

HEMP FACTS

from HempUSA.org

- 1) The hemp industry is among the oldest on the planet, going back more than 6,000 years. A piece of hemp fabric was found dating back to over 6,000 years old.
- 2) Presidents Washington and Jefferson both grew hemp. Americans were legally bound to grow hemp during the Colonial Era and Early Republic. The federal government subsidized hemp during the Second World War and U.S. farmers grew about a million acres of hemp as part of that program.
- 3) Hemp seed is nutritious and contains all essential fatty acids is high in Magnesium and Potassium and B-vitamins, digestive enzymes, all Amino acids and is a great source of dietary fiber. Hemp is not Marijuana and is not psychoactive and cannot be used as a drug. People of the world wake up Hemp is not Marijuana and Marijuana is not Hemp. They are distinctly different plants of the same specie.
- 4) The bark of the hemp stalk contains bast fibers, which are among the Earth's longest natural soft fibers and are also rich in cellulose. The cellulose and hemi-cellulose in its inner woody core are called hurds. Hemp stalk is not psychoactive. Hemp fiber is longer, stronger, more absorbent and more insulative than any other naturally earth grown fiber on earth.
- 5) According to the **Department of Energy**, hemp as a biomass fuel producer requires the least specialized growing and processing procedures of all hemp products. The hydrocarbons in hemp can be processed into a wide range of biomass energy sources, from fuel pellets to liquid fuels and gas. Development of bio-fuels could significantly reduce possibly to zero our consumption of fossil fuels and nuclear power.
- 6) In the late 1800s, the **fledgling petroleum industry** aggressively competed with the established biomass-based energy industry in an effort to gain control of world energy production and distribution. Fossil fuel producers succeeded in their campaign to dominate energy production and now the pendulum is swinging against them.
- 7) Hemp can be grown organically. Only eight out of about one hundred known pests, cause problems to the hemp plant and hemp is most often grown without herbicides, fungicides or pesticides. Hemp is also a natural weed suppressor due to fast growth of the canopy causing a blockage of the sun that does not allow for the weeds to grow.
- 8) Hemp produces more pulp per acre than timber on a sustainable basis, and can be used for every quality of paper known to man. One acre of hemp produces as much cellulose fiber pulp as 4.1 acres of trees. **Dewey & Merrill. Bulletin #404. U.S. Dept. of Age. 1916.** Hemp paper manufacturing can reduce wastewater contamination. Hemp's low lignin content reduces the need for acids used in pulping, and its creamy color lends itself to environmentally friendly bleaching (HYDROGEN PEROXIDE) instead of harsh chlorine compounds that pollute all waterways. No chlorine bleaching results in no dioxin runoff and no chemical by-products AND NO POLLUTION !!. A cleaner greener world. **Hemp for Paper Saves Forests, Protects Wildlife, Water, Land, and Air.**

9) Hemp fiber paper resists decomposition, and does not yellow with age when an acid-free process is used. Hemp paper more than 1,500 years old has been found still readable and in good shape. Hemp paper can also be recycled more times than wood-based paper.

10) Hemp fiberboard produced by Washington State University was found to be twice as strong as wood-based fiberboard. No additional resins are required due to naturally-occurring lignins.

11) Eco-friendly hemp can replace most toxic petrochemical products. Research is being done to use hemp in manufacturing biodegradable plastic products: plant-based cellophane, recycled plastic mixed with hemp for injection-molded products, and resins made from the oil, to name a very few examples. Over two million cars on the road today have hemp composite parts for door panels, dashboards, luggage racks, etc. Today many car companies are using sustainable plant based products in their car production.

Countries Growing Industrial Hemp Today

The U.S. is the only industrialized nation in the world that does not recognize the value of industrial hemp and permit its production. Below is a list of other countries that are more rational when it comes to hemp policy and allowing a God given plant to be grown.

AUSTRALIA began research trials in Tasmania in 1995. Victoria commercial production since 1998. New South Wales has research. In 2002, Queensland began production. Western Australia licensed crops in 2004.

AUSTRIA has a hemp industry including production of hemp seed oil, medicinals and Hanf magazine.

CANADA started to license research crops in 1994. In addition to crops for fiber, one seed crop was licensed in 1995. Many acres were planted in 1997. Licenses for commercial agriculture saw thousands of acres planted in 1998. 30,000 acres were planted in 1999. In 2000, due to speculative investing, 12,250 acres were sown. In 2001, 92 farmers grew 3,250 acres. A number of Canadian farmers are now growing organically-certified hemp crops (6,000 acres in 2003 and 8,500 acres in 2004, yielding almost four million pounds of seed).

CHILE has grown hemp in the recent past for seed oil production.

CHINA is the largest exporter of hemp textiles. The fabrics are of excellent quality. Medium density fiber board is also now available. The Chinese word for hemp is "ma."

DENMARK planted its first modern hemp trial crops in 1997. The country is committed to utilizing organic methods.

FINLAND had a resurgence of hemp in 1995 with several small test plots. A seed variety for northern climates was developed called Finola, previously know by the breeder code "FIN-314." In 2003, Finola was accepted to the EU list of subsidized hemp cultivars. Hemp has never been prohibited in Finland. The Finnish word for hemp is "hamppu."

FRANCE has never prohibited hemp and harvested 10,000 tons of fiber in 1994. France is a source of low-THC-producing hemp seed for other countries. France exports high quality hemp oil to the U.S. The French word for hemp is "chanvre."

GERMANY banned hemp in 1982, but research began again in 1992, and many technologies and products are now being developed, as the ban was lifted on growing hemp in November, 1995. Food, clothes and paper are also being made from imported raw materials. Mercedes and BMW use hemp fiber for composites in door panels, dashboards, etc. The German word for hemp is "hanf."

GREAT BRITAIN lifted hemp prohibition in 1993. Animal bedding, paper and textiles markets have been developed. A government grant was given to develop new markets for natural fibers. 4,000 acres were grown in 1994. Subsidies of 230 British pounds per acre are given by the government to farmers for growing hemp.

HUNGARY is rebuilding their hemp industry, and is one of the biggest exporters of hemp cordage, rugs and fabric to the U.S. They also export hemp seed, paper and fiberboard. The Hungarian word for hemp is "kender."

INDIA has stands of naturalized Cannabis and uses it for cordage, textiles and seed.

ITALY has invested in the resurgence of hemp, especially for textile production. 1,000 acres were planted for fiber in 2002. **Giorgio Armani grows its own hemp for specialized textiles.**

JAPAN has a rich religious tradition involving hemp, and custom requires that the Emperor and Shinto priests wear hemp garments in certain ceremonies, so there are small plots maintained for these purposes. Traditional spice mixes also include hemp seed. Japan supports a thriving retail market for a variety of hemp products. **The Japanese word for hemp is "ASA."**

NETHERLANDS is conducting a four-year study to evaluate and test hemp for paper, and is developing specialized processing equipment. Seed breeders are developing new strains of low-THC varieties. The Dutch word for hemp is "hennep."

NEW ZEALAND started hemp trials in 2001. Various cultivars are being planted in the north and south islands.

POLAND currently grows hemp for fabric and cordage and manufactures hemp particle board. **They have demonstrated the benefits of using hemp to cleanse soils contaminated by heavy metals.** The Polish word for hemp is "konopij."

ROMANIA is the largest commercial producer of hemp in Europe. 1993 acreage was 40,000 acres. Some of it is exported to Hungary for processing. They also export hemp to Western Europe and the U.S. The Romanian word for hemp is "cinapa."

RUSSIA maintains the largest hemp germplasm collection in the world at the N.I. Vavilov Scientific Research Institute of Plant Industry (VIR) in St. Petersburg. They are in need of funding to maintain and support the collection. The Russian word for hemp is "konoplya."

SLOVENIA grows hemp and manufactures currency paper.

SPAIN has never prohibited hemp, produces rope and textiles, and exports hemp pulp for paper. The Spanish word for hemp is "cañamo."

SWITZERLAND is a producer of hemp and hosts one of the largest hemp trade events, Cannatrade.

TURKEY has grown hemp for 2,800 years for rope, caulking, birdseed, paper and fuel. The Turkish word for hemp is "kendir."

UKRAINE, EGYPT, KOREA, PORTUGAL and THAILAND also produce hemp.

UNITED STATES granted the first hemp permit in over 40 years to Hawaii for an experimental quarter-acre plot in 1999. The license was renewed, but the project has since been closed due to DEA stalling tactics and related funding problems. Importers and manufacturers have thrived using imported raw materials. 22 states have introduced legislation, including VT, HI, ND, MT, MN, IL, VA, NM, CA, AR, KY, MD, WV and ME, addressing support, research or cultivation with bills or resolutions. The National Conference of State Legislators (NCSL) has endorsed industrial hemp for years.

Fuel:

- Farming 6% of the continental U.S. acreage with biomass crops would provide all of America's energy needs. [1](#)
- Hemp is Earth's number-one biomass resource; it is capable of producing 10 tons per acre in four months. [1](#)
- Biomass can be converted to methane, methanol, or gasoline at a cost comparable to petroleum, and hemp is much better for the environment. Pyrolysis (charcoalizing), or biochemical composting are two methods of turning hemp into fuel. [2](#)
- Hemp can produce 10 times more methanol than corn.
- Hemp fuel burns clean. Petroleum causes acid rain due to sulfur pollution.
- The use of hemp fuel does not contribute to global warming.

Food:

- Hemp seed can be pressed into a nutritious oil, which contains the highest amount of essential fatty acids in the plant kingdom. Essential fatty acids are responsible for our immune system responses, for clearing arterial walls of cholesterol and plaque and is found to be an anti-inflammatory food

- The byproduct of pressing the oil from hemp seed is high quality protein seed cake. It can be sprouted (malted) or ground and baked into cakes, breads, and casseroles. Hemp seed protein is one of mankind's finest, most complete and available-to-the-body vegetable proteins.
- Hemp seed was the world's number one wild and domestic bird seed until the 1937 Marijuana prohibition law. Four million pounds of hemp seed for songbirds were sold at retail in the U.S. in 1937. Birds will pick hemp seeds out and eat them first from a pile of mixed seed. Birds in the wild live longer, colors are more prominent, the birds sing more songs and breed more with hemp seed in their diet, using the oil for the feathers and their overall health.

Fiber:

- Hemp is the oldest cultivated fiber plant in the world.
- Low-THC fiber hemp varieties developed by the French and others have been available for over 20 years. It is impossible to get high from fiber hemp. Over 600,000 acres of hemp is grown worldwide with no drug misuse problem.
- One acre of hemp can produce as much usable fiber as 4.1 acres of trees or two acres of cotton.
- Trees cut down to make paper take 50 to 500 years to grow, while hemp can be cultivated in as little as 90-120 days and can yield 4 times more paper over a 20 year period.
- Until 1883, from 75-90% of all paper in the world was made with cannabis hemp fiber including that for books, Bibles, maps, paper money, stocks and bonds, newspapers, etc.
- Hemp paper is longer lasting than wood pulp, stronger, acid-free, and chlorine free. (Chlorine is estimated to cause up to 10% of all Cancers.)
- Hemp paper can be recycled 7 times, wood pulp 4 times.
- If the hemp pulp paper process reported by the USDA in 1916, were legal today it would soon replace 70% of all wood paper products.
- Rag paper containing hemp fiber is the highest quality and longest lasting paper ever made. It can be torn when wet, but returns to its full strength when dry. Barring extreme conditions, rag paper remains stable for centuries.
- Hemp particle board may be up to 2 times stronger than wood particleboard and holds nails better.
- Hemp is softer, warmer, more water absorbent, has three times the tensile strength, and is many times more durable than cotton. Hemp production uses less chemicals than cotton.
- From 70-90% of all rope, twine, and cordage was made from hemp until 1937.
- A strong lustrous fiber; hemp withstands heat, mildew, insects, and is not damaged by light. Oil paintings on hemp and/or flax canvas have stayed in fine condition for centuries.

Medicine:

- Deaths from **marijuana** use: 0
- From 1842 through the 1880s, extremely strong marijuana (then known as cannabis extractums), hashish extracts, tinctures, and elixirs were routinely the second and third most-used medicines in America for humans (from birth through old age). These extracts were also used in veterinary medicine until the 1920s and longer.
- For at least 3,000 years prior to 1842 widely varying marijuana extracts (bud, leaves, roots, etc.) were the most commonly used real medicines in the world for the majority of mankind's illnesses.
- The U.S. Pharmacopoeia indicated cannabis should be used for treating such ailments as fatigue, fits of coughing, rheumatism, asthma, delirium tremens, migraine headaches, and the cramps and depressions associated with menstruation.
- In this century, cannabis research has demonstrated therapeutic value and complete safety in the treatment of many health problems including asthma, glaucoma, nausea, tumors, epilepsy, infection, stress, migraines, anorexia, depression, rheumatism, arthritis, and possibly herpes.
- Deaths from **aspirin** (U.S. per year): 180 - 1,000 +
- Deaths from **legal drugs** (U.S. per year) at doses used for prevention, diagnosis, or therapy: 106,000

Industry:

- Almost any product that can be made from wood, cotton, or petroleum (including plastics) can be made from hemp. There are more than 25,000 known uses for hemp.
- For thousands of years virtually all good paints and varnishes were made with hemp seed oil and/or linseed oil.
- Hemp stems are 80% hurds (pulp by-product after the hemp fiber is removed from the plant). Hemp hurds are 77% cellulose - a primary chemical feed stock (industrial raw material) used in the production of chemicals, plastics, and fibers. Depending on which U.S. agricultural report is correct, an acre of full grown hemp plants can sustainably provide from 50 or even 100 times the cellulose found in other plants.
- One acre of hemp produces as much cellulose fiber pulp as 4.1 acres of trees, making hemp a perfect material to replace trees for pressed board, particle board, and concrete construction molds.
- **Heating and compressing plant fibers can create practical, inexpensive, fire-resistant construction materials with excellent thermal and sound-insulating qualities.** These strong plant fiber construction materials could replace dry wall and wood paneling. William B. Conde of Conde's Redwood Lumber, Inc. near Eugene, Oregon, in conjunction with Washington State University (1991-1993), has demonstrated the superior strength, flexibility, and economy of hemp composite building materials compared to wood fiber, even as beams.
- Isochanvre, a rediscovered French building material made from hemp hurds mixed with lime petrifies into a mineral state and lasts for many centuries. **Archeologists have found a bridge in the south of France from the Merovingian period (500-751 A.D.), built with this process.**

- Hemp has been used throughout history for carpet backing. Hemp fiber has potential in the manufacture of strong, rot resistant carpeting - eliminating the poisonous fumes of synthetic materials. In a home or commercial building along with allergic reactions associated with new synthetic carpeting, hemp would solve the problems associated with petrochemically produced product in a residential and commercial capacity.
- Plastic plumbing pipe (PVC pipes) can be manufactured using renewable hemp cellulose as the chemical feed stocks, replacing non-renewable coal or petroleum based chemical feed stocks.
- In 1941 Henry Ford built a plastic car made of fiber from hemp / flax and sissel. Hemp plastic is biodegradable, synthetic plastic is not.

More Hemp facts:

1. One acre of hemp produces twice as much oil as one acre of peanuts.

Agriculture, Papermakers have high hopes for Industrial Hemp.

Agri-View. " Wisconsin's largest farm newspaper" April 27, 1995.

2. America's first hemp law was enacted in 1619 at Jamestown Colony, Virginia ordering all farmers to grow Indian hemp seed.

Clark. V.S., History of Manufacture in the United States, Mcgraw Hill. NY 1929. pg 34.

3. Cannabis hemp was legal tender in most of the Americas from 1631 until the early 1800's. **you could even pay your taxes with cannabis hemp.**

Clark. V.S., History of Manufacture in the United States. Mcgraw Hill. NY 1929. pg. 34.

4. "The earliest known woven fabric was over 6,000 years old.

5. The original. Heavy-duty, famous Levi jeans were made for the California '49ers out of hemp sailcloth and rivets so that the pockets would not rip when filled with gold.

Hemp and the Marijuana Conspiracy: The Emperor Wears No Clothes, Jack Herer, Revised and expanded 1995 edition: copyright March, 1995, HEMP Publishing. 5632 Van Nuys Blvd., Van Nuys. CA 91401. pg. 6.

6. One acre of hemp produces as much cellulose fiber pulp as 4.1 acres of trees.

Dewey & Merrill. Bulletin #404. U.S. Dept. of Age. 1916.

7. Hemp paper is stronger and has greater folding endurance than wood pulp paper.

Dewey & Merrill. Bulletin #404, US Dept. of Ag., 1916.

8. Cannabis hemp seeds contain all the essential amino acids and essential fatty acids, which are vital to the immune system necessary to maintain a healthy life.

9. Hemp seeds contain up to 24% protein. A handful of seed provides the minimum daily requirement of protein for adults.

Rosenthal. Ed. Hemp Today, pg. 101.

10. The first recorded hemp crop planted in Kentucky was planted on April 25, 1775 in Boyle County.
State Historic Sight Marker, Boyle County Kentucky.
11. In the 1800's, Kentucky regularly accounted for one-half of the industrial hemp production in the United States.
Hopkins, James F., 1951. *A History of the Hemp Industry in Kentucky*. Lexington: University of Kentucky Press.
12. In 1942, the US Army and Department of Agriculture released their "Hemp for Victory" film which encouraged farmers to grow hemp for the war effort. The war had cut off importation of fibers for textiles and rope, and by 1943, over 100,000 acres of hemp were growing in the US. When W.W. II ended, the US Government canceled virtually all hemp farming permits.
Roulac, John, *Industrial Hemp Practical Products - Paper to Fabric to Cosmetics*, pg. 13. Hemptech.
13. In 1938, *Popular Mechanics* magazine stated, "Over 25,000 products can be manufactured from hemp, from cellophane to dynamite."
Roulac, John. *Industrial Hemp Practical Products - Paper to Fabric to Cosmetics*, pg. 24. Hemptech.
14. August 13, 1941, Henry Ford first displayed his plastic car at Dearborn Days in Michigan. The car ran on fuels derived from hemp and other agricultural based sources, and the fenders were made of hemp, wheat, straw, and synthetic plastics. Ford said his vision was "to grow automobiles from the soil."
The Kentucky Hemp Museum and Library. 1998 Historical Hemp Calendar, February. Roulac, John. *Industrial Hemp Practical Products - Paper to fabric to Cosmetics*, pg. 11.
15. All good paints and varnishes were made with hemp seed oil until 1937 (Sherwin Williams Paint Company testimony before Congress against the 1937 Hemp Tax Transfer law). 116 million pounds (58,000 tons) of hemp seed were used in the United States for paint manufacture in 1935. The hemp oil business was displaced when hemp seed production became illegal and went to DuPont Petrochemicals.
16. The encyclopedia Britannica was printed on hemp paper for 150 years.
17. Laws against hemp were passed a year after the development of a machine to harvest and process hemp so it could compete commercially against businesses owned by Hearst, the DuPonts and other powerful families. Source: *Jack Herer, The Emperor Wears No Clothes*
- 18. Prohibition...goes beyond the bounds of reason in that it attempts to control a man's Appetite by legislation and makes a crime out of things that are not crimes. "A prohibition law strikes a blow at the very principles upon which our government was founded" Abraham Lincoln December, 1840**