

Hemp

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A one-page flyer, "Hemp Facts from Drug War Facts," is available for download from here:

<http://drugwarfacts.org/cms/files/Hemp-Facts-from-Drug-War-Facts.pdf>

1. **Basic Data and Uses**

"The hemp plant has three primary components: bast fibre, hurd, and seed / oil."

Source:

"National Industrial Hemp Strategy," The Agricola Group (Ottawa, Canada: Manitoba Agriculture, Food and Rural Initiative Agriculture and Agri-Food Canada, March 30, 2008), p. 3.

http://www.votehemp.com/PDF/National_Industrial_Hemp_Strategy_Final_Comp...

2.

(Market Size and Value) "Currently, more than thirty nations permit the growing of industrial hemp. ⁶³ Industrial hemp is also recognized as a legal and legitimate crop in both the North American Free Trade Agreement (NAFTA) and General Agreement on Tariffs and Trade (GATT). ⁶⁴ The United States is the only industrialized nation that does not permit the production of industrial hemp. ⁶⁵ Other countries, such as Canada, allow hemp production due to its cultivation advantages and growing demand for hemp products in the North American market. ⁶⁶ Moreover, the United States is a leading importer of hemp products. ⁶⁷ Currently, the North American hemp market exceeds an estimated \$300 million in annual retail sales. ⁶⁸ "

Source:

Duppong, Thomas A., "Industrial Hemp: How the Classification of Industrial Hemp as Marijuana under the Controlled Substances Act Has Caused the Dream of Growing Industrial Hemp in North Dakota to Go up in Smoke," *North Dakota Law Review* (Grand Forks, ND: University of North Dakota School of Law, 2009) Vol. 85, No. 2, pp. 409-410.

[http://web.law.und.edu/LawReview/issues/web_assets/pdf/85-2/85NDLR403.pdf...](http://web.law.und.edu/LawReview/issues/web_assets/pdf/85-2/85NDLR403.pdf)

3.

(Cultivation in EU) "Today, China, Canada and Europe are the main Hemp cultivation areas in the world. In 2008 the total cultivation area in the European Union was around 15,000 ha [hectares] – in 2009 we expect this to have increased to 18,000 ha. These areas will produce around 24,000 t [tons] Hemp fibres and 29,000 t respectively. All by-products like shivs (woody part of the Hemp stem) and dust are used. The main countries for Hemp production are France, UK, Germany, The Netherlands and Poland."

Source:

The European Industrial Hemp Association, "Report on Industrial Hemp" Biowerkstoff-Report (Industriestraße, Germany: April 2010), Edition 7, p. 44.

http://www.nova-institut.de/pdf/bwr_april_2010.pdf

4.

(Hemp vs. Marijuana) "Industrial hemp and marijuana are different varieties of the same species, *Cannabis sativa* L. Marijuana typically contains 3 to 15 percent of the psychoactive ingredient delta-9-tetrahydrocannabinol (THC) on a dry-weight basis, while industrial hemp contains less than 1 percent. However, the two varieties are indistinguishable by appearance. In the United States, *Cannabis sativa* is classified as a Schedule I controlled substance, regardless of its narcotic content, under the Controlled Substances Act as amended. Since 1990, varieties containing less than 0.3 percent THC have been legalized in Great Britain, Germany, Austria, and Switzerland. Canada and Australia legalized hemp production in 1998. In other countries, such as China, Russia, and Hungary, hemp production was never outlawed."

Source:

United States Department of Agriculture, "Industrial Hemp in the United States: Status and Market Potential" (Washington, DC: January 2000), p. iii.

<http://www.ers.usda.gov/publications/ages001E/ages001E.pdf>

5.

(US Market Value) "There is no official estimate of the value of U.S. sales of hemp-based products. Industry representatives claim that U.S. retail sales exceed \$350 million annually. ²⁵ This reported retail value is a rough estimate and is difficult to verify. Included in the industry estimate of total U.S. retail sales are estimates of the size of the U.S. market for hemp clothing and textiles, which is approximated at about \$100 million annually. ²⁶ The estimate of total sales also includes between \$60 million and \$100 million annually for hemp-based foods, nutritional supplements, and body care products. ²⁷ Underlying data for this estimate are from SPINS survey data; ²⁸ however, because the data reportedly do not track retail sales for The Body Shop and Whole Foods Market—two major markets for hemp-based products—as well as for restaurants, hemp industry analysts have adjusted these upward to account for this gap in the reported survey data. ²⁹ "

Source:

Johnson, Renée, "Hemp as an Agricultural Commodity," Congressional Research Service, (Washington, DC: Library of Congress, December 22, 2010), p. 6.

<http://www.nationalaglawcenter.org/assets/crs/RL32725.pdf>

6.

(Bast Fibres) "Hemp bast fibres are among the strongest and most durable of natural fibres, with high tensile strength, wet strength, and other characteristics favourable for various industrial products. It has been estimated that hemp produces three to four times as much useable fibre per acre per year as forests, and the bast fibre contains a low amount of lignin (the natural polymer that binds plant cells together), which allows it to be bleached without the use of chlorine. Hemp bast fibre is used in the production of a wide range of products where its strength and durability are advantageous, including cordage (rope, twine, etc.), specialty papers, fabrics for clothing and other applications, and industrial textiles such as geotextiles and carpeting. The strength of hemp fibre also makes it ideal for use in a range of composites for applications such as moulded car parts and fibreboard for construction."

Source:

"National Industrial Hemp Strategy," The Agricola Group (Ottawa, Canada: Manitoba Agriculture, Food and Rural Initiative Agriculture and Agri-Food Canada, March 30, 2008), p. 3.

http://www.votehemp.com/PDF/National_Industrial_Hemp_Strategy_Final_Comp...

7.

(Hemp vs. Marijuana) "Marijuana and hemp come from the same species of plant, *Cannabis sativa*, but from different varieties or cultivars. However, hemp is genetically different and is distinguished by its use and chemical makeup."²

"Hemp, also called 'industrial hemp,'³ refers to cannabis varieties that are primarily grown as an agricultural crop (such as seeds and fiber, and byproducts such as oil, seed cake, hurds) and is characterized by plants that are low in THC (delta-9 tetrahydrocannabinol, marijuana's primary psychoactive chemical). THC levels for hemp are generally less than 1%.

"Marijuana refers to the flowering tops and leaves of psychoactive cannabis varieties, which are grown for their high content of THC. Marijuana's high THC content is primarily in the flowering tops and to a lesser extent in the leaves. THC levels for marijuana are much higher than for hemp, and are reported to average about 10%; some sample tests indicate THC levels reaching 20%-30%, or greater."⁴

Source:

Johnson, Renée, "Hemp as an Agricultural Commodity," Congressional Research Service, (Washington, DC: Library of Congress, December 22, 2010), pp. 1-2.

<http://www.nationalaglawcenter.org/assets/crs/RL32725.pdf>

8.

(Uses) "No data are available on imports of hemp seed and oil into the United States, but data do exist on hemp fiber, yarn, and fabrics. Imports of raw hemp fiber have increased dramatically in the last few years, rising from less than 500 pounds in 1994 to over 1.5 million pounds for the first 9 months of 1999. Yarn imports also have risen substantially, peaking at slightly less than 625,000 pounds in 1997. The switch from yarn to raw fiber in the last 2 years probably reflects the development of U.S. spinning capacity. At least two companies are now spinning hemp yarn from imported fibers. Imports of hemp fabric have more than doubled from over 222,000 pounds in 1995 to about 523,000 pounds in 1998.

"Current markets for bast fibers like industrial hemp include specialty textiles, paper, and composites. Hemp hurds are used in various applications such as animal bedding, composites, and low-quality papers. As joint products, finding viable markets for both hemp bast fiber and hurds may increase the chances of a successful business venture."

Source:

United States Department of Agriculture, "Industrial Hemp in the United States: Status and Market Potential" (Washington, DC: January 2000), p. iii.

<http://www.ers.usda.gov/publications/ages001E/ages001E.pdf>

9.

(Hurds) "Hemp hurd is composed of cellulose-rich, short fibres, and make up approximately 75% of the hemp stalk. They are spongy and absorbent, ideal characteristics in applications such as animal bedding and industrial absorbents. They may

also be used to produce low-quality paper. More recently, hemp hurd has been used to produce a concrete-like substance for use in building applications, as well as for insulation and to produce fibreboard."

Source:

"National Industrial Hemp Strategy," The Agricola Group (Ottawa, Canada: Manitoba Agriculture, Food and Rural Initiative Agriculture and Agri-Food Canada, March 30, 2008), p. 3.

http://www.votehemp.com/PDF/National_Industrial_Hemp_Strategy_Final_Comp...

10.

(Stalks) "The whole hemp stalk can also be used to produce various biofuels such as bio-oil (or pyrolytic liquid), cellulosic ethanol, syngas (synthetic gas) and methane. Alternatively, the bast fibre can first be removed for use in high-value fibre applications, and the remaining hurd can then be processed into biofuel. The processes by which hemp is converted to biofuels may also produce valuable chemicals and other materials as bi-products."

Source:

"National Industrial Hemp Strategy," The Agricola Group (Ottawa, Canada: Manitoba Agriculture, Food and Rural Initiative Agriculture and Agri-Food Canada, March 30, 2008), p. 4.

http://www.votehemp.com/PDF/National_Industrial_Hemp_Strategy_Final_Comp...

11.

(Oil) "Hemp oil is extremely nutritious, and is used in foods and nutraceutical products for humans and animals, as well as in personal care products. Hemp oil is also suitable for use in industrial products such as paints, varnishes, inks and industrial lubricants, and can be used to produce biodiesel. The crushed seed meal left over from oil production is frequently used for animal feed."

Source:

"National Industrial Hemp Strategy," The Agricola Group (Ottawa, Canada: Manitoba Agriculture, Food and Rural Initiative Agriculture and Agri-Food Canada, March 30, 2008), p. 4.

http://www.votehemp.com/PDF/National_Industrial_Hemp_Strategy_Final_Comp...

12.

(Hemp vs. Marijuana) Although opponents of hemp production claim that hemp fields will be used to hide marijuana fields, this is unlikely because, "Hemp is grown quite differently from marijuana. Moreover, it is harvested at a different time than marijuana. Finally, cross-pollination between hemp plants and marijuana plants would significantly reduce the potency of the marijuana plant."

Source:

West, David P, Hemp and Marijuana: Myths and Realities (Madison, WI: North American Industrial Hemp Council, 1998), p. 4.

http://www.votehemp.com/PDF/myths_facts.pdf

13.

(Hemp and THC) According to David West, PhD, "The THC levels in industrial hemp are so low that no one could ever get high from smoking it. Moreover, hemp contains a relatively high percentage of another cannabinoid, CBD, that actually blocks the marijuana high. Hemp, it turns out, is not only not marijuana; it could be called 'antimarijuana.'"

Source:

West, David P, Hemp and Marijuana: Myths and Realities (Madison, WI: North American Industrial Hemp Council, 1998), p. 3.

http://www.votehemp.com/PDF/myths_facts.pdf

14.

(Hemp Foods and Drug Testing) "The results of this study indicate that even extended ingestion of currently available hemp foods is not likely to produce urine samples which exceed the 50 ppb cutoff in the immunoassay screening test. The occurrence of screening positives at the 20 ppb cutoff is conceivable. However, their confirmation by GC/MS at the 10 or 15 ppb cutoff is highly unlikely."

Source:

Leson, Gero, "Evaluating Interference of THC Levels in Hemp Food Products with Employee Drug Testing," Agri-Food Research & Development Initiative (Morris, Manitoba: July 2000), p. 3.

<http://www.gov.mb.ca/agriculture/research/ardi/projects/pdf/98-231.pdf>

15.

(Hemp Oil and Dermatitis) "Skin dryness and itchiness, in particular, are very serious problems in atopic dermatitis, which often lead to additional complications, such as opportunistic infections. In any event, it seems that the reduction of atopic symptomology observed in this study is a direct result of ingested hempseed oil. These preliminary results confirm anecdotal observations of improved skin quality after ingesting modest amounts of hempseed oil on a daily basis over a relatively short period of time."

Source:

Callaway, James; Schwab, Ursula; Harvima, Ilkka; Halonen, Pirjo; Mykkanen, Otto; Hyvonen, Pekka; and Jarvinen, Tomi, "Efficacy of dietary hempseed oil in patients with atopic dermatitis," *Journal of Dermatological Treatment* (London, United Kingdom: April 2005) Vol. 16, No. 2, p. 93.

<http://www.finola.com/FinolaOilandAtopy.pdf>

16.

(Advantages of Hemp Versus Hydrocarbon-Based Products) "Comparisons of industrial hemp to hydrocarbon or other conventional industrial feedstocks show that, generally, hemp requires substantially less energy for manufacturing, often is suited to less-toxic means of processing, and provides competitive product performance (especially in terms of durability, light weight, and strength), greater recyclability and/or biodegradability, and a number of value-added applications for byproducts and waste materials at either end of the product life cycle."

Source:

Smith-Heisters, Skaidra, "Illegally Green: Environmental Costs of Hemp Prohibition," Reason Foundation (Los Angeles, CA: March 2008), p. 31.

<http://reason.org/files/1030ae0323a3140ecf531bd473632b57.pdf>

17.

(Nutrition) "The quality of an oil or fat is most importantly determined by its fatty acid composition. Hemp is of high nutritional quality because it contains high amounts of unsaturated fatty acids, mostly oleic acid (C18:1, 10%–16%), linoleic acid (C18:2, 50%–60%), alpha-linolenic acid (C18:3, 20%–25%), and gammalinolenic acid (C18:3, 2%–5%) (Fig. 37). Linoleic acid and alpha-linolenic acid are the only two fatty acids that must be ingested and are considered essential to human health (Callaway 1998). In contrast to shorter-chain and more saturated fatty acids, these essential fatty acids do not serve as energy sources, but as raw materials for cell structure and as precursors for biosynthesis for many of the body's regulatory biochemicals."

Source:

Small, Ernest and Marcus, David, "Hemp: A New Crop with New Uses for North America," *Trends in New Crops and New Uses* (West Lafayette, IN: Purdue University Center for New Crops and Plant Products, 2002), p. 306.

<http://www.hort.purdue.edu/newcrop/ncnu02/pdf/small.pdf>

18.

(Global Exporters) "The leading exporters of raw and processed hemp fiber to the United States are China, Romania, Hungary, Italy, Canada, and India. The leading exporters of hemp oil and seed are the United Kingdom, Canada, Switzerland, and China. The USDA [United States Department of Agriculture] trade database shows that the value of Canada's exports of hemp seed to the United States grew from \$0 in 2004 to \$1.2 million in 2006, after a long-standing legal dispute over U.S. imports of hemp foods ended in late 2004."

Source:

Rawson, Jean M., Congressional Research Service, "Hemp as an Agricultural Commodity (updated)" (Washington, DC: Library of Congress, March 23, 2007), p. CRS-4.

http://assets.opencrs.com/rpts/RL32725_20070323.pdf

19.

(Potential Retail Hemp Market) "Retail sales of imported hemp products exceeded \$70 million in the United States in 2006. ⁶² Given hemp's wide-ranging utility, supporters of domestic cultivation estimate that it would create a \$300 million dollar industry. ⁶³ "

Source:

Kolosov, Christine A., "Evaluating the Public Interest: Regulation of Industrial Hemp under the Controlled Substances Act," *UCLA Law Review* (Los Angeles, CA: UCLA School of Law, 2009), p. 244.

<http://uclalawreview.org/pdf/57-1-5.pdf>

20.

(Potential Economic Benefits, Kentucky 1998) In a July 1998 study issued by the Center for Business and Economic Research at the University of Kentucky, researchers estimated that if Kentucky again became the main source for industrial hemp seed (as it was in the past), the state could earn the following economic benefits:

Scenario
Full time

jobs created
Worker Earnings

Main source for certified industrial seeds only
69 jobs
□ 1,300,000.00

Certified seeds, plus one processing facility
303 jobs
□ 6,700,000.00

Certified seeds, plus two processing facilities
537 jobs
□ 12,100,000.00

Certified seeds, one processing facility, one industrial hemp paper-pulp plant
771 jobs
□ 17,600,000.00

Source:

Tompson, Eric C., PhD, Berger, Mark C., PhD, and Allen, Steven N., *Economic Impacts of Industrial Hemp in Kentucky* (Lexington, KY: University of Kentucky, Center for Business and Economic Research, 1998), p. iv.

<http://www.votehemp.com/PDF/hempstudy.pdf>

21.

(Potential Economic Benefits, Kentucky 1998) In a July 1998 study issued by the Center for Business and Economic Research at the University of Kentucky, researchers concluded that Kentucky hemp farmers could earn a net profit of \$600 per acre for raising certified seeds, \$320 net profit per acre for straw only or straw and grain production, and \$220 net profit per acre for grain only production. The only crop found to be more profitable was tobacco.

Source:

Tompson, Eric C., PhD, Berger, Mark C., PhD, and Allen, Steven N., *Economic Impacts of Industrial Hemp in Kentucky* (Lexington, KY: University of Kentucky, Center for Business and Economic Research, 1998), p. 21.

<http://www.votehemp.com/PDF/hempstudy.pdf>

22. **Laws and Policies**

(DEA Control) "Strictly speaking, the CSA [Controlled Substances Act] does not make *Cannabis* illegal; rather, it places the strictest controls on its production, making it illegal to grow the crop without a DEA [Drug Enforcement Administration] permit. DEA officials confirm issuing a permit for an experimental plot in Hawaii in the 1990s (now expired), and they confirm that DEA still has not ruled on an application submitted in 1999 by a North Dakota researcher. Hemp industry officials assert that the security measures the DEA requires are substantial and costly, and deter both public and private interests from initiating research projects requiring growing plots. All hemp products sold in the United States are imported or manufactured from imported hemp materials."

Source:

Rawson, Jean M., Congressional Research Service, "Hemp as an Agricultural Commodity" (Washington, DC: Library of Congress, January 5, 2005), p. CRS-3.

<http://www.fas.org/sgp/crs/RL32725.pdf>

23.

(Hemp Products and the DEA) In February 2004, the 9th Circuit Court of Appeals ruled that the Drug Enforcement Administration cannot ban hemp products. The Associated Press reported that "On Friday, the court said that though the DEA has regulatory authority over marijuana and synthetically derived tetrahydrocannabinol, or THC, the agency did not follow the law in asserting authority over all hemp food products as well. 'They cannot regulate naturally-occurring THC not contained within or derived from marijuana,' the court ruled, noting it's not possible to get high from products with only trace amounts of the mind-altering chemical. Hemp is an industrial plant related to marijuana. Fiber from the plant long has been used to make paper, clothing, rope and other products. Its oil is found in body-care products such as lotion, soap and cosmetics and in a host of foods, including energy bars, waffles, milk-free cheese, veggie burgers and bread." The case is *Hemp Industries Association v. Drug Enforcement Administration*, number 01-71662.

Source:

Terence Chea, Associated Press, "Appeals Court Rejects DEA Bid To Outlaw Hemp Foods," Feb. 6, 2004, from the web at <http://www.mapinc.org/newscsd/v04/n231/a07.html> , last accessed Jan. 23, 2010.

24.

(State Hemp Laws) "Meanwhile, twenty-eight states have considered some type of legislation liberalizing their laws regarding industrial hemp; fifteen have enacted such legislation, and eight of those 'have removed barriers to its production or research.' ⁹¹ In 1999, North Dakota became the first state to authorize and create a licensing scheme for industrial hemp production. ⁹² "

On January 10, 2010, Oregon became the 9th state to remove barriers to industrial hemp production and research when Senate Bill 676 was signed into law.

Source:

Christine A. Kolosov, "Evaluating the Public Interest: Regulation of Industrial Hemp under the Controlled Substances Act" *UCLA Law Review* (UCLA School of Law: 2009), p. 247.

<http://uclalawreview.org/pdf/57-1-5.pdf>

Oregon Senate Bill 676 and its progress through the Oregon legislature:

<http://www.votehemp.com/PDF/sb0676.en.pdf>

<http://www.votehemp.com/state/oregon.html>

25.

(Controlled Substances Act) "The CSA [Controlled Substances Act] classifies marijuana in the first category of schedules, placing it among the most harmful and dangerous drugs. ¹³⁷ Marijuana meets the criteria for a Schedule I controlled substance because of its THC content, which is a psychoactive hallucinogenic substance with a high potential for abuse. ¹³⁸ Another key classification made by the CSA regarding marijuana was its broad definition of the drug. ¹³⁹ The CSA defines marijuana as follows:

" The term "marihuana" means all parts of the plant *Cannabis sativa* L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds or resin. Such term does not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination.¹⁴⁰

"This effectively placed the entire use of the hemp plant, whether for drug use or as industrial hemp, squarely under the control of the CSA. ¹⁴¹ Therefore, the DEA views industrial hemp containing .3% THC the same as marijuana grown for drug use which commonly contains a 24% THC level, or eighty times more THC. ¹⁴² "

Source:

Duppong, Thomas A., "Industrial Hemp: How the Classification of Industrial Hemp as Marijuana under the Controlled Substances Act Has Caused the Dream of Growing Industrial Hemp in North Dakota to Go up in Smoke," North Dakota Law Review (Grand Forks, ND: University of North Dakota School of Law, 2009) Vol. 85, No. 2, p. 417-418.

http://web.law.und.edu/LawReview/issues/web_assets/pdf/85-2/85NDLR403.pdf...

26.

"Legislative history suggests that Congress accepted the name *Cannabis sativa L.* for the hemp plant, believing it to be the common description within the scientific community.⁴¹ This categorization combined all marijuana-producing *Cannabis* plants.⁴² Therefore, any hemp plant capable of producing any amount of THC was classified as *Cannabis sativa L.* under the CSA.⁴³ "

Source:

Duppong, Thomas A., "Industrial Hemp: How the Classification of Industrial Hemp as Marijuana under the Controlled Substances Act Has Caused the Dream of Growing Industrial Hemp in North Dakota to Go up in Smoke," North Dakota Law Review (Grand Forks, ND: University of North Dakota School of Law, 2009) Vol. 85, No. 2, p. 407.

http://web.law.und.edu/LawReview/issues/web_assets/pdf/85-2/85NDLR403.pdf...

27.

(Countries Which Grow Hemp) "Approximately 30 countries in Europe, Asia, and North America currently permit farmers to grow hemp, although most banned production for certain periods of time in the past. The United States is the only developed nation in which industrial hemp is not an established crop. Great Britain lifted its ban in 1993 and Germany followed suit in 1996. In order to help reestablish a hemp industry, the European Union administered a subsidy program in the 1990s for hemp fiber production.

"In 1998, Canada authorized production for commercial purposes, following a three-year experimental period and a 50-year prohibition. As a condition of receiving a license to grow industrial hemp, Canadian farmers are required to register the GPS coordinates of their fields, use certified low-THC hemp seed, allow government testing of their crop for THC levels, and meet or beat a 10ppm standard for maximum allowable THC residue in hemp grain products. Agriculture Canada (the Canadian department of agriculture) estimates that more than 100 farmers nationwide are growing hemp, with the majority in central and western Canada."

Source:

Rawson, Jean M., Congressional Research Service, "Hemp as an Agricultural Commodity" (Washington, DC: Library of Congress, January 5, 2005), p. CRS-3.

<http://www.fas.org/sgp/crs/RL32725.pdf>

28.

(Hemp and CBD) "Another chemical shared by both industrial hemp and marijuana is Cannabidiol (CBD).⁴⁸ CBD is unique because it is not intoxicating and it also moderates the euphoric effect of THC.⁴⁹ Marijuana, which has disproportionately higher levels of THC than industrial hemp, also contains lower levels of CBD.⁵⁰ The higher THC and lower CBD concentration gives marijuana its psychoactive effect.⁵¹ Conversely, industrial hemp's low THC levels and comparatively high CBD levels produce none of the intoxicating effects of marijuana.⁵² "

Source:

Duppong, Thomas A., "Industrial Hemp: How the Classification of Industrial Hemp as Marijuana under the Controlled Substances Act Has Caused the Dream of Growing Industrial Hemp in North Dakota to Go up in Smoke," *North Dakota Law Review* (Grand Forks, ND: University of North Dakota School of Law, 2009) Vol. 85, No. 2, p. 408.

http://web.law.und.edu/LawReview/issues/web_assets/pdf/85-2/85NDLR403.pdf...

29.

(History) "From the colonial period through the middle of the nineteenth century, hemp was widely grown in the United States for use in fabric, twine, and paper.¹⁹ Production dropped by the 1890's as technological advances made cotton a more competitive textile crop, and coarse fiber crops were increasingly imported.²⁰ Nonetheless, American farmers continued to grow hemp into the middle of the twentieth century, finding it a useful rotation crop because it acted as a natural herbicide²¹—a dense, rapidly growing crop, it choked out weeds prior to the next planting of corn and other crops.²² At the urging of the government, production to supply fiber for military purposes was expanded enormously during World War I and again during World War II, particularly after the Japanese cut off exports from the Philippines."

Source:

Kolosov, Christine A., "Evaluating the Public Interest: Regulation of Industrial Hemp under the Controlled Substances Act," *UCLA Law Review* (Los Angeles, CA: UCLA School of Law, 2009), p. 241.

<http://uclalawreview.org/pdf/57-1-5.pdf>

30.

(Hemp History) "Probably indigenous to temperate Asia, *C. sativa* is the most widely cited example of a "camp follower." It was pre-adapted to thrive in the manured soils around man's early settlements, which quickly led to its domestication (Schultes 1970). Hemp was harvested by the Chinese 8500 years ago (Schultes and Hofmann 1980). For most of its history, *C. sativa* was most valued as a fiber source, considerably less so as an intoxicant, and only to a limited extent as an oilseed crop. Hemp is one of the oldest sources of textile fiber, with extant remains of hempen cloth trailing back 6 millennia. Hemp grown for fiber was introduced to western Asia and Egypt, and subsequently to Europe somewhere between 1000 and 2000 BCE. Cultivation in Europe became widespread after 500 CE. The crop was first brought to South America in 1545, in Chile, and to North America in Port Royal, Acadia in 1606. The hemp industry flourished in Kentucky, Missouri, and Illinois between 1840 and 1860 because of the strong demand for sailcloth and cordage (Ehrensing 1998). From the end of the Civil War until 1912, virtually all hemp in the US was produced in Kentucky."

Source:

Small, Ernest and Marcus, David , "Hemp: A New Crop with New Uses for North America," Trends in New Crops and New Uses (West Lafayette, IN: Purdue University Center for New Crops and Plant Products, 2002), p. 284.

<http://www.hort.purdue.edu/newcrop/ncnu02/pdf/small.pdf>

31.

(History) "Industrial hemp was a critical agricultural product in America for over four centuries. So important was hemp ¹ to the earliest settlers that in 1619, the Jamestown colony passed a law making it illegal not to grow the crop. ² Colonies in Massachusetts and Connecticut passed similar laws in 1631 and 1632. ³ The first drafts of the United States Constitution and the Declaration of Independence were both penned on hemp paper, ⁴ and hemp cultivation continued well into the twentieth century as patriotic farmers responded to the government's call by drastically increasing production during World War I and World War II. ⁵ But, over the past seventy years, interpretations of narcotics laws by federal agencies, ⁶ and the policies enacted in response to those interpretations, have completely obstructed industrial hemp cultivation such that crops have not been grown domestically since 1958. ⁷ "

Source:

Kolosov, Christine A., "Evaluating the Public Interest: Regulation of Industrial Hemp under the Controlled Substances Act," UCLA Law Review (Los Angeles, CA: UCLA School of Law, 2009), p. 238.

<http://uclalawreview.org/pdf/57-1-5.pdf>

32.

(History) "During World War I, some hemp cultivation occurred in several states, including Kentucky, Wisconsin, California, North Dakota, South Dakota, Minnesota, Indiana, Illinois, Ohio, Michigan, Kansas, and Iowa (Ehrensing 1998). The second world war led to a brief revival of hemp cultivation in the Midwest, as well as in Canada, because the war cut off supplies of fiber (substantial renewed cultivation also occurred in Germany for the same reason). Until the beginning of the 19th century, hemp was the leading cordage fiber. Until the middle of the 19th century, hemp rivaled flax as the chief textile fiber of vegetable origin, and indeed was described as 'the king of fiber-bearing plants,—the standard by which all other fibers are measured' (Boyce 1900). Nevertheless, the Marihuana Tax Act applied in 1938 essentially ended hemp production in the United States, although a small hemp fiber industry continued in Wisconsin until 1958. Similarly in 1938 the cultivation of Cannabis became illegal in Canada under the Opium and Narcotics Act."

Source:

Small, Ernest and Marcus, David , "Hemp: A New Crop with New Uses for North America," Trends in New Crops and New Uses (West Lafayette, IN: Purdue University Center for New Crops and Plant Products, 2002), p. 284.

<http://www.hort.purdue.edu/newcrop/ncnu02/pdf/small.pdf>

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