



INTERCHANVRE

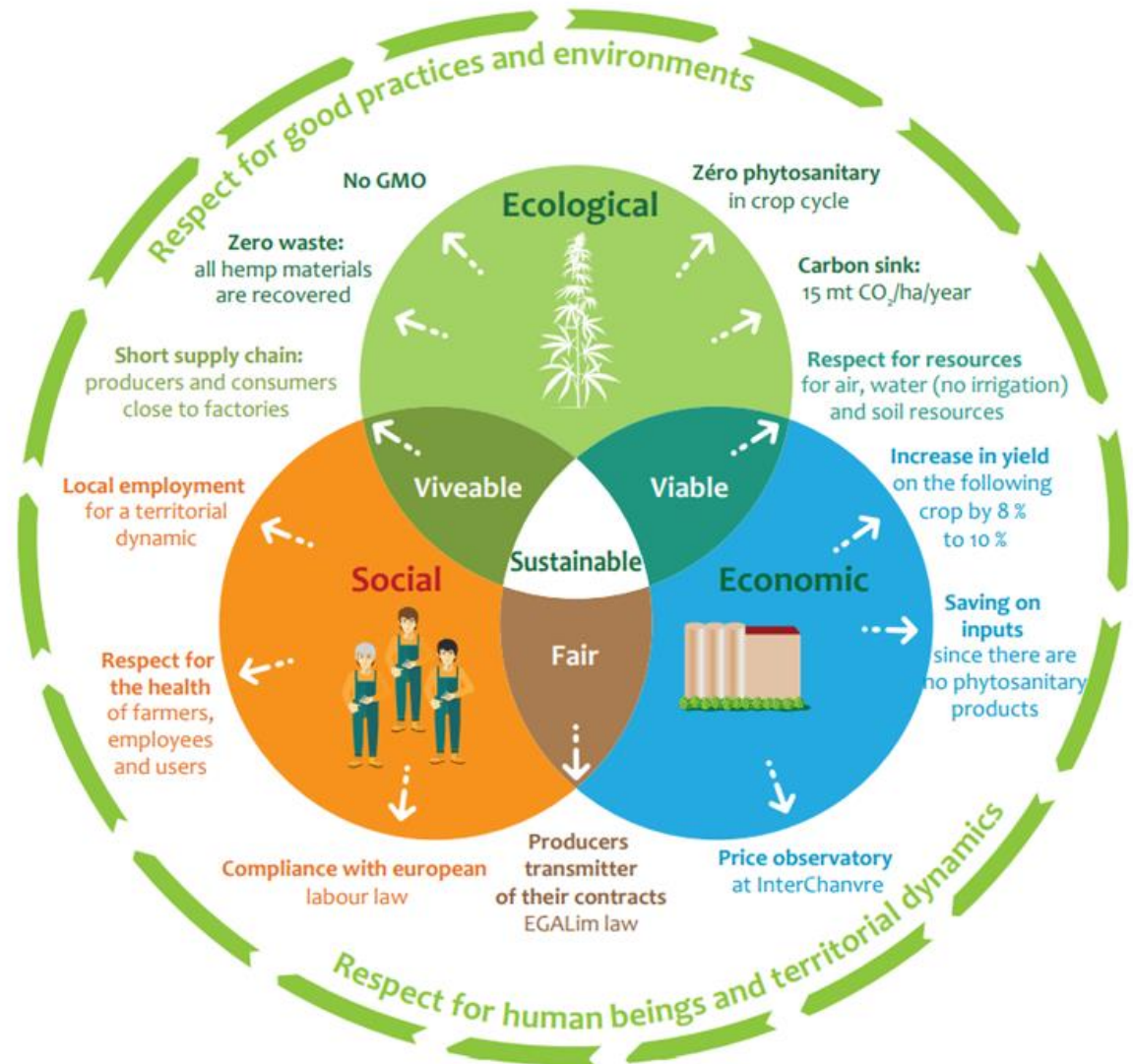
# Hemp's strengths to meet the European Green deal's goals





# A virtuous production in line with the Green deal

*Hemp producers can help the European Commission to reach the ambitious targets and objectives presented in the Farm to Fork strategy.*

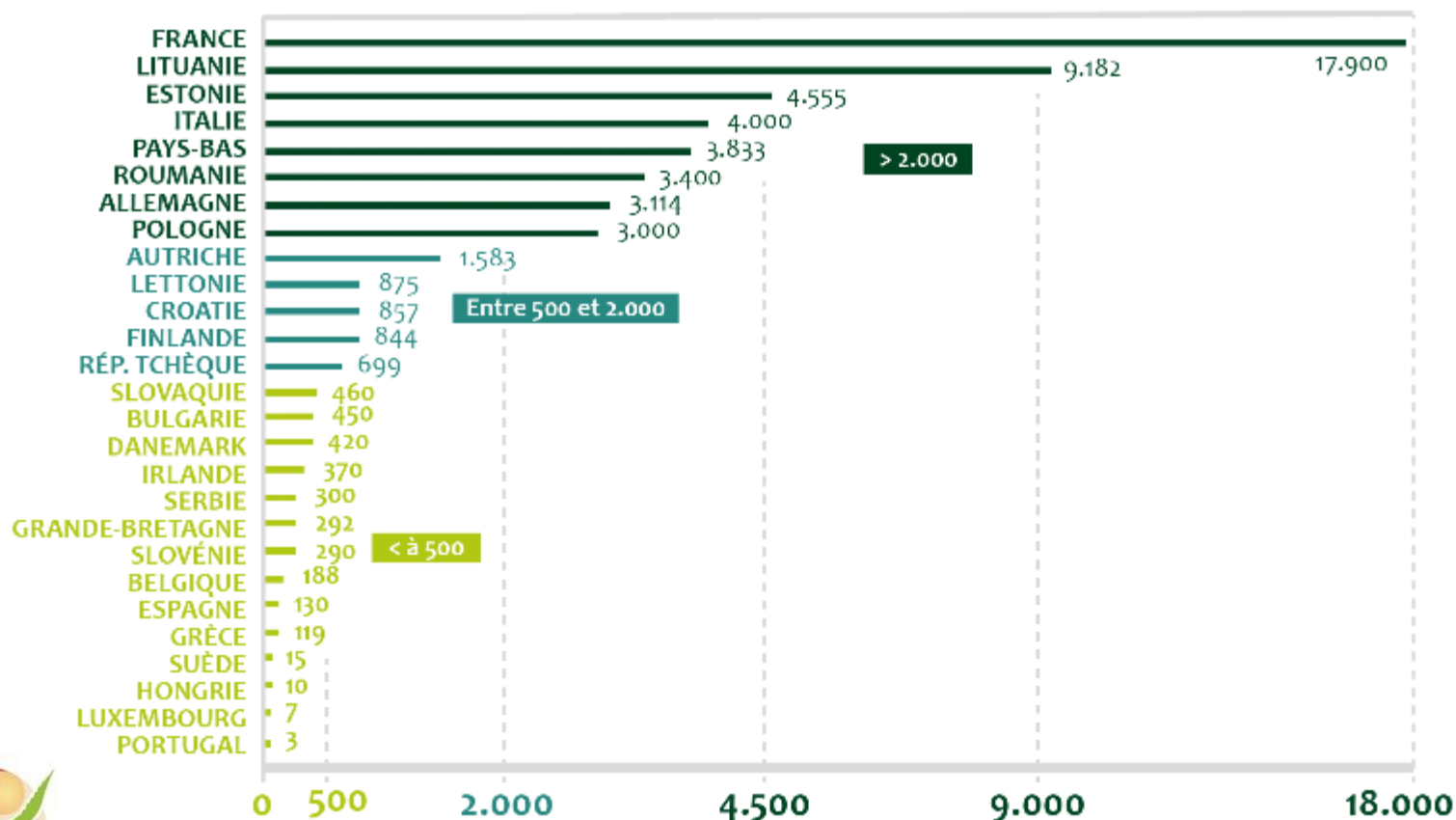




# Hemp in Europe

France is leader in production

La France leader européen incontesté avec près de 20 000 ha sur les 58 000 ha





# Hemp in the food sector

*Hemp can contribute to the goals of the European Commission in the Farm to fork strategy regarding the promotion of « the transition to a sustainable food system that guarantees food safety and access to healthy diets ».*

- Rich in **protein**, **fibre** and **omega 3**, hemp is a plant **alternative to animal protein**
- Its nutritional qualities make hemp a **superfood** in the form of oil, whole or shelled seeds, protein and flour that can be tasted alone or as an ingredient to a multitude of recipes
- The French hemp sector has set up a **labelling initiative** in the Commitment Charter called "Label chènevis français".





# Focus on the construction sector : a virtuous cycle

## Materials' end-of-life

- Prefabricated buildings can be easily deconstructed or moved
- Short and local supply chain
- Possibility to recycle or compost lime/hemp walls



## Hemp cultivation

- France is Europe's leading producer with 34300t of shiv a year
- No chemical treatments
- No irrigation
- 1 ha of hemp absorbs 15 t de CO<sub>2</sub> = 1 ha of forest
- Annual cultivation = renewable resource adaptable to specific needs

## Transformation of the hemp



- Factory close to producers
- 100% mechanical transformation
- 'Hemp building aggregate' quality label and binder/aggregate validation to guarantee safe construction



## Cost and design of buildings

- Social housing: € 1 400/m<sup>2</sup>
- Prefabrication in tertiary building sector: 2.6% difference compared to traditional construction

## Construction of buildings

- Professional regulations for insurability (fire test)
- In concrete or wool form, hemp offers unique properties
- Endless possibilities thanks to its modularity
- Excellent complement to wood (prefabrication including in 3D)

## Living comfort of buildings

- Unrivalled thermal, acoustic and hygrothermal performance
- Significant energy savings





# Focus on the construction sector



## Perfect control of the manufacturing and prefabrication process

- A technique that has been tested and used on buildings and which has made it possible to set up a partnership between the hemp sector and the wood industry for greater efficiency. In the Ile de France region, the firstwood/hemp prefabrication factory will be operational during the 1st quarter of 2021.



## Controlled quantities and quality from field to construction site

- The «granulat chanvre» label introduced in France in 2016 guarantees high-performance granulates and the validation of the binder/straw couples ensures the durability of the building.
- The training courses developed by the association «Construire en Chanvre» (Building with Hemp) accompany professionals in the ecological transition.



## Optimisation of construction and operating costs

- Radical reduction of the need to use heavy techniques (double-flow VMC, air conditioning).
- Solution combining insulation and inertia for natural comfort, in summer and in winter.
- Reduced implementation times for prefabricated walls.
- Significant reduction in heating costs during operation: for a 150 m2 house, the annual cost is between 50 € and 80 €.





# Focus on the construction sector

## The technical performances of hemp construction/renovation



- Thermal, hygrothermal and acoustic performances.
- Fire-stop effect with a fire resistance of more than 4 hours. The fire classification is EI 240, no other bio-based material achieves these performances, which allow the structural qualities of the wood structure to be retained when it is embedded.
- Resistance to rodents.
- Seismic stability and light architecture 320 kg /m<sup>3</sup> where concrete weighs 2.5 t/m<sup>3</sup>.

## Modularity and tailor-made finishes

- Thanks to the flexibility brought by the use of hemp concrete with a wooden structure, all the solutions are possible, from the smallest module to the largest assemblies, with the same attention to detail required by the client.





# The needs of Hemp in the construction sector

In order to **respond to the objectives of the Green deal** in the construction and renovation sectors, **allow the development of biobased solutions** while **respecting the technological neutrality of European regulations** it is necessary to:

- Propose an **evolution of the references** that favor traditional materials today (notably regarding the end of life and the Lambda coefficient on thermal insulation).
- **Base the regulations on results' goals rather than on means.**





## For more information

- InterChanvre drafted a document entitled « *Hemp an opportunity for the European Green deal : how to shelter, feed and dress oneself with Nature in its pure state* ».
- InterChanvre is also working on the question of CBD production and has ordered a **study regarding the valorisation of industrial hemp fibers depending on CBD rates to FRD.**

***We would be very happy to present you these documents and to invite you to visit our production sites in the upcoming months !***



**InterChanvre**

*Thank you*

[www.interchanvre.org](http://www.interchanvre.org)

