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Highland Hemp House



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Shah Hemp Inno-Ventures

Categories: Advocacy, Retail, Wholesale, Textiles
Description: SHIV makes fashion accessories from hemp textile, and produces a range of hemp massage and therapeutic oils. The company is also involved in a project that is building build homes in Nepal both for victims of the 2015 earthquake and for the less fortunate who've never had homes.

Website: <http://shivhomesnp.weebly.com>

More about this company:

20.02.2017 – Homebuilding project turns to Indiegogo
15.02.2017 – Nepalese, French firms in 'Hemp Boutique'
07.12.2016 – SHIV nears completion of a hemp home
11.11.2016 – German firms aid in post-quake Nepal
21.07.2016 – SHIV seeks to provide shelter in village
08.03.2016 – SHIV gets hospital project rolling
12.11.2015 – Oil crisis adds challenge for Nepalese startup
13.10.2015 – Entrepreneur looks to hemp to rebuild Nepal

Phone Number: (977) 98033 19991

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Kathmandu, Nepal

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GROW WITH US

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- Get your high-quality hemp goods into people's lives
- Innovative products from artisans and mass producers
- Creative media in support of your offers

FOOD

SIMPLICITY

For Buyers

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REACH BUYERS DIRECTLY



The materials we obtain from the hemp plant can help us get back to basics, but how about the

BASICS *of* HEMP

By *Steve Allin*

DIRECTOR, INTERNATIONAL HEMP BUILDING ASSOCIATION

The materials we obtain from the hemp plant can help us get back to basics but how about the basics of hemp? The original aspects of hemp are promoted as being able to provide great improvements to our environment, our quality of life and essentials such as food, clothing and shelter.

As we pass the 10-year commemoration of the Great Crash of 2008, it is time to take stock of where we now find ourselves from a society and community perspective. Many media outlets have been reviewing the situation as we pass the decade mark since

OUTLOOK

first Lehman Bros. and then the rest of the financial world very nearly completely collapsed. What is often forgotten is how we managed to avoid a complete disaster. Some people will remember terms such as “quantitative easing” or “debt restructuring” being bandied about at the time, and up until recently you might be forgiven for thinking that these seeming solutions worked at least partly to fix things.

The reality, unfortunately, is far from that. In fact, the underlying picture is getting far worse. The main reason for this is that all the money created and put into the global economy was in reality debt, and debt has not only to be paid back but paid back with interest; and here is the problem.

What bank managers know

In the years just after the crash I asked several bank managers and assistant managers if they really understood how the money system worked. By this I did not mean how the *banking* system worked, as this question would have been answered with all the terminology of economists, which as I will point out is not actually economics but accountancy. Accountants know how to balance books, tot up figures and put them in different columns, etc., but they know nothing about the origins of the money they

are making calculations with. It’s a bit like a carpenter knowing all about how to cut up a piece of wood but knowing absolutely nothing about how the timber was grown. It would be as if the tree just materialized out of nowhere onto their bench, ready to be worked on.

Economists should understand this but the vast majority have no clue; they are lost in a storm of terminology. So the basic question I asked these bankers was based on the

As we can easily see, our forests are shrinking together with the life forms that depend on them.

simple fact that all money we (as individuals, industry or governments) use day to day or store as savings or investments is created by borrowing it into existence (fractional reserve system). What we don’t create is the interest due on all these borrowings. So my question was where does that interest money come from? Most would assume bankers would know, but as they attempted to answer me they realised they didn’t know at all!

I have tried many times to explain this concept to people, together with the implications of this system. Most people’s eyes glaze over as they excuse themselves from the conversation with statements such as “I don’t understand economics,” as if it is an alien language from another planet. So I have attempted many different versions of trying to explain it. One way would be to use the game of ‘Monopoly’; most of us have some understanding of the game.

The board game is based on a finite amount of ‘money’ which is to be used by the players during the game. If it reflected reality a little more there would be the possibility to just print more if it was needed but this is not the case because if, like reality, you could just print more there would have

to be interest paid, which would create the same problem we have here on the streets of “reality”? Of course Monopoly doesn’t reflect real life completely but there is one basic similarity – there is only one winner. As in “real life,” eventually many people can’t pay their mortgages or rent and one person ends up with all the money. This goes against the standard concept of a “trickle down” economy unless you turn the pyramid upside down and see how the wealth trickles down to the rich at the bottom of the structure.

The gap is growing

All over the world we hear about a housing problem at the moment. Whether it is in the developing world, where the vast majority of the populations live in some type of shanty town, or whether in the developed world where increasingly the gap between the richest and the rest is growing wider everyday and homelessness and bad quality housing are causing growing social problems.

This situation is made worse by the fact that the potential for most people to find state-administered housing is reduced by a lack of government funds and the will to change the situation. Meanwhile the cost of a mortgage is totally beyond the average worker as wages are driven down by the effects of globalization.

In the current state of our economic system, as fewer people borrow money, there is less of it in circulation and we pass from boom to recession to the last stage of the game, which is called deflation. This condition occurs when the price of manufacture of goods becomes greater than the customer can afford, making it impossible to pay for anything. This is certainly the case with housing at the moment.

Tipping point

In some regions of the Western world we are seeing a bit of what some people are calling a “boom” again, but it is nothing on the scale we saw just before the 2008 crash; and it is more of an increase in spending on



Steve Allin near his homestead in County Kerry, Ireland

smaller items such as clothing and furnishings rather than bricks and mortar. So what has this got to do with hemp or building?

The term “tipping point” is often used about the state of affairs these days, and despite the distractions of the circus in the White House or with Brexit, this is very much an apt description of what is happening right now. Many of the reasons “populism” is on the rise is that there is a growing disease about the unfairness of the expanding divide of wealth and the lowering of quality of life and future expectations.

There were many problems identified by both Trump and the “Brexiters” that were certainly real, such as the damaging effects of globalisation or the disastrous T.T.I.P. and T.I.P. deals that governments were sleep-walking us into; but the solutions offered by both these camps will solve nothing.

Our money system totally relies on “growth” or an ever-growing debt level to create the extra cash to pay that interest, and for that we would need to have never ending supplies of resources to enable us to keep that expansion possible. As we can easily see our forests are shrinking together with the life forms that depend on them, our food is traveling more unsustainable miles to reach our plates and is prepared by workers earning less than a living wage while new buildings

Plans based around hemp have aspects that don't fit into the concept of just throwing money at them.

and renovated older stock are being built or repaired with unsustainable and in some cases toxic materials.

In the whirlwind of advertising for all the frivolous aspects of life we are bombarded with on a daily basis, it is easy to forget the basics such as simple food and shelter. These are needs that should be available to everyone and indeed could be a lot more of a possibility if we focussed on how we can create the necessary components of the hemp building system.

In the “hemp world” currently there is a deafening roar of excitement around the medical uses of Cannabis. I have recently been bombarded with requests for advice about how to tack a hemp building plan onto a medical cannabis plan as a kind of after-thought.

I have two problems with this. First is that with the latest developments in plant breeding and regulations in Canada and the U.S., the focus has changed to growing flowers rather than biomass, resulting in either fields or glass houses full of individual plants. This does not help the small farmer or the environment, as was originally the aim of what I would recognise as the “hemp revival.” Secondly, as someone who has used primarily natural medicine all my life, it is approaching health

from the wrong angle.

Addressing the health of occupants of a building before it makes them sick, or changing the type of food available to encourage health initially is a better method of maintaining public health than trying to provide the pharmaceutical industry with a magic cure-all.

Scale of enterprise

Scale of enterprise is another issue. Again recently I have had people hoping I will help them for free to write business plans aimed at raising millions of dollars. Some plans will inevitably require large amounts of investments, but plans based around hemp have aspects that don't fit into the concept of just throwing money at them.

As I am constantly having to remind those contacting me for advice, the first thing you need is hemp! Not a few acres of individual plants but whole fields of closely grown industrial hemp. This is not the hardest part, you might think, but most farmers are not sitting around with large areas of farmland that is not producing already.

Most of them will need to change from what they are already growing to hemp; they might even need to convert from grazing land to tillage, and this is quite a change of knowledge and systems. Even if they are already growing crops on a large scale, the fertilizer requirements will be different or need to be adjusted, and investment might be needed in new machinery for sowing or harvesting.

To produce materials sufficient even for a small scale building operation on a yearly basis, a few years are required; it will not happen overnight without some sort of difficulty arising. To then expand this to supply an industrial scale enterprise is another hurdle and one that will involve the cooperation of many farmers to create the regional supply needed to keep a factory going all year.

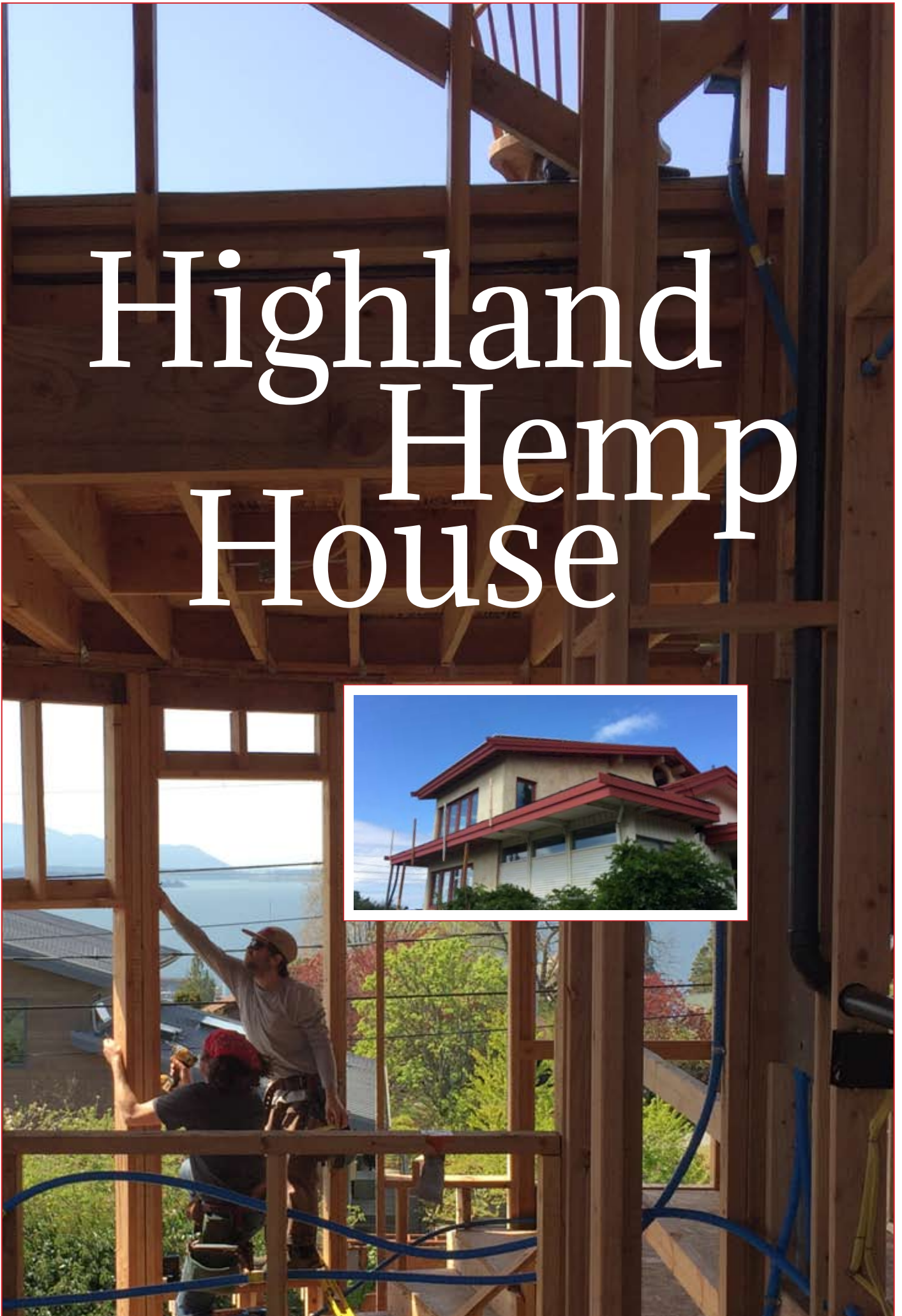
Many if not most industrial setups have relied on mineral extraction from a massive existing source such as a mine. Others might rely on pre-existing sources of timber from ancient forests, but with hemp we have to create that source, and for most business plans, quickly.

It is for these reasons I am usually more happy to start from a smaller base to establish a core group of expertise and then expand to an industrial scale. In other words to grow “organically,” not expecting to force the project forward.

I seem to need to make the point that CBD production is not likely to provide the range of benefits that industrial hemp can, and so any hemp building plan will be more in line with the production of bio-composites for the automotive industry, seed production for food or fibres for textiles.

Those are the basics of life: Transportation, food, clothing and a roof over our heads. If we get that right, maybe we won't get so sick that we need so much medicine.

Highland Hemp House



Once Pamela Bosch decided to rebuild her home with hemp, nothing was going to stop her

“I was on the rooftop of a 12,000 sq. ft. home in Idaho in the middle of a snowstorm when she called,” hemp builder Mattie Meade remembers. It was Pamela Bosch, farther north and west, in Bellingham, Washington state, USA. She’d made a decision. After three years of research that took her across two continents, after meticulous planning; an extensive search for the perfect materials, battles for permits and certifications, Bosch was ready to move forward with her dream project.

This summer, that dream took a big leap toward reality when Meade’s company, supported by local contractors, completed about half of the landmark Highland Hemp House (HHH) project in which hempcrete is being used to retrofit Bosch’s 1970s-era stick frame home. The pioneering effort traveled a long and bumpy path.

Hemp inspiration

“It was about 4 years ago when I ran into Nancy at the Food Co-Op.” Bosch said of her first hemp inspiration. Bosch, Nancy and several other women started getting together to discuss hemp and its various uses, specifically how it could impact their local community in Bellingham.

“Initially I was interested in hemp for phytoremediation, but when I learned about hempcrete, it became something I had to do,” Bosch said of the HHH project.

She started flying to Europe, meeting with international leaders of the modern hempcrete movement, drawing on the advice

of veteran hemp builder Steve Allin, founder of the International Hemp Building Association; long-time hemp farmer and product developer Albert Dun, Dun Agro, Holland; and Wolf Jordan, Wolf Jordan & Company, a Belgian builder who also makes natural building products.

“No one in the U.S. has an understanding of these materials like the Europeans,” said Bosch, who road tripped around the con-

tinents twice to see different hemp applications, study the history of hemp construction and look over technology.

When not on the road, Bosch was in Bellingham organizing and planning her dream home and working to obtain necessary permits and licenses.

It wasn’t easy. First Bosch said she found those working in the traditional and green building communities difficult to communicate with. Import permits from the U.S. Drug Enforcement Administration for a shipment of hurd had to be obtained. Bosch eventually had to indemnify herself of liability from the city, not to mention finding a non-traditional builder.

‘Leadership and courage’

“She sacrificed a few things to get this building permitted. It took a lot of leadership and courage,” Meade said of Bosch. Meade was among the open minded partners Bosch eventually assembled to help her realize her vision. “I knew from the first time we talked, Mattie was the right fit to help me realize

my dream.” Bosch said. That fit between builder and the main contractor is critical to any large-scale build, according to Bosch. “Part of building a good team is not only the talent, but also the stamina to keep going” she said.

After flying to Bellingham to assist with the design and planning of the project, Meade and his team developed systems for the installation throughout the winter of 2017-18.

Meade was back in Bellingham early this



Groundbreakers

Pamela Bosch, Founder of Highland Hemp House, Bellingham, Washington, USA, teamed with Mattie Meade of Hempitecture as main contractor on the first phase of a project in which Bosch’s 1970s stick-frame home is being stripped of its toxic traditional wall materials to be replaced with hempcrete. **Left:** The 3,200 sq. ft. home has a panoramic view of the Pacific Coast’s Puget Sound.

COVER STORY

past spring to work on the tear down of the toxic materials in the house's walls, and to adjust the framing for the hempcrete fill-in.

It was during the framing the team realized it faced significant challenges to complete the job in a timely fashion. "When the scale began to present itself, we began to ask ourselves how can we do this more effectively and efficiently," Meade said. A 2-story high south facade and the 3-story north wall -- 25 feet (7.62m) tall, were challenges. The builders used 2-foot forms to make a total of 12 layers.

Systems thinking

"We had to create a system to reduce labor intensiveness and speed up the timeline. We employed a systems thinking approach," he said. After surveying installation systems around the world the team developed an approach using readily available equipment that could easily be modified.

Hempcrete started going in the 12-inch (30.48cm) thick walls early summer of this year, a mixture of additive from Wolf Jordan, Dun Agro's hemp hurd, and locally sourced hydrated lime.

A beer cracking day

The last few buckets of hempcrete for Phase 1 of the project were poured and tamped mid-August of this year. "It was definitely a beer cracking day," Meade says. "It was a lot of planning coming to a close."

"I have a hempcrete house and it's beautiful! The neighbors intrigued and they love it!," Bosch said. "It smells like a Whole Earth Catalogue!"

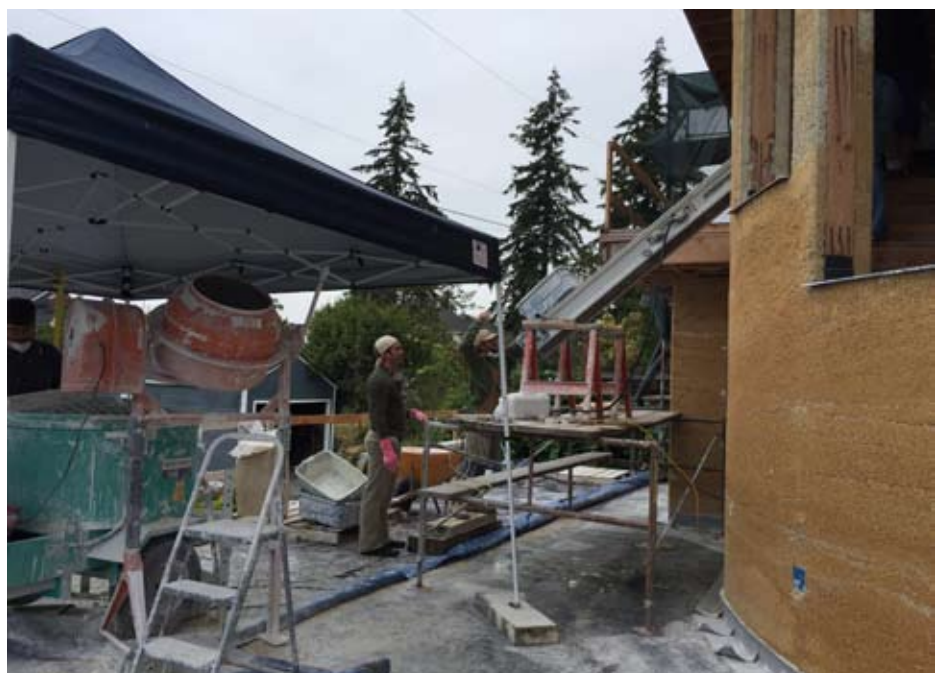
The team celebrated by having some of Bosch's musician friends come over for an open house party. "The acoustics are amazing!" she exclaimed.

Looking ahead

Bosch and Meade will continue working together until the HHH is completed. Hempitecture, Meade's firm views the project as a showpiece for the industry globally. "It's so important that our industry continues to grow in a legitimate way" he says.

As for Bosch, she's looking forward to her evolving role as a leader and educator in this emerging hemp construction sector. "If we're going to get hempcrete adopted into mainstream building, there's a lot of infrastructure that needs to be built," she said.

—John Rembold, Kehrt Reyher



HHH by the numbers

About 2,500 sq. ft. (232 sq m.) of exterior walls at Highland Hemp House are now of hempcrete. Quantities of basic materials used in the 12-inch thick walls:

9.1
tons lime
366 bags

5.5
tons hemp.hurd
300 bales

1.2
tons additive
51 bags



Historic Build

Project at Poland's HT Center will expand facilities

We'd wrapped up Deep Green Building 2018 a week earlier when The Master rang. "How's the wall?" he asked.

The Polish winter deep freeze was upon us, and the hempcrete we installed to create our first interior wall in the attic at HempToday Center was still being put to the temperature test more than a week later; we'd not extended the central heating to that level yet. At that moment, if you pressed hard with your index finger, you could still make a slight indentation. That is, by the way, a lovely feeling.

"Make sure to put up as many pictures as you can of those 'woooooonderful' people," The Master said.

Committed to hemp

There were 27 in total, from 12 countries and, yes, they all were wonderful. Brilliant. Funny. Committed to hemp. And hardworking. Except for Henry. He'd had an appendectomy 2 days before showing up, which we counted as a flimsy excuse for not doing his part. Nonetheless we let him stay because we like Freddie, his dog.

More importantly, Henry's a great conversationalist over a "Tennessee Tuck," and coffee or a beer in the kitchen. Freddie hangs out there too most of the time, waiting for something tasty to drop. Which Tommy Mullen, Mystic Mountain Hemp, Idaho Springs, Colorado, USA was always doing when he wasn't misplacing dishware or utensils. Some Guest Chef.

Day 1: Science in the morning

On the morning of Day 1, The Master gave an overview of hemp-lime construction and a fascinating lecture on how it all works down to the molecular level. If only I'd had a science teacher like Wolf Jordan at university.

Piotr Jastrzębski, Podlaskie Konopie ('Podlaskie Hemp'), and Przemek Brzyski, Budynek Konopi ('Hemp Buildings'), both of Poland, shared their experiences in farming, processing and construction and prepped us for the actual build, aided by some of Poland's leading natural builders.



This was a practiced and highly skilled work crew that performed like a well-oiled machine – giving delegates not only lessons in applying the material but also in work organization, which is critical to the overall hempcrete building process. Wolf agreed it was one of the best teams he'd ever worked with.

From field to build

Piotr farms hemp and other crops in northeastern Poland, processes hemp straw for construction and builds with it. He has a hempcrete house in a hemp field. Przemek is a scientist/builder – rare combination – who already has built several hempcrete

structures in Poland, and who has a number of hempcrete construction projects lined up for the 2019 building season. Piotr and Przemek work together, having created a full hemp-building value chain of their own.

Wolf, who hates the cold, braved it out at the mixing truck (-6 C/+20F) to give delegates detailed guidance in reaching the right consistency for the fresh material.

Strategy session

Everything was going well until the town water system failed. Which forced us to the dining table for a delicious hemp-laced lunch and strategy session.

Then was quickly formed the Crazy Polish Hemp Building Association (CPHBA). They came up with the idea to take some barrels to a local lake, break the ice and haul the vital ingredient back – if it meant we could build that day. We'd already bought out all the local stores of bottled water (sorry) and bought two big plastic (sorry) barrels when, alas, the water supply to the palace was restored mid-afternoon.

Soon, a conga line of building enthusiasts was tamping hempcrete into the forms.

What's happening in hempcrete building?

In morning exchanges there emerged a general consensus that France is the leading hemp-building nation. After that, Italy, according to Wolf, who also pointed out that there is a growing amount of activity in tiny Belgium, where his firm, Wolf Jordan & Co., is HQ'd. Australia also was flagged for its growing hemp-lime construction community while the UK is notable for specific larger-scale projects, and the USA for a rapid expansion of hemp building workshops and great media exposure of this remarkable resource as a healthy alternative to the toxic materials now in our homes.

The thing is: No real statistics are avail-

The hempcrete wall we built is the first wall of any kind ever constructed in the attic of the 250-year-old Palace at Nakło.



EUROPE

able as far as hempcrete construction is concerned, so any analysis is based on off-the-cuff and off-record conversations with key suppliers, contractors and people actually ordering such buildings. Needless to say, it's a sparse and dispersed group. In some sense figures don't matter anyway. What matters is pulling together committed entrepreneurs to build, build, build; to get together and share knowledge and help each other, form business relationships and bring others into the fold.

Naked tanning in the snow

On the morning of Day 2, we talked about how hemp can work in various market models, and we agreed it's important to promote and support Community Supported Agriculture, cooperatives and development of local value chains.

Not everyone attended the lectures that morning. The Iceland Delegate lay in the snow naked, tanning, while the guys in the CPHBA took warm baths in the yellow suite, using up the precious water we feared would be interrupted again at any moment. After their baths, the Polish boys bundled up against the elements in sweaters and heavy coats, ready for the hands-on work session. The Iceland Delegate put on sweatpants and a T-shirt, mostly for modesty's sake, and showed off her biceps by throwing around tubs of hempcrete like a dock worker. The wall grew.

Speaking of history

On the morning of Day 3, The Master gave a brief and bright talk about natural finishings and paints before demonstrating application of a specially formulated hempcrete mixture to the inside of an exterior wall as insulation. And later, the paint. If you ever want to hear a beautiful, spontaneous essay about life, just ask Wolf Jordan about color. This is a special triangular section of wall that, on the outside, holds the artistic masonry that makes up the joined crests of the Młodzanowski and Bystronowski families who built the palace in 1776.

The hempcrete wall we built is the first wall of any kind ever constructed in the attic of The Palace at Nakło, where HempToday Center has its editorial and learning center, and where we plan six total guest rooms, all walls built with hempcrete. It is the perfect material.

— Kehr't Reyber



Wolf Jordan, The Master, lectured on the finer points of chemistry in hempcrete mixing.



Hempcrete was mixed outside with warm water, and hoisted to the attic by block-and-tackle.



27 participants from 12 countries visited HempToday Center in Poland for the inaugural build.



Hemp TODAY



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Unique hands-on project: This hands-on project is the construction of interior walls to create a guest room in the attic of the Palace at Naklo, an 18th century estate that serves as the home of HempToday Center and a functioning Hemp Bed & Breakfast. This unique initiative is based on an architectural plan to add five rooms and an apartment in open space that, through nearly 250 years, was never inhabited.

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SUNIMPLANT: The 90 sq. m project is applying traditional architectural concepts enhanced through bioclimatic, environmentally friendly construction technologies.

Morocco project in ‘Decathlon’

Students involved in hemp building concept for North Africa

Moroccan cooperative Adrar Nough is among a group of four organizations whose project aimed at safeguarding the environment and culture of the Moroccan High Rif was selected to participate in the Solar Decathlon Africa 2019 competition.

Adrar Nough is joined by the National School of Architecture of Tetouan; the National School of Applied Sciences of Tetouan and the German



Monika Brümmer

Institute Fraunhofer in the project, called SUNIMPLANT. The team is applying traditional architectural concepts enhanced through bioclimatic, environmentally friendly construction technologies. It incorporates a variety of

ancestral hemp from the Rif, transforming it into new aggregates via a process developed by Adrar Nough co-founder Monika Brümmer through her doctoral thesis at the University of Granada. Brümmer is also the founder of Granada-based Cannabric, which makes load-bearing hemp-clay blocks and bricks.



Processing hemp fiber at Adrar Nough; right, new hemp-clay composites developed by Monika Brümmer

Brümmer’s innovation aims to advance the properties of mechanical resistance in conventional hemp concretes without significant loss of other favorable characteristics of the material. Innovative binders and formulations as well as post-harvest treatments that diminish the chemical interactions between binder and vegetable aggregate also reduces water usage. Pre-formed pieces are ready for transport in 72 hours.

The first African Solar Decathlon is next in September in the green city Mohamed VI of Benguerir, Morocco, under

the Moroccan Ministry of Energy, Mines, Water, and the Environment. The aim of the Decathlon is to foster development of low energy buildings by using regional sustainable raw materials.

Brümmer and Abdellatif Adebibe of the Moroccan Confederation of Associations for the Development of the Senhaja Rif Region, are the founders of Adrar Nough, which has a long-term plan to improve living conditions in the Rif, and capitalize on the potential of the region’s cannabis straw for socio-economic development.

SHIV continues rapid growth

Nepalese hemp firm expands across all units, opens consultancy

Nepal-based Shah Hemp Inno-Ventures (SHIV) is coming off a busy year in which it expanded across all business units and launched a consulting division, according to Dhiraj K. Shah, co-founder and CEO.

“It’s been an exciting year with a lot of progress,” said Shah, who founded the company with his wife Nivedita – primarily in response to housing needs after the 2014 earthquake that devastated the country. “Almost since we started we’ve fielded a lot of calls from people looking for solutions, so moving into consulting happened rather naturally,” Shah said of the company, which has developed into a leading voice for hemp in Asia. SHIV also is partnering with HempToday on the inaugural Asian Hemp Summit to be held in Kathmandu Feb. 1-2, 2019.

Working with farmers

SHIV works with local farmers, processors and manufacturers to deliver hemp products by exploiting Nepal’s abundant “wild crop” — uncultivated, naturally occurring cannabis fields — providing jobs and spurring local economic development in the poorer regions of Nepal. SHIV has a hemp construction division and makes building materials, health and beauty products, textiles and textile accessories

Over the past year, SHIV’s construction division completed projects for residential and professional use, and has a number of additional builds in the pipeline, Shah said. The company this past year also developed an ensemble of SHIV-branded products for construction including hemp shivs for wall and render application, as well as a binder and additive mixture for hempcrete.

SHIV’s textile unit is under “hEmpowering Bottom Up,” an initiative that works to advance economic and social development by training and employing Nepalese women.

Construction



A recently completed textile workshop built with hempcrete.



A SHIV-built family dwelling from hempcrete; on a mango tree farm.



Janakpur Trauma Hospital, a proposed 100-bed facility in southeastern Nepal, is planned as one of the biggest facilities of its kind. To be built from hempcrete.



SHIV will begin to build this guest house for travelers enroute to the Himalayas in November 2018.

Health & Beauty

SHIV advanced its line of hemp soaps, shampoos and oils with Massage PRO, which reduces pain in muscles and joints.



Textiles

SHIV also recently developed a number of new products in its textile division such as coffee sacks, tool bags, yoga mats and backpacks. The company offers customization of bulk orders to corporate customers, and is now offering non-woven products such as hemp rope and insulation (blankets, pillows, quilts, etc.) and finer yarns for 100% fine hemp fabric.



Sustainable Riff

U.S. developer puts hemp-bodied guitar line at center stage

U.S.-based We Are For Better Alternatives (WAFBA) says it has ordered a first shipment of specialized guitars molded from hemp composite as it launches Silver Mountain Hemp (SMH), a new brand.

The guitars are the centerpiece for a line that also includes components and accessories. WAFBA has organized several strategic partnerships to source the products, said Morris Beegle, founder and owner at Ft. Collins, Colorado-based WAFBA.

“We’re demonstrating the potential to establish a supply chain with great partners who are committed to earth-friendly practices,” Beegle said of the development of the products, all of which have hemp in them. “Our entire business model is really centered around that.”

Highly customizable

SMH looks to stand out in the highly competitive musical instrument market by offering guitars built to customers’ specifications. “The plan is to let buyers customize their guitars with different color finishes, electronics, bridges, fretboards, tuners and knobs,” said Beegle, a 30-year veteran of the American entertainment industry. His firm also is owner of the Colorado-based NoCo Hemp Expo as well as Southern Hemp Expo, which held its first edition in Nashville, Tennessee in September 2018.

WAFBA rolled out its first two models – the Silver Mountain Hemp Guitar (SMHG), and the HempCaster – during the Nashville event.

Classic designs

The guitars, supplied by Canadian Hemp Guitars (CHG), Quebec, are inspired by classic designs from legendary guitar makers Gibson and Fender, the SG and Telecaster models, respectively, Beegle said.

Marketing and sales of the SMH line will initially be through online channels and at hemp and cannabis trade events.

CHG guitars have a wood core underneath a molded composite of pressed hemp bast fibers on the back, sides and top. The Canadian company, started in 2012 by musicians Boyd Pellow and Stewart Burrows, makes a line of eco-friendly, hard-bodied instruments designed with a nod to the classic 1960s American chambered-body guitars.

Meanwhile, Beegle has assembled



Morris Beegle with his guitar molded from hemp composite; Below: Knobs & novelties from hemp plastic



Hard Truckers, a boutique cabinet group that’s building speaker cabinets with hemp board supplied by Sunstrand, a maker of natural composites based in Louisville, Kentucky, USA. Sunstrand makes natural fiber-based products for the construction, automotive, electronics, and recreation industries.

Speakers inside the cabinets are from San Francisco-based Tone Tubby, whose Tone Tubby Cones substitute the paper component in high-quality speakers with more durable and tear-resistant organic hemp fiber-based material.

A range of hemp-plastic control knobs and picks made by Green Spring Technologies, Ft. Worth, Texas, with guitar straps from Poland-based Natural Materials Unlimited, Warsaw, round out the SMH line, which Beegle says will expand over time.

The Family Farm



Team Obelisk: Andris, Debora, Fredis and Gabriela.

Photo: Arita Strode-Klavina

Building a model small hemp enterprise in Latvia

Small is beautiful at Obelisk Farm. That's the spot in eastern Latvia where Andris Visnevskis and Debora Paulino have escaped the urban life and are living out their hemp dream.

"We did it mainly because of the kids," Visnevskis said of the couple's transition from the bustle of London to the clean air and pastoral life of the farm in 2013.

Having read about the properties of hemp seed oil, Andris and Debora purchased the run-down 2.5 hectare property – which includes an old farm house and several stone and wooden out buildings – with visions of entering the hemp food market.

Business model

While their initial idea was to grow hemp for its nutrient-rich seed, the couple quickly realized that their farm's small size and lack of proper machinery called for an adjustment to the business model.

So in their second year at Obelisk, they added educational tours of the farm and launched a series of workshops in how to grow hemp, and how it can be used in food, paper, and for construction.

Andris is insulating the farmhouse with hempcrete, a project launched in 2017 when legendary hemp builder Steve Allin taught the first hemp construction workshop on the farm. This year's second edition drew attendees from around the Baltic States, Poland and Canada.

Packaged foods

Obelisk Farm also has an online shop that sells packaged hemp-seed food and tea from the flowers and leaves – products that are in growing demand in Latvia. In addition to individual consumer sales, the company has been successful among B2B customers who purchase Obelisk's products in bulk as corporate gifts.

Visnevskis said Obelisk's hemp agro-tourism activity and the shop drive most of the enterprise's income.

When tourism slows down during winter, the couple keep busy hand packing their tea and seed products in time for the important holiday sales season.

Dreaming of a farm

Andris and Debora, who's from Portugal, met at an Art Academy of Latvia carnival event in 2009. They later spent three years in London where Andris worked as a brick-layer while Debora tended bar.

"We were just working and saving money to buy a farm when we got into the idea of hemp. It all just came together," said Visnevskis. After considering Portugal and Latvia, the Latvian property proved to be a better buy.

The rundown farm required three years of renovation and grooming, most of which the couple did themselves before planting their first hemp crop in 2015. They've recruited volunteers to bring in their harvest by hand each year, drawing

both Latvian and international workers.

Obelisk's Hemp School is in a stunning old stone building that serves as a multi-purpose lecture and dining hall, and the complex has separate buildings for a library guest room, a retail shop, a shed for building materials and mixing hempcrete; and facilities for drying and storage.

Promoting Latvian hemp

Visnevskis is a strong proponent hemp in Latvia, which grew about 1,000 hectares in 2017; fields have grown gradually since 400 hectares were reported to have been under hemp in 2010. Meanwhile, various processing facilities are located in all regions of Latvia, with stakeholders concentrating for now on seeds and, to some extent, fiber raw material for export. For now, there is no hemp growing for CBD in Latvia, Visnevskis said.

With a relatively simple licensing regime and €500-per-hectare EU subsidies still available, Visnevskis sees potential for continuing steady growth of hemp fields across Latvia, and a continuing need to promote the expansion of industrial hemp for all it has to offer.

That's the mission driving Obelisk Farm: Promoting, teaching, advancing expansion of industrial hemp up and down the value chain.

"The key thing is education," said Visnevskis. "We want to demonstrate how the plant can be used — all of its uses."

Moving passion to purpose

‘Her Many Voices’ is changing the world one person at a time

The Founder of the Her Many Voices Foundation (HMFV), Alicia Fall is a TEDx Talk presenter (The Art of Igniting Action), educator, performing artist and public speaker on humanitarian issues for more than 30 years. Fall’s Foundation spearheads a pioneering hemp project that is developing a sustainable crop and building product for Haiti’s besieged yet resilient population.

HempToday: How would you describe things in Haiti at the moment, post the hurricanes of 2016 and the 2010 quake?

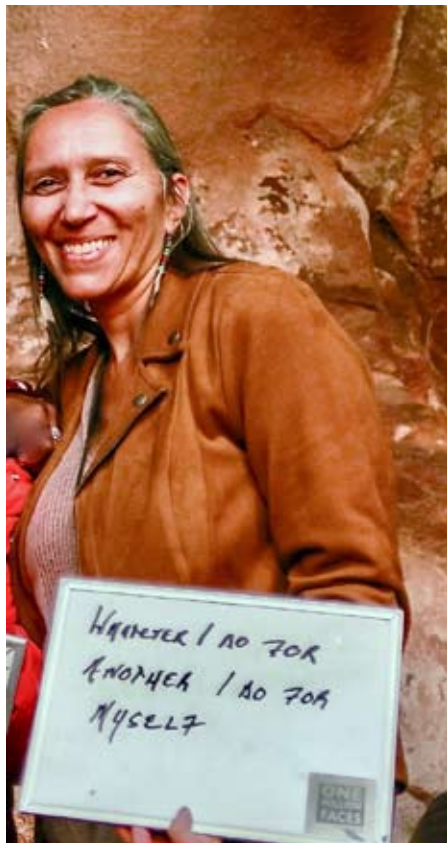
Alicia Fall: I get updates almost daily from our Projects Coordinator in Haiti. What I can say is the people continue to have an indomitable spirit of hope in the face of natural and unnatural disasters. That’s the positive. The reality is that since the quake and post 2016’s three hurricanes, there’s an unrest in the streets. People are frustrated and rightfully so. They’re sick of lip service given to them on promises of life improvements: Promises of work, promises of food security, medical attention and education for their children.

University students are tired of repeatedly having doors locked because of violent protests in the streets. They’ve been promised a lot, yet in 8 years little has changed for the majority of Haitians. One disaster after another and like in most countries, political divisiveness, have taken their toll on a very strong and resilient people.

What we have personally experienced is more tension in the air, more violence in the streets, more gang activity. When people become desperate the climate changes. And desperate actions are taken when the feeling is no action is taken by authorities to improve their circumstance. At the end of the day women still need to feed their children, men still need work and people still need more than hope. They need practical responses. That’s where Her Many Voices Foundation comes in. We provide practical education for women, children and men in Haiti in the belief that it will improve, at least, their individual worlds. Then they can pass that knowledge on to the next. It takes a collective effort to make big change. We are excited to be leading the way to a more sustainable future through our hemp project.

HT: What’s the role of hemp in meeting the goals of Her Many Voices Foundation?

AF: HMFV is founded on a profound respect for importance of Mother Earth. Like most mothers she gives us everything



we need and asks little in return. Our mission is to move our passions to purpose for the betterment of women, children and our Mother Earth.

Hemp is a high yield, low resource consuming crop. Our projects in Haiti will not only nourish back the soil in areas of a greatly deforested country; it will allow the people to yield hemp milk, seed and flour to ease hunger and lead to hempcrete building materials to create structures, like much needed toilets, within six months of planting. The difference this will make for the people in the communities we work with is hugely impactful.

HT: What are the challenges to getting funding to carry out the mission of the Foundation? How are you addressing that?

AF: In a world where there’s so much need yet financial limits for the 99% of us on the planet, many people are exhausted by the constant ask of support, no matter what the cause. Donor fatigue is a real thing. And when it comes to projects in Haiti, people see things differently.

Many people think “Oh they received all that money. They’re OK, now,” without understanding the history of a people, its

country and all its natural disasters faced on a regular basis. HMFV is working to diversify our funding streams. Gratefully, we currently have a very committed individual donor base. We are seeking venture capital for our hemp projects. For 2019 we are identifying new foundations to apply to for grants and have been accepted to the Colorado Gives Fund.

HT: What are the respective and different challenges to providing services for women and children in developing countries compared to what you do for low-income U.S. households?

AF: In the U.S., food insecurity means people can’t afford to buy food. In a place like Haiti, food insecurity means the crops have too little water, they dry up and there is no food available. Our work in Haiti requires us to address more of the basic survival needs of the people with whom we are working as part of achieving our overall mission. However in both situations, food insecurity is a real issue for the people we serve.


In the U.S. we can drive a truck load of food and resources to just about any location, confident we will safely arrive with nothing more than a driver. Working in developing countries, security is our greatest challenge and also not being taxed for bringing physical resources into the country.

When we first started working in Haiti we usually had to pay for safe passage no matter where we went. Today, eight years later, we have strong community support yet getting from point A to B can still be a challenge. I’ve come to look at it as creating more job opportunity as well as a bonding opportunity with people whose sole purpose is to keep us safe. That’s not such a bad thing.

HT: What are your goals for Her Many Voices for the next five years?

AF: We are changing the world one person at a time by building solid relationships. In five years we will be 13 years working with the village of Trou ChouChou and with Wynne Farm Ecological Nature Reserve. We’ll be operating and serving the community with no disruptions in service; building safe, sanitary toilets, homes and schools, and providing food supplementation to the local community. We’ll be teaching local and international visitors how to sustainably grow and harvest hemp in Haiti, and expanding our production and programs in the U.S.

PROFILE

A photograph of Sandro Tiberi, an Italian papermaker, standing in his workshop. He is wearing a dark blue long-sleeved shirt and a red apron with his name 'Sandro Tiberi' and 'Fabiano 2014' printed on it. He is leaning over a large, dark, circular wooden vat. In the background, there are framed pictures and a portrait of a man in a suit. The lighting is dramatic, highlighting the man and his work.

Sandro Tiberi learned papermaking during 15 years working in the mills of Fabriano, Italy

Substance of a dream

Italian hemp papers preserve tradition in specialty market

After discovering hemp's potential for papermaking just three years ago, Italian artisan Sandro Tiberi has developed a diverse line of high-quality products ranging from a translucent vellum-style parchment to a pulpy, textured material suitable for wallpaper and other decorating applications.

More importantly, Tiberi, who lives and works in the traditional Italian papermaking region around Fabriano, central Italy, offers a tantalizing future for hemp paper.

Preserving traditions

"It's important to preserve our traditions," said Tiberi, who learned papermaking during 15 years working in the factories of Fabriano, where production of paper dates to the 13th century. "But it's most important to apply those traditions to the future."

As Tiberi envisions the future, hemp fiber soon will be more readily available from local sources in Italy, to be turned into pulp in Fabriano. While he struggled with the hassles of importing small quantities of raw material from Spain, Tiberi recently found

a friendly supplier in SouthHemp, a fiber processing firm in south Italy that was willing to sell him the small amounts needed for a growing artisan workshop.

"Hempathy" for paper

Having raw materials closer at hand is allowing him to expand his "Hempathy" line of papers, hand-made creations used by everyone from painters to graphic designers to marketers creating high-quality corporate communications materials.

"There's greater and greater attention being paid to the bio and ecological sustainability aspects in products like the ones I produce," Tiberi said, ticking off hemp's eco-advantages: "Hemp has a low percentage of lignin compared to wood, so you don't need the large amounts of acids required to melt wood into pulp," he notes. "And the fiber and inner core of the hemp stalk are already white. So you also don't need harmful chemical compounds used to increase whiteness in wood pulp."

Perhaps most importantly, hemp produces the same amount of cellulose in one

growing season as four hectares of forest will yield in decades, Tiberi notes.

Demand in specialty market

In the hand-made specialty market, Tiberi sees demand rising for limited production runs of papers with personalized watermarks and reliefs. "I don't produce paper; I produce your paper, for your voice," notes Tiberi. "There's an alchemy to it."

But he's also working on bigger deals that would require him to ramp up production from what now is a three-person shop. Tiberi eventually sees a product line extending from hemp paper that can be run through modern ink jet and laser printers, to the highly-personalized, artistic creations he makes with his own hands.

An artist, and formally a "master" papermaker, Tiberi also proselytizes about hemp paper, including it in workshops he conducts on the craft through an officially recognized school. "I tell them paper is where the material and the spiritual meet," he says of his lectures. "We're not just making paper, we're making the substance of a dream."

A friendlier choice

China is poised to lead advancements in the development of cottonized hemp

Cottonization will bring hemp textiles into the mainstream, creating soft, workable fibers ideal for use in clothing, either on its own or blended with other fibers like cotton or synthetics.

One country is set to capitalize on modern cottonization processes, while already dominating the hemp textile market: China. China is by far the largest producer of hemp in the world, enjoying a long standing tradition of growing and processing the crop, and a government that supports the hemp industry.

While the market competitiveness of cotton struggles, and the environmental impacts of cotton production and processing escalate, the Chinese have realized that hemp fiber, processed appropriately, can provide a suitable -- and sustainable -- alternative.

Hemp fibers can now be made nearly as soft as cotton with several properties that make it more desirable, including the drastically reduced environmental impact. A pertinent example of hemp as the "friendlier" choice is that hemp rarely requires



Hemp fiber, before and after cottonization

pesticides and helps to clean fields of weeds. Cotton on the other hand uses roughly 16% of total global pesticides and 6.8% of herbicides, despite only being grown on 2.5% of the world's cropland, leading to far-reaching environmental and human health impacts.

Hemp is primarily grown in the northern and northwestern parts of China, with the provinces of Heilongjiang and Yunnan probably the most well-known for the crop.

Escalating investment, R&D and international collaboration is rapidly modernizing the Chinese hemp industry, with a lot of that going into hemp fiber, set to feed

into the country's massive textile industry, the biggest in the world in both volumes produced and exported. Interestingly, a lot of research and investment is coming from the Chinese military, which uses it to make socks and uniforms. They tout the superior characteristics of hemp textiles, noting the fibers anti-microbial effects, moisture absorption capabilities, breathability, UV protection and rapid drying time.

But hemp fiber has a drawback that many bast fibers suffer: Lignin embedded in the fibers. The lignin provides the stalks with rigidity, but makes processing difficult. Fibres with high lignin content are "rough," and not well suited to produce comfortable clothing. This is partly the reason why most hemp textiles are blended with cotton or other fibres, to increase comfort and softness.

Cottonization is a chemical or enzymatic process that removes the lignin from fibers, overcoming this hurdle in hemp fiber and making the fiber, like the term alludes, more cotton-like.

Already in 2009, Chinese scientists were able to reduce the lignin content of hemp fibres from 8-10% to as little as 0.2% by using environmentally-friendly enzymatic cottonization. These processes are now being used in commercial hemp textile mills, including a processing plant capable of processing 500,000 tons of fiber per year in Xishuangbana (Yunnan Province).

—Arne Verhoef

Canadian firm unveils kinematic decorticator

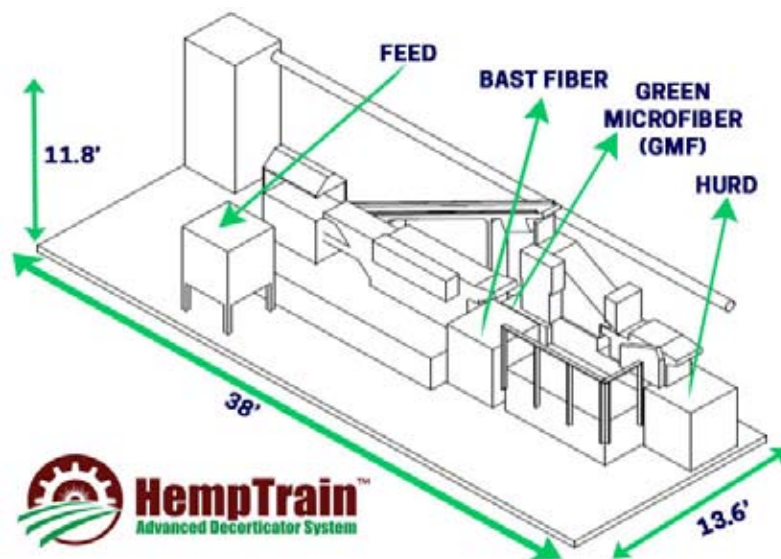
Canadian Greenfield Technologies Corp. (CGT) says it has developed the HempTrain Decortication System, specialized equipment based on high-speed kinematic technology that turns out intact structural bast fiber while capturing a clean microfiber stream and other hemp derivatives.

A turn-key installation of a HempTrain module with capacity 1 ton/hr is priced at \$1,850,000; it includes a bale opener, main processing units, electrical and dust control – delivered, installed and commissioned., the Calgary-based company said in a release.

Short-time payback

"This green microfiber stream significantly increases the value of the production, allowing for a high margin and short-time payback business model," the company said. The cost of operating the technology is much lower per ton/hr of throughput than conventional decorticators, while producing much higher value materials, according to CGT.

The technology is an advancement over



earlier generations of decorticators which employ a hammer mill, which damages bast fiber and causes attrition of hurd fiber.

GTC said it will begin hosting demonstrations of the decorticator in September.

Greenfield also was recently named to

supply between 60,000-120,000 pounds of its Nforce-Fiber product for construction of tracks for bobsled, luge and skeleton races at the site of the Winter Olympics in Beijing. The fibers, which are used as a strengthener in sprayed concrete, are already being used for outdoor projects such as pools and skate parks.

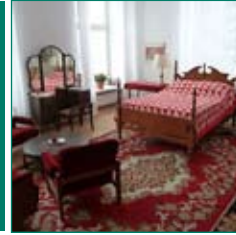
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