## Hemp: The Misunderstood Crop

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Hemp is a widely misunderstood resource. One tends to immediately think of "marijuana" when they hear the word "hemp." Because marijuana is still illegal in many states that hemp is legal in, people can easily confuse the two plants. Due to this misconception hemp and marijuana have almost become synonymous in the minds of many. To reduce misconceptions, this essay will provide an informative corrective of hemp, highlighting its history and the purposes it can serve. That is, research on both the legality of hemp and its growing practices will be presented. Additionally, the actual science behind the plant and its byproducts will be shared. The primary conclusion is that hemp is a useful natural resource with a misunderstood past.

Before beginning to share about this topic, and in the spirit of full disclosure, it is important to note that the author worked on a farm growing hemp. During this experience, the crop was grown from clones to fully mature plants, to being shucked and processed.

What makes hemp different from marijuana? Both plants are considered to be examples of "Cannabis Sativa" but they have a key biological difference. They both naturally produce tetrahydrocannabinol or (THC) as well as producing cannabidiol or (CBD). Despite this, both plants have dramatically different ratios of these components. THC is essentially the plant's version of adrenaline and is also what causes a psy-

choactive response when ingested. CBD is a chemical compound in the cannabis plant that has shown to have medical benefits to humans. According to hemp industry analysis Mari Kane, hemp naturally produces high CBD while maintaining low THC production. Whereas marijuana produces a low level of CBD while producing heavy amounts of THC.

A brief history further explains the distinguish-meant of hemp from marijuana. From the founding of the United States to modern day, the way hemp has been viewed and considered has changed numerous times. During the colonial era, hemp was an unregulated and standard crop for farmers all over the United States. According to Mari Kane, colonial era, "Thomas Jefferson, then ambassador to France, smuggled illegally obtained Chinese hemp seeds to the colonies. Those same seeds were eventually hybridized to create the famous Kentucky Hemp strain." Kane later mentions that hemp was a "valued commodity" from the 1800s up until the 1900s.

It was not until the first half of the 20th century that hemp transformed from a cash crop to a dangerous crop. Unfortunately, Hollywood racialized the crop with the 1936 Reefer Madness, a movie that made hemp and marijuana gain a bad reputation (Kane). Although Reefer Madness aimed to put marijuana in a bad light, hemp was also affected due to the fact that they are both members of the cannabis family. Despite

the campaign against marijuana and hemp, there was still advocacy for the potential benefits of the plants. In 1937, the magazine Popular Mechanics declared hemp to be the "New Billion Dollar Crop because of new developments in fiber technology." While hemp was making an agricultural boom, the first proposal for a marijuana prohibition tax act was put forth. Although this tax act was protested by the American Medical Association, the National Oilseed Institute and the birdseed industry, marijuana was made illegal and hemp became heavily taxed (Kane). Along with paying a tax, farmers had to register with their prospective state as a hemp farmer.

World War II brought many changes to the United States, some of which would influence the agricultural community. According to Ben Dronkers, director of the "Hash, Marihuana & Hemp Museum" midway through the war in 1942 there was the "Hemp for Victory" war campaign. This campaign made Hemp a valuable commodity for the United States military. There were posters as well as video propaganda that was put out by the Department of Agriculture. This campaign got farmers growing hemp for the military to be processed and made into cargo nets and rope. After the war when hemp was no longer needed in large volumes, there was a greater supply than demand for the crop. In 1957, the last major hemp harvest took place before the crop became no longer profitable.

Years later, the Controlled Substance Act of 1970 declared that all cannabis varieties including hemp would become schedule one controlled substance. In 1997, there were re-education programs discussing the difference between hemp and marijuana in attempts to clear up the misconceptions surrounding the Cannabis strains. Starting in the first decade of the 2000s until the 2014 Farm Bill, farmers and activists in Virginia pushed to legalize the growing, pro-

cessing and distribution of Hemp and CBD products. Since the Farm Bill, the growing of hemp has been a legal and rapidly growing business in Virginia, along with several other states across the country.

Since 2014 and prior to the criminalization of Hemp, the crop was used as a natural resource to create a variety of commodities. According to Ben Dronkers, "Industrial Hemp is one of the oldest cultivated crops on earth." Hemp is known for its fibrous nature which allows some of the strongest weather resistant ropes to be made out of it. Hemp can also be used for making- paper, textiles, clothing, biofuel, animal feed, concrete, rope and much more. In his article "The Forgotten History of Hemp" Jack Herer, also known as "The Hemperor" says that "ninety percent of all ships' sails from at least the fifth century BC until long after the invention of steam engines in the mid to late 19th century were made from hemp" (Herer). Herer also said that "Logs and Bibles were generally made of hemp fiber paper from the time of Columbus in the 15 century to early 1900s in western Europe and America" (Herer). In the recent years, the FDA has approved several drugs made from CBD harvested from legally grown and processed Hemp. The FDA first of these approved drugs was Epidiolex, a medication for epilepsy (Stern).

As mentioned in the introduction, the author worked on a hemp farm where hemp is grown for use in medical products. After harvest, the hemp is shucked and the bio-mass sent to a processor in order to extract the CBD oil. The extracted oils and byproducts were then used to make a variety of products such as CBD drops and gummies. This paper has discussed the difference between hemp and marijuana, given an overview of some key historical events involving hemp and covered some of the many uses of the plant. Hopefully, this

paper has been informative and helped to clear up some of the common misconcep-

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