



THE EVOLUTION OF HEMP

By: Charles Holmes, President
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Hemp vs Marijuana



- ✓ We may not be as pretty as our controversial cousin – marijuana.
- ✓ We may not be as much fun at parties...
- ✓ Industrial Hemp has <math><0.3\%</math> THC vs. Cannabis “Marijuana” up to 30% THC, therefore it's not financially viable to concentrate the THC from Hemp for getting “high”, it's the same family – slightly different makeup
- ✓ Hemp is the backbone of a truly self-sufficient, sustainable and healthy human race. Was the largest domesticated crop from 1,000 B.C. to 1883 A.D.

If **HEMP** was considered as the

BILLION-DOLLAR CROP

Popular Mechanics Magazine, 1938



in 1938- what would it be worth today?

~Food~Fuel~Fiber~Oil~Textiles~Building Materials~

Want it. Need it.

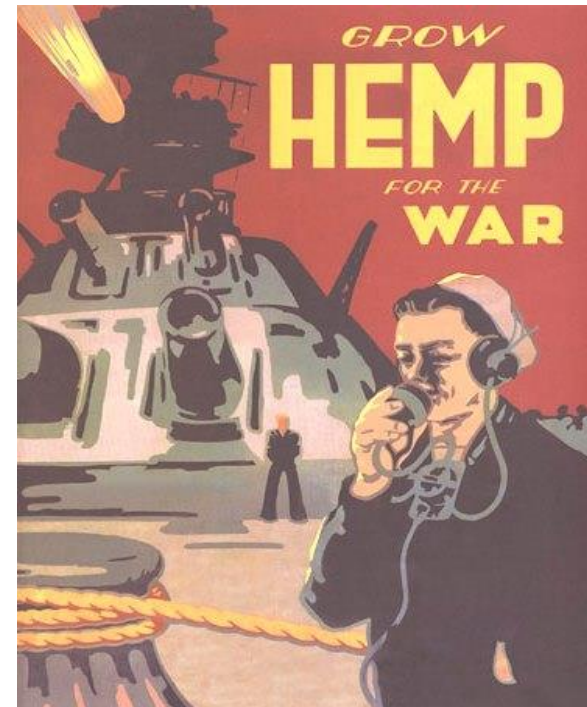
DEMAND HEMP!

Industry Builder, Job Creator & Economic Booster

Natural Fiber
& Recycled Footwear

www.wickedhemp.com

Vegan & Earth Friendly
Made to Tread Lightly



- ✓ US farmers - forced to grow for the “Hemp For Victory” campaign in 1940. Post war it was again illegal to grow. Kentucky had 300,000 acres. Seems we need it? What would the industry be worth now... if it was always legal! ... and continued to evolve:

3 Pillars of Industrial Hemp

SUPERFOOD

*2/3 highest quality easy to digest globular edistin protein, & 1/3 albumin (egg) protein

*80% polyunsaturates, highest of any food with ideal 1-3 ratio Omega 3 to Omega 6 EFA with sterodonic acid & ALA precursor to DHA and EPA formation

*phytonutrients & fibre

*vitamins & minerals

*alkaline forming

*no enzyme inhibitors like legumes, nuts & grains causing gas (flatulence)

FIBRE

*longest most durable natural fibre on earth. 4X pulp of trees

*carbon sequestering

*electro conductive

*nano carbon fibres - graphene

*textiles, rope, paper, canvas

*healthier, green construction

*1890 largest domestic crop

*average ship had 60 tons of hemp rope, ballast & sails

*1937 made illegal by big oil

NUTRACEUTICAL

*Cannadinoids (CBD) mimic our own endocannabinoid system, turning on our human receptor sites for top function

*IH is not stressed like indoor marijuana plants producing high "THC" psychoactive

*terpenes, phyto-sterols with highest quality betasitosterols

*supports immunity

*balances hormones

*antiseizure to anti-cancer, pain relief, aids digestion



Hemp Superfood - Evolution

<i>Year</i>	<i>What Happened?</i>
544 B.C.	Gautama Buddha survives by eating one Hempseed a day.
330-386 A.D.	"Supplementary Records of Famous Physicians" Hemp-seeds are very little used in medicine, but the magician-technicians (shujia) say that if one consumes them with ginseng it will give one preternatural knowledge of events in the future.
1564 A.D.	King Philip II of Spain mandated the cultivation of Hemp for food, fiber, and medicine throughout his empire. From modern-day Argentina to Oregon.
1631-1700's A.D.	'Must grow' Hemp laws are enacted in Connecticut and the Chesapeake Colonies and throughout Massachusetts. Hemp used as money and 'legal tender' for payment of taxes throughout most of the Americas.
1763-1767 A.D.	Farmers who do not grow Hemp can be arrested and jailed in Virginia.
1801 A.D.	Certain premiums offered to encourage the cultivation of Hemp in Canada.
1937 A.D.	USA: Estimated 10 million wild acres of Hemp; Marijuana Tax Act forbids Hemp farming; Dupont files patent for nylon; Over 4,000,000 lbs Hemp bird seed sold/yr.
1972 A.D.	U.S.D.A. finds Hemp seed: is lowest of all vegetable oils in saturated fats; Hemp meal/cake (the by-product of pressing the seed for oil) was one of the world's principle animal feeds and is recommended as a nutritionally balanced food for domestic animals; can be made into a tofu-like curd to taste like chicken, steak.
2002 A.D.	Living Harvest launches first hemp protein powder.
2004 A.D.	HIA vs. DEA permanently protects US Hemp foods and body care products sales.

Primary Hemp Foods



Protein Concentrates and Substitutes



CPG Retail Products



Hemp Fibre - Evolution

Year	<i>Fibre - What Happened?</i>
8000 B.C.	Hemp was the first plant known to be domestically cultivated, Mesopotamia/Turkey
2700 B.C.	Cannabis, as Hemp fabric, cordage, medicine, and food has been incorporated into virtually all cultures of the Middle East, Asia Minor, India, China, Japan, and Africa.
500 BC-1900	90% of the sailcloth and rigging lines used for all sea-going vessels is from Hemp.
100 A.D.	Roman surgeon Dioscorides names the plant Cannabis Sativa and describes various medicinal uses. Pliny tells of industrial uses and writes a manual on farming Hemp.
500-700 A.D.	Germans and Vikings all use hemp fibre. France, a bridge was built with hempcrete.
1150 A.D.	Moslems use Hemp to start Europe's first paper mill. Most paper is made from Hemp for the next 700 years. 1215 AD. The Magna Carta is written on Hemp paper.
1492 A.D.	Hempen sails, caulking, and rigging help Columbus and his ships reach America.
1611 A.D.	King James Bible is printed on Hemp paper. Rembrandt paints on Hemp canvas.
1776 A.D.	Betsy Ross hand stitched the first U.S. flag. The Stars and Stripes was made of Hemp. The Declaration of Independence was written on Dutch Hemp paper.
1873 A.D.	Levi Strauss receives U.S. patent for first riveted men's hemp denim work pants.
1929 A.D.	Henry Ford Researches methanol fuel and making plastics from renewable Hemp.
1942-43 A.D.	Farmers forced to attend the USDA film Hemp for Victory, sign that they had seen the film and read a Hemp cultivation booklet. 1955 Hemp farming again banned.
1998 A.D.	Phytotech, Consolidated Growers and Processors, Ukraine's Institute of Bast Crops,

Hemp Super Fibre

The first known Hemp rope was found in Czechoslovakia in 1997 and dated from 26,900 B.C.



2014 A.D. U of Calgary AB presents 1 molecule thick graphene from hemp is stronger and 1,000th the cost of graphene from graphite for lithium batteries.



Hemp Medicine - Evolution

Year	Medicine - What Happened?
2727 B.C.	Hemp is a "superior" herb as per the first medical text: Shen Nung's Pen Ts'ao, China. Fights malaria, rheumatism and is a sedative.
2000-1400 B.C.	India, Nepal, Atharva Veda, mentions Cannabis as one of the "five sacred plants": 3 types of preparations: 1) Bhang, leaves and tops consumed as a beverage. 2) Ganja, leaves and tops, smoked. 3) Charas or Hashish, resins from buds and/or leaves.
1000 B.C. - 1900 A.D.	Hemp Extracts are the #1, #2 and #3 most important and most frequently used medicine for two-thirds of the world's population.
1837-1901 A.D.	Queen Victoria uses Cannabis resins to treat menstrual cramps. Sparking enormous interest in the uses of Cannabis as a medicine in the English speaking world.
1890 A.D.	Popular American 'marriage guides' recommend Cannabis extracts for heightened marital pleasures. Women's temperance groups, lobbying for alcohol prohibition, suggest Cannabis as a suitable substitute for the 'demon drink'.
1975 A.D.	Medical College of Virginia discover that Cannabis is incredibly successful for reducing the size of many types of tumors, both benign and cancerous.
1999 A.D.	Cannabinoids (CBD) discovered to have antioxidant properties. U.S. Patent 6,630,507 Publication date Oct 7, 2003. CBDs useful in treatment of: prophylaxis of oxidation associated diseases such as ischemic, age-related, inflammatory and autoimmune diseases, particularly neuroprotectants following ischemic insults such as stroke and trauma, or in the treatment of neurodegenerative diseases, such as Alzheimer's, Parkinson's and HIV dementia.

New Release in UK!

European Industry Hemp Association (EIHA)
Predicts CBD = EURO 2B Legal Open EU Market

New Standards Set – Competitors Cleaned Up

PLANETHEMP Low THC - CBD Product is
“Unique to Market” as a “Nutraceutical Food”
- launched April 2017

- SRP = £37 (CA\$62) approximately 50% margin to Hempco
- 150 ml bottle – 600mg low THC CBD with Organic Hemp Seed Oil
- 2.5 ml (teaspoon) serving spoon - recommended 2 servings per day
- 10 mg CBD per serving – recommended 20 mg CBD per day
- Approximately CA\$2/day cost – CA\$.10/mg CBD
- 30 servings or 1 months supply



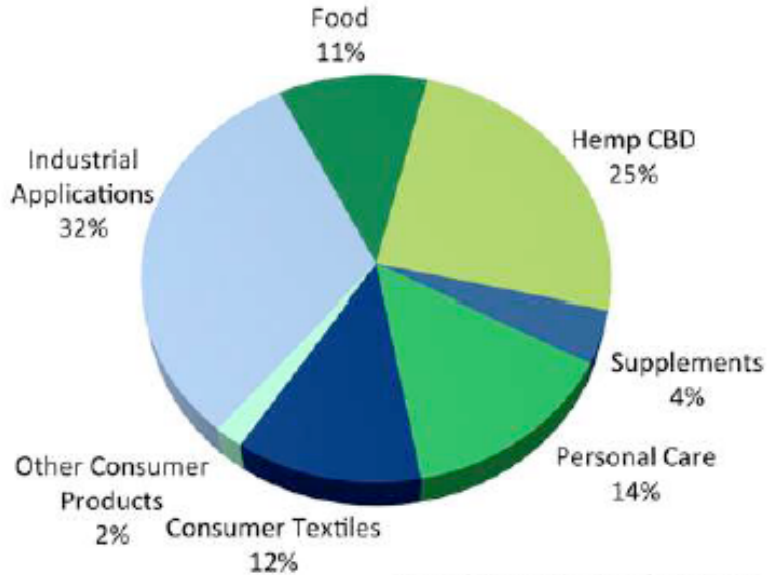
WHAT HAPPENED?



- ✓ Hemp provides more for humans than any other plant resource on earth.
- ✓ Hemp has been cultivated and used by man for thousands of years.
- ✓ Hemp has thousands of uses: health foods and supplements, industrial fiber, textiles, body care, medicine, rope, paper, money and carbon sequestering
- ✓ Corporate competition had it driven into a negative context as a drug.

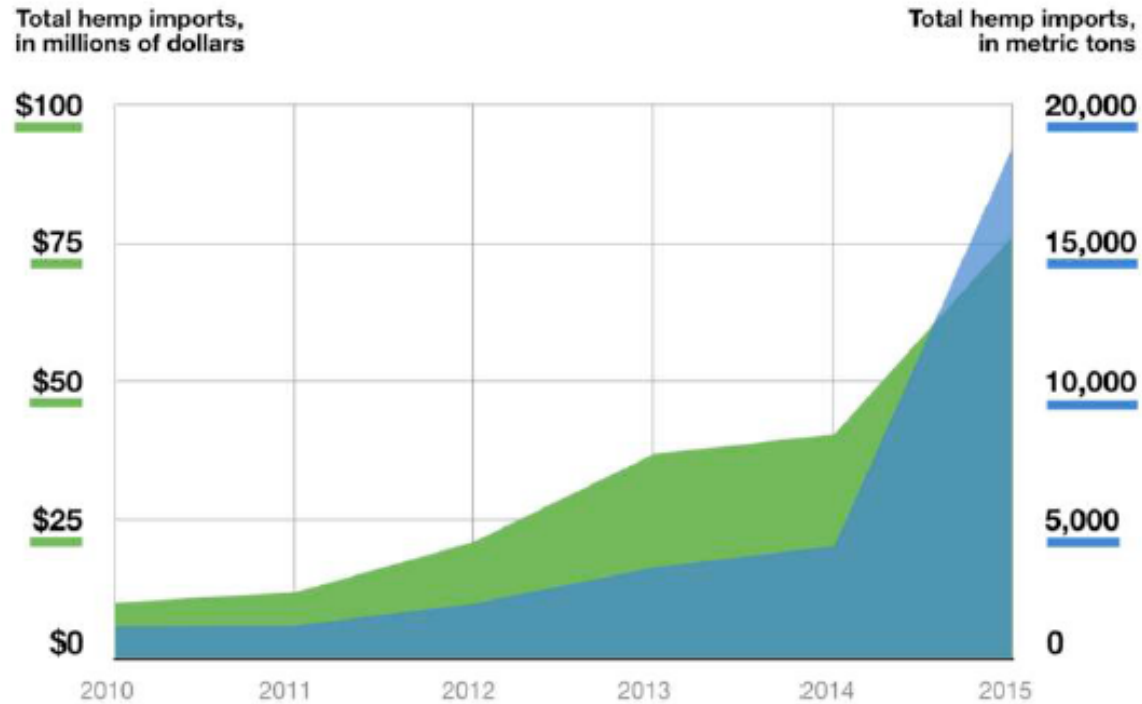
US HEMP MARKET

\$1.8 Billion U.S Hemp-Based Product Sales by Category in 2020e



Source: Hemp Biz Journal estimates

US Imports of Raw Hemp Products



Source: Congressional Research Service compiled data

Graphic by Alexandra Kanik

Hemp Seed

vs

Pulses

- Ready to eat raw
 - No enzyme inhibitors
 - Easily absorbed
 - Omega 3 & 6 EFA in balance
 - All essential and non essential amino acids – more complete
 - Contain vitamins B1, B3, B6, D
 - Low environmental impact
 - Limited storage life
 - 100k acres planted 2015
- Usually boiled
 - Enzyme inhibitors
 - Difficult to digest
 - Limited EFA's
 - Good source protein
 - Can be stored for decades
 - 4.8m acres planted in 2016
 - Repairs nitrogen in the soil rotates perfectly with hemp
 - Over \$4B revenue

Why Central/North Alberta?

- Most sunlight growing hours
- Ideal soil, skilled producers
- Skilled labor, Gov support
- Central and north Alberta is not subject to tidewaters like MB, SK and south Alberta

What is 15,000 acres worth?

Product	Max Yield	Raw Material Cost	Processing Cost	Avg Sale Value	Gross Profit Potential
Seed	12M lb (5.4M kg) 5M lbs sale product	-\$10.8M \$.90/lb (\$2.07/kg)	-\$3M \$.60/lb(\$1.32/kg)	+\$17.5M (\$3.5/lb(\$8.1/kg))=	\$17.5M - \$13.8M = \$3.7
Seed Hulls CBD extract	6M lb (2.7M kg) 20,900 lbs (9,450kg)	-\$0.6M \$.10/lb (\$.22/kg)	-\$200M	+\$330M (CAD\$35/g)	\$330M - \$200M = \$130M

Assumptions

- 15,000 acres produces minimum 6,000,000 lbs hemp hulls
- Hulls cost is less than \$.10/lb, sold mostly as cattle feed now
- CBD processing costs are approximately half of sale price
- Sale price is minimum CAD\$35/g terpene CBD concentrate

There was approximately 133,000 acres of hemp harvested in Canada 2017... right now. We are the world's 3rd largest producer.

Food Value and Sales = approx. \$400M and hundreds of direct and thousands of indirect jobs. Canada leads the way in this area.

Fibre Value = approx. \$400M, Sales are less than \$4M and dozens of direct and indirect jobs. China leads in this area... Canada has several decortication and processing facilities underway.

CBD Medicinal Value = approx. \$8B, Sales are less than \$100K as it is still categorized as a Controlled Substance. Legislation is scheduled to change Summer 2018.

**Eat it, treat with it, rub it on, wear it, work it, drive it – live it!
For a healthier, happier and more sustainable planet.**

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the seed of possibility

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Invest in your future - today