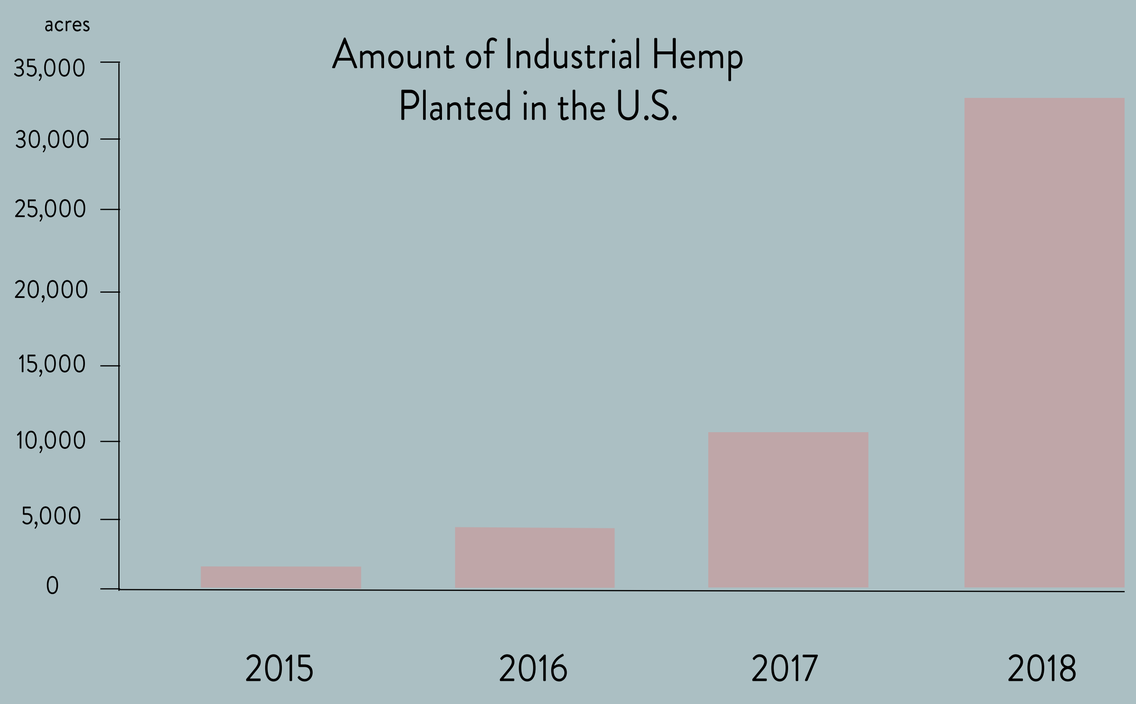
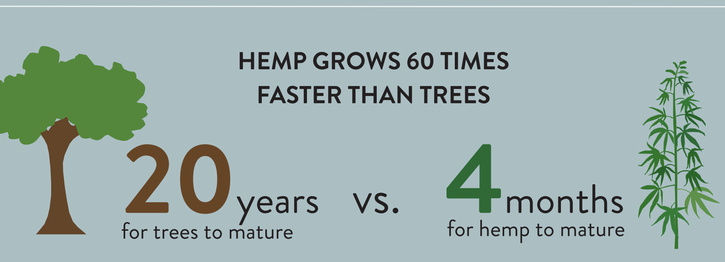
INDUSTRIAL HEMP USE



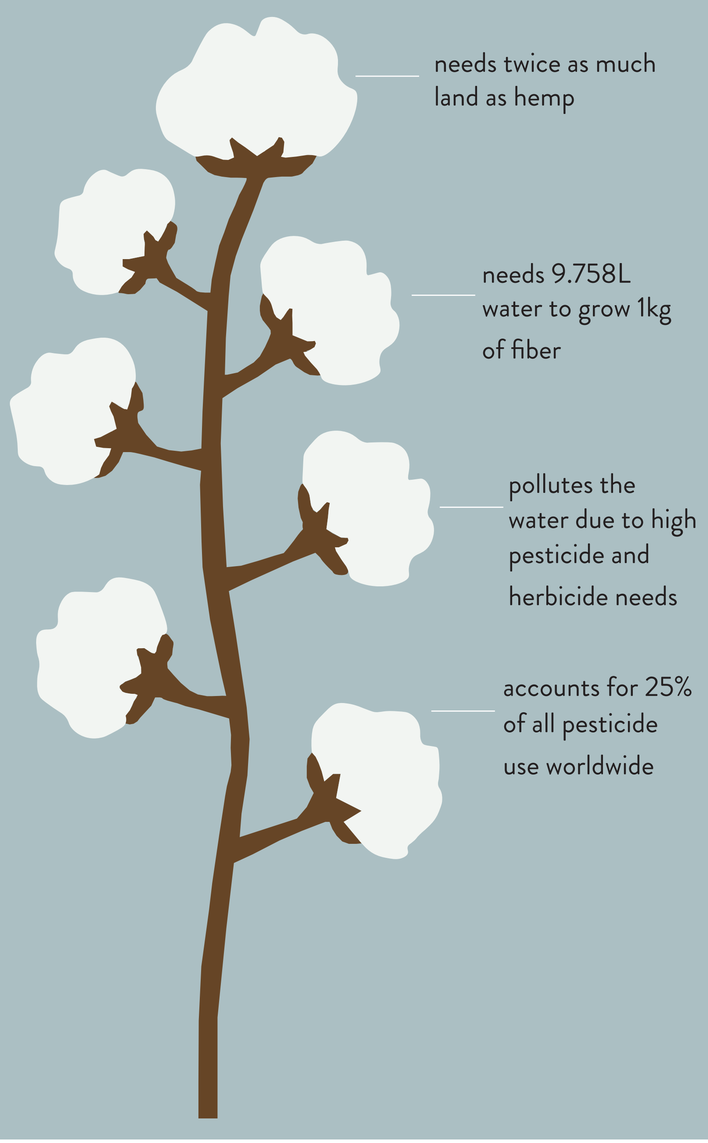
In 2018, the U.S. hemp ban was lifted, allowing hemp to be legally grown throughout the U.S. again. Thanks to the recently passed U.S. Farm Bill, hemp is less stigmatized and will now be treated as an agricultural commodity for the first time in over sixty years. The last commercial hemp farm was planted in 1957. The bill makes hemp legal in the United States, though with one serious caveat: the plants can't contain more than 0.3 percent THC. Any higher than that and the plant is officially categorized as marijuana. Currently used in over **25,000** products globally, industrial hemp-based goods include: automotive parts, furniture, textiles, food, beverages, beauty products, and construction supplies. It cannot be overstated how beneficial this plant could be for U.S. farmers in the coming years. As the agricultural landscape of America evolves — creating challenges for farmers ranging from flagging industries like tobacco and dairy to climate change, a more sustainable domestic crop is essential. Hemp's positive environmental impact is something to marvel at. Not only is it cheaper to produce hemp for paper and clothing manufacturing, but it is much more environmentaly friendly.

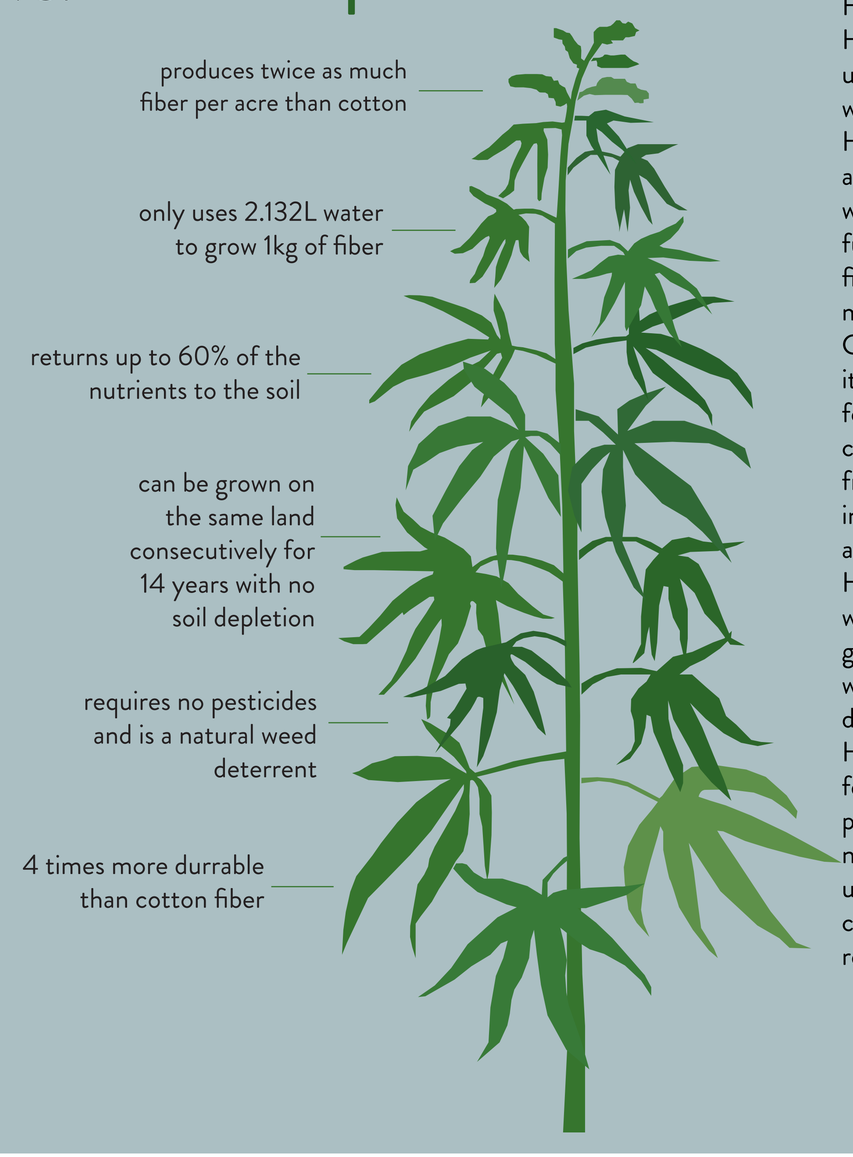
What can hemp produce?



Building materials that substitute for wood can be made from hemp. These wood-like building materials are stronger than wood and can be manufactured cheaper than wood from trees. Using these hemp-derived building materials would reduce building costs and save even more trees. Most hemp-derived products are non-toxic, biodegradable, and renewable. The potential of hemp for paper production is enormous. According to the U.S. Dept. of Agriculture, one acre of hemp can produce **4 times more** paper than one acre of trees. All types of paper products can be produced from hemp: newsprint, computer paper, stationery, cardboard, envelopes, toilet paper, even tampons. Trees must grow for 20 to 50 years after planting before they can be harvested. While hemp grows 10 to 20 feet tall and it is ready for harvesting after just four months. Substituting hemp for trees would save forests and wildlife habitats alike, as well as become a more profitable way of producing paper, all while taking away from harmful CO2 emissions that occurs when cutting down forests. On average, hemp costs about **$0.38** per pound to grow.

Cotton vs. Hemp





Hemp can be substituted for cotton to make textiles. Hemp fiber is **10 times stronger** than cotton and can be used to make all types of clothing. Cotton grows only in warm climates and requires enormous amounts of water. Hemp requires little water and grows in climates all around the globe. Once planted, hemp can be cultivated within 90-120 days of planting. When the plant has fully matured, it is cut, and then left to loosen in the fields for another 4-6 weeks. This period of waiting makes the fibers workable for industrial purposes. Cotton is naturally white without dyes, allowing for it to be easily changed to whichever color is desired for processing, however with the use of synthetic and chemical dyes, as well as the pesticide/herbicide residue from harvesting and production, the chemicals present in cotton fabrics can lead to harmful skin side effects and allergic reactions.

Hemp, on the other hand, can be harvested in different ways, allowing for it to be creamy white, brown, green, grey, or even black, without the use of any dyes whatsoever. Hemp can still be dyed to achieve the desired color, both naturally and artificially.

Hemp naturally repels weed growth and hemp has few insect enemies. Few insect enemies and no weed problems means hemp requires no herbicides and few or no pesticides. While cotton requires enormous pesticide use. 50% of all pesticides used in the U.S. are used on cotton. Substituting hemp for cotton would drastically reduce pesticide usage.

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