

BRINGING BACK INDUSTRIAL HEMP, NORTH CAROLINA USA

By Marty Clemons

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So why did I build the first panelized hempcrete house in North America? Two years ago



I met with architect Mike Spinello and told him that I wanted to create a lego-like system for tiny houses. Right around the same time, I became President of the North Carolina Industrial Hemp Association. The mandate changed to tiny lego-like houses built with hempcrete.

Hempcrete is made from the woody core of the hemp plant, lime, and water. It is fire resistant, antimicrobial, and sequesters carbon in the curing

process. Hempcrete is non-structural. Hemp houses existed prior to my project. In those houses a mixture of hempcrete was applied to a traditional framing system built on site. The panelized nature of the hempcrete is what is truly unique about my project.

American Lime Technology in Chicago built the panels. The panelized hempcrete building system has been used extensively in the UK, but never in the United States. The advantage of using the panelized system is that the outer shell of the home can be erected in one day. A non-panelized hempcrete house would take significantly more time and cost more money, assuming labor is being outsourced. The panelized system is also more efficient at scale.

The hempcrete tiny house is a prototype. Mike and I will continue to innovate both the design and the building materials. Our goal is to create houses that are modern, sustainable, and affordable. Our longer-term goal is to create a house that is fossil-fuel free. Currently there are no viable options to make this a 100% reality, but we hold the vision for such a possibility in our lifetimes.



The hemp in our panels was grown in Canada, but the broader vision is to localize the production of the panels using hemp that is grown domestically. Hempcrete made from domestic hemp is already starting to become a reality. Sunstrand, a company in Kentucky that processes sustainable fibers, is currently offering a hempcrete product made from Kentucky grown and processed hemp.

Could industrial hemp be a catalyst for a regenerative bio-economy? I believe so. While I do not believe industrial hemp is the only answer, it is really hard to find a more sustainable plant, and it has more than 25,000 industrial uses. Industrial hemp regenerates the soil, requires significantly less water than other crops, and grows very quickly. All four parts of the plant can be utilized for food, fiber, nutritional supplements, and building materials.

Industrial hemp is still illegal to grow according to the federal law, as it is in the cannabis family, and all cannabis is a schedule one drug under the Controlled Substances Act. The 2014 Farm Bill, however, authorized states to start industrial hemp pilot programs. Industrial hemp is defined as containing 0.3% THC or less. North Carolina has an industrial hemp pilot program that is regulated by the North Carolina Industrial Hemp Commission. Only bona fide farmers that have Schedule F income can grow industrial hemp in North Carolina with a license.

Industrial hemp was an important crop in America prior to its prohibition in the 1930's. Industrialists saw the plant as a threat to their industries' profitability, so it was banned. Today, industrial hemp has broad bi-partisan support. The Industrial Hemp Farming Act is currently pending in Congress. If this legislation passes, industrial hemp would be removed from the Controlled Substances Act.

Industrial hemp could play an important role in the coming Ecozoic era.