

THE ARGUMENT FOR THE LEGALIZATION OF INDUSTRIAL HEMP

INTRODUCTION

Industrial hemp as a cash crop in the United States has a history as old as the United States itself. The Founding Fathers grew hemp and it was an integral crop in the economic structure of the colonial United States.¹ Industrial hemp supported our economy during World War II.² Currently it is illegal to grow hemp in the United States without a special Drug Enforcement Administration (DEA) permit being issued.³ The United States is the only industrialized nation that currently does not allow the growing of hemp.⁴ Unfortunately, the hemp issue has been confused and/or attached to the pro-marijuana movement in the United States.

As this comment will show, industrial hemp is perhaps the most versatile crop that can be grown. Its use can save trees and fossil fuel, clothe the world, and can be used as an ingredient in cosmetics and foodstuffs. It can even be used to replace fiberglass in automobiles. Growing industrial hemp uses less water and pesticides than does cotton. These are just a few of the reasons that California should pass

¹ NATIONAL ORGANIZATION FOR THE REFORM OF MARIJUANA LAWS (NORML), ABOUT HEMP, at <http://www.norml.org/hemp/index.shtml> (last visited Jul. 20, 2000). [hereinafter NORML, *About Hemp*] (on file with San Joaquin Agricultural Law Review).

² U.S. DEPT OF AGRICULTURE, HEMP FOR VICTORY (1942) available at Industrial Hemp Info Page, at http://www.geocities.com/Hollywood/Boulevard/2200/articles/ind_hemp/HEMPVIC.HTM (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

³ NORML, *About Hemp*, *supra* note 1.

⁴ DAVID P. WEST, PHD, Hemp and Marijuana Myths & Realities, for the North American Industrial Hemp Council (1998), at <http://www.gametec.com/hemp/hemp.mj.html> (last last visited Jun. 24, 2002) (on file with San Joaquin Agricultural Law Review); *Court halts government hemp rule*, ENVIRONMENT NEWS SERVICE, April 18, 2003, at <http://ens-news.com/ens/apr2003/2003-04-18-09.asp> (last visited on April 27, 2003) (on file with San Joaquin Agricultural Law Review).

legislation legalizing the growing of industrial hemp allowing it to become an economically viable crop in California.

Hemp is not marijuana, as this comment will explain. This comment will also discuss the fact that one half of the states in the U.S. have introduced some form of industrial hemp legislation at the state level. California, a state known as a leader in agriculture, recently had legislation introduced but it was vetoed by Governor Gray Davis.⁵ CA Assembly Bill 388 would have allowed the University of California system to grow hemp in order to study its viability as a cash crop in California.⁶

I. INDUSTRIAL HEMP IS NOT MARIJUANA

“The term ‘industrial hemp’ is a phrase that specifically denotes the use of benign strains of the cannabis plant strictly for agricultural and industrial purposes.”⁷ It is important to use the full term “industrial hemp” when discussing this particular strain of the cannabis plant because of the confusion with the term “hemp”, which commonly refers to marijuana and the issue of the legalization of marijuana. The purpose of this comment is to focus on the industrial and agricultural uses of the strain of cannabis plant that contains less than 1% delta-9 tetrahydrocannabinol (THC). THC is the compound that produces a narcotic effect which makes marijuana illegal. Marijuana contains over 3% THC and thus has the narcotic effect upon those who ingest or smoke it.⁸ Compare industrial hemp that is in the family Cannabaceae, genus *Cannabis*, species *C. sativa* and not only contains THC levels of less than 1%, but contains cannabidiol (CBD) which has been shown to block the effect of THC in the nervous system.⁹ Species *C. sativa* is a member of the mulberry family.¹⁰ Industrial hemp has a relatively

⁵ A.B. 388 Bill Status, (Cal. 2002), at http://www.leginfo.ca.gov/pub/bill/asm/ab_0351-0400/ab_388_bill_20020917_status.html (last visited on Sept. 21, 2002) (on file with San Joaquin Agricultural Law Review).

⁶ A.B. 388 as submitted to Governor Gray Davis (Cal. 2002), at <http://www.leginfo.ca.gov> (on file with San Joaquin Agricultural Law Review).

⁷ SAM H. CLAUDE, “INDUSTRIAL HEMP” IS NOT ‘HEMP’ OR MARIJUANA!, CAMPAIGN FOR AGRICULTURAL AND INDUSTRIAL RENEWAL 2001, at <http://www.cair.net/doc.php3/general-info/iH-not-mj> (last visited Jun. 24, 2002). (on file with San Joaquin Agricultural Law Review)

⁸ See *id.*

⁹ WEST, *supra* note 4.

¹⁰ NORTH AMERICAN INDUSTRIAL HEMP COUNCIL (NAIHC), HEMP FACTS, (October 1997), at http://naihc.org/hemp_information/hemp_facts.html (Last visited Jun. 23, 2002) [hereinafter *NAIHC, Hemp Facts*] (on file with San Joaquin Agricultural Law Review)

high level of CBD compared to THC.¹¹ Conversely, drug strains of hemp, i.e. marijuana, are high in THC and low to intermediate in CBD.¹² Smoking industrial hemp actually has the effect of preventing the marijuana high due to the high CBD to THC ratio.¹³ Industrial hemp has even been shown to cross pollinate with marijuana and create the effect of lowering the THC level in the marijuana, thus acting as an eradicator of marijuana.¹⁴

II. HISTORY OF INDUSTRIAL HEMP IN THE UNITED STATES

A. Revolutionary Era

“The first law concerning industrial hemp in the colonies at Jamestown in 1619, ordered farmers to grow Indian hemp.”¹⁵ In 1631, a compulsory grow law was passed in Massachusetts.¹⁶ Connecticut proposed a grow law in 1632.¹⁷ The Chesapeake colonies ordered their farmers, by law, to grow industrial hemp in the mid-eighteenth century.¹⁸ These laws were passed because industrial hemp was such a viable and versatile product. Among one of the important uses during this time was the use of industrial hemp for sailing ship sails and ropes.¹⁹ Names like Hempstead or Hemphill dot the American landscape and reflect areas of intense industrial hemp cultivation.²⁰

Industrial hemp paper was used to write the first two drafts of the U.S. Constitution, with the final draft being on animal skin.²¹ Two of the strongest advocates for an industrial hemp-based economy were

Review).

¹¹ WEST, *supra* note 4.

¹² *See id.*

¹³ *See id.*

¹⁴ E. SMALL & H.D. BECKSTEA, THE SPECIES PROBLEM IN CANNABIS (1979), reprinted in DAVID P. WEST, WHAT HAPPENS IF YOU CROSS HEMP AND MARIJUANA?, at <http://www.gametec.com/hemp/hybrids.html> (last visited Jun. 24, 2002) (on file with San Joaquin Agricultural Law Review).

¹⁵ HUGH DOWNS, COMMENTARY ON HEMP TRANSCRIPT FOR ABC NEWS (Nov. 1990), reprinted in Industrial Hemp Info Page, at http://www.geocities.com/Hollywood/Boulevard/2200/articles/ind_hemp/H-DOWNS.HTM (last visited on Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

¹⁶ *See id.*

¹⁷ *See id.*

¹⁸ *See id.*

¹⁹ KELE DING, DRUG USE TIMELINE, IDAHO STATE UNIVERSITY, at <http://www.isu.edu/~dingkele/HE443/concept/history.html> (last visited Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

²⁰ DOWNS, *supra* note 15.

²¹ DOWNS, *supra* note 15.

George Washington and Thomas Jefferson, with each cultivating the crop for its fiber content.²² In 1791, Benjamin Franklin published what is thought to be the first ever article on industrial hemp to appear in an American magazine. This article, written by Abbe Braille in London in 1790, describes the new mode of cultivating and dressing industrial hemp. The article also included a chart which broke down the cost of cultivating the industrial hemp and the profit made on the sale of industrial hemp produced on 20 acres of land.²³ Originally, "Old Ironsides", the namesake of the last remaining Constitution-class frigate ships, was outfitted with cannabis hemp sails and over 60 tons of cannabis hemp rigging.²⁴

B. WW II Era

1. 1937 Marihuana Tax Act²⁵

This act levied a one dollar tax paid through the purchase of a "marihuana stamp", on any activity dealing with Cannabis sativa. The Act did not differentiate the different types of C. sativa, nor did it even refer to levels of THC. It was this act that led to the current law today that also does not differentiate the different types of C. sativa or levels of THC. However, the Act did segregate out the mature stalks of C. sativa and any fiber made from the stalks, oil from the seeds of such stalks, or any other manufacture or preparation of such mature stalks (with the exception of the resin extracted therefrom).²⁶ The Act was very stringent in that it applied to anyone who imports, manufactures, produces, compounds, sells, deals in, dispenses, prescribes, adminis-

²² NATIONAL ORGANIZATION FOR THE REFORM OF MARIJUANA LAWS (NORML), ABOUT HEMP, at <http://www.norml.org/hemp/index.shtml> (last visited Jul. 20, 2000). [hereinafter NORML, *About Hemp*] (on file with San Joaquin Agricultural Law Review).

²³ ABBE BRAILLE. THE NEW MODE OF CULTIVATING AND DRESSING HEMP, reprinted in Hempology.org, 1791 Early American Hemp Cultivation, at <http://www.hempology.org/ALL%20HISTORY%20ARTICLES.HTML/1791%20EARLY%20AMERICAN%20HEMP.html> (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

²⁴ JOHN E. DVORAK. WHERE'S THE HEMP?, at <http://hempology.org/JD%27S%20ARTICLES/WTH.html> (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

²⁵ The Marihuana Tax Act of 1937, Pub. L. No. 238, 75th Congress, reprinted in Schaffer Library of Drug Policy, at <http://www.druglibrary.org/schaffer/hemp/taxact/mjtaxact.htm> (last visited Jun. 25, 2002) (on file with San Joaquin Agricultural Law Review).

²⁶ The Marijuana Tax Act §1(b).

ters, or gives away marihuana.²⁷ Additionally, each instance and for each place that such a transaction took place was subject to the \$1 tax.²⁸ Penalties for a conviction of a violation for any provision of the Act was a maximum fine of \$2000 and/or imprisonment of up to 5 years.²⁹ Section 14 of the Act gave, via the Secretary of the Treasury, rights, privileges, powers, and duties to the Commissioner of Narcotics and the Commissioner of the Internal Revenue Service absolute administrative regulatory and police powers in enforcement of the Act.³⁰ Legislative history of the Act shows that the intent of the Act was “not to interfere materially with any industrial, medical, or scientific uses which the hemp plant may have.”³¹ Harry J. Anslinger, Commissioner of the Federal Bureau of Narcotics (FBN) (the predecessor to the Drug Enforcement Administration (DEA)), told the Senate Committee that those in the domestic industrial hemp industry “are not only amply protected under this act, but they can go ahead and raise hemp just as they have always done it.”³² However, the language of the Act made it very difficult for anyone to rigidly comply and the FBN lumped industrial hemp with marijuana, so the legal risks outweighed the economic benefit for growers of industrial hemp.³³

2. 1938 Popular Mechanics Article - Billion Dollar Crop

In 1938, Popular Mechanics Magazine published an article on industrial hemp entitled, “New Billion-Dollar Crop.”³⁴ “This was the first time that any agricultural crop in America was referred to as being worth a “billion dollars.”³⁵ The article discussed a new machine, known as a decorticator, which was in service in Texas, Illinois, Minnesota, and other states that produced fiber at half a cent per pound.³⁶ The decorticator made it possible to remove the fiber-bearing cortex from the rest of the stalk, which in turn made hemp fiber available for use without prohibitive amounts of human labor.³⁷ The article pre-

²⁷ The Marijuana Tax Act §2(a).

²⁸ The Marijuana Tax Act §2(a)(c)&(d).

²⁹ The Marijuana Tax Act §12.

³⁰ The Marijuana Tax Act §§14(I)&(II).

³¹ WEST, *supra* note 4.

³² WEST, *supra* note 4.

³³ NAIHC, *supra* note 10.

³⁴ POPULAR MECHANICS MAGAZINE, *New Billion-Dollar Crop*, (1938), available at Cannabis.com at <http://www.cannabis.com/untoldstory/pmpage1.shtml> (last visited Jan. 12, 2003) (on file with San Joaquin Agricultural Law Review).

³⁵ DOWNS, *supra* note 15.

³⁶ POPULAR MECHANICS MAGAZINE, *supra* note 34.

³⁷ POPULAR MECHANICS MAGAZINE, *supra* note 34.

dicted that “hemp, a crop that will not compete with other American products, will displace imports of raw material and manufactured products produced by underpaid coolie and peasant labor and it will provide thousands of jobs for American workers throughout the land.”³⁸

3. 1942 USDA film “Hemp for Victory”

In 1942 the U.S. Department of Agriculture produced a film in order to promote industrial hemp production to aid the war effort. At the request of the United States government, farmers planted 36,000 acres of industrial hemp seed in 1942. This was an increase of several thousand percent. The goal for the following year was to have 50,000 acres of seed industrial hemp planted.³⁹

Despite the existence of the Marihuana Tax Act of 1937, the result of the “Hemp for Victory” Campaign was that “thousands of farmers grew hundreds of thousands of acres of hemp for wartime needs.”⁴⁰ However, by the end of WW II, the government’s allowance of industrial hemp cultivation also ended and by 1957, “prohibitionists had reasserted a total ban on hemp production.”⁴¹

C. Present/Modern

In 1995 one politician in Colorado introduced legislation allowing for industrial hemp cultivation but it was defeated.⁴² The following year, Colorado along with, Missouri, Hawaii, and Vermont, proposed similar legislation which, although defeated, garnered significant support.⁴³ The DEA has only granted one industrial hemp permit in the last forty years.⁴⁴ However, since 1995, twenty-five states (Arizona, Arkansas, California, Colorado, Hawaii, Idaho, Illinois, Iowa, Kentucky, Maine, Maryland, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Oregon, South Dakota,

³⁸ POPULAR MECHANICS MAGAZINE, *supra* note 34.

³⁹ U.S. DEPT OF AGRICULTURE, HEMP FOR VICTORY (1942) *available at* Industrial Hemp Info Page, *at* http://www.geocities.com/Hollywood/Boulevard/2200/articles/ind_hemp/HEMPVIC.HTM (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

⁴⁰ NORML, *About Hemp*, *supra* note 1.

⁴¹ NORML, *About Hemp*, *supra* note 1.

⁴² NORML, *About Hemp*, *supra* note 1.

⁴³ NORML, *About Hemp*, *supra* note 1.

⁴⁴ NORML, *About Hemp*, *supra* note 1; and DAVE CULL, INDUSTRIAL HEMP ARCHIVE ARTICLE 700 (Jan. 4, 2001), *at* <http://fornits.com/curiosity/hemp/peaars.cgi?fetch=700> (last visited Feb. 5, 2001); *and* FACTS ABOUT HEMP, HEMP INDUSTRIES ASSOCIATION, *at* <http://www.thehia.org/hempfacts.htm> (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

Tennessee, Vermont, Virginia, West Virginia, and Wisconsin) have introduced legislation allowing for industrial hemp cultivation.⁴⁵

Despite various support for industrial hemp's cultivation, the DEA is opposed to any such legislation. The DEA is also opposed to revising existing federal law which would allow industrial hemp to be cultivated.⁴⁶ Currently, only the DEA has the power to grant farmers licenses to grow industrial hemp and has only granted the state of Hawaii a license.⁴⁷ The DEA granted this license in 1999.⁴⁸ However, the security measures that were required and implemented in Hawaii, such as chain link fence with razor blade barbed wire and a twenty-four hour infrared security system⁴⁹ surrounding the industrial hemp plots, would hinder commercial production. According to the National Organization for the Reform of Marijuana Laws (NORML), "DEA officials have stonewalled several state efforts to enact [industrial] hemp cultivation and research bills by threatening to arrest any farmers contracted to grow the crop."⁵⁰

III. ARGUMENTS AGAINST LEGALIZATION OF INDUSTRIAL HEMP

An article published by the Illinois State Police, "The Economic Truths About Hemp/Marijuana and its Non-Existent Market Economy," argues that because there is no "zero-THC hemp", [industrial] hemp is marijuana.⁵¹ The article argues that marijuana and industrial

⁴⁵ VOTE HEMP, STATE INDUSTRIAL HEMP LEGISLATION, at http://www.votehemp.com/state_legis.html (last visited Feb. 16, 2003) (on file with San Joaquin Agricultural Law Review).

⁴⁶ NORML, *About Hemp*, *supra* note 1.

⁴⁷ DAVE CULL, INDUSTRIAL HEMP ARCHIVE ARTICLE 700 (Jan. 4, 2001), at <http://fornits.com/curiosity/hemp/peaars.cgi?fetch=700> (last visited Feb. 5, 2001) (on file with San Joaquin Agricultural Law Review); and CANNABIS NEWS, DEA PERMITS HAWAII TO PLANT INDUSTRIAL HEMP, (posted Dec. 13, 1999), at <http://www.cannabisnews.com/news/thread3985.shtml> (last visited Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

⁴⁸ CANNABIS NEWS, DEA PERMITS HAWAII TO PLANT INDUSTRIAL HEMP, (posted Dec. 13, 1999), at <http://www.cannabisnews.com/news/thread3985.shtml> (last visited Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

⁴⁹ *See id.*

⁵⁰ NORML, *About Hemp*, *supra* note 1.

⁵¹ Illinois State Police, *reprinted in* GLOBAL HEMP NEWS DIGEST (May 2000), *The Economic Truths About Hemp/Marijuana and its Non-Existent Market Economy (If You Grow It, . . . They Will NOT come) - The Case Against Hemp*, at http://globalhemp.com/Media/Magazines/Global_Hemp_Magazine/2000/May/illinois_state_police.shtml (last visited Jun. 23, 2002) (on file with San Joaquin Agricultural Law Review).

hemp are the same thing. The article also states that THC levels for industrial hemp are equivalent to that of marijuana in the 1970's.⁵²

A second argument made by the Illinois State Police is that "hemp advocacy groups intermingle the legalization of industrial hemp with that of marijuana."⁵³ They also argue that by legalizing industrial hemp, the cost of enforcing anti-marijuana laws would increase.⁵⁴ The increase would be because high THC and low THC hemp look the same and the only way to tell the difference is through testing.⁵⁵ Finally, the article argues that except as a small-scale specialty crop, industrial hemp is not economically viable and that demand is already being met by exports from countries that subsidize its production.⁵⁶ While this may be the case today, it may not be the case in the near future as other resources such as timber become more scarce. A report published by the USDA in 2000 makes similar arguments regarding the small market for industrial hemp products such as bast fiber, hemp seed, and hemp oil.⁵⁷

In 2001, the Family Research Council (FRC) published an Anti Hemp Treatise, which also had similar arguments against industrial hemp as those of the Illinois State Police article.⁵⁸ They argued that the promotion and use of industrial hemp products and fabrics encourages not only a marijuana subculture, but also the agenda of drug legalization.⁵⁹ Also argued by the FRC is that the THC in industrial hemp products poses health risks, that marijuana legalizers are pushing industrial hemp, and that special problems would be created for law enforcement with the legalization of industrial hemp.⁶⁰ However, on the other side of the demand argument is the argument that the com-

⁵² *See id.*

⁵³ *See id.*

⁵⁴ *See id.*

⁵⁵ *See id.*

⁵⁶ *See id.*

⁵⁷ DAVE CULL, INDUSTRIAL HEMP ARCHIVE ARTICLE 700 (Jan. 4, 2001), at <http://fornits.com/curiosity/hemp/pears.cgi?fetch=700> (last visited Feb. 5, 2001) (on file with San Joaquin Agricultural Law Review); USDA, INDUSTRIAL HEMP IN THE UNITED STATES: STATUS AND MARKET POTENTIAL 25-26 (2000) (on file with San Joaquin Agricultural Law Review).

⁵⁸ ROBERT L. MAGINNIS, HEMP IS MARIJUANA: SHOULD FARMERS GROW IT? REPRINTED IN INDUSTRIAL HEMP ARCHIVE ARTICLE 699, at (last visited Feb. 5, 2001) <http://fornits.com/curiosity/hemp/pears.cgi?fetch=699> (posted Jan. 4, 2001) (on file with San Joaquin Agricultural Law Review).

⁵⁹ *See id.*

⁶⁰ *See id.*

mercial demand for industrial hemp may increase if the cultivation of it were made legal.

IV. INDUSTRIAL HEMP AS AN ALTERNATIVE TO GROWING TOBACCO

In 1995, the USDA published an article entitled, "Industrial Hemp and other Alternative Crops for Small-scale Tobacco Producers."⁶¹ This article focused on the statistical data that shows tobacco production in the top two tobacco producing states, North Carolina and Kentucky, is on a decline. While the article states the benefits of growing industrial hemp, it also acknowledges that "few estimates are available for modern production and processing costs."⁶² Additionally, this article discusses an uncertain market potential for industrial hemp.⁶³

Kentucky's General Assembly created a 17-member board called the Industrial Hemp Commission in 2001, to look at industrial hemp as a cash crop.⁶⁴ The Georgia Farm Bureau, Georgia's largest farm group consisting of 322,500-members, approved a resolution calling for the University of Georgia to study industrial hemp in December 1999.⁶⁵ The spark for creating this study was two years of dry weather that extirpated some tobacco fields, government production cuts on tobacco, and low prices on conventional commodities which caused the Georgia tobacco farmers to become desperate for new crops.⁶⁶ Maryland has allocated \$78.7 million through 2010 to buy out tobacco farmers.⁶⁷ The source of these funds is the \$4 billion Maryland will re-

⁶¹ USDA AGRICULTURAL RESEARCH SERVICE AND ECONOMIC RESEARCH SERVICE FOR KARL STAUBER. UNDER SECRETARY FOR RESEARCH, EDUCATION, AND ECONOMICS. INDUSTRIAL HEMP AND OTHER ALTERNATIVE CROPS FOR SMALL-SCALE TOBACCO PRODUCERS (Published by the USDA Summer 1995) available at Industrial Hemp Info Page, at http://www.geocities.com/Hollywood/Boulevard/2200/articles/ind_hemp/USDA95.HTM (last visited on Jul. 20, 2000). [hereinafter USDA, *Alternative Crops*] (on file with San Joaquin Agricultural Law Review).

⁶² See *id.*

⁶³ See *id.*

⁶⁴ Courtney Kinney, *Board Studying Viability of Hemp as Crop*, Kentucky Post, Nov. 20, 2001, reprinted in GLOBAL HEMP NEWS DIGEST, volume 2, issue 38., at http://www.globalhemp.com/News/2001/November/board_studying_viability.shtml (Last visited Dec. 1, 2001) (on file with San Joaquin Agricultural Law Review).

⁶⁵ Elliott Minor, *Georgia Farmers Call for Industrial Hemp Research*, ASSOCIATED PRESS, Jan. 3, 2000, reprinted in AG FIBER TECHNOLOGY NEWS, volume 2, number 26 (Jan. 25, 2000), at <http://www.agrotechfiber.com/076372.html> (last visited Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

⁶⁶ See *id.*

⁶⁷ ASSOCIATED PRESS, *Maryland Misjudges Response to Tobacco Buyout*, reprinted in THE DAILY RECORD, volume 1, number 27, Jul. 29, 2000, at <http://>

ceive from the national lawsuit against cigarette manufacturers.⁶⁸ Farmers will immediately grow alternative crops once they stop growing tobacco.⁶⁹ Original estimates are that 30 to 40% of the tobacco farmers would take the buyout.⁷⁰ Maryland has approximately 1,100 tobacco farmers.⁷¹ This would give rise to 330 to 440 farmers who would be looking for new economically viable crops to grow.

V. MODERN USES FOR INDUSTRIAL HEMP

A. *Bio-Diesel Vehicle Fuel*

“Rudolph Diesel designed his diesel engine to run on hemp oil.”⁷² On July 4, 2001, a 1985 Mercedes Turbo Diesel powered on hemp oil began a 10,000 mile trek across the U.S. and Canada.⁷³ Apple Energy of Ohio processes industrial hemp seeds into biodiesel fuel.⁷⁴ Kellie Sigler, co-founder of the industrial hemp car project, states that “if six percent of America were planted with industrial hemp, all of America’s transportation and energy demands could be met.”⁷⁵

B. *Replaces Fiberglass in Vehicles*

Henry Ford felt it would be advantageous to build and fuel cars from farm products so he experimented with industrial hemp to build car bodies.⁷⁶ As recently as 1997, BMW was experimenting with industrial hemp materials in automobiles as part of an effort to make cars more recyclable.⁷⁷ In 1997, Popular Mechanics published an article about using industrial hemp in automobiles. In the article, company spokesman for the Daimler-Benz company noted that the engineers liked using [industrial] hemp fibers because they are more rigid and

www.mddailyrecord.com/archives/1_27_statewide/localnews/23_40-1.html (last visited on Oct. 3, 2000) (on file with San Joaquin Agricultural Law Review).

⁶⁸ *See id.*

⁶⁹ *See id.*

⁷⁰ *See id.*

⁷¹ *See id.*

⁷² NAIHC, *Hemp Facts*, *supra* note 10.

⁷³ Ian Shedd, *Car Fueled By Hemp Oil On Real Trip*, NEW HAVEN REGISTER, Jul. 6, 2001, *reprinted in* GLOBAL HEMP NEWS DIGEST volume 2, issue 26, at http://www.globalhemp.com/News/2001/July/car_fueled_by_hemp_oil.sh_tml (last visited on Jul 15, 2001) (on file with San Joaquin Agricultural Law Review).

⁷⁴ *See id.*

⁷⁵ *See id.*

⁷⁶ NAIHC, *Hemp Facts*, *supra* note 10.

⁷⁷ NAIHC, *Hemp Facts*, *supra* note 10.

pest-resistant than flax.⁷⁸

American car makers have begun to replace fiberglass with natural plant fibers.⁷⁹

Using such fibers can save much of the energy needed to make a car and result in parts that are 40 percent lighter - and biodegradable. By 2010, the New Jersey consulting firm Kline & Company expects natural fibers to replace a fifth of the fiberglass in today's automobile interiors. In North America, plant stalks replaced 2 percent of the fiberglass in mats, seat backs, and other plastic composites in 2000; [industrial] hemp dominated this field. The crop is at least 65 cents cheaper per pound than fiberglass; it also grows perennially and can be recycled easily.⁸⁰

C. Construction

Industrial hemp can be used to make products such as medium density fiber board, oriented strand board, and even beams, studs, and posts, all of which have construction uses.⁸¹ Because industrial hemp has long fibers, these products are stronger and/or lighter than those made from wood.⁸² Recently in England, the Suffolk Housing Society commissioned a project to build entire houses from industrial hemp products.⁸³ The society concluded that these houses require less energy to build, produce less waste, and cost less to heat.⁸⁴ However, compared to traditional brick and mortar houses, the houses cost ten percent more to build.⁸⁵ It is possible, however, that the price will fall as the building technique develops.⁸⁶

D. Paper

The long fibers found in industrial hemp create high-quality paper for books, magazines, and stationery, while the shorter fibers are ex-

⁷⁸ *Putting Cannabis in Cars*, POPULAR MECHANICS MAGAZINE, Mar. 1997, at 22, reprinted in SCHAFFER LIBRARY OF DRUG POLICY, at <http://www.druglibrary.org/schaffer/hemp/indust/popmech.htm> (last visited on Jun. 25, 2002) (on file with San Joaquin Agricultural Law Review).

⁷⁹ Alec Appelbaum, *Salient Facts: Auto Plants*, THE NEW YORK TIMES MAGAZINE, April 23, 2001/Section 6, at 30 (on file with San Joaquin Agricultural Law Review).

⁸⁰ *See id.*

⁸¹ NAIHC, *Hemp Facts*, *supra* note 10.

⁸² NAIHC, *Hemp Facts*, *supra* note 10.

⁸³ James Mortlock, *Hemp Homes Could be the Future*, EAST ANGLIAN DAILY TIMES, September 10, 2002, reprinted in GLOBAL HEMP NEWS DIGEST, volume 3, issue 31, at http://www.globalhemp.com/News/2002/September/hemp_homes_could_be.shtml (last visited on Sept. 21, 2002) (on file with San Joaquin Agricultural Law Review).

⁸⁴ *See id.*

⁸⁵ *See id.*

⁸⁶ *See id.*

cellent material for newspaper, tissue paper, and packaging materials.⁸⁷ Industrial hemp paper not only resists decomposition, but it is not subject to the age-related yellowing of wood-derived papers.⁸⁸ Kimberly Clark, a Fortune 500 company, has an industrial hemp-paper mill in France which produces industrial hemp paper preferred for bibles due to both its durability and failure to yellow with age.⁸⁹

The 1995 USDA report discussed industrial hemp use for the specialty and recycled paper market. Products in the specialty paper markets include currency, cigarette papers, filter papers, and tea bags.⁹⁰ HurterConsult, Inc., a company based in Ottawa, Canada, has done a pre-feasibility study for Prairie Pulp and Paper Co. for the use of flax straw and industrial hemp to produce either pulp and/or un-coated printing and writing paper.⁹¹

E. Clothing & Fashion

Industrial hemp has a twofold appeal for the fashion industry. The intrinsic qualities are first and foremost on the list and include the following: stronger than cotton, warmer than linen, and more absorbent than nylon.⁹² Additionally, industrial hemp is environment friendly. Cotton requires huge amounts of water and enormous quantities of pesticides, herbicides, and fertilizers.⁹³ Whereas industrial hemp needs little or no pesticides or herbicides and significantly less water than cotton crops do.⁹⁴ Pesticides sprayed on cotton account for one half of the pesticide use in the United States.⁹⁵ Six thousand tons of pesticides

⁸⁷ JOHN ROULAC, ABOUT INDUSTRIAL HEMP, HEMPTech -CAMPAIGN FOR AGRICULTURAL AND INDUSTRIAL RENEWAL (C.A.I.R.), at <http://www.cair.net/doc.php3/general-info/about-ih> (last visited Jun. 24, 2001) (on file with San Joaquin Agricultural Law Review).

⁸⁸ *See id.*

⁸⁹ NAIHC, *Hemp Facts*, *supra* note 10.

⁹⁰ USDA, *Alternative Crops*, *supra* note 61.

⁹¹ Wendy Stephenson, *Manitoba 'Paperless' Paper Plant Gearing Up For Production: 'Huge numbers' for new plant*, WINNIPEG SUN, July 17, 2001, *reprinted in* GLOBAL HEMP NEWS DIGEST, volume 2, issue 26, at http://www.globalhemp.com/News/2001/July/manitoba_paperless.shtml (last visited on Jun. 23, 2001) (on file with San Joaquin Agricultural Law Review).

⁹² Michael Dorgan, *Harnessing Hemp*, SAN JOSE MERCURY NEWS, November 14, 1995, *reprinted at* INDUSTRIAL HEMP INFO PAGE, at http://www.geocities.com/Hollywood/Boulevard/2200/articles/ind_hemp/HARNESSTM (last visited on Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

⁹³ *See id.*

⁹⁴ *See id.*

⁹⁵ ROULAC, *supra* note 87.

and defoliants are used on cotton each year in California alone.⁹⁶ Owen Sercus, a professor in the textile development and marketing department of Manhattan's prestigious Fashion Institute of Technology predicted that industrial hemp is going to be the natural fiber for the 21st century.⁹⁷ Fashion designers Ralph Lauren and Calvin Klein have been using industrial hemp fabric. In 2000, Ralph Lauren disclosed that he secretly used industrial hemp fabric in his clothing as far back as 1984.⁹⁸ Calvin Klein used industrial hemp for his 1995 home collection items, including decorative pillows, and has announced plans to use industrial hemp in his clothing lines.⁹⁹ Shoe manufacturers including Adidas and Vans have either marketed industrial hemp-topped sneakers or plan to do so in the future.¹⁰⁰

Woody Harrelson, a well-known actor and proponent of industrial hemp, was recently outfitted in a Giorgio Armani designed tuxedo made from industrial hemp fabric.¹⁰¹ Armani's company has participated in a consortium of Italian farmers and seed producers to restart Italian industrial hemp cultivation in Italy.¹⁰² The consortium will initially plant 494 acres.¹⁰³ Additionally, Armani's consortium is building a factory that will have the capacity to process industrial hemp produced from 2,470 acres.¹⁰⁴

F. Food

Hempseed contains eight essential amino acids, two essential fatty acids, and Gamma Linolenic Acid (GLA), which is an Omega-6 Super GLA, which is less commonly found in fish and flaxseed oils.¹⁰⁵

⁹⁶ ROULAC, *supra* note 87.

⁹⁷ Dorgan, *supra* note 92.

⁹⁸ Dorgan, *supra* note 92.

⁹⁹ Dorgan, *supra* note 92.

¹⁰⁰ Dorgan, *supra* note 92.

¹⁰¹ Marvyn Caplan, *Hemp Fabric Making a Comeback*. THE HAMILTON SPECTATOR, September 13, 2002, reprinted in GLOBAL HEMP NEWS DIGEST, volume 3, issue 32, at http://www.globalhemp.com/News/2002/September/hemp_fabric_making.shtml (last visited on Sep. 21, 2002) (on file with San Joaquin Agricultural Law Review).

¹⁰² *See id.*

¹⁰³ *See id.*

¹⁰⁴ *See id.*

¹⁰⁵ OHIO HEMPERY. NUTRITIONAL ANALYSIS OF HEMPSEED AND HEMPSEED OIL, Hemp Industries Association, at <http://www.thehia.org/faqs/faq5.htm> (last visited on Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review); OHIO HEMPERY. NUTRITIONAL ANALYSIS OF HEMP NUT (TM) HULLED HEMPSEED, Hemp Industries Association, at <http://www.thehia.org/faqs/faq6.htm> (last visited on Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

A study in 2000, funded by the Canadian government and coordinated by Leson Environmental Consulting in Berkeley, CA, concluded that as long as industrial hemp seed processors continue to adhere to thorough seed cleaning methods, people who frequently consume quality industrial hemp foods now found in stores, will not fail urine tests for marijuana.¹⁰⁶ These thorough cleaning methods will generally keep THC levels in industrial hemp oil below 5 ppm and the level in hulled seeds below 2 ppm.¹⁰⁷ The study required employers and administrators of drug testing programs to follow established federal guidelines for urine testing, requiring that urine samples, which fail the screening test, must be confirmed by GC/MS (gas chromatography/mass spectrometry).¹⁰⁸ The use of the GC/MS testing provides a more stringent testing method and therefore would prove or disprove the failed urine test.

G. Paint & Varnish

In 1935, more than 58,000 tons of industrial hemp seed were used to make paint and varnish which were non-toxic. When industrial hemp was banned, these safe paints and varnishes were replaced by toxic petro-chemicals.¹⁰⁹

VI. CONTROLLED SUBSTANCE ACT

The Controlled Substances Act (CSA), Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970, is the legal foundation of the government's fight against the abuse of drugs and other substances. This law is a consolidation of numerous laws regulating the manufacture and distribution of narcotics, stimulants, depressants, hallucinogens, anabolic steroids, and chemicals used in the illicit production of controlled substances. The CSA places all substances that are regulated under existing federal law into one of five schedules. This placement is based upon the substance's medicinal value, harmfulness, and potential for abuse or addiction. Schedule I is reserved for the most dangerous drugs that have no recognized medical use, while Schedule V is the classification used for the least dangerous drugs. The act also provides a mechanism for substances to be controlled, added to a schedule, decontrolled, removed from control, rescheduled, or transferred from one schedule to another.

¹⁰⁶ John Roulac, *Hemp Foods and Workplace Drug Testing Not in Conflict*, *New Study Finds*, August 4, 2000, available at HEMPTech: HEMP NEWS SERVICE DIGEST, at <http://www.hemptech.com/cgi-bin/hempNEWSmaker/home.cgi?read=708> (last visited on Feb. 16, 2003) (on file with San Joaquin Agricultural Law Review).

¹⁰⁷ *See id.*

¹⁰⁸ *See id.*

¹⁰⁹ DOWNS, *supra* note 15.

Proceedings to add, delete, or change the schedule of a drug or other substance may be initiated by the Drug Enforcement Administration (DEA), the Department of Health and Human Services (HHS), or by petition from any interested party, including the manufacturer of a drug, a medical society or association, a pharmacy association, a public interest group concerned with drug abuse, a state or local government agency, or an individual citizen. When a petition is received by the DEA, the agency begins its own investigation of the drug.

The DEA also may begin an investigation of a drug at any time based upon information received from law enforcement laboratories, state and local law enforcement and regulatory agencies, or other sources of information.

Once the DEA has collected the necessary data, the DEA Administrator, by authority of the Attorney General, requests from the HHS a scientific and medical evaluation and recommendation as to whether the drug or other substance should be controlled or removed from control. This request is sent to the Assistant Secretary of Health of the HHS. Then, the HHS solicits information from the Commissioner of the Food and Drug Administration and evaluations and recommendations from the National Institute on Drug Abuse, and on occasion, from the scientific and medical community at large. The Assistant Secretary, by authority of the Secretary, compiles the information and transmits back to the DEA a medical and scientific evaluation regarding the drug or other substance, a recommendation as to whether the drug should be controlled, and in what schedule it should be placed.

The medical and scientific evaluations are binding to the DEA with respect to scientific and medical matters. The recommendation on scheduling is binding only to the extent that if HHS recommends that the substance not be controlled, the DEA may not control the substance.

Once the DEA has received the scientific and medical evaluation from HHS, the Administrator will evaluate all available data and make a final decision whether to propose that a drug or other substance be controlled and into which schedule it should be placed.

The CSA also creates a closed system of distribution for those authorized to handle controlled substances. The cornerstone of this system is the registration of all those authorized by the DEA to handle controlled substances. All individuals and firms that are registered are required to maintain complete and accurate inventories and records of all transactions involving controlled substances, as well as security for the storage of controlled substances.¹¹⁰

¹¹⁰ UNITED STATES DRUG ENFORCEMENT ADMINISTRATION, CONTROLLED SUBSTANCE ACT, 1970, at <http://www.usdoj.gov/dea/pubs/csa.html> (last visited on Sept. 23, 2002) (on file with San Joaquin Agricultural Law Review).

VII. CASE LAW

On October 9, 2001, the DEA issued an interpretive rule which purported to make industrial hemp foods containing harmless infinitesimal traces of naturally-occurring THC immediately illegal under the CSA of 1970.¹¹¹ However, because trace infinitesimal THC in industrial hemp seed is non-psychoactive and insignificant, the U.S. Congress exempted non-viable industrial hemp seed and oil from control under the CSA. This is consistent with Congress' exemption of poppy seeds from the CSA, even though they contain trace opiates otherwise subject to control under the CSA.¹¹² The DEA's interpretive ruling alarmed health food stores because they carry products such as industrial hemp oil and food products that contain industrial hemp oil and/or industrial hemp seed. However, on March 7, 2002, the U.S. Court of Appeals for the Ninth Circuit stayed the DEA's ruling when it granted the Hemp Industries Association (HIA) motion.¹¹³ On April 8, 2002, the HIA argued before the Ninth Circuit that the DEA's interpretive ruling misinterprets the CSA and violates the Administrative Procedures Act.¹¹⁴ Public and Congressional outcry followed the DEA's interpretive ruling when over 115,000 public comments were submitted to the DEA and 25 members of Congress wrote to the DEA to tell them that their interpretive rule was overly restrictive.¹¹⁵

On March 21, 2003, the DEA issued its final rule, which was almost identical to its interpretive rule, regarding hemp food products.¹¹⁶ Once again the HIA, along with several hemp food and cosmetic manufacturers and the Organic Consumers Association, petitioned the Ninth Circuit to prevent the DEA from stopping the currently legal sale of hemp seed and oil products in the United States.¹¹⁷ On April 16, 2003, five days before the DEA's final rule was to go into effect,

¹¹¹ CANNABIS NEWS, HIA TO ARGUE BEFORE 9TH CIRCUIT COURT - APRIL 8, posted on April 4, 2001, at <http://www.cannabisnews.com/news/thread12442.shtml> (last visited on Nov. 17, 2001) (on file with San Joaquin Agricultural Law Review).

¹¹² See *id.*

¹¹³ See *id.*

¹¹⁴ ADAM EIDINGER, MINTWOOD MEDIA, HEMP INDUSTRY CONFIDENT, AWAITS COURT DECISION, *Vote Hemp*, at http://www.votehemp.com/PR/4-17-02_update.html (last visited on Nov. 17, 2002) (on file with San Joaquin Agricultural Law Review).

¹¹⁵ ADAM EIDINGER, MINTWOOD MEDIA, COURT DECISION ON HEMP FOODS EXPECTED THIS WEEK. *VOTEHEMP*, at http://www.globalhemp.com/News/2003/April/court_decision_on_hemp_html (last visited on April 14, 2003) (on file with San Joaquin Agricultural Law Review).

¹¹⁶ See *id.*

¹¹⁷ See *id.*

the Ninth Circuit once again issued a stay blocking the DEA's attempt to halt the sale of food products containing hemp seed and/or oil.¹¹⁸ Without this stay, companies such as Nature's Path, who produces hemp granola and waffles, would have lost up to three percent of its sales.¹¹⁹ In the past year sales of Nature's Path hemp food products has increased approximately twenty percent.¹²⁰ Nature's Path will continue to change the process for reviewing hemp food by pushing to have the Food and Drug Administration (FDA) involved in the reviewing process instead of the DEA.¹²¹

On the international front, a North American Free Trade Agreement (NAFTA) suit is pending with the U.S. State Department. The Canadian agro-firm Kenex Ltd. has been growing and processing industrial hemp oil, seed, and fiber products in Canada and has been investing heavily over the past five years in its expansion into the United States markets for edible oil, seed, and fiber.¹²² On August 2, 2002, Kenex filed its NAFTA Notice of Arbitration under NAFTA Chapter 11 in response to the DEA's recent ruling seeking to effectively prevent Kenex from accessing American markets for its industrial hemp food products.¹²³ Kenex and the U.S. State Department plan to select a three-

¹¹⁸ ADAM EIDINGER, MINTWOOD MEDIA, NINTH CIRCUIT COURT BLOCKS DEA HEMP RULE, VOTEHEMP, at http://www.votehemp.com/PR/4-17-03_CourtStay.html (last visited on April 28, 2003) (on file with San Joaquin Agricultural Law Review).

¹¹⁹ Christine Frey, *DEA Ruling Puts Hemp Foods on the Ropes*, SEATTLE POST-INTELLIGENCER, April 5, 2003, at http://seattlepi.nwsourc.com/business/115981_retail05.shtml (last visited on April 27, 2003) (on file with San Joaquin Agricultural Law Review); *Court OKs Continued Sales of Food Made From Hemp*, THE BELLINGHAM HERALD, April 22, 2003, at http://news.bellinghamherald.com/stories/20030422/LocalState/1376_26.shtml (last visited on April 27, 2003) (on file with San Joaquin Agricultural Law Review).

¹²⁰ Christine Frey, *DEA Ruling Puts Hemp Foods on the Ropes*, SEATTLE POST-INTELLIGENCER, April 5, 2003, at http://seattlepi.nwsourc.com/business/115981_retail05.shtml (last visited on April 27, 2003) (on file with San Joaquin Agricultural Law Review).

¹²¹ *Court OKs continued sales of food made from hemp*, THE BELLINGHAM HERALD, April 22, 2003, at http://news.bellinghamherald.com/stories/20030422/LocalState/1376_26.shtml (last visited on April 27, 2003) (on file with San Joaquin Agricultural Law Review).

¹²² *U.S. State Department, DEA Meets With Hemp Industry: NAFTA Challenge to DEA Rule Likely to Continue; Oral Arguments in Federal Court April 8*, Vote Hemp, reprinted in GLOBAL HEMP NEWS DIGEST, volume 3, issue 13, at http://www.globalhemp.com/News/2002/March/us_state_department_dea.shtml (last visited on Jun. 23, 2002) (on file with San Joaquin Agricultural Law Review).

¹²³ *See id.* Notice of Arbitration, United Nations Commission on International Trade Law and NAFTA, Kenex and Government and the United States of America, Date of

member arbitration panel to determine if at least \$20 million compensation is due to Kenex for losses stemming from the DEA's attempt to ban industrial hemp seed food products.¹²⁴ As of April 28, 2003, no final decision has been made.

VIII. GOVERNOR SIGNED LEGISLATION IN STATES OTHER THAN CALIFORNIA

A. *Hawaii*

Hawaii is currently the only state the DEA has granted permits to grow industrial hemp.¹²⁵ The DEA granted the state of Hawaii a license to grow industrial hemp in 1999.¹²⁶ As discussed above, the security measures that were required and implemented in Hawaii, such as chain link fence with razor blade barbed wire and a twenty-four hour infrared security system surrounding the industrial hemp plots, would hinder commercial production due to their high cost.¹²⁷ In April 2002, Hawaii passed House Bill 57 that would extend until June 30, 2005, the time in which privately-funded industrial hemp research can be conducted in the State.¹²⁸

B. *Kentucky*

On March 20, 2001, the Governor of Kentucky signed House Bill 100 into law.¹²⁹ HB 100 allows the Kentucky Department of Agriculture to work with a selected Kentucky university or universities' agricultural research program to create an industrial hemp research program.¹³⁰ HB 100 further permits said universities to conduct research

issue August 2, 2002, available at <http://www.international-economic-law.org/US%20Notices/Kenex%20Notice%20of%20Arbitration.pdf> (last visited on April 30, 2002) (on file with San Joaquin Agricultural Law Review).

¹²⁴ ADAM EIDINGER, HEMP NAFTA SUIT BEGINS ARBITRATION PHASE, VOTE HEMP (August 2, 2002), at http://www.votehemp.com/PR/8-1-02_NAFTA_filed.html (last visited on Nov. 17, 2002) (on file with San Joaquin Agricultural Law Review).

¹²⁵ CANNABIS NEWS, *supra* note 48.

¹²⁶ CANNABIS NEWS, *supra* note 48.

¹²⁷ CANNABIS NEWS, *supra* note 48.

¹²⁸ H.B. 57, H.D. 2, St. Leg., (Haw. April 30, 2002), at <http://www.capitol.hawaii.gov/site1/docs/getstatus2.asp?billno=HB 57> (last visited on Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

¹²⁹ VOTE HEMP, *supra* 45.

¹³⁰ H.B. 100, Ky Leg. (March 20, 2002), at <http://www.lrc.state.ky.us/record/01rs/HB100htm>. (last visited on Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

on industrial hemp as an agricultural product in Kentucky.¹³¹ Due to the aforementioned controversy surrounding industrial hemp, implementation of any research has been very slow going.¹³² The only school to apply to the Council of Secondary Education for permission to experiment with industrial hemp is the University of Kentucky.¹³³

As Kentucky's tobacco crop dwindles due to the federal tobacco settlement, Kentucky farmers are looking to farm other crops. One farmer, whose family worked hundreds of acres for six generations, has lost nearly sixty percent of its tobacco production since the federal tobacco settlement has kicked in.¹³⁴

C. Maryland

On May 15, 2000, the Governor of Maryland signed into law House Bill 1250.¹³⁵ This bill provides for the establishment of a pilot program to study the growth and marketing of industrial hemp.¹³⁶

D. Montana

On April 23, 2001, the Governor of Montana signed into law Senate Bill 261.¹³⁷ SB 261 authorizes the production of industrial hemp as an agricultural crop in Montana.¹³⁸ SB 261 goes perhaps the farthest of any enacted state legislation in that it specifically provides for an ex-

¹³¹ See *id.*

¹³² Associated Press, *Colleges Reluctant To Start Growing Hemp*, THE COURIER-JOURNAL, (Louisville, KY) May 28, 2001, at <http://www.courier-journal.com/localnews/2001/05/28/ke052801s29748.htm> (last visited on Oct. 20, 2002) (on file with San Joaquin Agricultural Law Review).

¹³³ Joe Ward, *Canadian Company Plans to Sue U.S. Over Hemp Ban; Kentucky Groups See Agricultural Promise, say DEA is too Hard-line*, THE COURIER-JOURNAL (Louisville, KY), January 15, 2002, at Business 1E (on file with San Joaquin Agricultural Law Review).

¹³⁴ Marcus Green, *Raising Big Shrimp in Ponds Helps Some Kentucky Farmers; Replace Income Lost as Demand for Tobacco has Dried Up*, THE COURIER-JOURNAL (Louisville, KY), September 8, 2002, at Business 1E (on file with San Joaquin Agricultural Law Review).

¹³⁵ VOTE HEMP, *supra* 45.

¹³⁶ H.B. 1250, Ch 681, Md. Leg., Reg. Sess. (Md. May 18, 2000), at <http://mlis.state.md.us/2000rs/billfile/HB1250.htm> (last visited on Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

¹³⁷ S.B. 261, Leg. History (Mt. April 23, 2001), at http://laws.leg.state.mt.us/pls/laws01/LAW0203WRV.ActionQuery? P_BLTP_BILL_TYP_CD=SB&P_BILL_NO=261_BILL_DFT_NO=&Z_ACTION=Find&P_SBJ_DESCR=P_SBJT_SBJ_CD=&P_LST_NMI=&P_ENTY_ID_SEQ= (last visited on Oct. 20, 2002) (on file with San Joaquin Agricultural Law Review).

¹³⁸ S.B. 261 (Mt. 2001), at <http://data.opi.state.mt.us/bills/2001/billhtml/SB0261.htm> (last visited on Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

emption to criminal possession of dangerous drugs and criminal production or manufacture of dangerous drugs for industrial hemp production as an agricultural crop.¹³⁹ SB 261 goes even further because it requires the Department of Agriculture to request a change or waiver in federal law.¹⁴⁰ SB 261 limits the THC level in industrial hemp to three percent.¹⁴¹

E. West Virginia

On March 17, 2002, the Governor of West Virginia signed into law Senate Bill 447. The purpose of SB 447 is as follows:

The Legislature finds that the development and use of industrial hemp can serve to improve the state's economy and agricultural vitality and that the production of industrial hemp can be regulated so as not to interfere with the strict regulation of controlled substances in this state. The purpose of the industrial hemp development act is to promote the economy and agriculture by permitting the development of a regulated industrial hemp industry while maintaining strict control of marijuana.¹⁴²

SB 447 limits the THC level to one percent in industrial hemp grown for agricultural purposes in West Virginia.¹⁴³ SB 447, like Montana legislation SB 261, provides that the Commissioner of Agriculture will "promulgate rules . . . which are consistent with the United States Department of Justice and the DEA."¹⁴⁴ Also similar to Montana's SB 261, is SB 447's provision for the defense to prosecution for the possession or cultivation of industrial hemp if grown under the provisions of SB 447.¹⁴⁵

IX. LEGISLATION IN CALIFORNIA

A. California Democratic National Party Supports Industrial Hemp

On February 22, 1999, the Democratic Party of Orange County adopted a resolution in support of industrial hemp and on March 26-28, 1999, proposed that the California Democratic Party in Sacramento also adopt the resolution.¹⁴⁶ For the first time in recent history a major

¹³⁹ *See id.*

¹⁴⁰ *See id.*

¹⁴¹ S.B. 261, §2 (Mt. 2001), at <http://data.opi.state.mt.us/bills/2001/billhtml/SB0261.htm> (last visited Oct. 15, 2002) (on file with San Joaquin Agricultural Law Review).

¹⁴² S.B. 447, §19-12E-2 (W.Va. 2002).

¹⁴³ S.B. 447, §19-12E-4 (W.Va. 2002).

¹⁴⁴ S.B. 447, §19-12E-7(4) (W.Va. 2002).

¹⁴⁵ S.B. 447, §19-12E-9 (W.Va. 2002).

¹⁴⁶ DEMOCRATIC PARTY OF ORANGE COUNTY, RESOLUTION ADOPTED BY THE DEMO-

political party embraced industrial hemp when the California Democratic National Party adopted the resolution in support of industrial hemp.¹⁴⁷

B. HR 32 - 1999-2000

On September 10, 1999, House Resolution 32 was adopted by the California Assembly by a vote of forty-one to thirty.¹⁴⁸ Assemblywoman Virginia Strom-Martin (Democrat - Duncan Mills) was the sponsor of House Resolution 32.

C. AB 448 - 2001

The passing of HR 32 led to the creation of Assembly Bill 448 which failed by a vote of 6 to 4 in the Assembly Agriculture Committee in May 2001.¹⁴⁹ AB 448 was a proposed act to “add Division 26 (commencing with Section 81100) to the Food and Agricultural Code, relating to industrial hemp.”¹⁵⁰ Synopsis of AB 448: “Provides that, notwithstanding any other provision of state law, and in conformance with any applicable provision of federal law, any person who meets specified requirements and is issued a license by the Secretary of Food and Agriculture shall be authorized to plant, grow, harvest, possess, process, sell, or buy industrial hemp for commercial purposes. Defines ‘industrial hemp’.”¹⁵¹ Industrial hemp is defined as “all parts and varieties of the plant *cannabis sativa*, cultivated or possessed by a licensed grower, whether growing or not, that contain a tetrahydrocannabinol (THC) concentration of three tenths of one percent or less by weight.”¹⁵² AB 448 specifically states that industrial hemp does not include marijuana.¹⁵³ The bill went on to have two revisions but failed

CRATIC PARTY OF ORANGE COUNTY: SUPPORT OF INDUSTRIAL HEMP, *reprinted in* CAMPAIGN FOR AGRICULTURAL AND INDUSTRIAL RENEWAL, at <http://www.cair.net/doc.php3.res-pol/democrat-orangecounty> (last visited Jun. 24, 2002) (on file with San Joaquin Agricultural Law Review).

¹⁴⁷ JOHN E. DVORAK, *USA Hemp Update*, Hempology.org - The Study of Hemp, at <http://hempology.org/JD%27S%20ARTICLES/HEMP%20NEWS/SEPT99.html> (last visited on Jul. 20, 2000) (on file with San Joaquin Agricultural Law Review).

¹⁴⁸ E-mail from Kasey Schmike, Resources Consultant, Budget Subcommittee #3, to Strom-Martin. (August 2, 2000) (on file with the author).

¹⁴⁹ A.B. 448, Bill Status (Cal. Assy. 2001), at http://www.leginfo.ca.gov/pub/bill/asm/ab_0401-0450/ab_448_bil_20010521_000006_asm_comm.html (last visited on Jun. 17, 2001) (on file with San Joaquin Agricultural Law Review).

¹⁵⁰ A.B. 448, 2001 Assem., 2001-02 Reg. Sess. (Cal. 2001).

¹⁵¹ *See id.* § 1105.

¹⁵² *See id.*

¹⁵³ *See id.* § 81100(d).

passage in the Assembly on May 21, 2001.¹⁵⁴

D. AB 388 - 2002

Assembly Bill 388 was the third bill Strom-Martin introduced with regard to industrial hemp. AB 388 was first introduced to the Assembly on February 20, 2001.¹⁵⁵ In the fall of 2001, it was in the Senate Agriculture and Water Resources Committee.¹⁵⁶ This bill was an act to add Article 9.5 (commencing with Section 590) to Chapter 3 of Part 1 of Division 1 of the Food and Agricultural Code, relating to specialty fiber crops.¹⁵⁷ AB 388 provides for University of California to conduct an assessment of economic opportunities available through the production of specialty or alternative fiber crops.¹⁵⁸ Basically, the purpose of AB 388 is to allow specialty fiber crops, such as industrial hemp, research to be conducted in order to further conduct economic and agricultural viability studies of industrial hemp in California. This version of the industrial hemp bill was expected to get the ball rolling with regard to industrial hemp being cultivated in California and having a high degree of government control over its growth in the process. The theory is that if there is a high degree of government control the public health and welfare will be protected and the production of marijuana will be curtailed.

California Assembly Bill 388 reads as follows:

An act to add Article 9.5 (commencing with Section 590) to Chapter 3 of Part 1 of Division 1 of the Food and Agricultural Code, relating to specialty fiber crops.

LEGISLATIVE COUNSEL'S DIGEST

AB 388, Strom-Martin. Specialty fiber crops.

Existing law provides for the University of California to conduct various studies, pilot demonstration projects, and programs designed to provide information and support to the Department of Food and Agriculture and California's agricultural community.

This bill would request that the University of California conduct an assessment of economic opportunities available through the production of specialty or alternative fiber crops. This bill would request the University of California to report its finding to the Legislature by January 1, 2004.

The people of the State of California do enact as follows:

¹⁵⁴ A.B. 448.

¹⁵⁵ A.B. 388 Bill History, at http://www.leginfo.ca.gov/pub/bill/asm/ab_0351-0400/ab_388_bill_20020915_history.html (last visited Sept. 21, 2002) (on file with San Joaquin Agricultural Law Review).

¹⁵⁶ See *id.*

¹⁵⁷ A.B. 388 as submitted to Governor Gray Davis (Cal. 2002), at <http://www.leginfo.ca.gov> (on file with San Joaquin Agricultural Law Review).

¹⁵⁸ See *id.*

SECTION 1. Article 9.5 (commencing with Section 590) is added to Chapter 3 of Part 1 of Division 1 of the Food and Agricultural Code, to read:

Article 9.5. Specialty or Alternative Fiber Crops

590. (a) The University of California is requested to conduct an assessment of economic opportunities available through the production of specialty or alternative fiber crops including industrial hemp, kenaf, and flax by extrapolating data on productivity and production costs available from trials conducted in other states and countries to California's conditions. The assessment shall include, but not be limited to, the following:

- (1) An estimation of market demand and likely crop prices.
- (2) Identification of potential barriers to profitability.
- (3) Identification of production, legal, processing, and marketing issues that would need to be addressed in future demonstration research or pilot commercial trials.

(b) Not later than January 1, 2004, the University of California is requested to report its findings to the Assembly Committee on Agriculture, and the Senate Committee on Agriculture and Water Resources.¹⁵⁹

Assembly Bill 388 passed the house on June 11, 2002, by a six to two vote, with action to amend, and re-refer to the Committee.¹⁶⁰ Interestingly enough, AB 448 had a topic listing of "Industrial Hemp: License for Commercial Purposes" when it went for vote. AB 388 had the topic listing as "Specialty Fiber Crops". Perhaps one reason that 388 passed was that the words 'industrial hemp' were not in the title, as well as the fact that it is allowing industrial hemp to be grown for research and study purposes only.

Re-referral hearing date was set for June 24, 2002, and was placed on second reading file pursuant to Senate Rule 28.8.¹⁶¹ On June 25, 2002, the bill was read a second time and was then submitted for a third reading.¹⁶² On August 8, 2002, AB 388 went to a vote in the Senate and passed 23 to 10.¹⁶³ On August 15, 2002, AB 388 was read for the third time and went to an Assembly vote.¹⁶⁴ The Assembly passed the bill forty-five to thirty.¹⁶⁵ On August 21, 2002, at 3:00 PM AB 388 was enrolled and sent to the Governor with the title of : "An act to add Article 9.5 (commencing with Section 590) to Chapter 3 of Part 1 of Division 1 of the Food and Agricultural Code, relating to specialty fiber crops."¹⁶⁶ On September 15, 2002, Governor Gray Da-

¹⁵⁹ *See id.*

¹⁶⁰ A.B. 388, Bill History, (Cal. 2002).

¹⁶¹ A.B. 388, Bill History, (Cal. 2002).

¹⁶² A.B. 388, Bill History, (Cal. 2002).

¹⁶³ A.B. 388, Bill History, (Cal. 2002).

¹⁶⁴ A.B. 388, Bill History, (Cal. 2002).

¹⁶⁵ A.B. 388, Bill History, (Cal. 2002).

¹⁶⁶ A.B. 388, Bill History, (Cal. 2002).

vis vetoed Assembly Bill 388.¹⁶⁷

X. CONCLUSION

Assembly Bill 388 was the first step to the production of industrial hemp in California. If the Governor had signed AB 388, California would have been at the forefront of research of industrial hemp as a viable agricultural crop. The biggest obstacles are the DEA and the CSA due to the Controlled Substance Act. Perhaps if the California legislation had been written similar to West Virginia's and Montana's with specific acceptable levels of THC, the governor would have been more inclined to sign it. Additionally, because universities and private parties are hesitant to grow a crop that the Federal Government deems illegal, the California legislation should provide an exemption to criminal prosecution if the industrial hemp is grown under the guidelines set forth in the legislation. If research can show the levels of THC in industrial hemp is trace or non-existent and that the growth of industrial hemp can actually sabotage the growth of marijuana, then the future of industrial hemp, not only in California, but in the entire United States, will be positive.

Furthermore, it appears there is the proverbial "catch-22" where the CSA is concerned. There does not appear to be any attempt to change the CSA without first passing state legislation authorizing growing industrial hemp for research. But the research is necessary so that scientific evidence can be submitted to the DEA and the Department of Health and Human Services (HHS). The DEA and the HHS require the research in order to change the CSA.

There has not been any challenge to change the CSA itself. Any industrial hemp legislation has been done at the state level. There has not been any at the federal level. An avenue to pursue would be to change the CSA so that it would not include industrial hemp by way of changing the CSA to list a minimum level of THC required to constitute industrial hemp or marijuana as being illegal. If this change could be made a major obstacle to industrial hemp legislation in the various states would be gone. Any growing and research done on industrial hemp which had THC levels below the minimum would not be deemed illegal. Thereby paving the way for more research to be done on the economic viability of industrial hemp in the U.S.

TARA CHRISTINE BRADY

¹⁶⁷ A.B. 388 Bill Status, (Cal. 2002), at http://www.leginfo.ca.gov/pub/bill/asm/ab_0351-0400/ab_388_bill_20020917_status.html (last visited on Sept. 21, 2002) (on file with San Joaquin Agricultural Law Review).