



THE ASSOCIATION & VOICE OF THE US SEWN PRODUCTS INDUSTRY

PART 1

BUILDING A ‘HEMPIRE?’

SEAMS’ member Bear Fiber on leading edge of creating U.S. hemp fiber value chain

By Devin Steele

Like the old ball player who comes out of retirement to remind everyone of how it’s done and to bring an historical perspective to life, hemp has returned to the playing “field” to once again showcase its many attributes to America and the world. Before being put out to pasture – well, pulled *from* the pasture, for various reasons in many countries – hemp was hip. Its fiber helped clothe people, helped explorers discover the New World in sailcloth and helped secure a multitude of things in ropes.

When the 2018 Farm Bill ushered in U.S. hemp cultivation again, the “new” old crop quickly began to spring back to life from American soil and gain favor among consumers, particularly around the CBD oil craze. Since then, hemp has seen exponential growth in the U.S., and cannabis and hemp stocks have surged in recent weeks – with even higher expectations ahead, experts say.

Among its virtues, hemp has shown to be: stronger than any other natural fiber; antimicrobial, hypo-allergenic, antiviral and UV resistant; abrasion resistant; naturally resistant to mold, mildew and rot; absorbent and breathable; softer with every wash without losing its shape; and warmer in the winter and cooler in the summer. Additionally, hemp is one of the most environmentally friendly grown fibers in the world, requiring no pesticides, herbicides or fertilizers and little water in fields – and absorbs more CO2 than any forest or commercial crop, meaning growing hemp could help offset carbon emissions.

But despite its innumerable attributes, the fiber derivative of hemp has been slower to catch on, due to a number of factors. A main reason is that hemp fiber requires more high-tech processing and greater expertise to transform it into a comfortable garment that consumers would want to wear.

To that end, one SEAMS’ member on the leading edge of helping build out a hemp farm-to-fiber-to-finished good value chain in America. Bear Fiber was created in Wilmington, N.C., by one of the world’s preeminent authorities in the hemp field, Guy Carpenter, who brought decades of experience working with the fiber around the globe and understanding the benefits brands and consumers are interested in.

Along with hemp subject matter expert and business partner Patrique Veille, he co-founded the company in 2017 in order to “be on the forefront of hemp fiber engineering to yarns and textiles and consumer products,” Carpenter said. “We want to be a reliable supplier of consistent hemp fiber in multiple grades to the spinning industry.”

So far, the company has built a “very good foundation” to realize that vision, and has developed the expertise to engineer, refine and upgrade hemp fiber for short staple spinning, he said. Bear Fiber could not get to this point alone, he said, so the company has worked with numerous partners to conduct trials and tests, run samples, share knowledge, etc. Among those partners are fellow SEAMS’ member the Manufacturing Solutions Center at (MSC) at Catawba Valley Community College in



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Conover, N.C.; Gaston Colleges' Textile Technology Center (TTC) in Belmont, N.C.; N.C. State's Wilson College of Textiles in Raleigh, N.C.; Fashion For Good; the U.S. Department of Agriculture; CFDA/Vogue; Textile Exchange; and more.

Their goal is to help grow the American hemp fiber industry by developing a commercially sustainable market to support farmers, processors, yarn spinners, textile manufacturers and the apparel industry here in the USA, according to Carpenter.

In January, Bear Fiber put some tangibility behind its efforts by unveiling the [first socks made of American hemp](#), which gained wide national attention in the hemp, fashion, textile and sustainability worlds. Launching its own line of branded products will help create more market interest and demand in hemp fiber, Carpenter said.

Hemp is the focus, but their socks also contain a proprietary technology that conforms to your feet, will not slouch or droop, do not have that irritating toe seam, breathe naturally and have been "intimately blended" with organic cotton and Unifi's REPREVE recycled performance fiber Nylon 6, he pointed out.

The company now aims to feed other U.S. and global brands with this proprietary fiber as it scales production accordingly, he added.

"Once consistent grades of hemp fiber for integration into blended yarns are available, then we will see the momentum increasing rapidly for more hemp yarns, textiles and apparel to enter into the consumer market," Carpenter said. "A little hemp in the blend can make a big change in fabric performance and longevity of that fabric."

The hemp fiber journey

Though being born in the textile manufacturing hotbed city of Spartanburg, S.C., where many of his friends' parents worked in the industry, and later returning there as a teenager in a military family, Carpenter never had an ambition to work in the industry, he said. But after a circuitous journey that took his family around the world during many of his formative years and to several countries during his time at the College of Charleston (B.S., Political Science), the University of South Carolina (MBA, International Business), the Peace Corps and the U.S. Army, he ended up taking a job in the industry in his home state.

He started a career that now includes more than two dozen stops along the way at a wholesaler that sold T-shirts, sweatshirts and polo-style shirts into the embellishment (screen printers, embroiderers, etc.) sector. After getting his first taste of the apparel industry, he was hired as a high-end shirt maker in North Carolina to set up an international distribution network. That led to a stint as a senior vice president in Europe for a knitwear maker that supplied big brands from Hungary and Romania, before he returned to the States. Several career stops, including several in the consulting field, would afford him the opportunity gain a better education of natural fibers, including hemp, over the next 15+ years.

"While I was in Hungary making goods, one of our biggest customers, Nike Europe, called me and asked me to put 3% organic cotton in the yarn for their garment," Carpenter recalled. "And I said, 'why?' And they said they wanted to make an organic cotton T-shirt, because back then, there were no rules



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(around the level of organic ingredients). So we ended up doing it and I became fascinated with organic cotton and its opportunity in the marketplace as a niche product. And that led to an interest in other natural fibers, and I explored possibilities with hemp and flax. But the technology at the time didn't allow them to be integrated into knitwear very well.

"It was at that point that I think I became less of a numbers management guy and more of a fiber guy," he added. "I became fiber obsessed."

Which is why he was happy to accept a position at Hemp Town in Vancouver, Canada and, through the business, met Phillip Liang, who would become a friend and mentor. Liang introduced Carpenter to the hemp and organic cotton, textile and apparel industry in China, which led Carpenter to a job selling private label apparel made with organic cotton, hemp, bamboo and other sustainable, natural fibers in China.

Carpenter's networking opportunities led him back in the U.S., where he took on several consulting roles, but he would continue to travel the world. He later took a position with [TC]2 in Cary, N.C., while continuing to provide consulting services.

In 2017, he got a call from a group of younger people who were "enthusiastic about bringing the opportunity to grow industrial hemp to North Carolina," and needed his help and expertise, he said. "I ended up saying yes, and they did a great job," he said. "They did all the work. I supported the concept by being able to talk about the potential for business with hemp."

Around the same time, the N.C. Legislature created the Industrial Hemp Commission, and the Secretary of Agriculture asked him to serve as its agribusiness commissioner, which he accepted.

"We tried to be as inclusive as we could to give as many farmers as possible the opportunity to take advantage of this new turn of events for industrial hemp, its legalization," he said. "That first year, everybody wanted to grow hemp for CBD, which kind of ticked me off. I mean, this is the textile state, and I knew that hemp fiber is the long game for where the real opportunity is in hemp."

That light-bulb moment got Carpenter's wheels to turning, which put in his mind the notion to start a company specializing in natural fibers, primarily hemp, he said. As he was developing the concept, he met Veille, and "it was clear from the get-go that he actually knew more about hemp than anybody else I'd met in North Carolina because of his experience working with it in Canada. I realized that he was young and smart and hard working with an incredible attention to detail and very knowledgeable about not only hemp, but all matters involving business logistics, operations, etc."

And thus, Bear Fiber was born.

Creating a new 'hempisphere'

With their experience, they already knew how to "cottonize" hemp, an important process that gives it a cotton-like hand through a finishing process that removes the lignin that binds hemp fibers together in bundles and "opens" them for further refinement. "But I had never actually needed to do it myself because I had been bringing it all over from China," Carpenter said. "So it wasn't until a year later that we



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actually had some domestic hemp fiber that we could ‘cottonize’ because nobody was growing it here until then. And we did that and ended up, from our first trial, spinning yarn and knitting fabric and making a finished garment for a client as proof of concept.”

Bear Fiber did so by developing a proprietary wet process to degum, clean and ‘cottonize’ the fiber so that it is suitable for short staple spinning, he said. The company also bought a decorticator, a machine that mechanically separates the fiber from the hurd, or the woody core, before it enters the wet process.

In addition to its aforementioned partners, the company has worked with commercial textile mills that have spun yarn and knitted fabrics from its hemp fiber.

“We love all of our partners,” he said. “They’ve all been super cooperative and helpful and integral to our moving forward, and we will depend on them to continue to help us in the future. They’re all innovative, creative and inspiring.”

And all of these development partners are based in the Carolinas, which is helping the region become the heart of the hemp fiber industry in this hemisphere, he said. Or maybe soon, this “hemisphere” ...

“Based on my global work experience in this industry, there is nowhere else in the world where these types of opportunities exist to work with the most expert professionals in the industry to assist a new business to develop in the fiber, yarn, textile, apparel and fashion industry. Nowhere else is there so much talent available. It’s not even close. We are blessed to be in the absolute best place in the world to be part of making a domestic hemp fiber value chain possible and offer other potential opportunities for others to develop business channels with this fiber. And the institutions we have that are helping us do have been incredibly helpful to the largest degree possible. I would also add that the commercial spinners, knitters, weavers, finishers, dyers – all parts of the chain, as well as the brands – have all been eager to assist in development.”

Chuck Costner, product development specialist at one of Bear Fiber’s partners, the Textile Technology Center, has worked closely with the company to test and develop hemp products. With 30 years of experience in yarn manufacturing after having been trained by experts in Switzerland in the early 1980s, he said the future is promising for hemp fiber, with Bear Fiber leading the way.

“I think you will see great things come from the hemp industry, and Guy is really making it happen through testing and innovation at TTC,” he said. “The hemp future is bright and has a lot of great people working in it who will make it happen.”

As Bear Fiber and others in the hemp fiber business continue to overcome obstacles and unveil more products, other issues facing the industry include raising consumer awareness and creating demand, Carpenter said.

“The strength and the abrasion resistance characteristics of hemp fiber will be obvious to consumers,” he said. “One of the best things about using a blended hemp fiber in yarns for textiles is that the garments are going to last longer. And for consumers to recognize that, they’re just going to need to buy it and to ‘be’ it. A hemp garment can be in their closet for five years or even 10 years, and they could still be wearing it like it was new. But how do you make that aspect obvious to a consumer?”

EMPOWERING THE MADE IN AMERICA MOVEMENT



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Fortunately from a generational perspective, at least, many younger consumers are obsessive about sustainability – an endearing quality of hemp products. And during the COVID-19 pandemic, consumer behaviors and preferences have shifted even more toward demanding more purpose-driven and sustainable products. And for an industry that has taken its lumps in the sustainability department over the years, the textile/apparel industry could benefit from all of the eco-friendly attributes of hemp.

And to many in the U.S., especially over the last few years as near-shoring and reshoring have expanded, the made-in-America aspect of a hemp farm-to-fiber-to-finished good value chain is probably appealing to many.

“The importance of having hemp product sourced and made in America is paramount to the growth opportunity of hemp fiber globally because here in America is where we innovate and create, and we design better than any other place in the world,” Carpenter said. “We’re going to bring forward yarns and textiles that create a new natural fiber technical textile.

“We’re now able to grow and produce this incredible fiber ourselves, and one of the things I look most forward to seeing is how others create new yarns and textiles and apparel and nonwoven products with hemp,” he continued. “One of the things that I look forward to, and this ties into the market potential also, is the fact that we’re going to be making things with hemp that no one has even imagined yet. It offers us the chance to substitute a sustainable raw material input in many product directions that were using plastics or other non-sustainable inputs before.”

And hemp could mean a boon to the cotton sector, he added.

“Cotton is hemp’s BFF,” he said. “We want to work with cotton growers and Cotton Incorporated and develop a relationship so that we can build a more sustainable textile industry in the United States based upon natural fibers. And we see our challenge as replacing 50/50 cotton/poly with 65/35 cotton/hemp.”

Building that U.S. hemp fiber value chain aligns closely with SEAMS’ mission of “Building a Bridge for a Stronger U.S. Supply Chain,” a point Carpenter made when asked about his company’s membership in the association.

“After we created Bear Fiber, SEAMS was the first organization that asked me to speak about the potential of hemp in our industry,” he said. “And since that time I have found my most important resources for the growth of our company to be other members of SEAMS who have been positive in their encouragement and helpful in their counsel.

“I am a believer that you can’t do anything by yourself,” he added. “Someone is always helping you along the way. We wouldn’t have gotten as far as we have without the help of so many others in the industry, particularly SEAMS’ members.”

[NEXT EDITION: Read about SEAMS’ member Trace Femcare LLC, a hemp tampon producer founded by Claire Crunk](#)