

ADVANTAGES OF HEMP USE IN GREEN BUILDING

Hemp use associated with lime to produce panels, bricks, insulation systems and plasters is achieving raising consensus in the eco-construction world.

Among the plant fibers used as building materials, hemp boasts several advantages both for its specific characteristics, especially from an environmental point of view, and for its potential contribution to local economies.

Projected in the future of green building, processed hemp stands out for its important ecological and economic characteristics. In particular this material bears the following exceptional performances:

- It is an excellent heat and sound insulation material;
- It is lightweight, fire resistant and preserves a high level of breathability;
- It is resistant against mold as it is moisture absorbent (one square meter of hemp wall absorbs up to 14 liters of water, which can be released into the ground and/or be collected and recycled);
- It is microbe and insect resistant;
- It is carbon synthesizer and tackles pollution by reducing CO2 emissions during the construction process and ensures a healthy house living;
- It is 100% recyclable at the end of its life cycle and is totally biodegradable;
- It is economic: adding to its insulating property which heavily contributes to energy saving, a hemp-based building can cost up to 20% less compared to those built with current techniques.

Due to the above mentioned characteristics, hemp reveals itself as an innovative solution in the building sector and as an insulation system. Once overcome its cultivation and use prohibitions, hemp (*Cannabis Sativa*) is expanding its application in many countries through the consolidation of its use in the process of creating new materials implied to construct new houses, ecologically renovate and revamp existing infrastructures, thermally and acoustically isolate buildings, and create green buildings. In order to do so, hemp is normally associated with lime to produce building blocks, which once dried become very light and durable.

Experimental buildings in wood structure and walls built with prefabricated bricks bio-composed in hemp and lime are multiplying and, mortars, plasters and insulation systems are being experienced. To produce these building materials both the woody and green parts of the plant can be used hence ensuring the sustainability of the products. As a result of this process, increasingly competitive new hemp-based products are being created to the extent that in England, where these materials are widely used for social housing, [Limetechnology](#) company was recently awarded with the 2014 Asden prize for its hemp building bricks.



Hemp production also generates significant benefits for the economy and for the territorial and environmental management. In fact:

- It is an easy plant to cultivate in diverse soil types and environmental contexts (Hemp production can be found from Asia and Europe to the Americas);
- It grows very quickly and requires low water consumption;
- It is pest resistant and doesn't require pesticides or herbicides, thus contributing to the environmental protection;
- It grows faster than weeds, leaving the ground weed-free;
- It ensures an important phyto-purification function for soils contaminated by chemical agents, and significantly contributes to the improvement of the environment;
- Its production can generate a significant supply chain planning, reducing distances between producers and potential users and generating small and medium enterprises engaged in the production of various hemp construction products (i.e. panels, mortars, stucco, etc.).

From the point of view of its contribution to local economies, it is important to note that hemp can be also used to produce a wide range of other useful products, such as: paper, fabric, seeds, oil, plastics, and fuel. Hemp seeds are very high in protein (25% protein content) and are widely used in the food sector.

The extensive literature on the use of hemp for green building demonstrates the success of this innovative system and provides with relevant information on technology centers and specialized agencies active in this field as well as presenting ideas as future possible building projects for a sustainable territorial development.

To know more

[Inater.net website](http://Inater.net)

[Inater.net.gallery](http://Inater.net/gallery)

[UNAUS blog](http://UNAUS.blog)

[Chanvre-terre-chaux.com website](http://Chanvre-terre-chaux.com)

Limetechnology.co.uk

[Limetechnology Brochure](#)

[Hemp Lime producers association](#)

[The hemp builder webpage](#)

[Hemp Builder in facebook](#)

[Hempcrete Australia](#)

[Hempowered.com Australia](#)

[Hemp technologies global](#)

Cannabric.com



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