

Linchpin

**HEMP**

Cultivation





### **Cabinet decision to approve industrial production of hemp could generate \$1 billion**

Minister clarifies only govt allowed to cultivate the crop for now, clears misconceptions about abuse of hemp plant.

 <https://www.dawn.com> [Click here](#)



**Ch Fawad Hussain** ✓  
@fawadchaudhry



Cabinet has approved first License for @MinistryofST and PCSIR for industrial and medical use of Hemp, landmark decision ll place Pakistan in billions of USD CBD market.....

5:32 AM · Sep 1, 2020



♥ 10.2K    💬 1.9K people are Tweeting about this

## **HEMP & PAKISTAN**

Pakistan as a nation has taken a huge step towards the cultivation and export of Hemp and to enter into the booming CBD market.

These early days give us the First Mover advantage. Linchpin Global has successfully brought on-board Industry experts, Seed & Machinery experts, willing pool of large-scale cultivators to kick-start production.



## **HEMP TESTING**

Pakistan will build Hemp testing facilities that ensure quality of the end product and regulation of THC production.



The purpose of presentation is not to promote legalization of a controlled substance (narcotic) but to educate, convince and promote a plant often mistaken for a controlled substance.

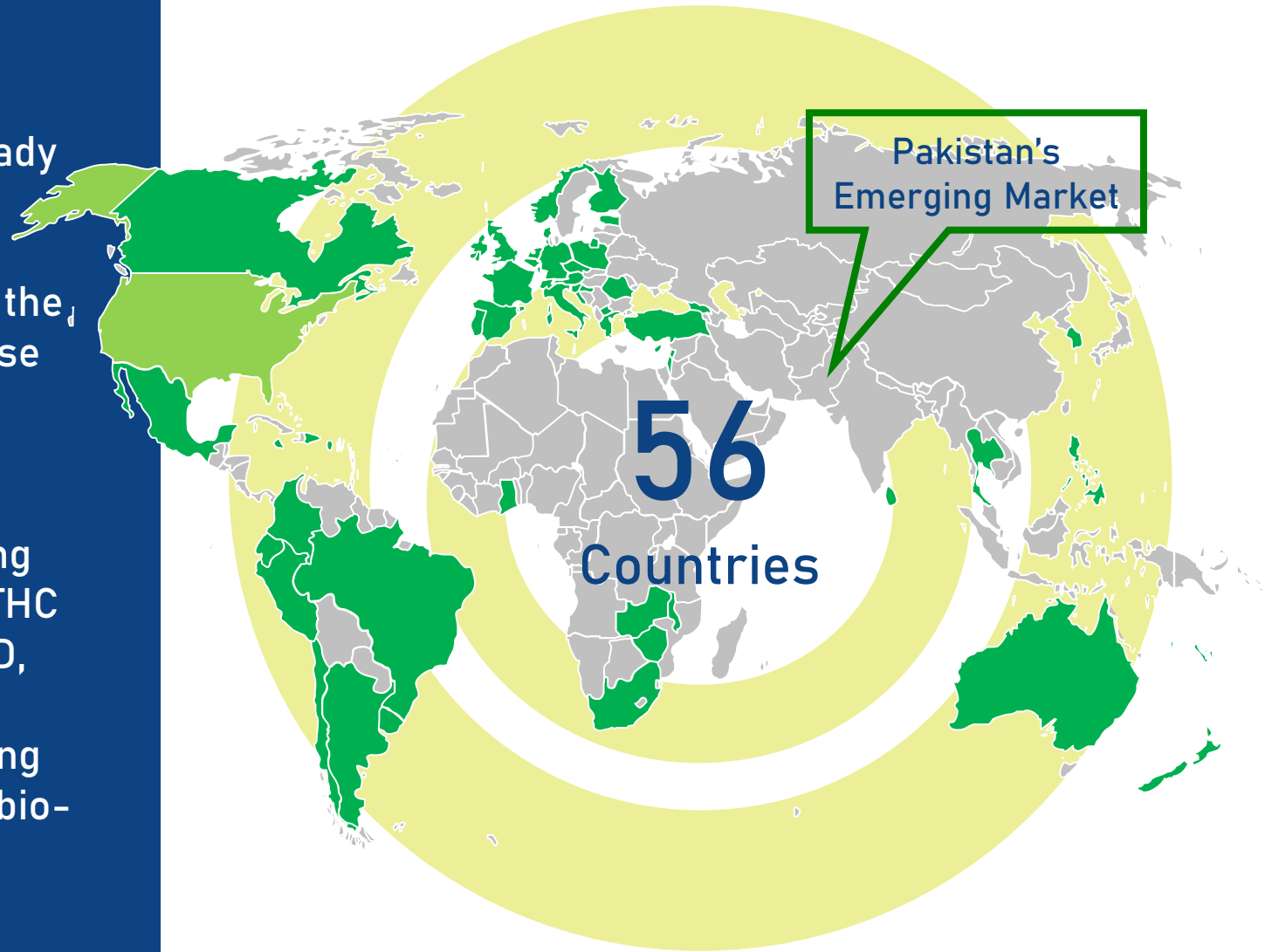
## **Hemp**



## Global

The global industrial hemp market has already been witnessing expansion in production capacities. The supply and consumption of industrial hemp will continue to increase in the next decade. 56 countries so far have legalise CBD for medicinal use.

Hemp-derived CBD, short for cannabidiol, a cannabis compound that delivers the calming effects of marijuana without the high from THC (the psychoactive component). Besides CBD, hemp fibers are used to make a variety of commercial and industrial products, including rope, textiles, clothing, shoes, food, paper, bio-plastics and insulation.



## Widely recognized Medical Uses:

- Reduces stress
- Decreases the physiological effects of anxiety
- Improving symptoms PTSD
- Inducing sleep in cases of insomnia
- Reduces number and intensity of Epileptic seizures
- Treatment for Alzheimer's disease\*
- Multiple Sclerosis (MS) and MS Pain\*
- Parkinson's disease
- Stroke patients
- Arthritis patients
- Chronic pains
- Muscle pains
- Spinal cord injuries
- CBD may help alleviate cancer symptoms\*
- CBD may help with cancer treatment side effects\*
- CBD oil offers\* benefits for acne management (Cosmetics)

*Diseases like cancer claimed about \$150 Billion in treatment costs during 2019. [CLICK HERE](#)*

*\*More research is needed.*







The Food and Drug Administration is responsible for protecting the public health.

FDA is responsible for advancing the public health by helping to speed innovations.

FDA also plays a significant role in the Nation's counterterrorism capability.

21 - FOOD AND DRUGS x +

govinfo.gov/content/pkg/USCODE-2018-title21/html/USCODE-2...

## 21 U.S.C.

United States Code, 2018 Edition

Title 21 - FOOD AND DRUGS

CHAPTER 13 - DRUG ABUSE PREVENTION AND CONTROL

SUBCHAPTER I - CONTROL AND ENFORCEMENT

Part A - Introductory Provisions

Sec. 801 - Congressional findings and declarations: controlled substances

From the U.S. Government Publishing Office, [www.gpo.gov](http://www.gpo.gov)

### §801. Congressional findings and declarations: controlled substances

The Congress makes the following findings and declarations:

(1) Many of the drugs included within this subchapter have a useful and legitimate medical purpose and are necessary to maintain the health and general welfare of the American people.

(2) The illegal importation, manufacture, distribution, and possession and improper use of controlled substances have a substantial and detrimental effect on the health and general welfare of the American people.

(3) A major portion of the traffic in controlled substances flows through interstate and foreign commerce. Incidents of the traffic which are not an integral part of the interstate or foreign flow, such as manufacture, local distribution, and possession, nonetheless have a substantial and direct effect upon interstate commerce because—

(A) after manufacture, many controlled substances are transported in interstate commerce,

(B) controlled substances distributed locally usually have been transported in interstate commerce immediately before their distribution, and

(C) controlled substances possessed commonly flow through interstate commerce immediately before such possession.

At the federal level in the US, the Agriculture Improvement Act of 2018, Pub. L 115-334, (the 2018 Farm Bill) was signed into law on Dec. 20, 2018 defined **hemp** as "the plant *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a **delta-9 tetrahydrocannabinol (THC)** concentration of not more than **0.3 percent** on a dry weight basis." This removes hemp from the Controlled Substances Act (CSA), which means that cannabis plants and derivatives that contain no more than 0.3 percent THC on a dry weight basis are no longer controlled substances under federal law.

“

As long as Hemp plant meets the criteria (THC<0.3%), it is no longer regulated by drug enforcement authorities and falls under department of agriculture

”







# World Health Organization

## CANNABIDIOL (CBD) Critical Review Report

*Expert Committee on  
Drug Dependence*

**Fortieth Meeting  
Geneva, 4–7 June 2018**

### Section 6: Adverse Reactions to Humans

*“As noted above, CBD does not produce the effects that are typically seen with cannabinoids such as THC.”*

### Section 8: Abuse Potential

*“...the evidence from well controlled human experimental research indicates that CBD is not associated with abuse potential.”*

# GROWING & HARVESTING

## Optimal Climate

- Warm-weather areas with well-drained soils rich in organic material
- Excessively heavy rainfall areas are not optimal
- High mountain regions are also sub-optimal

## Best types of Soil

- Loose, well-aerated loam soil with abundant organic matter
- Ideal soil temperature: 50° F
- pH 6.0-7.5
- Well-drained or tiled clay soils can be used, but poorly-drained clay or poorly structured soils often results in establishment failures, as seedlings and young plants are prone to damping-off.

## Machinery and equipment required for seeding and harvesting

- For sowing: a grain drill or a corn planter.
- Harvested with a combine tractor and, almost immediately, clean to remove any stocks, leaves, and immature seeds
- The National Hemp Association lists sellers of farm equipment and hemp dryers.
- Industrial Hemp Farms: Services for production, transport, processing of industrial hemp and CBD hemp





## PROCESSING & RESEARCH

### Expected yield

- 1 acre of hemp can yield:
  - ~ 700 pounds of grain - can be pressed into about 22 gallons of oil & and 530 pounds of meal
  - ~ 5,300 pounds of straw - can be transformed into ~ 1,300 pounds of fiber

### Best crops to rotate with hemp

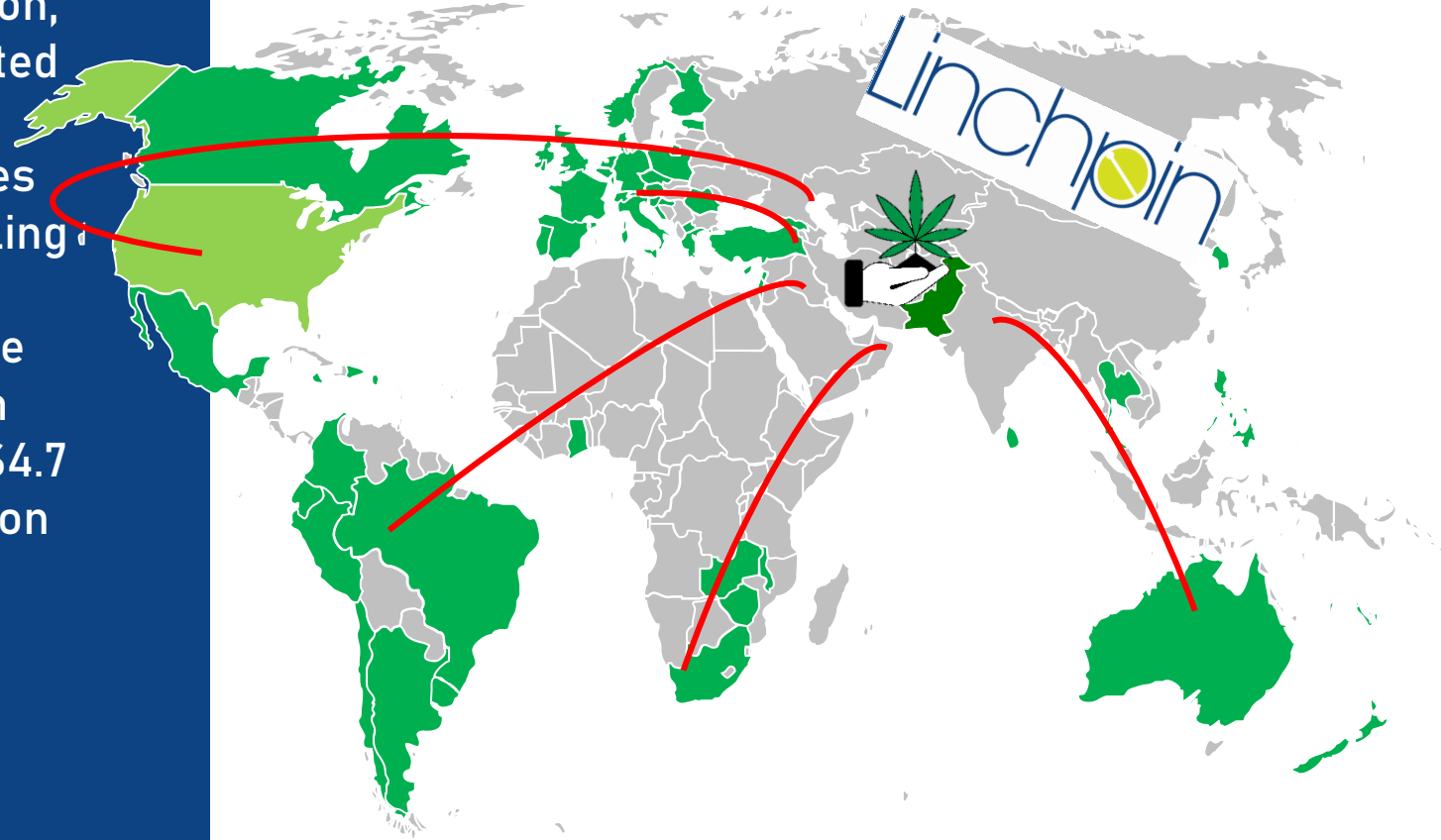
- Hemp can be grown continuously for several years on the same land, but this comes with the risk of pest build-up (mainly rootworms, borers, and rots).
- Hemp can be used to diversify rotations of bean, wheat, or alfalfa; hemp can
  - suppress weeds and decrease outbreaks of insects
  - add organic matter to the soil
  - providing aeration to the soil through its extensive root system
- Recommended that hemp does not follow canola, soybeans or sunflowers to avoid the risk of white mold and other pests and diseases.

### Research & Development

- Derivatives and other Medicinal benefits explored
- Paper, textiles, concrete and other local industries.

## EXPORT AND FOREIGN TRADE

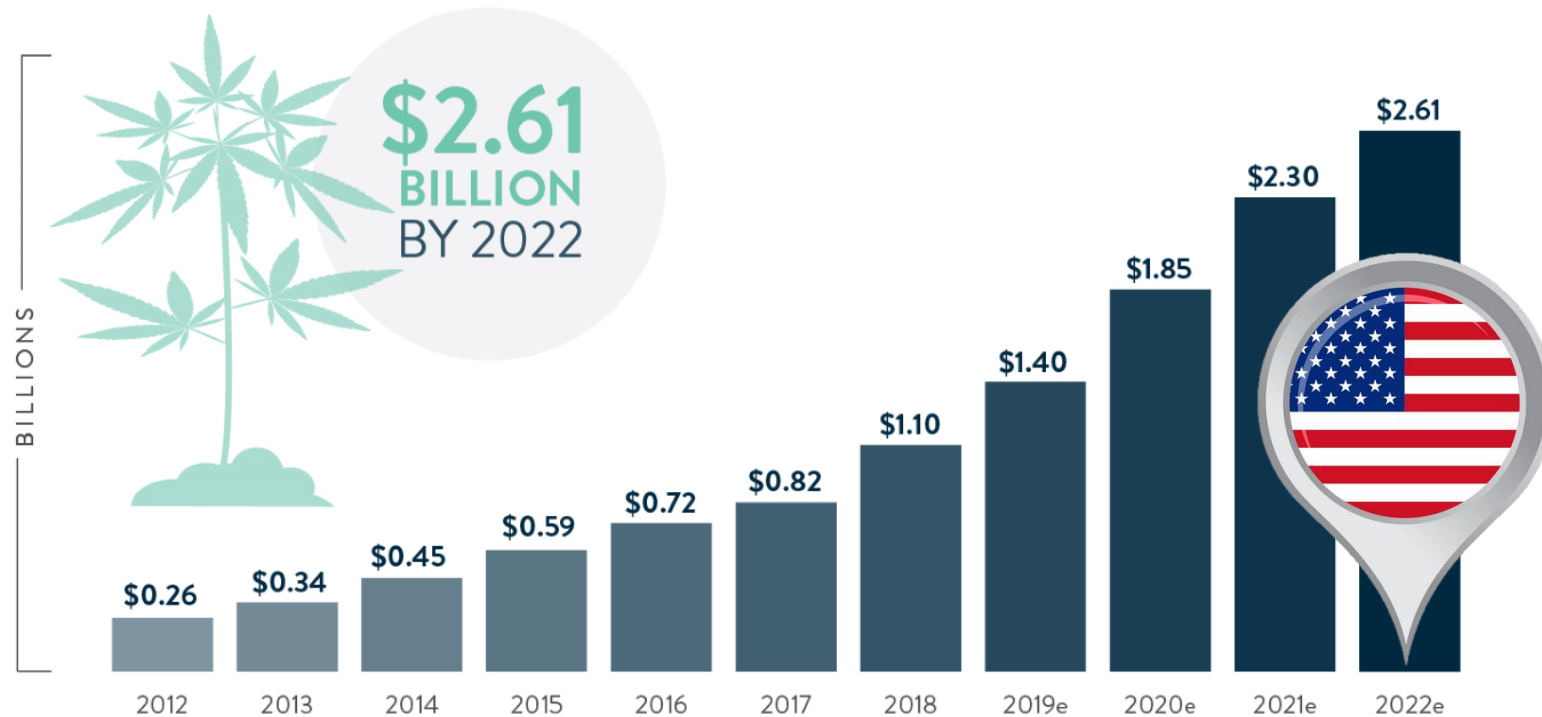
CBD is being lauded as an all-natural way to alleviate ailments including pain, inflammation, anxiety, and insomnia. It has become a coveted ingredient in a host of consumer products, from skin lotions to vitamin water to tinctures to dog biscuits. The surge in demand is fuelling a global “Green Rush” and researchers estimate the market for CBD in the U.S. alone could be worth almost \$24 billion by 2023. In Canada, sales of legal cannabis may reach \$4.7 billion by that time, up from about \$570 million in 2018.





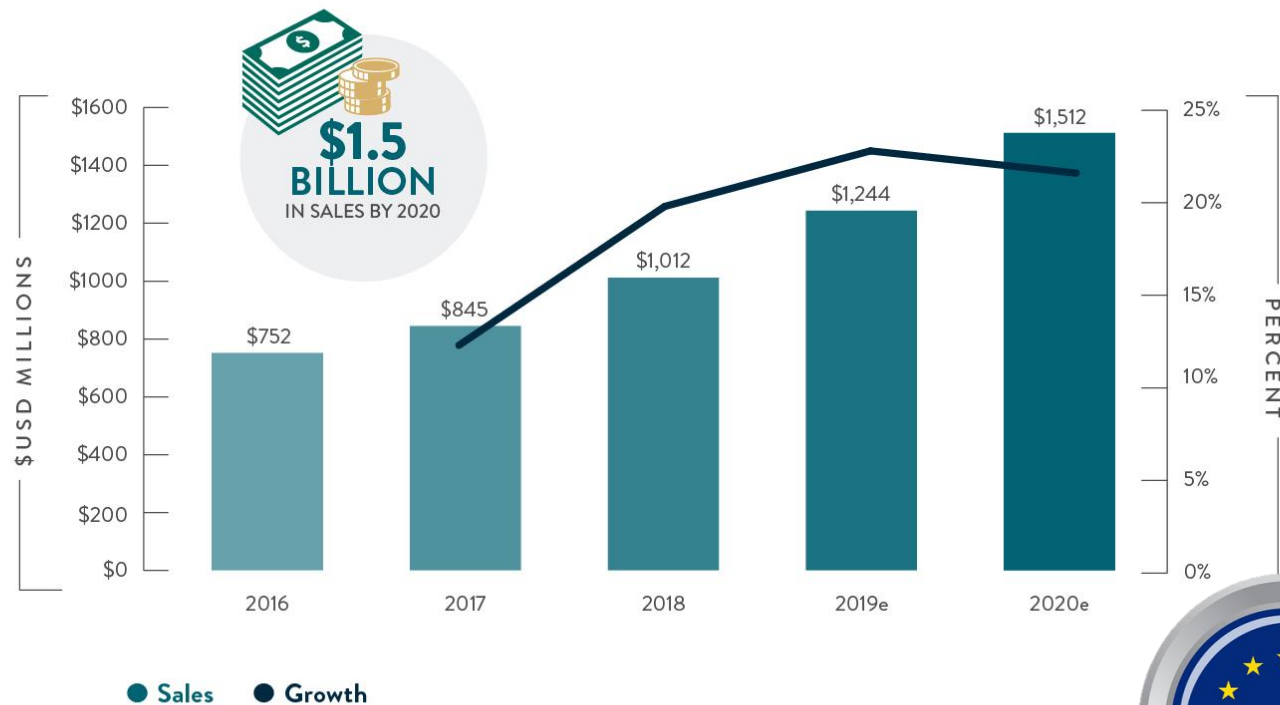
# GROWTH IN THE US

## U.S. HEMP-BASED PRODUCT SALES 2012-2022e



# GROWTH IN THE EU

## EUROPEAN HEMP SALES



© 2019 New Frontier Data | Sources: Hemp Business Journal (\$ mil., consumer sales)

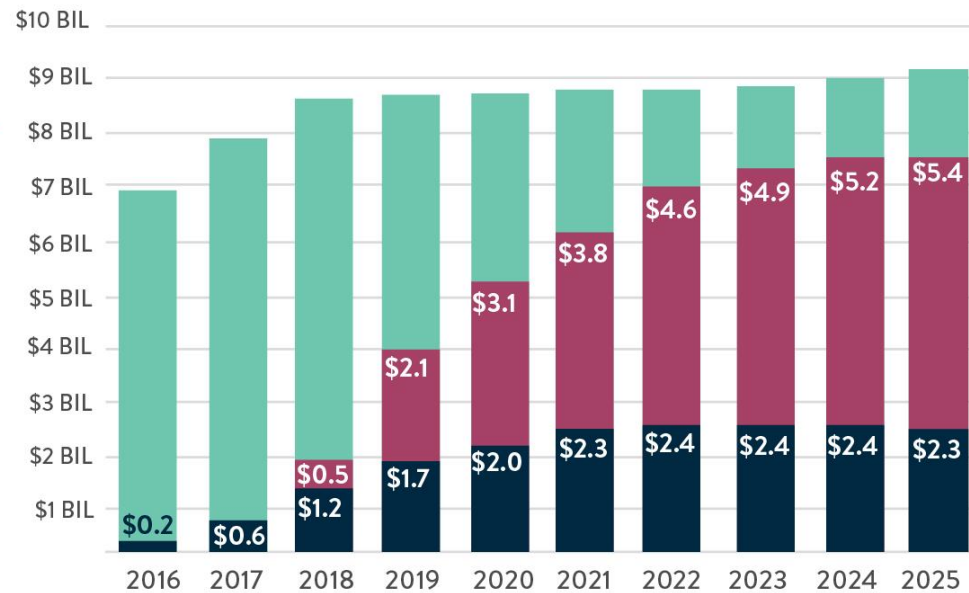


# GROWTH IN CANADA

CannaBit®

## CANADIAN MARKET PROJECTED GROWTH

FOR MORE INSIGHTS  
LIKE THIS VISIT:  
[NEWFRONTIERDATA.COM](http://NEWFRONTIERDATA.COM)



CANADIAN MARKET DEMAND PROJECTIONS (IN BILLIONS CAD\$)

- ILLICIT MARKET
- ADULT USE MARKET
- MEDICAL MARKET

CAD\$1.00=USD\$0.80

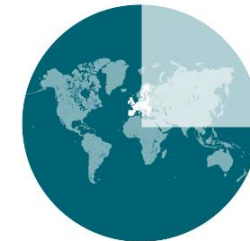
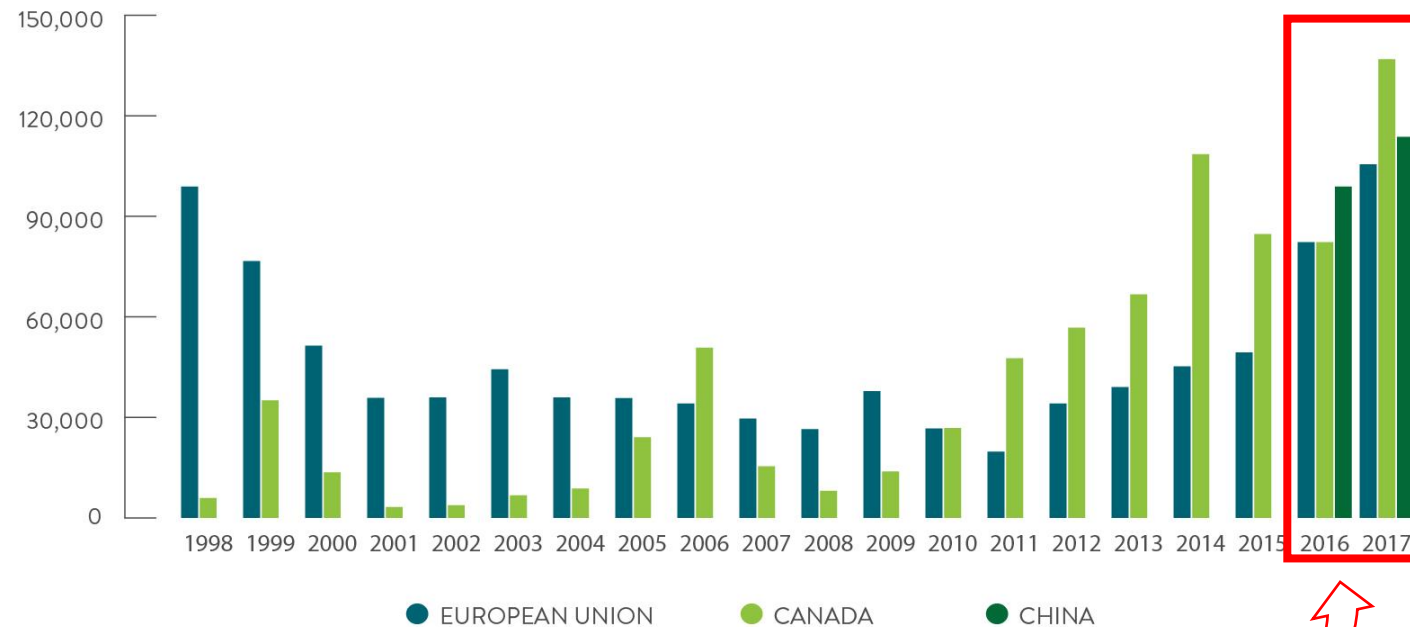


# CHINA COMPETING WITH THE WEST

CannaBit®  
— EUROPE —

## DEVELOPED GLOBAL MARKETS: HEMP ACREAGE COMPARISON

FOR MORE INSIGHTS  
LIKE THIS, VISIT:  
[NEWFRONTIERDATA.COM/EUROPE](http://NEWFRONTIERDATA.COM/EUROPE)



EUROPE CULTIVATES  
UP TO 1/4 OF THE  
WORLD'S HEMP

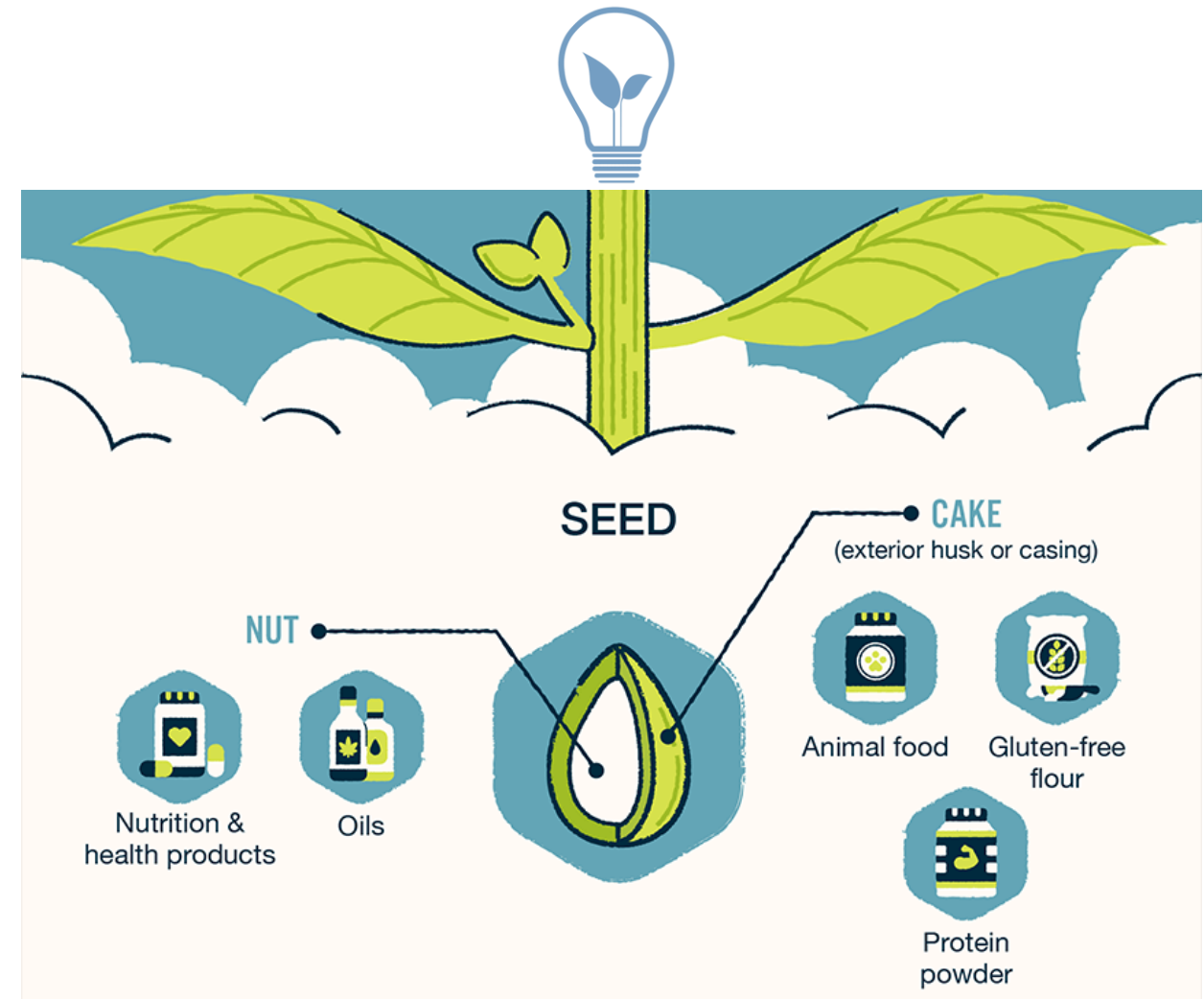
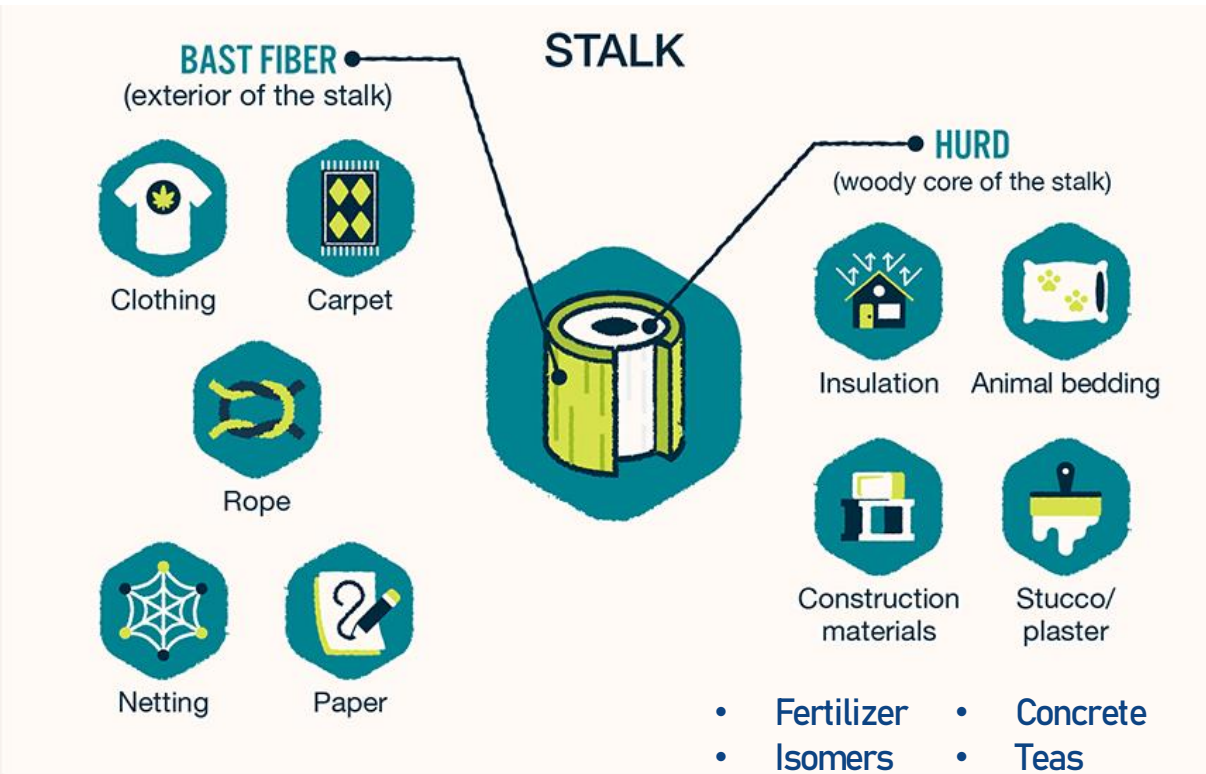


© 2019 New Frontier Data | Source: Hemp Business Journal: Global State of Hemp | Nova-Institut and EIHA (European Union), Health Canada (Canada) and FOASTAT. Cultivation in China predates 2016, but historic data is sparse and inconclusive, and Hemp Business Journal did not begin tracking until 2016.



# BIOMASS DERIVATIVES

## ANATOMY OF THE HEMP PLANT AND USES



# SCOPE OF CBD & DERIVATIVES

**THREE**  
Billion USD

CBD products market  
share in cosmetics  
industry by 2026



**75%**  
CAGR



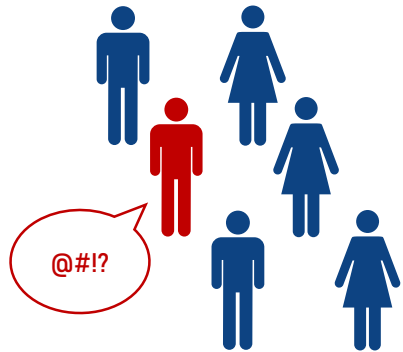
The perfect  
environmental  
replacement for  
**PLASTIC**



Cattle Feed  
& breeding

BE1FREE.

**\$200**  
Million



**1 in 6**  
People

Suffer from a  
neurological  
disorder



**TEXTILE  
&  
CLOTHING**



Designed to build, not to smoke.  
**HEMPCRETE**



**CARBON  
NEGATIVE**

Hemp Beverages  
industry size in 2019

**LOFT**

**HEMP INFUSED  
HERB TONIC**

CHAMOMILE | HIBISCUS | LEMON BALM

12 FL OZ (355mL)



# Linchpin



Bringing the Right teams together

Extensive Research

Execution

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