

# **Cultivation of Hemp, a High-Yield Easy Crop, Can Boost Rural Economy**

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Uttarakhand is a beautiful state with huge abundance of biodiversity. The treasure of its plant resources is a boon for its about 70 per cent population residing in rural areas (census 2011) which if realised in an optimum manner could boost the rural economy. Plants have always been a medium to provide food, shelter and clothing to the conventional population along with sufficing other requirements like alternate medicines and bio fuels for making their life comfortable.

The synthetic lifestyle, which we have adopted in form of plastics and harmful chemicals, add not only to air, land and water pollution during production, but also their use and disposal takes long years of biodegradation at the end of their life cycle. Now that we have started feeling the pinch of global warming, a conscience call has given rise to a green movement among conscious consumers and stakeholders for products, which are sustainable and can protract our mother earth through a grim patch of time that we are ourselves responsible for.

This green movement has started creating niche markets around the globe for sustainable organic products developed under global green sustainable standards, thus benefiting the rural economy. One such high yield non-timber forest product is hemp, known as 'bhang' in the common lingo. It's known as the world's oldest crop the mention of which has been found in China around 5000 B.C. and even in Atharva Veda around 2000 B.C to 1400 B.C. Till about the mid 20th century, hemp was fulfilling the basic human requirements because of its immense benefits but this usefulness was looked down upon for its intoxication ability. It is now being again revived for its positives the world over as a "super crop". China is leading the movement and has committed to replacing cotton by industrial hemp. Other countries such as France, the UK, Canada, Romania, Hungary, Korea, Australia and others are promoting cultivation and manufacturing of hemp as it is believed to provide remarkably more than 20,000 uses such as hemp milk, seed proteins, fiber, geo textiles, composites, bio plastics, animal beddings, bio fuel, medicines, ropes and twines, seed oil, cosmetics and wellness products.

## **Wild animals spare crop that can grow on barren land**

Hemp is a "no hassle" easy crop to grow with minimum land preparation (can even grow on barren land) that gives the maximum output (200% more produce compared to cotton). Wild animals such as monkeys and boars and birds don't attack the hemp crop. Hemp is a natural carbon sequestrian (22 tonnes per hectare), its stalks can reach about 15 feet tall in 70 to 90 growing days (harvesting period is maximum of 120 days as per usage). It requires less land (500 plants in a field of 10x3 metres) and minimum use of water resources. It leaves the soil more fertile after harvesting and grows with negligible use of pesticides and herbicides, thus making it one of the most sustainable plants. Hemp gives a natural ultra violet protection shield unlike cotton. Its fibers do not break and retain the structure with age. Hemp is considered to be a bank of proteins after soya beans, thus can help in the eradication of malnutrition at a low cost. A bio-composite made out of hemp shive is high in strength with thermostatic properties and could provide low cost housing in rural and disaster-prone areas.

In our country, hemp grows more like a wild plant and is negligible under traditional cultivation for domestic use. Hence no serious data exists of its plantation. It is to be specified that industrial hemp contains only about 0.3% to 1.5% of tetra hydro cannabinoids (THC), the intoxicating ingredient that makes one high, while marijuana contains about 5% to 10% or more of THC.

### **Cultivation allowed for industrial, horticulture use**

The Indian government had promised to limit the export of Indian hemp after signing the treaty Single Convention on Narcotics Drugs in 1961. India then framed the NDPS Act in 1985, which restricted the use of natural plant resources containing any kind of psychotropic substance. The use of hemp was prohibited under the NDPS Act but the definition allowed its cultivation (with low THC) for industrial and horticulture purposes and research under proper guidance and security measures.

An Excise Commissionerate report had stated that states could decide on legalizing hemp in their regions. The cultivation of hemp was allowed for commercial purpose under the Uttar Pradesh Excise Act of 1910 in Garhwal and Kumaon regions, excluding the Terai and Bhabbar areas, during the British Raj.

### **Major source of earning for East India Company**

Uttarakhand has been a fertile ground for hemp. The British recognised its potential worth of gold and allowed its cultivation especially in Almora and Nainital and parts of Garhwal. The tribal population used to make clothes called bhangela, ropes, sacks and fish nets out of hemp as mentioned in the Himalayan gazetteer. Hemp was a major source of earning for East India Company. However, after the British left hemp was used primarily for domestic needs in the region. Making fabric and ropes from hemp is no more practiced in the state as the process is cumbersome.

The hemp cultivation was restricted due to illicit trading of marijuana in the areas away from the reach of the safeguards. The safety of the citizens of the country, barricading illicit trading, security measures for cultivars to be grown for proper use, accessing seeds of industrial hemp (which is under research in India but could be imported from abroad) are some important issues that the state government needs to sort out before it decides to legalise industrial hemp.

Board set up to overlook research, development Keeping in mind the leverage of the Uttar Pradesh Excise Law 1910 and the usefulness of the plant, the state government had set up the Uttarakhand Bamboo and Fiber Development Board (UBFDB) as the nodal agency to undertake research and development of the cultivar to convert it to industrial hemp, which is still ongoing. The board has initiated self-help groups under their clusters to resurge the process of hemp fiber to fabric on an experimental basis.