

Nepalese Hemp
Megan Williams
AGR*2150
Manish Raizada
November 24th, 2015

Nepalese Hemp

Product Description:

The hemp plant or *Cannabis sativa*, is a versatile raw product with the potential to be used in the food industry, holistically, and in paper and textiles (Bouloc, 2015). The crop can be used from its early stage as a seed, and then once the plant is farmed, there are further uses for the hemp leaves and the white bast fibre in the plants stem (Meeks, 2011). The hemp plant is often confused with the production of the drug marijuana, yet these are two different products. It is important to be aware that hemp has many universal uses. Although it is in the same genus as the drug marijuana, the chemical compound found in the drug that provides users with the “high” - tetrahydrocannabinol (THC) is only found in trace amounts. The hemp plant that is used specifically for food and other materials, is different from the plant producing marijuana (Bouloc, 2015).

Hemp Growth, Cultivation and Processing

Hemp is believed to have originated in Central Asia, around 8,000 B.C.E and can be grown in a variety of soils, making it a very versatile crop to farm (Bouloc, 2015). Rural Nepal would be an ideal location to grow and cultivate hemp due to its climate. While hemp can be grown in a variety of different soils, it would specifically thrive in Nepal due to the country’s humid environment. The hemp plant needs a humid environment for proper growth, one which has a rainfall of at least 25-30 inches annually (Bouloc, 2015).

According to The World Bank, Nepal has 1500mm or 59 inches of rain per year, which provides more than a sufficient amount for the growth of the hemp crop (The World Bank, 2015). Depending on the environmental conditions, hemp plants can grow between 4–15 feet in height, and at best reach a diameter of 0.75 inches (Bouloc, 2015). Since the 1930s, cultivation has been focused on selecting varieties of hemp that would not be ideal for drug usage. The peak point for cultivation of these varieties is before the plant flowers, thus reducing its potential as a drug material (Hemp Basics, 2015).

As mentioned previously, all parts of the hemp plant can be used and turned into products. Hemp fibre has been used in paper production for over 2000 years (Bouloc, 2015). Hemp bast fibre is long and its core (which is similar to wood) contains shorter fibres. Hemp has the potential to be blended with other pulps to be a more sustainable source of paper. Hemp leaves and seeds are safe for human consumption and can be used as a food source due to their high mineral and nutrient content. They were also originally used for medicinal purposes (Meeks, 2011). The farming of hemp would be a major benefit to Nepalese farmers as they would be able to make use of every part of the crop. This is a plant that is hardy, resilient, and can be grown without the use of chemical pesticides (Hemp Oil Canada, 2014).

Hemp has been shown to reduce weeds around other plants when it is planted at the right time, and thus shows great potential to be rotated with other crops in Nepalese fields as a natural weed suppresser (Health Canada, 2012). In order for this to be successful, there would need to be information and educational resources available to Nepalese farmers. This is something that would take time and money in order to be implemented properly. However, this is a product that

could potentially provide long-term success as an increased, or alternative income to farmers in Nepal.

Impact on Nepalese Women

While women are highly involved in agriculture, there is still an existing divide between men and women in Nepal's farming and household labour. There are defined roles for both men and women as to what is deemed socially acceptable (FAO, 2010). In Nepal, the highest level of agricultural involvement for women is in the hills and mountainous regions (FAO, 2010). This is an ideal combination of climate and location for the hemp as the climate is preferable for the crop to thrive (Clarke, 2007). As previously discussed, this is a resistant crop that requires minimal pesticide inputs and no herbicides (Mitchell, 2013). A major drawback however, is that the hemp seed is sold at a relatively high price. It is also an annual crop and therefore must be properly stored in order to be processed again (Mitchel, 2013). For women in particular, this is a feasible option of as it could be grown in a smaller plot or garden, and create an alternative income. With an extra income in the hands of a woman, this could have as large of an impact as being able to send her child to school.

Export Potential

While hemp is not a product that is currently required for a large population, it is a product that can be substituted for those that a country requires, and this is what makes the crop unique. Hemp is currently viewed as more of a niche product, in Canada particularly, and is used and endorsed in many natural and organic products (Health Canada, 2015). While the crop has success as a niche product, it is not being promoted or used on a large scale. If hemp is marketed

and put to use at its full potential, there will be more environmental, social, and economic sustainability surrounding the product.

Hemp would have great industrial potential to a country like Canada. In today's day and age, consumers are becoming more aware of where their products come from and increasingly want products with less of an environmental impact. In this respect, hemp is a very appealing product as it is easily grown and processed in a sustainable way (Canadian Hemp Trade Alliance, 2015). Economically, hemp alone is a more expensive product than most pulp elements, but when it is combined with other products it is very cost effective (Canadian Hemp Trade Alliance, 2015).

In regards to exporting hemp to Canada, it must have a THC level at or below 0.3% of the weight of leaves and flowering parts in order to be sold in Canada (Agriculture and Agri-Food Canada, 2013). This regulation is to ensure hemp is entering the country for its intended uses. If the hemp produced in Nepal does not meet this regulation, this could be a barrier for Nepalese producers.

Conclusion

To conclude, hemp is a crop fit to be grown and cultivated in Nepal, due to the country's climate and location. It is a crop that would pose success in Canadian markets due to its versatility and potential use in multiple industries. While there are barriers to increase hemp production in Nepal, these are barriers that could be faced with simple solutions. With adequate funding, education, and production of the hemp plant, this crop could potentially have great success in Canadian markets.

Potential Canadian Companies

<https://myvega.com>

<http://www.thebodyshop.ca/en/index.aspx>

<http://boosterjuice.com>

<http://www.earthcarepaper.com/history.html>

Bibliography

About Hemp and Canada's Hemp Industry. (2011, July 19). Health Canada. Retrieved November 19, 2015, from <http://www.hc-sc.gc.ca/hc-ps/substancontrol/hemp-chanvre/about-apropos/index-eng.php>

Average precipitation in depth (mm per year). (2015). The World Bank. Retrieved November 17, 2015, from <http://data.worldbank.org/indicator/AG.LND.PRCP.MM>

Bouloc, P. (2013). Hemp: Industrial production and uses. Wallingford, Oxfordshire: CABI.

Clarke, R. (2007). Traditional Nepali Hemp Textiles. *Journal of Industrial Hemp*, 12, 97-113. The Haworth Press, Inc. doi: 10.1300/J237v12n02_07

Hemp uses, information facts - Natural Hemp Products - Hemp Basics. (2015). Retrieved November 17, 2015, from <http://www.hempbasics.com>

Industrial Hemp. (2013). Agriculture and Agri-Food Canada. Retrieved November 23, 2015, from <http://www.agr.gc.ca/eng/industry-markets-and-trade/statistics-and-market-information/by-product-sector/crops/pulses-and-special-crops-canadian-industry/industrial-hemp/?id=1174595656066>

Integration of Gender in Agriculture: An Analysis of Situation. (2010). Food and Agriculture Organization of the United Nations, 4-7. Retrieved November 7, 2015, from [ftp://ftp.fao.org/TC/CPF/Country NMTPF/Nepal/thematic studies/Gender Final Report _TC_. pdf](ftp://ftp.fao.org/TC/CPF/Country%20NMTPF/Nepal/thematic%20studies/Gender%20Final%20Report_TC_.pdf)

Meeks, M. (2011, November 10). Harvesting the Hemp Plant in Nepal. Retrieved November 20, 2015, from <http://www.surya.com.au>

Mitchell, D. (2013, October 17). Why Legalized Hemp Will Not Be a Miracle Crop. *Modern Farmer*. Retrieved November 18, 2015, from <http://modernfarmer.com/2013/10/legal-industrial-hemp-wont-matter/>

Our Story | Hemp Oil Canada. (2014). Retrieved November 18, 2015, from <http://>

www.hempoilcan.com/company/our-story/

Products – Canadian Hemp Trade Alliance. (2015). Retrieved November 18, 2015, from <http://www.hemptrade.ca/products.php>