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The Demonized Seed

As a Recreational Drug, Industrial Hemp Packs the Same Wallop as Zucchini. So Why Does the U.S. Drug Enforcement Agency Continue to Deny America This Potent Resource? Call It Reefer Madness.

By Lee Green Special to The Times

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On an otherwise unremarkable day nearly 30 years ago, in a San Fernando Valley head shop, an ordinary man on LSD had an epiphany. The one thing that could save the world, it came to him, was hemp.

Thunderbolts come cheap on LSD, but this one looked good to Jack Herer even after his head cleared. The world needed relief from its addiction to oil and petrochemicals. From deforestation and malnutrition. From dirty fuels, sooty air, exhausted soils and pesticides. The extraordinary hemp plant could solve all those problems. Herer was sure of it. Thus began his journey as a heralding prophet.

For 12 years, Herer expanded his knowledge of hemp, burrowing deep into U.S. government archives and writing about his discoveries in alternative newspapers and magazines. He self-published "The Emperor Wears No Clothes," an impassioned rant for the utilitarian virtues of cannabis sativa, the ancient species that gives us both hemp and marijuana, which are genetically distinct. Experts agree that in contrast to marijuana, cannabis hemp—or industrial hemp as it is often called—has no drug characteristics.

Herer's book, quirky but substantive enough to be taken seriously, inspired thousands and became an underground classic. The author has issued 16 printings over the years, revising and updating his material 11 times. Today, Herer is widely credited with launching the modern hemp movement, a persistent campaign by an eclectic coalition of environmentalists, legislators, rights activists, farmers, scientists, entrepreneurs and others to end the maligned plant's banishment and tap its potential as a natural resource.

Despite the book's over-the-top exuberance and occasional leaps of syllogistic fancy—or more likely because of them—it has sold 665,000 copies in seven languages. Or is it 635,000 copies in eight languages? The prophet isn't sure as he pads across the abused gray carpet of his two-bedroom Van Nuys apartment, a flower-child domicile to which the benefits of even the most rudimentary housekeeping remain foreign. Beard unkempt, hair askew, Herer matches the décor. "How can they make the one thing that can save the world illegal?" he asks, no less astonished by this paradox now than he was three decades ago.

Herer's question is essentially the same one hemp advocates in the U.S. have been asking with mounting consternation for the past decade. They are asking it now with new urgency in response to the Drug Enforcement Agency's latest foray against hemp, an attempt since 2001 to ban all food products containing even a trace of hemp, even though the foods are not psychoactive. The California-based Hemp Industries Assn. and seven companies that make or sell hemp products won a reprieve for the industry in June, when the U.S. 9th Circuit Court of Appeals ruled the DEA's efforts "procedurally invalid." But the matter remains in litigation, and the hemp issue continues to confound policymakers.

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California's Legislature passed a bill on behalf of hemp not long ago that, in its final, watered-down form, could hardly have been less ambitious. Assembly Bill 388, approved in 2002 by wide margins in both chambers, merely requested that the University of California assess the economic opportunities associated with several alternative fiber crops. But because one of the crops was cannabis hemp, then-Gov. Gray Davis vetoed the measure, leaving California uncharacteristically behind the curve on a progressive issue that many other states and nations have embraced in recent years.

If all or even most of the oft-cited claims for hemp are true, the substance may know no earthly equal among nontoxic renewable resources. If only half the claims are true, hemp's potential as a commercial wellspring and a salve to creeping eco-damage is still immense. At worst it is more useful and diverse than most agricultural crops. Yet from the 1930s through the 1980s, many countries, influenced by U.S. policies and persuasion, banished cannabis from their farmlands. Not just marijuana, but all cannabis—the baby, the bath water, all of it.

Confronted with declining demand for their tobacco, farmers in Kentucky, where hemp was the state's largest cash crop until 1915, argue that commercial hemp could help save their farms. California doesn't face that particular dilemma but, in theory, hemp agriculture eventually could bestow innumerable benefits on the state, from tax revenues to healthier farm soils and reductions in forest logging for wood and paper. Environmentally benign hemp crops could replace at least some of California's 1 million acres of water-intensive and chemical-laden cotton.

Since taking root in the early 1990s, the hemp movement has made great progress around the world. Unfenced fields of the tall, cane-like plants flourish in Austria, Italy, Portugal, Ireland—the entire European Union. Great Britain reintroduced the crop in 1993. Germany legalized it in 1996. Australia followed suit two years later, as did Canada. Among the world's major industrial democracies, only the United States still forbids hemp farming. If an American farmer were to fill a field with this drugless crop, the government would consider him a felon. For selling his harvest he would be guilty of trafficking and would face a fine of as much as \$4 million and a prison sentence of 10 years to life. Provided, of course, it is his first offense.

This for a crop as harmless as rutabaga.

Prejudiced by nearly 70 years of government and media propaganda against all things cannabis, most Americans have no idea that hemp crops once flourished from Virginia to California. Prized for thousands of years for its fiber, the plant rode commerce from Asia to Europe in the first millennium and sailed to the New World in the second. American colonists grew it in the early 1600s. Two centuries later, hemp was the nation's third-largest agricultural commodity. The U.S. census of 1850 counted 8,327 hemp plantations, and those were just the largest ones. California farmers cultivated it at least into the 1930s.

If all this seems hazy to the American mind, it's because cannabis hemp slowly vanished from our farms and our cultural memory. The abolition of slavery following the Civil War put hemp at a competitive disadvantage because its harvest and processing required intensive labor. The industry slowly declined to the brink of extinction as cotton captured the fiber market, but by the mid-1930s new machinery could efficiently extract hemp's fibers from its stalk, and the plant was poised for economic recovery. The February 1938 issue of Popular Mechanics hailed it as the "New Billion-Dollar Crop," while a concurrent issue of Mechanical Engineering deemed hemp "The Most Profitable and Desirable Crop That Can Be Grown."

The trail grows murkier here, but the crucial element of this buried history lies beyond dispute: In 1935, the U.S. government—in particular the Bureau of Narcotics (part of the Treasury Department and a predecessor to the present-day U.S. Drug Enforcement Agency) and its chief, Harry J. Anslinger—embarked on an inflammatory campaign to convince the public of the evils of marijuana.

The Hearst newspapers had acquired a taste for sensationalistic headlines and lurid stories about Mexicans and "marijuana-crazed Negroes" assaulting, raping and murdering whites. It was all nonsense, but Anslinger shamelessly parroted these myths and concocted his own in congressional testimony and in speeches and articles, branding marijuana the "worst evil of all." In a 1937 magazine piece titled "Marijuana, the Assassin of Youth," he blamed suicides and "degenerate sex attacks" on the drug.

"Marijuana is the unknown quantity among narcotics," he wrote. "No one knows, when he smokes it, whether he will become a philosopher, a joyous reveler, a mad insensate, or a murderer." Prior to such calculated misstatements, few Americans had smoked marijuana. Most had never even heard of it.

The government's motives for its attack on marijuana remain unclear. Researchers have proffered theories ranging from collusion with corporations threatened by hemp's commercial potential to moralistic fervor and bureaucratic thirst for domain once Prohibition ended in 1933. Regardless of motives, the ensuing stigmatization, red tape, state and federal controls, punitive taxes and misconceptions about marijuana's nature and its relationship to hemp doomed any chance that hemp would be resurrected as an agricultural crop. Fewer and fewer farmers were willing to grow it, and manufacturers sought other resources for rope, twine, nets, sailcloth, textiles, paint and other fiber and oil products for which hemp is well suited. The government briefly reversed course during World War II, launching an aggressive "Hemp for Victory" campaign that implored U.S. farmers to grow the crop to alleviate wartime materials shortages. But after the war, hemp again faded into oblivion.

In 1957, a Wisconsin farmer harvested the last legal commercial hemp crop in America. The government's outright prohibition of the crop, a nonissue until interest in hemp renewed in the early 1990s, was formalized in 1971 with implementation of the Controlled Substances Act, the centerpiece of U.S. drug policy.

Today's reawakened market faces an uphill battle in the U.S., not just because source materials can't be grown here but because decades of enforced hibernation have left the industry light-years behind in technology, infrastructure, research and development, marketing and public acceptance. Hemp Industries Assn., a consortium of about 250 importers, manufacturers, wholesalers and retailers, says that in the past decade the North American market has gone from virtually nothing to an estimated \$200 million. Not bad under the circumstances, but still a pittance for a plant that could clothe and house us, build and fuel our cars, enhance our diets and keep the front gate from squeaking.

Hemp has attracted many passionate advocates over the years simply because of its relation to the illegal drug. But a glance at hemp's résumé makes it clear why a mere vegetable could inspire a devout constituency that transcends the counterculture. Hemp's products, its proponents insist, are interchangeable with those from timber or petroleum. The fiber volume supplied by trees that take 30 years to grow can be harvested from hemp just three or four months after the seeds go into the ground—and on half the land. Hemp requires no herbicides, little or no pesticide, and it grows faster than almost any other plant: from seed to 10 feet or taller in just a few months. Unlike most crops, it actually enriches rather than depletes the soil. As a textile it has proven stronger than cotton, warmer than linen, comfortable to wear and durable. As a building material, its extraordinarily long fibers test stronger than wood or concrete. As a nutrient it contains one of nature's most perfectly balanced oils, high in protein, richer in vitamin E than soy and possessing all eight essential fatty acids.

But because hemp contains traces of the chemical intoxicant known as tetrahydrocannabinol, or THC, the U.S. government lists cannabis as a Schedule I drug, a category reserved for the most dangerous and medically useless drugs. Methamphetamine, PCP and cocaine don't warrant that classification, but hemp does, right alongside heroin and LSD. The word hemp doesn't actually appear on the list, but the drug-war establishment, particularly the instrumental DEA, behaves as though it does by recognizing no distinction between varieties of cannabis.

The DEA sometimes seems bent on fomenting confusion. Two years ago, during his brief tenure as head of the agency, Asa Hutchinson stated that "many Americans do not know that hemp and marijuana are both parts of the same plant and that hemp cannot be produced without producing marijuana." One reason many Americans do not know this is because it's not true. That's like saying beagles and collies are both parts of the same dog and that beagles cannot be produced without producing collies.

Unmoved by logic, accepted nomenclature or the realities of plant genetics, the DEA insists that all cannabis is marijuana. Does the agency also consider industrial hemp grown legally outside the U.S. to be marijuana? "Yes, we do," says Frank Sapienza, the agency's chief of drug and chemical evaluation. Since more than 30 other countries manage to distinguish between marijuana and industrial hemp and allow their farmers to grow hemp, one wonders what they know that the U.S. doesn't. "I'm not going to comment on what other countries do," Sapienza says.

The DEA argues that the revival of hemp farming in the U.S. will somehow increase the availability, use and public acceptance of marijuana. Hemp activists dismiss this argument out of hand, as does one of their most formidable allies, former CIA Director James R. Woolsey. Hailing from the political right, Woolsey vehemently opposes any loosening of America's marijuana laws. But in his experience, he says, most people, once they become informed about hemp, see no justification for America's prohibition against the crop. "They understand that there's not been any increase in use of marijuana in, say, Europe or Canada as a result of industrial hemp cultivation. It's one of those issues in which there are no

real substantive arguments on the other side."

Sapienza points out, as DEA officials often do, that the agency merely enforces the law. In truth, though, the DEA also interprets the law, creates exemptions to it and makes judgments that determine how statutory abstractions translate to on-the-ground realities. A case in point is the agency's declaration in late 2001 that all edible hemp products—cereals, health bars, sodas, salad oils and the like, products sold in the U.S. for years—are illegal. Hundreds of retailers were given a few months to get such items off their shelves. If a federal court hadn't intervened, a multimillion-dollar industry would have been wiped out by a DEA decision to reinterpret existing law. For now, edible hemp products remain legal and commercially available in the U.S., pending a 9th Circuit court ruling expected sometime this year.

Despite hemp's stigma, state legislatures in recent years have been surprisingly bold in their willingness to address the issue. Though Davis vetoed California's 2002 bill requesting research, in 1999 both the state Assembly and the California Democratic Party approved unambiguous resolutions supporting hemp commercialization. Twelve other states have passed similar resolutions or bills. Since 1997, North Dakota, Minnesota, Montana, West Virginia and Maryland have legalized cultivation, and in 2000, the National Conference of State Legislatures passed a resolution urging the federal government to clear the barriers to domestic hemp production. But entrenched federal opposition renders all these political machinations meaningless beyond symbolic value.

The DEA, which is within the Justice Department, justifies its unbending posture on hemp with assertions that legal hemp agriculture would provide camouflage for illegal pot growers. From the air or at a distance, the agency says, industrial hemp and marijuana are virtually indistinguishable.

"The DEA is wrong," says Indiana University professor emeritus Paul Mahlberg, a plant cell biologist who has studied cannabis for more than 25 years and is conducting research on 150 different strains, both hemp and marijuana. "Hemp plants are tall, 8 to 20 feet. Marijuana plants in the field are shorter." And cultivated hemp grows a slender, nearly leafless lower stem, whereas marijuana strains are bred to be "Christmas tree-like in appearance," with abundant leaves, glands and flowers in which are stored the intoxicating THC.

Marijuana's bushiness requires far more space per plant, says John Roulac, a compost expert and owner of the Sebastopol, Calif., health-food company Nutiva, which imports sterilized hemp seed from Canada for nutrition bars. From the ground or the air, a hemp crop looks significantly denser than a marijuana crop. "In a square yard, you might grow one or two marijuana plants, whereas with hemp you might have 100 plants," Roulac says.

The argument about physical appearance should be a nonissue, hemp advocates say, given that the last place a marijuana grower would want to locate his drug crop is in or near a hemp field. The consensus among cannabis experts, supported by the logic of plant genetics and field studies, is that cross-pollination would sabotage the pot grower's efforts, causing his next generation of marijuana to be only half as potent. This genetic convenience delights hard-line anti-marijuana types such as Woolsey, the former CIA chief. He was skeptical about pro-hemp arguments when he first heard them. "But then I got into the science of it a bit, and it was quite clear to me that not only is [hemp cultivation] a good idea, it's a major headache for marijuana [growers]," he says with an impish laugh. If it were up to Woolsey, tall, lush fields of industrial hemp would be greening America, filling the sky with airborne pollen and frustrating marijuana growers everywhere.

The DEA flatly rejects the idea that a hemp field would degrade any marijuana in the vicinity. A spokeswoman for the agency recently maintained that "it cannot be said with any level of certainty that a cannabis plant of relatively low THC content will necessarily reduce the THC content of other plants grown in close proximity."

Hemp may be absurdly intertwined with marijuana, but the DEA could ease restrictions on hemp simply by removing marijuana from its list of most dangerous drugs. That may sound radical to a public conditioned to believe marijuana is as dangerous as heroin, but Mitch Earleywine, a drug addiction expert and associate professor of clinical psychology at USC, doesn't think so. In reviewing about 500 marijuana studies for his recent book "Understanding Marijuana: A New Look at the Scientific Evidence," Earleywine found little or no scientific evidence for any of the most prominent allegations against the drug, least of all that it causes violent or aggressive behavior, decreases motivation or acts as a gateway to harder drugs. It is addictive, he says, but "it's nowhere near the caliber of, say, heroin, alcohol, nicotine, caffeine, any of those drugs." Should it be a Schedule I controlled substance? "In all honesty, the idea that it has to be scheduled at all might be up for question," he says. "Americans are just too freaked out about [marijuana]."

One of the most persistent charges against the hemp lobby is that it's really just a marijuana movement in disguise.

"Let's not play dumb here," says America's reigning drug czar, John P. Walters of the White House Office of National Drug Control Policy. "It is no coincidence that proponents of marijuana have invested a great deal of time and money in an effort to expand hemp cultivation. They do this not, one presumes, from any special interest in industrial fiber resources, but from an earnest belief that more widespread domestic hemp cultivation will make the cultivation and distribution of marijuana easier, and that a legal hemp industry would frustrate law enforcement efforts against marijuana trafficking."

Unquestionably, the hemp and marijuana crowds overlap. Most pro-marijuana people think American farmers should be able to grow hemp, and many in the hemp movement condemn America's war on drugs and its marijuana laws. But the government's claim that virtually everyone pressing for hemp cultivation has a hidden agenda amounts to a sort of psychotropic McCarthyism. Eric Steenstra represents a Hungarian hemp textile producer and runs an Internet-based advocacy organization called Vote Hemp. "Industrial hemp is a peripheral issue to the drug war, but it has gotten caught up in it," he says. "It's frustrating. You can't discount this movement as being just a bunch of stoned hippies following the Grateful Dead."

Quips former Kentucky Gov. Louie B. Nunn: "Should we listen when Canada's Royal Mounted Police report no problems regulating hemp, or are they also working to legalize marijuana?"

Yes, there is Woody Harrelson, but the class photo also includes Nunn, Ralph Nader, Hugh Downs, Ted Turner and Woolsey, who sits on the board of directors of the North American Industrial Hemp Council, an advocacy organization founded in 1995.

"They've tried to tie us to the marijuana movement all along, and they can't get it done," says Erwin "Bud" Sholts, chair of the hemp council. Sholts is a 69-year-old farmer whose career as an alternative crop researcher for the state of Wisconsin convinced him America should consider hemp a valuable resource, not an outlaw crop. "If the rest of the world wants to make marijuana legal, that's fine, but we're interested in the agriculture crop."

When Jack Herer began his quest to emancipate hemp, he just assumed that everyone would find the essential facts about the plant's qualities so compelling that the battle would be won in six months—two years, tops. That was 29 years ago.

One of the many people intrigued by Herer's book was Dave West, a Midwest plant breeder with a doctorate in breeding and genetics. His curiosity about hemp had already been piqued by something he witnessed in the mid-1980s as he toiled one sweltering day in a Wisconsin cornfield. A helicopter suddenly appeared low in the sky, then hovered over an adjacent field while several men rappelled to the ground. It was a drug-enforcement operation going after wild marijuana. "Which, as a plant breeder and as somebody who grew up in Wisconsin, I knew was preposterous," West recalls. "I knew this was feral hemp and nobody wanted it, and that's why it was growing as a weed out there and nobody was picking it."

Since 1979, at a cost of millions of dollars annually (\$13.5 million in 2002), the DEA has orchestrated an ambitious campaign of "marijuana eradication." The scene West observed in the cornfield was, and still is, a common one: a marijuana eradication team eradicating not marijuana but harmless feral hemp, often called "ditchweed." Escaped remnants from commercial hemp harvests of long ago still grow along railroad tracks and fence lines and in fields and culverts throughout America's heartland. Justice Department statistics show that year after year, as much as 98% of the "wild marijuana" the DEA pulls up is actually ditchweed.

"Here was an agency of the government that was selling this line"—calling ditchweed "marijuana"—"that was obviously a perversion of reality," West says. "This is a genetic resource issue. Instead of collecting, preserving and working with it, we're sending the DEA to rappel down from helicopters to pull it out and destroy it wherever they can find it."

From July 1999 until recently, West presided over a state-sanctioned, corporate-funded quarter-acre test plot of cannabis on the Hawaiian island of Oahu. He possessed the only DEA license to research cannabis for industrial use. To meet DEA requirements, he fortified his site with better security than you'd find at a typical Russian nuclear stockpile. Ten-foot-high fencing topped with barbed wire, an alarm siren, infrared beam perimeter. You'd think he was manufacturing enriched plutonium.

For nearly four years West worked to develop a strain of cannabis ideal for cultivation as industrial hemp in the United States. Funding proved difficult given that investors and grants don't tend to find their way to research for a crop that has been illegal in this country for 33 years. But when he shut down the project last fall, West says, his decision wasn't prompted so much by money woes as by the federal government's "strong and entrenched opposition to hemp." In a written statement he handed to DEA agents Sept. 30, the day he walked off the property for good, he left no doubt about his feelings. "I quit in protest," his statement said.

A few months earlier, he had begun girding himself for the unpleasant task of eliminating the very thing his labors had created. "When I pull the plug," he lamented with wry sarcasm, "the DEA will require that the seed be destroyed. It is, after all a narcotic with no known redeeming use here on this flat earth."

The DEA agents did indeed require West to destroy the seed. The government shows no signs that it will allow industrial hemp to be grown in the United States anytime soon.

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A Cannabis Primer

Because they're often used interchangeably, the terms cannabis, hemp and marijuana can be confusing. While cannabis encompasses all varieties of the species, hemp, often called industrial hemp, has come to mean a few dozen nonintoxicating varieties of cannabis bred and cultivated for commercial ends: clothing, paper, food, biofuels, biodegradable plastic, building materials, automobile parts, insulators, paints, lubricants—the list of possibilities goes on.

Marijuana, on the other hand, refers strictly to the cannabis drug plant, of which there exist endless varieties differentiated by the amount of intoxicating substances they contain, notably tetrahydrocannabinol (THC). Today virtually all strains of cannabis are the product of human alteration, manipulated by scientists, breeders and drug dealers to increase or decrease THC content and other characteristics to suit their purposes.

Mitch Earleywine, a drug addiction expert at USC, says marijuana typically contains a THC concentration of 2% to 5%, and some strains have measured as much as 22% or higher. By contrast, industrial hemp has been reduced by breeders to 0.3%, a trifle that authorities agree produces no psychoactive effect.

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The Myth of Hemp Licensing

If you want to apply for a license to grow commercial hemp, you must solicit the U.S. Drug Enforcement Agency. The DEA consistently claims that no prohibition on hemp farming exists in this country, as if to suggest that all one need do is file the proper paperwork and make a reasonable case.

"We don't have any preconceived notions that we are or are not going to approve or deny any application," says Frank Sapienza, the DEA's chief of drug and chemical evaluation, implying that every case is a judgment call that could go either way.

Nonetheless, the agency has rejected every application it has ever received. How many? There's no telling—literally. The agency will say only that "the DEA does not have records of the number of applications received for such activities"—an extraordinary claim from an organization that documents every marijuana plant that it and cooperating law enforcement agencies uproot from U.S. soil. (In 2001, the total was 3,304,760 plants, though nearly all of them were feral hemp, or "ditchweed," not marijuana.)

Any denial that there is a U.S. hemp prohibition contradicts a salient fact: The DEA has never approved an application for

commercial hemp cultivation.

Lee Green last wrote for the magazine about secular ethicist Michael Josephson.

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