

# **UK HEMP** manifesto

**SEEDING THE FUTURE  
FOR BRITISH HEMP**

UK Hemp Manifesto  
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## Introduction

To evaluate the potential of hemp it is essential to address the elephant in the room: hemp is part of the *Cannabis Sativa L.* family, but with minimal levels of THC (the principal psychoactive constituent). The term 'industrial hemp' was classified in the US 2018 Farm Bill, as containing no more than 0.3%THC by dry weight for all uses of the hemp plant.

Hemp is an environmentally and economically sustainable agricultural crop, and a solution to many of the UK challenges in this new post-Brexit, Coronavirus landscape. Hemp boosts our immunity to combat viral infections, sequesters carbon both from the air and soil, and can make over twenty thousand sustainable products from its seed, fibre and flower. Hemp, if encouraged and supported, can help create a lucrative UK green and sustainable economy, and enable the government to keep its promise of carbon net zero by 2030.

This manifesto clearly lays out why a liberated hemp industry can support farmers and help the UK government keep to its climate change commitments. We are calling on the UK government for a complete de-scheduling of hemp from the Misuse of Drugs Act 1971, the removal of all the barriers that are restricting growth, and the enabling of the UK rural and bio economies to benefit from this multi-billion pound 'green and sustainable' crop.

We are advocating:

- Remove hemp as a controlled substance from the Misuse of Drugs Act 1971, permitting the use of the whole plant for all applications.
- Remove all Home Office licencing restrictions and put back into DEFRA's jurisdiction.
- Increase the permitted levels of THC to 1% reflecting Switzerland, (there is no psychotropic elements at this level), and develop new domestic cultivars which are better suited to our latitude, with the option to increase THC levels at a later date.
- De-schedule all derivatives, extracts, cannabinoids, and seeds of the whole hemp plant, as long as those portions of the plant remain below the THC threshold.
- The recognition of hemp as a beneficial driver for rural economic innovation, and a target for investment to establish basic processing infrastructure.
- Recognise and promote hemp as a viable and essential UK environmental crop.
- Recognise the cultivation of hemp as having an important net carbon positive impact and therefore a public service for the public good.

We are also asking that the government dedicate a proportion of the green jobs plan, promised by Chancellor Rishi Sunak (in his Green Jobs Summer 2020 Statement), to the hemp industry. A robust, thriving UK hemp industry can kickstart a new green industrial and manufacturing revolution, support the struggling rural economy, and help to seed a brighter, more prosperous future for British farmers, processors, distributors, retailers, and customers.

## Part 1: HEMP HISTORY IN THE UK

Low THC Cannabis Sativa is not a new crop to England. In fact, Britain's greatness was built on the thriving hemp industry in the fifteenth and sixteenth centuries. Hemp was so valuable during the reigns of King Henry VIII and Queen Elizabeth I that it was illegal not to grow hemp, and people even paid their taxes with it. (A quarter of an acre per landowner (*one root*), had to be planted with hemp.<sup>1</sup> Its fibres were so crucial to the national navy (providing everything from rope to sails) that it could be said hemp was a great enabler of British global exploration.

However, the whole Cannabis genus was banned worldwide in 1961, under the UN Single Convention on Narcotic Drugs, and in the UK under the Misuse of Drugs Act 1971. Growing became legal again in the United Kingdom in 1993, but with many restrictions, and the hemp flower is still prohibited, and considered a controlled substance.

These political obstacles and challenges are crippling the industry, and the potential UK hemp revival has not happened at the levels expected, despite the lucrative and rapidly growing global hemp industry, the urgent need to resolve environmental and sustainability issues, and the need to boost British farming.

## Part 2: HEMP AND AGRICULTURE

### What is Industrial Hemp?

Low THC Cannabis Sativa is a competitive species of plant, which grows and adapts globally to most climates, soil types, and altitudes. The plant pre-dates most crops and has been used by humans for more than 12,000 years.<sup>2</sup> With its naturally nutritional flowers, leaves and roots; healthy, nutritious seed; and tough fibre, all parts of the plant can be used to help and support humanity, and the environment.

The hemp plant has more than twenty thousand uses. Its fibrous stalk, if treated in the right way, can be stronger than steel, and can be used for many different applications, from construction materials, to paper and packaging, plastics to bio-ethanol.<sup>3</sup>

Its seed oil can be refined to replace all fossil fuel products, including biofuels, biodegradable plastics, solvents, and paints. In addition, the seeds are also a highly nutritious food. They contain Omega 3, 6, and 9, and Gamma Linoleic Acid (GLAs), as well as the essential amino acids that we need for a balanced diet. Its oil also makes excellent skin creams and beauty products.<sup>4</sup>

Its flower is also essential for human health. Hemp researchers in Israel recently discovered that humans have an endocannabinoid system that is directly responsible for our immune and brain functionality. The hemp flower and leaf contain all the cannabinoids needed for this internal system to function properly.<sup>5</sup>

## Why Industrial Hemp Benefits Agriculture

- **Alternative to oil seed rape.** Compared with the constant threat of flea beetle damage that comes with growing rapeseed, hemp is a great option agronomically. As a native UK oilseed, it is easy to grow and requires fewer inputs. It is also on par financially with oil seed rape, but without any of the associated risks.<sup>6</sup>
- **Effective Break Crop.** Preliminary international studies show that after cultivation the soil is left in optimum condition and can deliver a 15-20% higher yield with follow on crop yields.<sup>7</sup>
- **Restores Top Soil.** Hemp, with a deep taproot can break up compaction, aerate the soil and further aid in nutrient absorption and uptake by plants season-over-season, remediating over fertilization, soil erosion and compaction.<sup>8</sup>
- **Carbon Sequestration.** CO<sup>2</sup> sequestration ranges between 10-15 tonnes of atmospheric carbon per hectare, in a three-month period.<sup>9</sup>
- **Phytoremediator.** It is the most effective crop for phytoremediation at scale for contaminated land.<sup>10</sup>
- **Proven Contribution to Public Good.** Hemp must be recognised for its net carbon positive impact, as it also provides renewable, biodegradable, low impact materials for thousands of different uses, and is a feasible solution to petrochemical products.

## Why Industrial Hemp is a Vital Crop Solution for Farmers

- **Opportunities.** Hemp is an ideal crop to attract young people into farming, as it offers much needed crop solutions to the farming community, including a wide range of opportunities in developing a thriving environmentally responsible industry, with numerous profitable downstream applications.
- **Profitable.** Given the potential return on investment,<sup>11</sup> encouraging crop diversification and reducing barriers for entry into the lucrative European and global hemp markets will provide a very attractive prospect for farmers.
- **Environmentally friendly.** Our current generation of young farmers are very aware of the importance of environmental sustainability, its effect on production costs, and the potential economic sustainability it can provide.

## Current Obstacles for UK Farmers

Whilst hemp cultivation is growing exponentially throughout Europe (33,000 hectares in 2016),<sup>12</sup> Canada (56,000 hectares), and China (46,134 hectares),<sup>13</sup> estimates place current UK cultivation at just 850 hectares (2018).

The reasons for this are:<sup>14</sup>

- **Complicated process.** Hemp requires a renewable three-year Home Office licence which is constantly changing, very complicated to fill out, and disincentivises farmers.
- **Licence timeframe.** The licence is often awarded when it is too late for farmers to grow.

- **DBS check.** This licence requires every farmer to provide an enhanced DBS check from the Drugs and Firearms department of the Home Office, and for every new field grown, a new licence has to be applied for.
- **Flower prohibition.** The flower and leaf are prohibited to be used for processing. This barrier of uncertainty could be removed by excluding industrial hemp plants from these regulations and providing confidence in the industry. This in turn would enable a secure environment for financial investment, research and development, and job creation.

Hemp also needs to be recognised as a viable cash crop, highlighting its agricultural importance in the curriculum of agricultural colleges. This needs to be supported by the provision of grants and research project bids towards environmentally sustainable manufacturing, industrial applications, and engineering technology and research.

### Part 3: HEMP AND THE UK ECONOMY

#### The Economic Benefits

Since the 2018 US Farm Bill, which designated hemp as an agricultural crop and removed it from the controlled substances regulations, the US hemp industry is growing 27% annually. Hemp products (which do not include medical or recreational cannabis) was \$820million in 2017, and is projected to increase to \$2.6bn in US domestic sales revenue by 2022.<sup>15</sup>

In comparison, China led all countries in 2018 with almost \$1.2 billion in hemp sales, followed by the U.S. at \$1 billion, all of Europe at \$980 million, and the combination of Central and South America at \$220 million<sup>16</sup>. Due to the limited size of the UK hemp sector, revenue figures are unavailable, while the UK lags behind with only 18 UK hemp licences awarded in 2018.<sup>17</sup>

Britain is missing out on this growing lucrative market. At present the current statistics show:

- The Global hemp industry was worth USD 4.6 billion in 2019, and is expected to grow to USD 26.6 billion by 2025, with food forecasted to be the largest market share.<sup>18</sup>
- The UK CBD market is currently worth £300 million in the UK<sup>19</sup> but UK Farmers are excluded from this lucrative market, as current legislation prohibits the harvest of hemp flowers and leaves.
- The CBD industry alone is expected to reach 2 billion Euros in the EU by 2020.<sup>20</sup> In the US, the CBD industry will grow to \$1.3 billion by 2022.<sup>21</sup>
- As a Carbon Offsetting crop, it can contribute to an industry estimated globally at \$200 billion by 2050.<sup>22</sup>

#### The Potential of Hemp to Shape Rural Economies<sup>23</sup>

A local hemp industry encourages micro-businesses and SMEs that have the potential to support and shape local and specifically rural economies. There are several ways in which hemp

can contribute to rural development policy goals in the UK, particularly as policy is moving towards sustainable farming and rural development.

- **Social innovation.** As a crop that has multiple end product uses, hemp has the potential to contribute to networked rural development and local economic dynamism. One obvious area to explore is the use of hemp as a locally sourced building material that could be used in the construction of local homes.
- **Promoting rural entrepreneurship.** Increasing rural prosperity requires looking beyond traditional models and embracing new initiatives with the potential to develop new local industries. With the right investment, UK hemp can emulate and expand on the success of existing hemp initiatives in other countries around the world.
- **Stimulating rural industries.** Manufacturing is in decline across rural areas with associated effects on the job market. A vibrant hemp industry can provide new manufacturing opportunities in innovative product areas such as plastics alternatives, building material and food produce manufacture.
- **Bridging the age gap.** The ageing population of rural areas has been well documented, as has the obstacles to the entry of younger generations into farming practices (the average age of a UK farmer is 59). Hemp has the potential to breathe new life into traditional farming practice and create new job skills and job opportunities in farming and ancillary hemp industries, such as local manufacturing and building.

### Hemp's Contribution to the Bioeconomy

Hemp fibre can hit a lot of the targets outlined in the Bioeconomy Strategy of 2018, which specifically mentions the UK's aim of "producing smarter, cheaper materials such as bio-based plastics and composites for everyday items, as part of a more circular, low-carbon economy."<sup>24</sup>

- **Bioplastics.** Hemp fibre can also be used, either as a reinforcing component for natural-fibre composites, or in cellulose-based plastics, such as, natural insulation quilts and boards.
- **Hempcrete.** Hempcrete is completely non-flammable and provides one of the most effective materials to achieve zero carbon construction.
- **Paper.** Hemp can increase the productivity, sustainability and resilience of our agriculture and forestry, as acre for acre hemp provides four times more paper than trees.<sup>25</sup>
- **Automotive and Aerospace.** One of the examples given in the Bioeconomy Strategy of the bioeconomy at work is "strong, lightweight materials for the automotive and aerospace industries", which is an application where hemp fibre is already used.

### Opportunities for UK hemp innovation, design and manufacturing.

- **Reputation.** The UK has a historical international reputation for upholding the highest standards and premium quality across the agriculture industry, which we need to leverage to create new agricultural innovation, design and manufacturing opportunities for the green and bio economy.

- **British Commonwealth.** Our greatest export market is outside the EU. The DTI has acknowledged and identified that there are key knowledge transfer opportunities between the UK, and more developed hemp markets, such as Canada. The Commonwealth has been identified as a key target for UK export growth trade missions. Facilitating and encouraging cross-border collaborations is essential to the UK hemp industry's development.<sup>26</sup>
- **Research Funding.** With the existing restrictions around hemp it is challenging to find investment for agricultural R&D. By bringing farmers together and giving the industry a greater say in setting the strategic direction for research funding, we can efficiently and cost effectively find the most useful ways to utilise hemp to support both farmers and the environment.

Support and innovation for the further development of new and existing UK grown and processed bio-based products, such as *hemp insulation* and *hempcrete*, will have an important impact on the affordability of zero-carbon technologies. It also has the immediate wider advantage of contributing to the sustainability, growth and diversification of the rural economy in the UK.

#### Part 4: HEMP AND UK CLIMATE CHANGE GOALS

*“It seems to me unarguable that man has an impact on the climate. It seems to me unarguable that climate change can have a devastating and damaging impact on societies and economies that are even less developed. And therefore, it seems to me unarguable that we should seek first to lessen the impact that man might have on the climate, and secondly invest appropriately in measures to mitigate and protect individuals and societies from the impact of climate change.”* Michael Gove, Environment Secretary 2014<sup>27</sup>

#### How Hemp Can Aid Domestic Climate Change Obligations

The cultivation of hemp delivers several governmental agricultural and climate change promises. Hemp can help protect our natural and rural habitats, and fulfil the environmental commitments embodied in the *25-Year Environment Plan* and the *UK Green Brexit paper*. Both of these Policy Papers call for many of the solutions hemp can provide (and mentioned in this Manifesto), including:

- improved soil, water and air quality
- increased biodiversity
- climate change mitigation
- minimised pesticide use
- better use of crop rotation



## How Hemp Can Aid International Climate Change Obligations

The UK has also signed up to the Paris Agreement on Climate Change, pledging to become Net Zero by 2050, and the UN Sustainable Development Goals. Industrial hemp can contribute to the UK keeping its *climate change targets* because:

- **Carbon Sequestration.** Hemp is the fastest plant sequester because it can grow up to 5 metres in 3 months, sequestering 10-15 tonnes of carbon per hectare.
- **Phytoremediation.** Hemp requires little to no pesticides or herbicides, and has a long taproot that digs deep into the soil, extracting contaminants, pollutants and toxins, and helping to secure and condition the topsoil.<sup>28</sup>
- **Carbon Neutral Products.** Hemp can contribute to the zero avoidable waste by 2050 and help to eliminate avoidable plastic waste by end of 2042.<sup>29</sup>

## CONCLUSION

For too long hemp's status as a viable agricultural crop and source of innovative green industry has been constrained by stigma, political pressure and the outdated UN Single Convention policy. A lack of political will to see beyond 'cannabis as a drug' has stood in the way of reform and an appraisal of this crop for the merits and potential benefits it brings and stifles market opportunity due to restrictions resulting from the Home Office licencing process.

This manifesto seeks to portray hemp in a different light. It seeks to reclaim this plant as a crop that has links to our nation's history, as an agricultural product and a driver of exploration and innovation. Hemp is a vital crop that brings value to all areas of society, the economy, and the environment, and creating a sustainable future for all.

This manifesto invites lawmakers to reassess whether current restrictions on hemp, formed fifty years ago, are still fit for purpose in an era when economic growth is so closely linked to green goals and sustainability aims.

This manifesto proposes that the UK has a real opportunity to play a leading role in the development and expansion of this environmentally responsible industry. De-scheduling all parts of the hemp plant and removing all the barriers to growth, would open up a new cash-crop to UK agriculture, which can create jobs and encourage manufacturing across the entire supply chain, while establishing a hub for rural economic innovation. With vision, investment and the removal of stigmas, hemp can kick start a new green industrial revolution, and help to seed a brighter future in a post-Brexit landscape.

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