the entire demand for products in Brazil. Ease Labs is also looking into the export of medicines, since the company makes products available for direct import by the final patient upon import authorisation from ANVISA. Although, initially, production will take place with imports, the intention, in the medium

term, is to vertically integrate all stages of production, from seed to sale, be that in national territory or abroad.

FLORA GROWTH CORP

In January 2020, Canadian company Flora Growth Corp started the process of entering into the Brazilian medical CBD market, with the creation of a Brazilian subsidiary, 'Flora Brazil'.

- In January 2020, the company embarked on a wider Latin American strategy via an alliance with Rappi S.A.S., through which Flora will have the right to exhibit and offer its CBD products on Rappi's virtual platform, which is present in Argentina, Brazil, Chile, Colombia, Mexico, Peru and Uruguay. In addition, the application has a virtual wallet, RappiPay, where it is possible to make transfers and payments. Rappi has over 13 million users and 20,000 couriers in Colombia alone.
- In January 2020, Flora entered into a letter of intent with Latin Canada Pharma Inc. to acquire Grupo Farmaceutico Cronomed of Bogota, Colombia, a maker of medical products, dietary supplements, meal replacements, protein powders, etc. The companies will explore how Flora's organic CBD oil can be used to improve Cronomed's product line.

TERRA VIVA

Terra Viva was founded by Dutch immigrants in 1959 and is a family farming business that operates on participatory management principles. The 8,700-hectare Brazilian farm supplies a wide range of food, fuel and ornamental crops, including potatoes, onions, eucalyptus, cut and potted flowers, bulbs and ornamental greenery. The farm benefits its neighbours by creating employment and by protecting the environment through GAPs and dedicated nature reserves. Furthermore, the company funds social programmes for local youth and is the largest producer of amaryllis bulbs in the world.

Today, Terra Viva employs over 1,100 workers, though it still remains a family business. Schoenmaker Humako, which is part of the Terra Viva group, recently won a court ruling to plant industrial hemp. The company undertook a lawsuit against ANVISA in October 2019, which resulted in a judge from the Federal District of Brasilia authorising Terra Viva to import and grow industrial hemp seeds with a THC concentration of less than 0.3%; the company is also permitted to sell seeds, leaves and fibres. Other companies are expected to take similar action in the wake of this historic decision.

RAMM PHARMA CORP.

RAMM Pharma operates in cannabinoid pharmacology and product formulation for cannabis-based pharmaceuticals and other cannabis-based products. Founded in 1988 in Montevideo, Uruguay, the company is a well-established pharmaceutical and medical product business, which has developed medically registered and approved plant-derived cannabinoid pharmaceutical products. The company currently has multiple approved and registered products that have been authorised for sale in Uruguay and compassionate use in several Latin American countries, as well as a pipeline of new products in various stages of approval and development. RAMM Pharma operates a successful pharmaceutical, cosmetic and nutraceutical product development and medical services business, which has been serving the local market for 30 years.

RAMM Pharma Corp. includes wholly owned subsidiaries MedicPlast S.A., Yurelan SA and RAMM Pharma Holdings Corp.

- In September 2019, RAMM listed shares on the Canadian Stock Exchange.
- In February 2020, RAMM entered into a definitive agreement dated 24 February 2020 to acquire Glediser S.A. operating as NettaLife™, a leading developer of cannabis-based products for pets.

MEDICPLAST S.A.

Medicplast S.A. is based in Uruguay, with the head office in Montevideo. It operates in the pharmaceutical and medicine manufacturing sector and has been operating since 1988. Medicplast was the only company in 2019 to have registered a medical cannabis product in Uruguay. The product, Epifractan, is an oil, which is available with either 2% or 5% CBD and less than 0.5% THC. The company also registered a topical CBD product. The raw material for manufacturing these products is currently being imported from Switzerland.

SILVERPEAK LIFE SCIENCE URUGUAY INC. AND FOTMER LIFE SCIENCES

Silverpeak Life Science Uruguay Inc. is one of the largest companies in the country's medical cannabis industry. The company, whose headquarters are based in Canada, aimed to raise US\$35 million in 2019 to quadruple production and build a larger extraction lab in 2020. It aims to produce 25 tonnes in 2020 with the intention of generating US\$100 million in revenue, up from US\$5 million in 2019.

Fotmer, a subsidiary of Silverpeak, is the first fully licensed company in Uruguay producing top pharmaceutical-grade cannabis flower (also known as Flos), APIs, cannabis extracts and manufactured products for the international market. Founded in 2016, the company's Uruguayan operation is solely catered to global export. Licensed exclusively for medical applications in a UN convention-compliant supply structure – and in addition to existing permissions from Australia and Canada – Fotmer is a key Latin American supplier for Europe's medical cannabis needs. In 2019, Fotmer shipped over one metric tonne of THC-rich dried flower to Australia and the EU, with expectations for 2020 closer to 100 kilos a month. In 2019, only two companies had a licence to grow high-THC cannabis for medical use: Fotmer and Dormul. Dormul was acquired in 2019 for about US\$10 million by Khiron Life Sciences.

- In April 2019, Cansativa GmbH, a German cannabis distributor and wholesaler, became the first European company to import Latin American medical cannabis samples for initial testing, with samples provided by Fotmer Life Sciences and Clever Leaves.
- In May 2019, Fotmer became the first company to obtain a licence to process psychoactive cannabis. It allows the company to obtain up to 5,000 kilograms of raw extract during a period of five years. To do that, Fotmer can use up to 10,000 kilograms of cannabis flower and 10,000 kilograms of other parts of the cannabis plant from its own psychoactive crop.
- In September 2019, Fotmer shipped ten kilograms of high-THC medical cannabis flowers to Australia.
- In October 2019, Fotmer asked the Uruguayan government for approval to expand its annual production limit to 150 metric tonnes (330,693 pounds) of dried flowers with an increase in oil output.
- In early 2020, Fotmer began exporting to Germany.
- In May 2020, a dried-flower export from Uruguay to the EU achieved a new record, with almost 1.5 tonnes exported to Portugal to an unknown buyer.

TERRACE GLOBAL

Terrace Global is a multi-country operator with a focus on the development and acquisitions of international cannabis assets. Terrace Global's existing asset platform consists of: (1) a 33.75% indirect equity interest in one of the two recreational cannabis operations in Uruguay; (2) 100% of Oransur, S.A., a Uruguayan company producing high-CBD hemp on a 150-acre farm in Uruguay; (3) 100% of Terra Nova Produção e Comercialização de Produtos Natuis e Farmacêuticos, Lda, a Portuguese company with a pre-licence issued by INFARMED for the cultivation, importation

and exportation of medical cannabis in Portugal; and (4) 100% of Pharmabinoide S.L., a Spanish company producing and commercialising hemp in Spain. MariMed Inc., a multi-state cannabis operator in the US, dedicated to improving the health & wellness of people through the use of cannabinoids and cannabis products, owns approximately 6% of Terrace Global. Terrace Global is expecting to be a significant participant in the Brazilian market, facilitated by the South American trade agreement Mercosur.

INNOVATERRA

Innovaterra is a Uruguayan company dedicated to the research, production and industrialisation of medicinal hemp. The company is associated with CECAM, the Commercial and Industrial Centre of Salto and the Chamber of Industries of Uruguay. The company holds R&D, production and extraction licences from the IRCCA.

INSUMOS MEDICOS S.A.

Insumos Medicos S.A. is a Paraguayan pharmaceutical manufacturing, import and distribution company, and in December 2018 entered into an exclusive supply and distribution agreement with Aphria to provide medical cannabis in Paraguay. As part of the agreement, Insumos is responsible for the registration of Aphria's products with Paraguay's Ministry of Public Health and Social Welfare and appropriate licensing for the import of medical cannabis.

PATAGONIA FARMS

Patagonia Farms is a licensed medical cannabis cultivator, extractor and developer of APIs based in Santiago, Chile, with 800+ acres to cultivate organic medical cannabis in Chile. In February 2020, the company signed an agreement with Elementary Ventures, a business launch consultancy, in order to bring Patagonia Farms' cannabinoid-based APIs to market.



GRASSROOTS SPA

Grassroots SpA is an online cannabis company with over 3,000 patients across the country of Chile. In December 2018, Grassroots signed an agreement with Global Cannabis Applications Corp., a leading developer of innovative data. Grassroots aims to bring doctors and patients together via cutting-edge technology.

GLOBAL CANNABIS APPLICATIONS CORP.

Global Cannabis Applications Corp. is a global leader in designing, developing, marketing and acquiring innovative data technologies for the medical cannabis industry. The Citizen Green platform is the world's first end-to-end – from patient to regulator – medical cannabis data solution. It uses six core technologies: mobile applications, artificial intelligence, regtech, smart databases, blockchain and digital reward tokens, to qualify candidates for clinical studies.

DAYA FOUNDATION

Daya Foundation is a non-profit foundation based in Santiago, Chile and is a therapeutic centre specialising in cannabis solutions for terminally ill patients. The organisation has been a pioneer in the struggle for regulation in the country, and has two main streams of work: obtaining the permits required to develop a big crop of cannabis and home growing, with formative workshops for patients who do not have the time to apply through the bureaucratic process.

Daya is present in 15 cities in Chile and has a collaboration network present in Argentina, Colombia, Ecuador, Mexico and Uruguay. The foundation is helping more than 10,000 patients with all kinds of oncological pathologies, epilepsies, diverse chronic pain, Parkinson's, autism, anxiety and other medical conditions, and it also offers judicial advice and a social communication service.

MARIGOLD PROJECTS

Based in Jamaica, Marigold Projects is 49% owned by Aphria and holds a Tier 3 licence to cultivate more than five acres of land with cannabis for medical, scientific and therapeutic purposes. The company's cultivation farm is fully operational and by December 2018 had harvested approximately 2,500 kilograms of cannabis. Marigold Projects maintains an additional ten acres of vacant land in anticipation of expanding its cultivation operations.

- In August 2019, Marigold opened its first retail store, Sensi Medical Cannabis House, part of a longer-term strategy to open five in total in Jamaica.

EPICAN

Epican is a Jamaican-owned, staffed and operated vertically integrated cannabis company with cultivation, extraction, manufacturing and retail distribution licences. The founders, the McKenzie brothers, have been at the forefront of the nation's burgeoning medical cannabis industry, including extensive advocacy for the responsible development of the industry. Epican's social commitment to Jamaica's agricultural community includes a partnership plan to support Jamaica's Small Farmer Programme. Epican was among the first to receive a cultivation licence.

- In June 2018, TGOD entered into a strategic partnership with Epican Medicinals Ltd.
- In July 2018, Epican opened its flagship ~4,000-square-foot Kingston retail location.
- In May 2019, Epican and TGOD opened their second retail location in Jimmy Cliff Boulevard in Montego Bay.

JACANA

Jacana is a vertically integrated medical cannabis company founded in 2017 by entrepreneur Alexandra Chong, who grew up in Jamaica. Jacana's flagship farm is located on 100 acres in St. Ann, Jamaica, while the White River site is located about a mile away and serves as the farm's water source. Its London office manages distribution, sales, marketing and corporate development work. The company also has a team in Canada. At the time of writing, Jacana had launched four products onto the Jamaican market.

- In 2018, Jacana completed the first-ever international export of Jamaican medical cannabis flower, securing multiple international licences and permits, and raised €22 million to cultivate, develop and distribute certified medical cannabis solutions.
- In December 2019, Jacana opened its first store in Upper Manor Park Plaza, St Andrew.

KAYA

Kaya claims to be the first licensed medical cannabis producer and dispensary operator in Jamaica. Kaya operates a herb house in St Ann and has three retail locations and cultivation sites across Jamaica.

- In February 2018, vertically integrated cannabis brand house HIKU announced a strategic alliance with Kaya to pursue medical and adult-use cannabis branding, genetics and retail opportunities in Canada and Jamaica.
- In January 2019, Kaya Inc. reversed steps that were undertaken for a proposed merger with Canadian outfit Buzz Capital.
- In February 2020, Kaya made its first shipment of cannabis oil to the Cayman Islands. The importer in the Cayman Islands is a company operating under the name of Blue Water Medical Supplies. There are reports that the company is currently contemplating

Barbados as another likely regional market for its products.

- In 2020, the company invested around J\$60 million in the establishment of a new outlet in Kingston.

GLOBAL CANNA LABS

Global Canna claims to be the Caribbean's largest medical producer and is strategically positioned with local partners for packaging and distribution for the global supply chain. The company operates under a Tier 3 operator's licence on its 270,000-square-foot facility in the heart of Montego Bay. Global Canna is part owned by Canadian company Elixer, which consists of a US\$2.5 million investment by way of a secured debenture, convertible into a 30% equity interest in Global Canna and a 5% royalty on Global Canna's net sales.

- In December 2019, Global Canna Labs successfully exported ten kilograms of medical cannabis from Jamaica into Canada.

THE JAMAICAN MEDICAL CANNABIS CORPORATION

JMCC is a Canadian-Jamaican medical cannabis exporter. In June 2018, JMCC invested US\$2 million (J\$264,000,000) into research on local cannabis strains in order to ascertain with scientific accuracy their medicinal potential, over the next ten years. In February 2019, JMCC acquired 49% ownership of Kirkpatrick Farms on the outskirts of Montego Bay. The 250-acre farm would become JMCC's largest cultivation site, bringing total cultivation for the company to one million square feet or 23 acres and achieving a minimum of three harvests per year. Finally, Q1 2019 saw JMCC announce a partnership with CanaQuest. Under their agreement, JMCC will cultivate the premium medical-grade cannabis for CanaQuest's novel products, as well as managing the processing, product formulation, packaging, warehousing and distribution of the products around the world.

TIMELESS HERBAL CARE

The company Timeless Herbal Care is Kingston, Jamaica-based and is owned by Courtney Betty, a former crown attorney at the Department of Justice Canada, who serves as its president and CEO. Timeless dubs itself as an international nutraceutical company and Jamaica's leading medical cannabis company.

The Timeless journey began when the company helped create Jamaica's legal cannabis framework. Subsequently, the company received the first research and development permit, and planted the first legal cannabis in Jamaica in over 102 years.

ABP S.A.

ABP, S.A. is an established and successful pharmaceutical import and distribution company in Argentina, which supported a number of university hospitals in securing an import permit for cannabis oil. Aphria and ABP, in close partnership with the Argentinian government, will continue to advance opportunities for medical cannabis in the country, including the potential for in-country cultivation and pharmacy distribution of cannabis products.

TROPICAL VERDE COAST LTD

Mota Ventures Corp. from Canada has signed a binding letter of intent to acquire Jamaican cannabis grower and extractor Tropical Verde Coast Ltd, as it targets the Caribbean CBD oils market. Mota Ventures recently completed the acquisition of a Colombian cannabis producer, NNZ Consulting Corp., which is licensed to cultivate non-psychoactive cannabis in Colombia through its subsidiary Ihuana S.A.S.

CANN FARM

Based in Peru, Cann Farm is dedicated to cultivating and processing medicinal plants under the highest quality standards and developing from them a broad portfolio of innovative products for the health and well-being of the

international community. In addition to the importation and marketing of products derived from cannabis and other plants for medicinal use and the cultivation and processing of medicinal plants, both for the Peruvian market and for export, Cann Farm invests in scientific research and agronomic issues.

Only two licensed companies – ICC Labs and Simbiosys – operate in the adult-use segment.

In the hemp space, various companies, such as CannaPur (Khiron) Di Canna, BCBD, and Inverell (Auxley), are all licensed operators.



REGIONAL TRADING BLOCS

As is the case with the EU in Europe, ASEAN in Asia or NAFTA in North America, there are two main trading blocs in LAC. Despite not currently having a direct impact on the cannabis and hemp industries, its regulations indirectly impact the industry, particularly

when it comes to cultivation and international trade. Talks have taken place with regards to Pharmacopoeia homogenisation, and a direct impact on the spheres of cannabis and hemp is expected in the years to come.

The main trading blocs are:

MERCOSUR/MERCOSUL



- Protects the internal market with tariffs, main focus is internal trade, encompassing almost half of the LAC population
- Clear political and economic leadership from Brazil
- Agriculture is a very important commodity, with a latent hemp export potential due to its weather and soil
- Conservative/closed approach to international trade
- Uruguay is its most developed country in terms of cannabis legislation
- China is the main trade partner
- EU-Mercosur Free Trade Agreement signed recently
- Agricultural products often face challenges in accessing EU markets
- No central regulator for pharmaceutical products, but there have been some talks to create a common regulatory framework and a block Pharmacopoeia
- Free trade agreements, Andean Community Canada (planned), EU (negotiations ongoing), EFTA, Egypt, Israel, Palestine.

Members: Argentina, Brazil, Paraguay, Uruguay

ALIANZA DEL PACIFICO



- Focus on international trade outside the bloc
- No clear centralised leadership from any country
- Agriculture is relevant but less than for Mercosur
- Liberal approach to international trade
- Colombia is the most developed country in terms of cannabis legislation
- Mexico is the country with the greatest potential
- Good cannabis cultivation conditions
- The US is a big trade partner (over 50% of exports)
- No central regulator for pharmaceutical products, but some initial talks have taken place, aiming to let pharmaceutical products flow freely within the trade association, and in addition, pharmacopoeia homogenisation talks have taken place.

Members: Chile, Colombia, Mexico, Peru

Appendix

ABBREVIATIONS

ABRACE	Brazilian Cannabis Support Association Esperança
ADP	Alternative Development Programme
AECU	Uruguayan Cannabis Studies Association
Agrocalidad	Agency for Regulation and Control of Phyto and Zoo Health
ANICANN	Association of the Cannabis Industry in Mexico
ANMAT	National Administration of Drugs, Foods and Medical Devices
ANVISA	National Health Surveillance Agency
API	Active Pharmaceutical Ingredient
Arcsa	National Agency for Health Regulation, Control and Surveillance
ARGENCANN	Argentine Chamber of Cannabis
ASEAN	Association of Southeast Asian Nations
Asocolcanna	The Colombian Association of Cannabis Industries
CAO	Chief Agricultural Officer
CAGR	Compound Annual Growth Rate
CARICOM	Caribbean Community
CBD	Cannabidiol
CBG	Cannabigerol
CBN	Cannabinol
CECAM	Chamber of Medical Cannabis Companies of Uruguay
CEO	Chief Executive Officer
CLA	Cannabis Licensing Authority
COFEPRIS	Federal Commission for the Protection against Sanitary Risk

COIP	Comprehensive Organic Criminal Code
COO	Chief Operating Officer
DIGEMID	General Directorate of Medicines, Supply and Drugs
EADA	Escuela de Alta Dirección y Administración (Business School, Barcelona)
ECUA	United Cannabis Entrepreneurs of Argentina
EFTA	European Free Trade Association
ESG	Environmental, Social and Corporate Governance
EU	European Union
FDA	Food and Drug Administration
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GAD	Decentralised Autonomous Government
GACP	Good Agricultural Collection Practices
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GDP PPP	Gross Domestic Product Purchasing Power Parity
GGPAJ	Ganja Growers and Producers Association of Jamaica
GMP	Good Manufacturing Practice
GPIC	Cannabis Industry Promotion Group
ICA	Colombian Agricultural and Livestock Institute
ILANS	Latin American Institute of Neurology and the Nervous System
INCB	International Narcotics Control Board
INVIMA	Colombian National Food and Drug Surveillance Institute
IP	Intellectual Property
IPO	Initial Public Offering
IRCCA	Institute for the Regulation and Control of Cannabis
JMCC	Jamaican Medical Cannabis Corporation
JV	Joint Venture

LAC	Latin America and the Caribbean
LAIHA	Latin American Industrial Hemp Association
LAVCA	The Association for Private Capital Investment in Latin America
LP	Licensed Producer
M&A	Mergers and Acquisitions
MCI	Mexican Cannabis Institute
MoU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NGO	Non-governmental organisation
NOP	National Organic Programme
OTC	Over-the-counter
PIC/S	Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme
PPP	Public-Private Partnership
PRI	Institutional Revolutionary Party (Mexico)
R&D	Research & Development
RSHO™	Real Scientific Hemp Oil
SDG	Sustainable Development Goals
SKU	Stock-keeping Unit
TGOD	The Green Organic Dutchman
THC	Tetrahydrocannabinol
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNODC	United Nations Office on Drugs and Crime
USDA	United States Department of Agriculture
UYU	Uruguayan Peso
VC	Venture Capital
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

METHODOLOGY

The market sizing contained within this report has been based on a variety of official sources including United Nations (UN) population projections by country, World Bank forecasts of inflation (GPP) and price level index, and the UNODC's figures on prevalence of annual cannabis use by country.

Penetration of the different categories of cannabis per country was calculated using a variety of sources, ranging from primary consumer research to official and industry data on the volumes imported, prescribed or dispensed, as well as the eligible population and user penetration as accounted by official surveys and industry estimates.

Prohibition Partners' proprietary market sizing model accounts for every country south of the southernmost land or maritime border of the US, including Mexico, the Caribbean, Central America and South America. However, the dominions of states located mostly outside the region, such as American, British, Dutch and French possessions in South America or the Caribbean have not been included.

For situations where data were not available for a particular country, industry averages, informed assumptions and inferences were utilised. All the figures contained herein represent an attempt at estimating the most likely scenario of development in each covered market. However, all the reported figures are very sensitive to the untested assumptions of the model and are based on historical data

from most developed international programmes, which do not need to necessarily correspond with the reality of the nascent or yet-to-be-born markets.

During 2020, Colombia and Uruguay have been exporting cannabis to the international markets. Included in this report are estimates on the demand of the legal cannabis schemes in LAC. They do not focus on the ability of the region to attract foreign investment and do not represent forecasts as to the value of the industry's produce.

Political and regulatory change remain the strongest economic drivers in the cannabis industry. Assumptions around the most likely date of legalisation and effective access have been estimated, but slight changes with regards to the date or scope of reforms may dramatically affect the figures shown in this model.

Medicinal

The medicinal market-size estimates and forecasts contained within this report include both medical and pharmaceutical products, which have been modelled separately. Value forecasts can include CBD medical products.

Pharmaceutical cannabis products, like Sativex, have been modelled after the estimated eligible population for their recognised indications, as well as the observed trends in more mature markets for pharmaceutical cannabis with an abundance of data (Germany, UK, US).

Medical cannabis estimates represent a calculation of patient penetration over time, as well as dosages, estimated from official and company data where available. Eligible population is not calculated as the sum of patients who suffer from qualifying conditions, primarily because patients may suffer from multiple qualifying conditions for which cannabis can be prescribed, and because of the difficulty of assessing competitive drugs in such a wide therapeutic scope.

Prices of medicinal cannabis have been gathered where possible and estimated from price indexes in the geographies lacking products on the market. Evolution of prices has been modelled based on post-legalisation pricing trends from a number of markets.

Recreational

Our recreational cannabis market sizes take the UNODC yearly prevalence figures of cannabis use to calculate the eligible population for a legal recreational scheme. Our assumption is that legal cannabis will increase its share of the market vis à vis the illicit market during the first few years, following the observed trends in Canada and Uruguay.

Prices have been estimated from international bulk prices of cannabis, as well as the illicit market and our assessment on the current supply-demand balance in the international cannabis markets.

CBD

Consumer products containing CBD have been modelled for 15 countries possessing significant amounts of retail and commercial activity and where the product is attainable without being in direct violation of the law. However, CBD can probably be obtained in or smuggled from other countries, representing minuscule amounts.

Only packaged products of CBD have been considered, without accounting for medicines obtained under a doctor's prescription or the informal economy.

User population has been estimated following a qualitative assessment of market conditions in each country, accounting for the regulatory status of CBD (existence of product registration), as well as the degree of official enforcement. International trends in penetration rates, dosages, frequency of consumption and product formats have been assumed for our focus countries.



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