## Global Hemp Markets

Product and consumer landscapes

February 2019



#### **Contents:**

- 1 Overview 13 Product Analysis
- 3 Key Findings 21 Hemp in Canada
- 5 Market Analysis 23 Hemp in China
- 9 Market Selection

#### Definitions:

Hemp is a member of the *Cannabis sativa* family. This family of plants also includes cannabis/marijuana which contain higher tetrahydrocannabinol (THC) content than hemp. The purpose of this report is to investigate global hemp markets. However, in the Markets and Internet Search sections, cannabis is included to ensure complete coverage of the investment growth and search interest.



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hemp products.

In response to interest from domestic producers, the Economic Intelligence Unit (EIU) has investigated the global markets for hemp

products.

The aim of this report is to identify potential market opportunities for New Zealand producers

of hemp and hemp products.

Utilising a range of tools, the Economic Intelligence Unit assessed consumer search interest, market activity for hemp products, and investment in cannabis firms to identify the range of markets for hemp products.

Market identification enables the targeting of markets where consumers are responsive to hemp products.

Identification of product categories: We examined what hemp related products were launched across a range of markets. This allows New Zealand producers to reduce product development risk by targeting product categories and product types where the proof of concept has been demonstrated. Further analysis of launched products identified categories and markets where there is a significant activity.

Deep dives in selected markets and products: We examined selected markets and product categories in detail to determine future growth prospects, identify relevant market factors, and determine potential sales distribution. This will support market selection and highlights avenues for potential partnerships with final product producers or distribution channels.



# Key Findings



#### The United States is the most active market for hemp products

The United States (US) should be a target market for New Zealand hemp producers. The US shows strong consumer engagement in search prevalence for hemp related products<sup>(1)</sup>. In addition to this, the US had the most releases of hemp products, and a large share of hemp products (26% of new hemp products launched 2012-2017, compared to 8.8% of all retail products<sup>(2)</sup>).



#### Snacks are the dominant product category for hemp products.

This is followed by bath & shower products, other beverages (which were mostly protein supplements), and hair products as the categories with the most hemp activity in the US. Of these, snack products in the US is the ideal first target, as a result of the category's high value, strong forecast growth, and acceptance of hemp products, demonstrated through continued product launches<sup>(2)</sup>. These categories reflect alignment with other consumer trends, such as a desire for quick, healthy products, free from animal products or chemical additives.



#### Products emphasise different attributes in their marketing strategies.

Snack products emphasis being low allergen and free from certain traits, such as GMO and gluten. Skincare leads its marketing with flavour, while hair care and beverages (protein supplements) focus on function. Bath & shower products use a combination of functional branding and flavouring<sup>(2)</sup>.



## Beauty products and protein supplements are high growth markets in the US.

The protein supplements market alone has a forecast CAGR of 8.6% for 2017-2022 in the US, and would be an ideal first food and beverage target. The breakfast cereal market, another prominent hemp category, has been experiencing a stagnation, which is forecast to continue<sup>(3)</sup>.



#### Healthcare & biotechnology firms are receiving significant investment

This reflects the drive towards medicinal use of cannabis. Investment is also flowing to software for business management and marketing for hemp producers. Investment now indicates that there is likely to be substantial commercial activity in this space in the future (4).



## The US and Canada dominate consumer interest searches for general hemp products

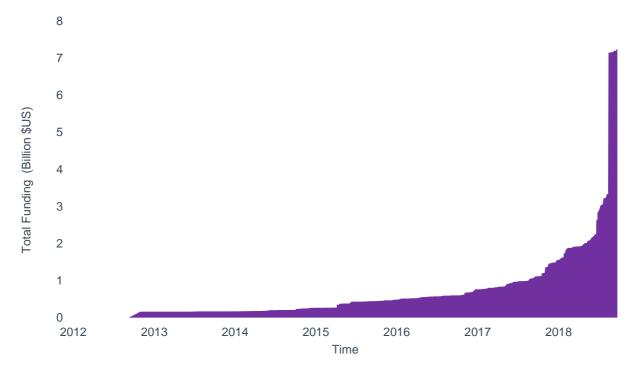
But interest in hemp fibre is led by Asia and interest in cannabidol (CBD) pharmaceutical products is lead by a number of small, high-income countries, for example, the United Arab Emirates (UAE)<sup>(1)</sup>.

Notes: 1 - Consumer Engagement data sourced from google trends (2018). 2 - Products launched and claims data obtained from Mintel (2018). 3 - Category value data sourced from Euromonitor International (2018). 4 - Investment data obtained via crunchbase (2018).



# Market Analysis

Figure 1: Total Funding for Cannabis Companies (2012 - Oct 2018)



Source: MPI, Crunchbase (2018) © all rights reserved.

#### Venture Capital Investment is growing.

- Visible venture capital funding of companies in the cannabis\* industry is growing rapidly, reaching over \$7 Billion United States Dollars (USD) in September 2018. A large part of this was driven by a single, \$3.8 Billion USD funding round in August 2018 for Canopy Growth<sup>(5)</sup>.
- From 2013 to 2017, annual investment has grown every year, with a compound annual growth rate (CAGR) of 209%. This is driven by a higher number of larger funding rounds. There is significant investor confidence in the market, with each investor making on average 2.3 investments in cannabis firms and 33% of firms receiving multiple rounds of investment<sup>(5)</sup>.
- \* Cannabis was used as a search term for investment.

- In 2013 there were 10 rounds of venture funding for companies in the cannabis industry, compared to 136 in 2017. Average investment size has increased from approximately \$1.4 Million USD in 2013 to 7.3 Million USD in 2017.
- New Zealand firms operating in the industry will likely require investments of scale to be competitive in the market. The average size of a sample of 1000 investments in this period was approximately \$61 Million USD, indicating that funding size will likely continue to grow<sup>(5)</sup>.

#### INVESTMENT BREAKDOWN

#### There is significant activity in healthcare

Categorisation of cannabis firms shows that there is significant activity in the medical field by cannabis firms<sup>(7)</sup>. The top four categories for firms receiving investment were all biology based, health-related categories. This reflects a global interest in therapeutic compounds that can be extracted from cannabis, and indicates that firms are able to demonstrate enough viability for these products to attract investment.

After this, the most common categories were software and technology based, aimed at supporting cannabis firms. This indicates that the emerging hemp industry is not gradually developing like established industries have over time, but rather incorporating current disruptive trends (e.g., E-commerce, Internet of Things (IoT)) from the outset.

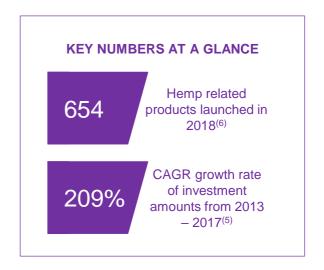
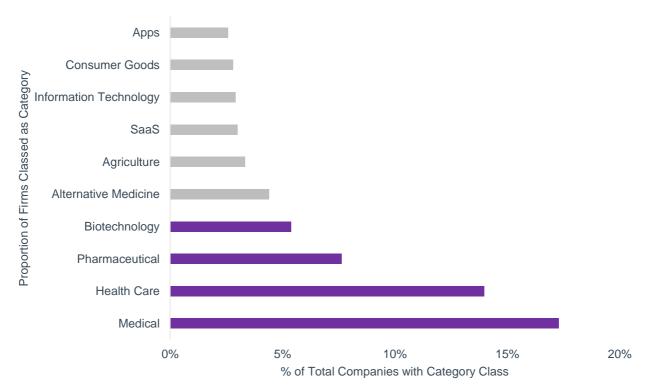


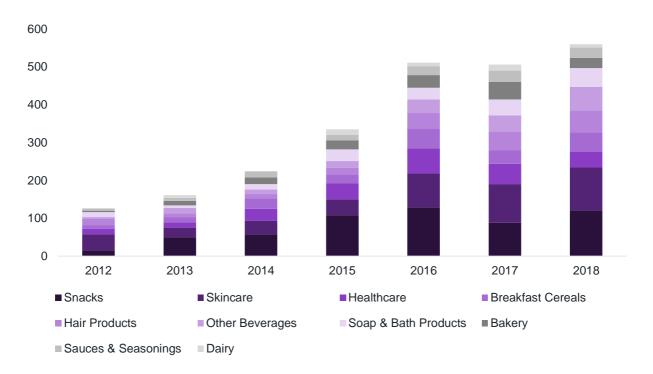
Figure 2: Key firm categories involving cannabis as at October 2018<sup>(7)</sup>



Source: MPI, Crunchbase (2018) © all rights reserved.

#### **PRODUCT LAUNCHES**

Figure 3: Hemp products launched by year (2012 – 2018)



Source: Mintel GNPD (2018) © all rights reserved

## **Growth in Hemp products greater than average**

The number of new hemp retail products launched globally has increased consistently from 2012, with 654 new products being launched globally in 2018<sup>(6)</sup>.

While the key growth category was snacks from 2013 – 2016, snacks has since been overtaken by skincare products, with stronger growth in other categories. There has also been increased activity in other beauty products, such as hair products and haircare, indicating that this is becoming a more important market<sup>(6)</sup>.

The diversity of products launched is also evident, with strong growth across all categories.



## Market Selection

#### The US is a key product launch market

The US is a key market for hemp products, and is where 26% of new hemp products were launched between 2012 and 2018<sup>(6)</sup>. High-income, industrialised Western countries, including Germany, Canada, and the United Kingdom, round out the other significant active markets for hemp products.

The US is the market with the greatest activity.

The United States has the largest number of hemp products entering the market and a disproportionately large amount of new hemp products being released. The geographic proximity of the US to Canada, another active market, suggests a North American regional business approach may be a viable option.

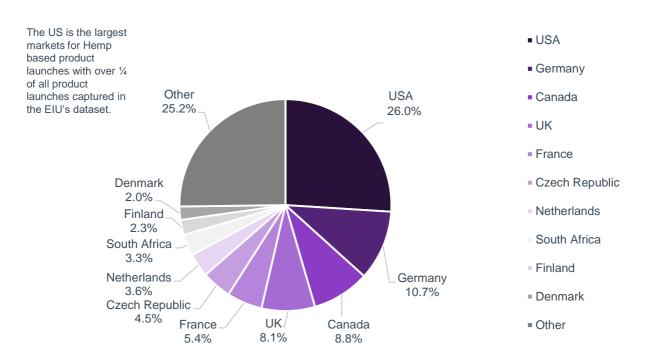
Product launches follow trends around the relaxation of regulation surrounding hemp/cannabis products. The five largest retail markets are all countries that have legal hemp cultivation. This suggests that local markets are a common first target for hemp cultivators, and results in a high proportion of hemp products in these markets, relative to other products, as countries that legalise products first are able to develop their market first.

Figure 4: Hemp product launches by Country (2012 – 2018)

Country	Share of hemp launches	Share of all product launches		
US	26%	9%		
Germany	11%	6%		
Canada	9%	4%		
UK	8%	6%		
France	5%	6%		

Source: MPI, Mintel GNPD (2018) © all rights reserved.

Figure 5: Hemp Product launches by Country (2012 – 2018)



Source: MPI, Mintel GNPD (2018) © all rights reserved

#### NORTH AMERICA - THE KEY MARKET FOR HEMP

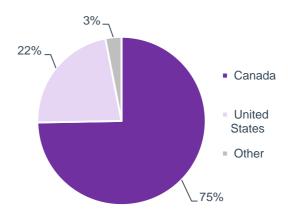
#### Firms are based in North America.

Canada received 75% of the venture capital funding of cannabis firms<sup>(5)</sup>. This is distorted by Canopy Growth, a firm based in Canada, which has received 59.7% of global investment in cannabis firms. Aside from Canopy Growth, Canadian firms are slightly better funded than US firms, potentially as a result of recent legalisation

#### Cannabis firms are concentrated in North

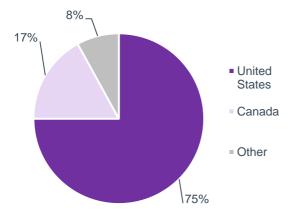
**America**, representing approximately 92% of firms in the industry. This largely matches the distribution of cannabis legalisation, which allows greater scale for firms growing plants of the cannabis species.

Figure 6: Global venture funding by Country



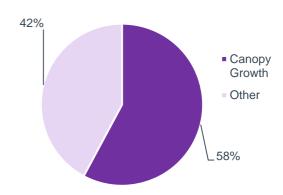
Source: MPI, Crunchbase (2018) © all rights reserved.

Figure 7: Cannabis Firms by Country



Source: MPI, Crunchbase (2018) © all rights reserved.

Figure 8: Global Venture funding by Company



Source: MPI, Crunchbase (2018) © all rights reserved.

## HEMP PRODUCT SEARCH INTEREST DIFFERS ACROSS MARKETS

Figure 9: Relative search interest by market.



#### "Hemp"

#### **High Interest Markets:**

Canada, the United States, New Zealand, Australia, and Ireland



#### "Hemp Fibre"

#### **High Interest Markets:**

Taiwan, Canada, Hong Kong, the United States, New Zealand and China.



#### "Cannabidol Pharmaceuticals"

#### **High Interest Markets:**

UAE, Australia, the United States, Switzerland and the Netherlands.

Source: MPI, Google Trends (2018) © all rights reserved.

### Search interest in hemp identifies key markets

Search analytics identified developed Western markets as ideal target markets for hemp products. Canada and the United States rate highly in terms of search proportions per person across hemp, fibre, and cannabidol pharmaceuticals<sup>(8)</sup>. This indicates these markets are suitable targets for a broad range of hemp products, and that a hemp producer could find customers for their entire production output, rather than having to enter multiple markets to do so.

Hemp fibre presents specific opportunities in Asian markets<sup>(8)</sup>. In these markets, it is primarily used as a textile and as an industrial input. Strong population growth and building activity in these markets means that construction materials that use hemp as an input, e.g. hempcrete, a form of concrete, may be viable products.

#### **Pharmaceutical Interest follows income**

There is strong consumer search interest in cannabidol pharmaceutical products in high-income countries<sup>(8)</sup>. Consumer interest combined with the likely high unit cost of extract products suggest high-income consumers in countries like the Netherlands would be ideal targets for these products.



# Product Analysis

#### Ethical and natural claims are common

New hemp products launched in 2012–2018 make significant use of ethical claims (vegan, ethical – animal), and naturalness claims (organic, botanical). These claims are becoming increasingly important in more established products, e.g. meat, but this demonstrates that hemp products are responding faster to changing consumer drivers than more established product categories<sup>(6)</sup>.

Hemp consumers will have an expectation of new products meeting these emerging trends and claims. Products that not do not meet these drivers will have a disadvantage in terms of consumer perception.

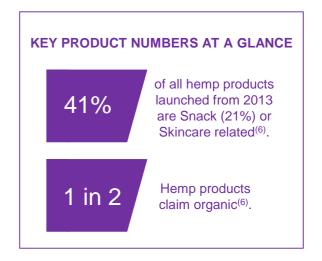
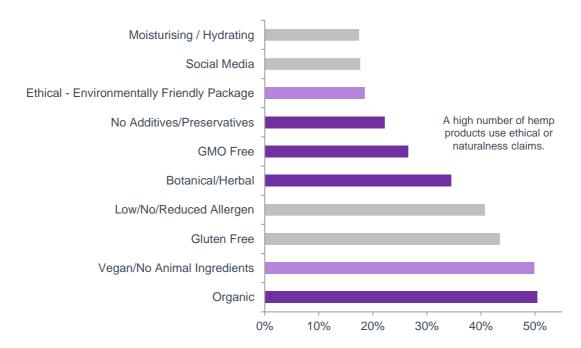


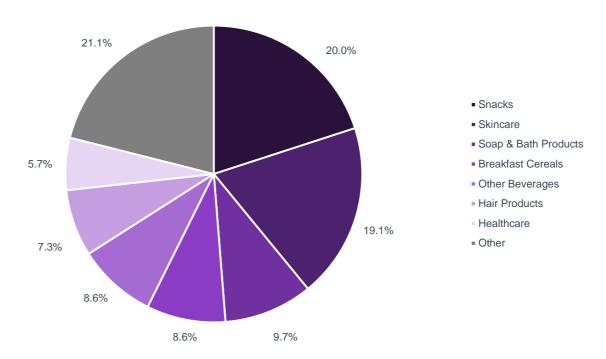
Figure 10: Hemp product claims in New Products or rebrands (2012 – 2018)



Source: MPI, Mintel GNPD (2018) © all rights reserved.

#### SNACKS AND SKINCARE DOMINATE PRODUCT LAUNCHES

Figure 11:Hemp Product Categories in the US 2012 - 2018



Source: MPI, Mintel GNPD (2018) © all rights reserved.

#### Beauty products are experiencing strong growth

Product launches for some categories have been relatively stable since 2013/14. After a slow start in 2012, other beverages, breakfast cereals, and healthcare have been releasing a relatively constant number of products each year<sup>(6)</sup>. This shows that these categories are experiencing stable growth.

Skincare and Haircare products have grown significantly in recent years. Skincare and haircare have experienced an increase in the number of product launches since 2016, indicating increasing consumer interest in hemp as an ingredient for beauty products. This can also be seen to a smaller extent with Soap and Bath products<sup>(6)</sup>.

Snack releases have slowed after a 2016 boom. Annual launches for snack products increased year on year from 2012-2016, before falling in 2017. Despite a recovery in 2018, this suggests that the snack market may be saturated in the United States<sup>(6)</sup>.

#### COUNTRY PRODUCT BREAKDOWN

45% 40% Proportion of Country Hemp Products 35% 30% 25% 20% 15% 10% 5% 0% USA UK Canada France Germany ■ Snacks ■ Skincare ■ Healthcare ■ Breakfast Cereals Hair Products Other Beverages Soap & Bath Products ■ Bakery ■ Sauces & Seasonings Dairy

Figure 12: Top 10 Category breakdown by five largest countries (2012 – 2018)

Source: MPI, Mintel GNPD (2018) © all rights reserved.

### Consumption alignment offers opportunities for globalised snack products.

Alignment in consumption profiles in key product categories means that there is opportunity for globalised products. Similar demand for hemp snack products in Germany, Canada, and the France means that snack products could be expanded into these markets once a brand is established in the US<sup>(6)</sup>.

The disproportionately high interest in hemp products in the UK may indicate strong opportunity for hemp snack products.

### Spreading trends may shape future market opportunities

At present the Soap and Bath category is only a major category in the US and France, ranking relatively lower in other countries. If trends in hemp products spread from the US to other countries, then New Zealand firms could gain a first mover advantage by selling a skincare product designed for the US into other countries<sup>(6)</sup>.

#### SNACKS AND CEREALS IN THE US

#### **Hemp Snacks in the US**

Snack bars constitute over 90% of hemp snack products in the US<sup>(6)</sup>. This product category is forecast to grow strongly, at a CAGR of 4.5% from 2018 to 2023<sup>(9)</sup>.

In the broader snacks category, there is also growing demand from consumers for healthier snacks, leading manufacturers to choose to limit the amount of fats, sodium and sugar in their products.

The snack market is an ideal target for hemp producers, as it is a rapidly growing market, within a broader category where healthier ingredients are being demanded,

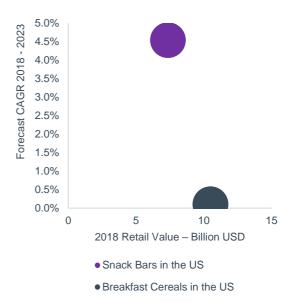
#### **Breakfast Cereals**

Breakfast cereals are not a recommended target market for hemp producers.

The breakfast cereals market in the US has been declining in retail value since a peak in 2012 as consumption decreases. This is forecast to stabilise from 2018 – 2023<sup>(6)</sup>.

Any New Zealand firm would have to compete with established brands in a no growth market.

Figure 13: Snack Bars and Breakfast Cereals in the US – Value and Forecast Growth (2018 – 2023)



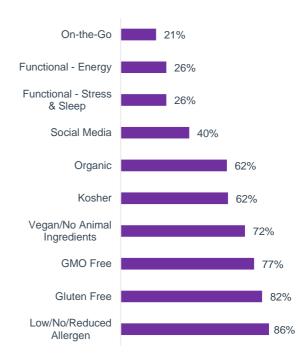
Source: MPI, Euromonitor (2018) © all rights reserved.

#### **US Snack Claims**

Allergens are a key concern in US snack products, likely driven by the prevalence of nut allergies. This may be an opportunity to differentiate hemp products if they are able to replicate the taste and feel of 'nutty' products without the risk of allergies.

Ethical concerns are more prevalent in snack products. The high incidence of ethical and natural claims shows that snack consumers are emerging as 'conscious' consumers. Products entering the market should take account of this, and incorporate these claims into their products where possible.

Figure 14: Product claims for Snack products launched between 2012 and 2018



Source: MPI, Euromonitor (2018) © all rights reserved.

#### HEMP BEAUTY PRODUCTS IN THE US

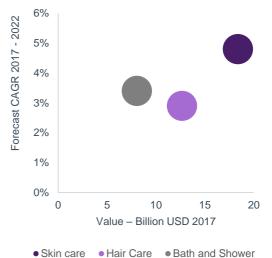
#### **Market Analysis**

The second largest category of hemp products, skincare, is also the product category with the greatest total US value (\$18.4 billion USD), and has forecasted growth of 4.8% CAGR<sup>(9)</sup>. The category has the highest concentration of hemp products on the market (2.8% of products since 2012) out of beauty products, but higher future growth should accommodate this. This would be an ideal beauty and personal care category to target.

The bath & shower and hair care categories are more varied in entry conditions. The bath & shower category has a higher forecast growth rate (3.4% CAGR) and lower concentration of hemp products already on the market (2% of products launched since 2012), but less total value (\$8 billion USD).

Hair care in the US has greater overall value (\$12.6 billion USD) than the bath & shower category but a lower forecast growth rate in the next 5 years (2.9% CAGR), and a higher concentration of hemp products already on the market (2.2% of products launched since 2012).

Figure 15: Retail Value and Predicted Growth of Product Categories in the US.



Hair CareBath and Shower

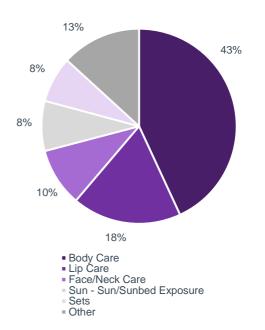
Source: MPI, Mintel (2018) © all rights reserved.

#### **Skincare Products**

Hemp skincare in the US has two components. At the product level, hemp is used as a functional ingredient, and not heavily pushed, instead focussing on flavour. When hemp is marketed in skincare products, it is usually at the brand level. An example of this is 'sugar body scrub', under the brand name Hempz<sup>(6)</sup>.

A large part of this is driven by two firms, Hempz and Hemp technologies, which released 22.4% and 9.3% of new hemp skincare products in the US between 2012 and 2017<sup>(6)</sup>.

Figure 16: US Skincare Products by category.



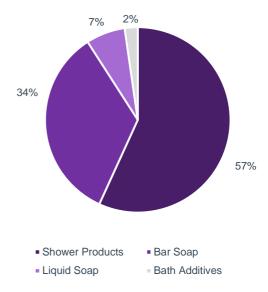
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#### HEMP BEAUTY PRODUCTS IN THE US

#### **Soap and Bath Analysis**

- Marketing of bath & shower hemp products in the US is mixed, with focus spread between function, flavour and ingredients. This means that marketing techniques focussed on any of these aspects could be used.
- As this category is less sensitive to the marketing strategy used, firms should instead focus on either skincare or hair care, and then bringing that same approach to bath & shower products.

Figure 17: US Soap & Bath Hemp products by sub category.

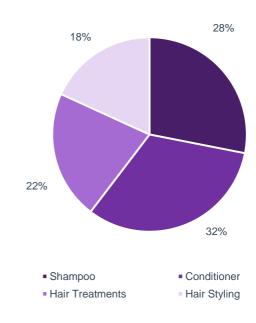


Source: MPI, Mintel (2018) © all rights reserved.

#### **US Haircare Hemp Products**

- The marketing of hemp hair care products in the US has a focus on function, with descriptions being based around ingredients helping deliver an outcome, e.g. "hemp seed to replenish moisture for increased elasticity and shine".
- Because of this, functionality should be pushed as the product value proposition, and with hemp being used to either support this, or as an overall brand, similar to skin care products.

Figure 18: Haircare Hemp Products by Subcategory.



Source: MPI, Mintel (2018) © all rights reserved.

#### PRODUCT DISTRIBUTION

#### **Distribution approach - Skincare**

The distribution of sales in the US for beauty and personal care products is currently experiencing a shift away from traditional, store-based retailing in favour of specialty stores and e-commerce. This is reflective of an overall shift in this direction across all products<sup>(9)</sup>.

Hemp producers can take advantage of this by targeting new products directly at fast growing distribution channels. Ideal targets are Internet retailing and specialist beauty retailers, which are currently growing.

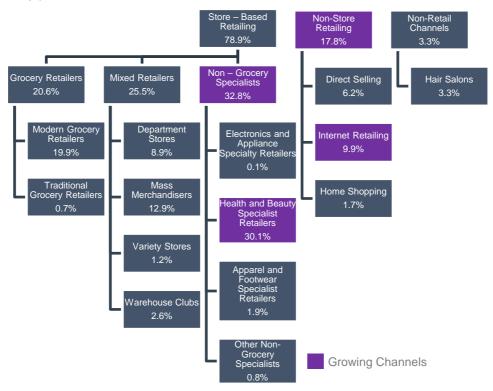
This will likely be effective for hemp products. As identified in product claims, hemp consumers have a greater than normal expectation that their products will meet emerging trends, and will be more responsive than other consumers to these new distribution channels.

#### **Distribution approach - Snack Products**

Snack bar distribution is experiencing growth in unconventional retail areas. Internet retailing is experiencing strong growth, reaching 9.6% of retail value in 2018, and growing at a CAGR of 11.8% from 2012 – 2018<sup>(9)</sup>.

New Zealand hemp producers should look to sell snack products through these emerging channels. Using existing e-commerce platforms, e.g. Amazon, offers a low risk, low investment mode of market entry.

Figure 19: Beauty product distribution in the US



#### 'OTHER BEVERAGES' A CATEGORY TO NOTE:

#### **Hemp Beverages**

The majority of the hemp products in this category are meal replacement and nutrition products. This is predominately nutritional smoothies, protein shakes, and protein powders<sup>(6)</sup>.

The selling point of these products are almost exclusively that they are a source of natural, plant-based proteins. As a result of this, the category had a significantly higher proportion of product claims than hemp products as a whole.

Over 60% of products made claimed to be low allergen, vegan, high / added protein, gluten free, and GMO free. Across all hemp products only one claim, organic, was present in over 50% of products. This indicates that these claims are of greater importance in nutritional supplements than other hemp products, and should be considered as 'must haves' rather than 'nice to haves' for New Zealand firms considering product design<sup>(6)</sup>.

Figure 20: Claim Breakdown of Products

Claim	% of 'Other Beverages' products using claim.		
Low/No/Reduced Allergen	94%		
Gluten Free	85%		
GMO Free	79%		
High/Added Protein	77%		
Vegan/No Animal Ingredients	69%		
Dairy Free	65%		
Organic	40%		
Functional - Stress & Sleep	37%		
Functional - Energy	37%		
Social Media	33%		

Source: MPI, Mintel GNPD (2018) © all rights reserved.

#### **Markets**

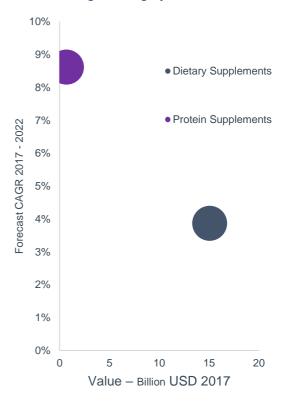
The dietary supplements market in the US is large (\$15 billion USD) and predicted to grow (CAGR of 3.9% 2017-2022)<sup>(9)</sup>.

Protein supplements, the most prevalent hemp product in this category, are currently a small but component, but have a very high predicted growth rate (CAGR of 8% 2017-2022)<sup>(9)</sup>. This makes it an ideal target for new hemp products

The global market for dietary supplements as a whole is predicted to grow faster globally than in the US (5.8% CAGR globally vs 3.9% CAGR for the US) from 2017- 2022. The protein supplement subcategory, while forecast to experience strong growth globally (6.44% CAGR), is expected to grow slower than the US<sup>(9)</sup>.

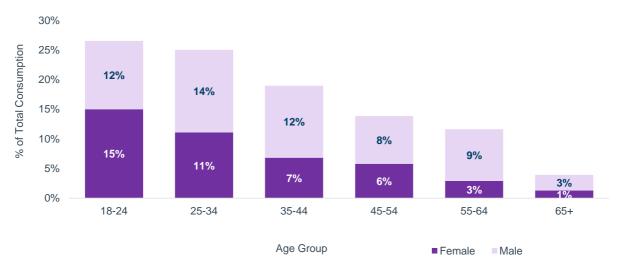
Because of this, firms would likely be able to market nutritional supplement products in markets outside the US as well.

Figure 21: Breakdown of Hemp products in 'Other Beverages' category.



Source: MPI, Mintel GNPD (2018) © all rights reserved.

Figure 22: Purchase Frequency Weighted Demand<sup>(10)</sup>



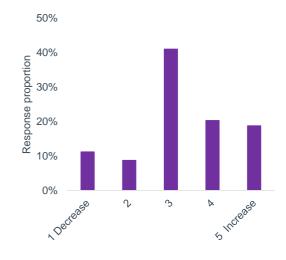
On 17 October, Canada passed the Cannabis
 Act, legalising recreational cannabis. The EIU
 investigated the effect that this had on the domestic
 hemp market, and if hemp consumers would
 become more or less interested in hemp products
 as cannabis products became available.

**Hemp Demographics** 

- Demographics are weighted by purchase frequency. Purchase frequency gained from survey demographics were used to provide greater insight into hemp consumption.
- There is an even split between male and female consumers. This shows that products should be designed with universal appeal.
- The most active consumers are young. When demographics are weighted by purchase frequency, the young consumer group becomes more significant, making up the majority of consumption.
- Females expect to increase consumption the most. The greatest increase is shown among females, especially in the 45-54 and 54-65 age groups. All demographic groups apart from 65+ females expect to increase their consumption.

Source: EIU Consumer Survey (2018) © all rights reserved.

Figure 23: How is your consumption of hemp products likely to change in the future?



Source: EIU Consumer Survey (2018) © all rights reserved.

Figure 24: Average score by demographic for future consumption

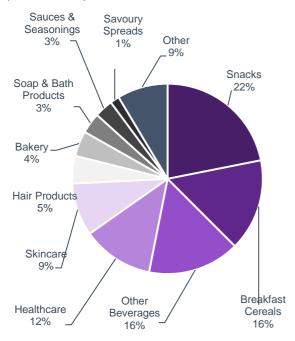
(1 = Decrease, 3 - No Change, 5 - Increase).

Age	18 - 24	25 – 34	45 – 44	45 – 54	55 – 64	65+
Male	3.13	3.02	3.34	3.31	3.19	3.20
Female	3.07	3.40	3.29	3.59	3.48	2.90

Source: EIU Consumer Survey (2018) © all rights reserved.

#### **CANADA'S MARKET SHOWS SEGMENTATION IS IMPORTANT**

Figure 25: Canada Hemp Product Categories (2012 – 2018)

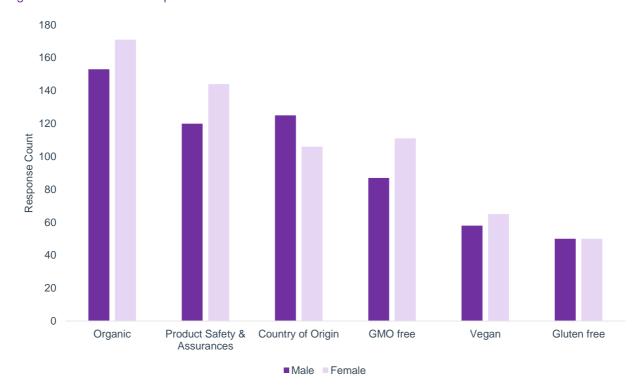


Source: MPI, Mintel GNPD (2018) © all rights reserved.

#### **Product Categories**(10)

- Producers should target snack products and other beverages. Producers looking to enter the Canadian market should look to the quickly growing snack and nutritional beverage categories, and avoid the declining breakfast cereals market. This mirrors the US, supporting a North American market entry strategy.
- Male and female consumers value different product traits. Female consumers value organic and product safety traits more than males when deciding to purchase a hemp product. Given that female consumers expect to increase consumption more than males, these traits should have a higher priority for producers.
- Vegan and gluten free claims both rank poorly as influencers for hemp products, but vegan claims are growing in importance as gluten free has plateaued. Google search analytics show that searches for vegan are growing in intensity in Canada, while gluten free is plateauing after a peak in 2013

Figure 26: Product Trait Importance



Source: MPI EIU Survey © all rights reserved.

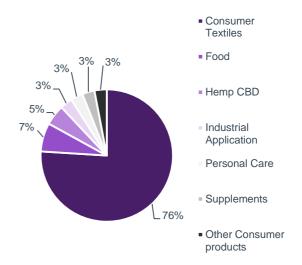
Note: 11 - Participants were asked to nominate which two traits were most important to them. As a result of this, total responses were counted rather than proportions, as these add to over 100%. Relative scores of traits should be the factor considered.

A case study and survey on an emerging growth market.

#### **Chinese Hemp Markets**

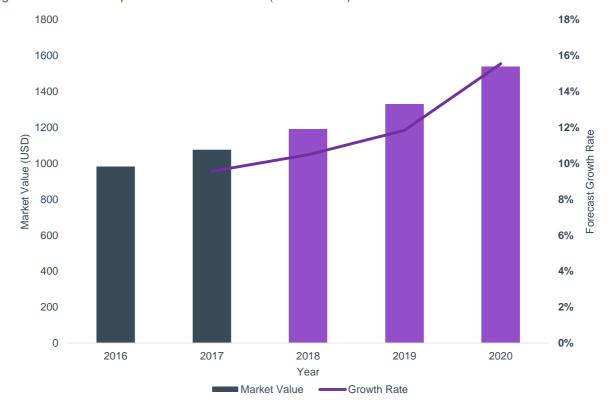
- The Chinese hemp market has less visibility than other markets. While China is one of the worlds largest producers of hemp, it's market for consumer facing products is not as mature as other markets. The lack of retail products mean that existing data sources are of limited use when assessing the Chinese hemp market, and all data used was from open sources. Firms looking to enter the Chinese market would benefit from a local partner to gain greater insight.
- Historic acceptance has led to a higher proportion of industrial use. The Chinese market has greater experience with hemp, resulting in a market that is focused less on fast moving consumer food goods, and more on functional use in textiles. This expertise could be tapped and used to produce these goods for other markets.
- Increasing incomes in China may drive growth
  of fast moving consumer hemp goods. As
  incomes in China converge with more wealthy
  countries, consumption is likely to grow in more
  consumer facing goods.

Figure 27: Chinese Hemp Market Segmentation



Source: New Frontier (2018)(x)

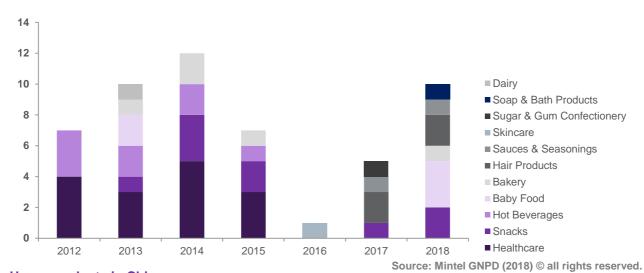
Figure 28: China Hemp Market Value Forecast (2018 - 2020)



Source: New Frontier (2018)(x)

#### CHINA'S MARKET SHOWS DIFFERENT ATTRIBUTES

Figure 30: Product Launches in China (2012 – 2018)



#### Hemp products in China

Low product launches show a immature market. Despite being a large hemp producer, the low number of product launches shows that hemp is not currently

of product launches shows that hemp is not currently resonating with consumers.

Naturalness and function drive Chinese hemp consumption. Hemp products in China are marketed as a natural health remedy, with some listing themselves as 'Chinese medicine'.

**Products are targeted at child and elderly demographics.** Hemp products focus on dependants, targeting children with soft rice cereals and drink additives. Elderly consumers are targeted with a range of tea products.

Nutrition and bowl health are key functional positioning claims. Child focused products are markets based on their nutrition for development, while products targeted at elderly consumers are based around healthy bowl movements.

Figure 29: Fu Shi Bowel Movement Promoting Tea



Source: Mintel GNPD (2018) © all rights reserved.

Figure 31: Top Hemp product claims in each category

Category	Healthcare	Snacks	Hot Beverages	Baby Food	Bakery
Key Claims	Botanical / Herbal (93.3%)	Wholegrain (66.7%)	Wholegrain (50%)	Wholegrain (50%)	Ease of Use (80%)
	Digestive function (73.3%)	Low Cholesterol (44.4%)	Low Cholesterol (50%)	Low Cholesterol (50%)	Vitamin/ mineral fortified (60%)
	For babies and toddlers (40.0%)	High Fibre (22.2%)	High Fibre (22.2%)	Time/Speed (50%)	
	Other functions (40.0%)	High Protein (22.5%)	High Protein (22.5%)	High Fibre (37.5%)	
	Prebiotic (26.7%)			Low trans-fat (37.5%)	

Source: Mintel GNPD (2018) © all rights reserved.

#### CHINESE SEARCH DISTRIBUTION

Figure 32: China Hemp Search Distribution



#### Search Interest(13)

Search interest for all cannabis/hemp products is highest in the southern Guangdong region. Guangdong is the most populous region in China, and the largest regional economy.

The search terms hemp, hemp / cannabis seeds and marijuana were tracked by Baidu, while the search terms hemp oil and hemp skin cream were not, further indicating that hemp is limited as a consumer facing product in China.

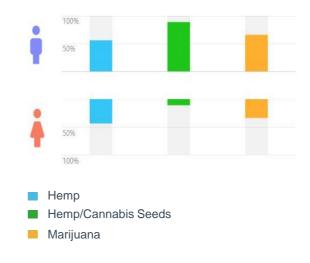
Demographics for Chinese searchers indicates an older age group than Canadian consumers. In China the 30-39 age group is the largest group, followed by the 40-49 age group.

Hemp/cannabis seeds are mainly searched for by males, while hemp and marijuana searches are more balanced.

This information presents only an indicative insight into search interest. Caution should be used in interpreting these results given the variability in use of the Chinese characters associated with hemp, cannabis and marijuana.

Figure 33: Baidu Search Demographics

Source: Baidu Search analytics (2018)



Source: Baidu Search analytics (2018)



#### METHODOLOGY AND OTHER INFORMATION

#### Methodology

#### Investments:

- Investment data was gathered through Crunchbase, an external investment service that tracks firms receiving venture capital investment.
- Firms tracked were those containing the keyword cannabis, either in name, description, or categorisation. This provided a greater sample size over other keywords.
- Firms were classed according to their industry category. The cannabis category was excluded from this, as the vast majority of firms were in this category. Firms could class themselves as more than one category.

#### **Search Interest:**

- Search interest was determined using Google Search analytics tools. This allows the tracking of specific topics of consumer interest.
- Search Interest for the Chinese market was gathered using Baidu search analytics.
- · Search terms included:

麻 - Hemp

大麻 - Hemp/Marijuana

大麻种子 - Hemp/Cannabis seeds

大麻油 - Hemp oil

大麻纤维 - Hemp fibre

大麻护肤霜 - Hemp skin cream

#### **Category Data:**

 Category data was gathered through Euromonitor, an external economic service that collects global economic data.

#### Literature Review

 Background information was collected through a open source literature review examining news articles, academic journals and business information.

#### **Product Launches**

- Product launch data was gathered through Mintel, an external service that tracks firms' new product launches.
- Products tracked were those containing the keyword "Hemp" as an ingredient.
- This allows the tracking of brand and market sizes, trends in claims and product formats, and pricing.

#### **Canada Hemp Survey**

 The survey consisted of seven questions and was deployed via a paid Google Survey panel over the period 12 to 25 November 2018. The sample size consisted of 1000 completed responses.

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