

**Hem Mills Inc and the Expansion of Industrial Fiber**

Spring 2021





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will advance the goals of the USA...

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will advance the goals of organizations.

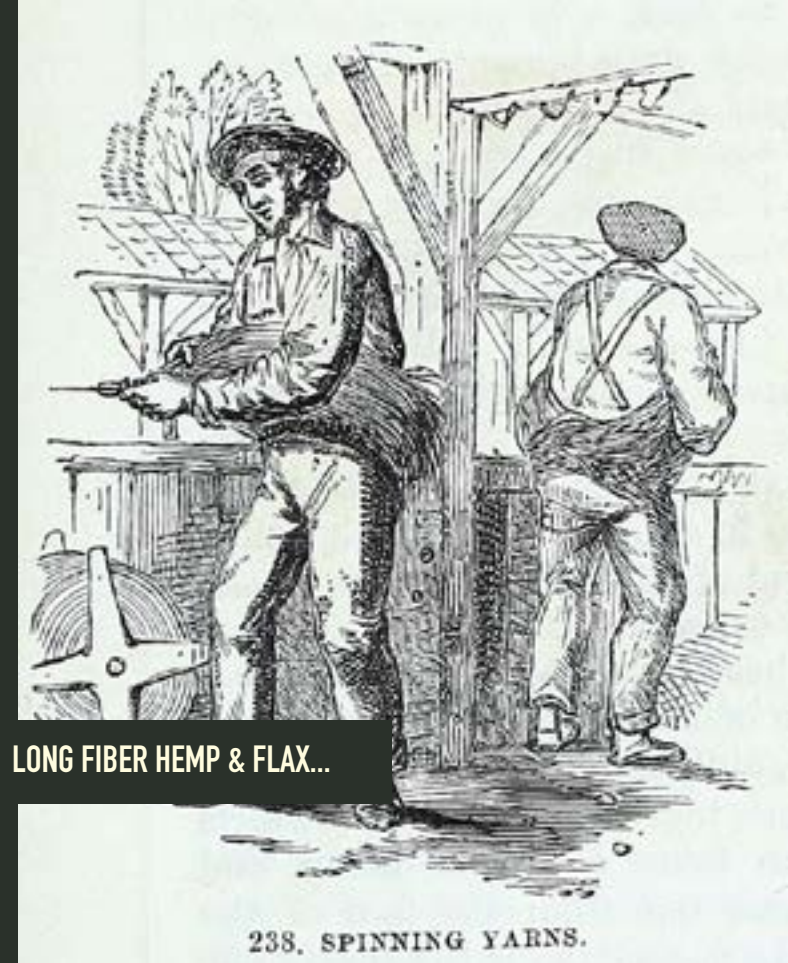
- Relevance for hemp, beyond CBD/THC.
- Education platform in textiles.
- Membership expansion.
- New funding partners in textiles.

# Back in 1810...

## The cotton gin created King Cotton, a short fiber.

Long fiber flax and hemp were defeated by cost.

Today King Cotton is no more, Long fiber hemp is on the rise. Only Hem Mills has taken the road less traveled to Romania, importing state-of-the-art for hemp fiber processing, from seed to socks.



LONG FIBER HEMP & FLAX...



MEET THE COTTON GIN

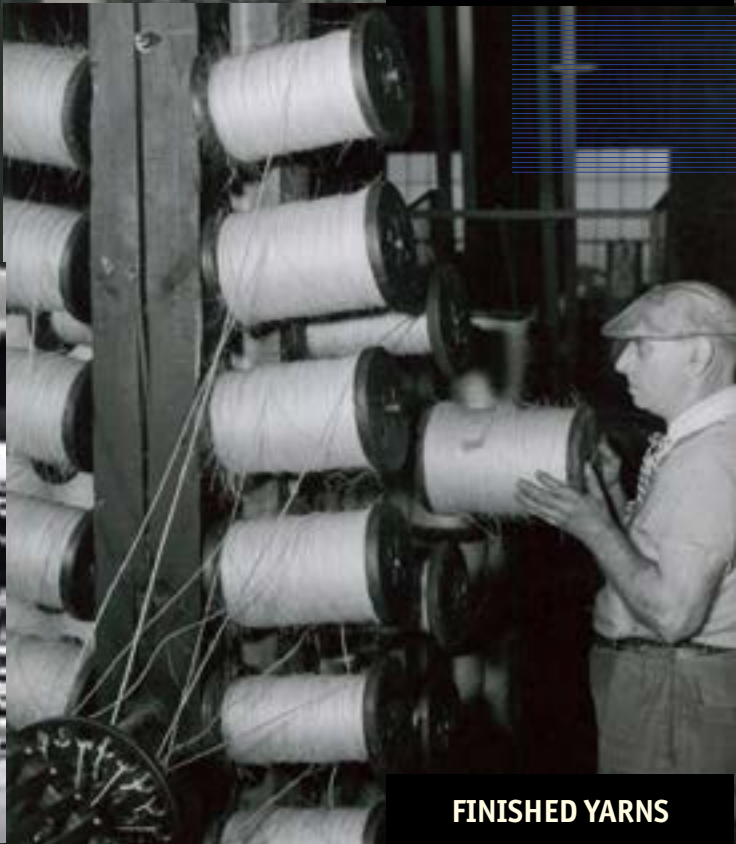


# Fast-forward, 1941.

Hemp, a strategic material.

Japan threatened the supply chain of hemp and jute from SE Asia.

The Hemp for Victory campaign was a success.



# The Process in 2021.





# Hemp Fiber Will Pivot The Textile and Hemp Industries...

## A Hemp-based Textile Company

Hem Mills is first and foremost a textile company. This is a major difference in the expansion of the hemp industry because it fits today’s needs of apparel and industrial textiles for new, high value product, made in the USA.

## Importing the Romanian Process

Hem Mills’ Romanian partner is the CEO of a prominent hemp company, and is one of the world’s leading experts in taking the crop from the field through the process to produce yarn with wet-spinning.

## Removing FDA & DEA from the Equation

CBD and marijuana industry sectors are weighted heavily by decades of culture and bureaucracy from these agencies. Hemp fiber is a different story altogether and will easily forge ahead as the dominant hemp industry sector.

## Historic Context Of Fiber, Not Marijuana

Over the centuries hemp has never lost its value as a strategic material, except when the politics of drug use began to overshadow the industry. Overcoming the politics is inevitable, from a historical perspective.

## Making And Selling Product Today

CEO Madison Sexton has built Hem Mills from scratch in about two years. The apparel and textile clients are lining up with increasing orders and purchase orders and allowing the company to push the envelope.



## Working With Cotton Infrastructure

Hem Mills’ strategy from day one has been to rely on available cotton technology and expertise. The company employs some of the top cotton engineers and works with local North Carolina producers as needed, including NC State University textile research group.

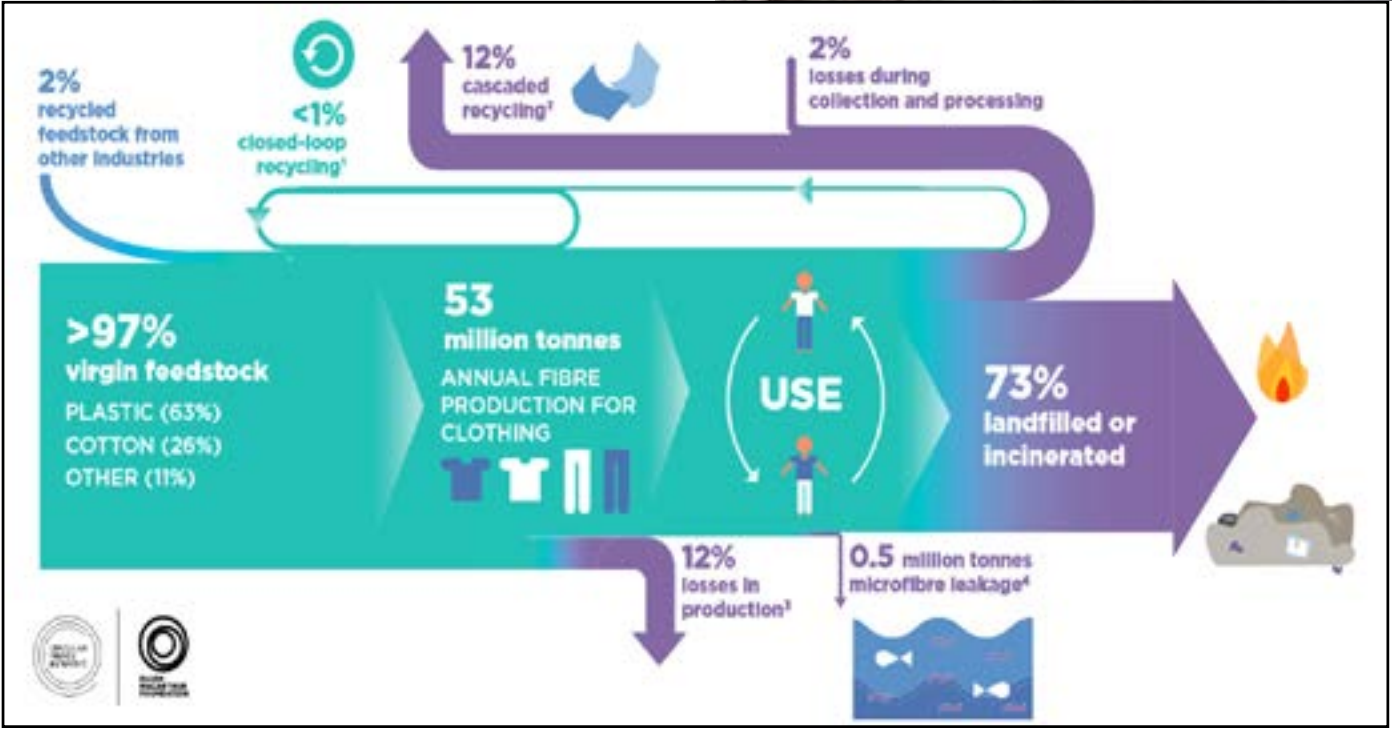
## Post-Consumer Recycling

Hem Mills is now aligning with technology partners in Europe who have established mechanical processing of old clothes into yarns.



	 Hemp	vs	 Cotton
Length	20 cm		2.5 cm
Yield	Average 600 Kilos Of Fiber Per Acre, Per Year		Average 240 Kilos Of Fiber Per Acre, Per Year
Pesticides	Minimal Need for Pesticides/Herbicides		Uses at least 16% of Global Pesticides
Water	Requires 2300 Liters To Produce 1 Kilo Of Fiber.		Requires 10,000 Liters To Produce 1 Kilo Of Fiber.

SOURCE Ecological Footprint And Water Analysis Of Cotton, Hemp And Polyester Stockholm Environment Institute





# Hemp Fiber Will Advance the Goals of the USA...



## Near-Term Green Jobs

US hemp textiles can grow rapidly and Hem Mills will lead that process. Here are the types of jobs to be expected in the hemp fiber industry:

- Seed Genetics
- Agriculture
- Processing Converting the plant to fiber
- Textiles Operating a mill to produce yarns and fabrics.
- Manufacturing Production of apparel, industrial soft goods, composites.
- Education An expanding industry will require that new standards and expertise be taught to a variety of audience groups.

## Paris Climate Accord

All available research shows multiple value points for hemp to reduce reliance on non-renewables while also capturing carbon on an impressive scale. The value of hemp for carbon credits will continue to increase. The hemp plant can mature in 90 days, a tree 90 years.

## Rural Economic Development

Farm communities across the US can benefit from the expansion of hemp farming and processing.

## Reducing Reliance On China & Europe

China leads the world in hemp farming, processing and manufacturing. The US can easily outpace China while adding in multiple innovations.



NONWOVENS



WOVENS



AGRICULTURE

## Post-COVID Economics

The hemp industry is expanding beyond CBD and marijuana COVID or not. Times of hardship give us the opportunity to shift the industry to its full potential.

## Positive Politics

Urban / rural partisanship has divided our country long enough. Hemp fiber will give the US a common economic foundation to show what's possible when we all work together.

## International Partnerships

How the US rolls out a new hemp fiber industry will have positive impact around the world, combining economic and environmental interests.

## The Fabric of Our Country



1790

Hand-dyed Yankee Linen

Locally Cut And Sewn

Hemp Rope



1865

Georgia Cotton Produced By Slaves

Hemp Rope



1944

Hand-Sewn 'Liberation' Flag

Bretagne, France

Hand Dyed Cotton Rags

Hemp Rope



2021

WalMart

Nylon

\$15.95 Free Shipping

# Added Value from Carbon Credits.

Hem Mills will prove a new level of agriculture–industrial sustainability with carbon financing.

Hemp offers new carbon sequestration in fast-growing acreage, soaking up 22 tons of CO<sub>2</sub> per acre per crop.

Economic value can be shared with farmers in a vertical supply chain.



Hemp Uses CO<sub>2</sub> to Make Fiber



Stored / Diverted CO<sub>2</sub> Has Market Value

## CURRENT CARBON FOOTPRINT COTTON FIBER

PROCESS	IMPACT	CARBON SCORE
Discard to Landfill	Transport Footprint. Wasted Resource. Microfiber Pollution.	VERY HIGH
Ship to US	Global Handling & Transport Footprint	
Asian Processing & Manufacturing	Cheap & Dirty. Microfiber Pollution.	
Asian Cotton Fields	Cheap & Dirty. Huge Water Footprint.	

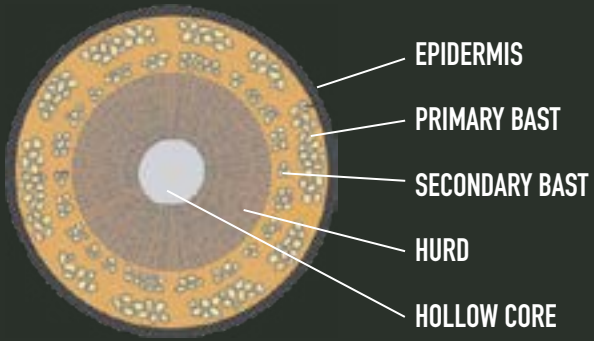
## NEW CARBON FOOTPRINT HEMP/COTTON/RECYCLED FIBER

PROCESS	IMPACT	CARBON SCORE
Recycle Fibers Back to Mill	Local Transport. New Fiber Value. No Microfiber.	FINANCIAL CREDIT VALUE
Ship Local	Local Handling & Transport Footprint	
Local Processing & Manufacturing	Efficient & Clean. No Microfiber.	
US Hemp & Cotton Fields	Efficient & Clean. Minor Water Footprint.	



# A World of Hemp Fiber

PROCESSED BAST FIBER



PROCESSED HURD/SHIVE



FORM	SECTOR	SUB-SECTOR	MARKET	EXAMPLES
WOVEN TEXTILES	APPAREL		FASHION BRANDS	STELLA MCCARTNEY
			CONSUMER	LEVIS
	INDUSTRIAL	SOFT GOODS	CANVAS	CANOPIES
			BEDDING	BANDAGE
			UPHOLSTERY	ROPE/ TWINE/ NETTING
			CARPET	FIRE HOSE
			MEDICAL	
			EQUIPMENT	
	INDUSTRIAL	HARD GOODS/ COMPOSITES	MOLDED/ FORMED COMPONENTS	BRAKE PADS
				SKATEBOARDS
	CELLULOSE	INDUSTRIAL	PACKAGING	VEHICLE INTERIORS
				FIRE HOSE
NONWOVENS	INDUSTRIAL		PLASTICS	FAST FOOD
				SHIPPING
	INDUSTRIAL			MATTRESS
	INDUSTRIAL			HEMPCRETE/ HEMP BLOCKS
	CONSTRUCTION			ENERGY PELLETS
	ENERGY			ANIMAL BEDDING
CELLULOSE	INDUSTRIAL			
BULK	INDUSTRIAL			
PELLETS	INDUSTRIAL			

REPLACING / AUGMENTING

POLYSTYRENES	FIBERGLASS	JUTE	PAPER PULP
POLYURETHANES	NYLON	KAPOK	CLAY
PET	RAYON	COTTON	CONCRETE
POLYESTER	CELLULOSE	WOOD	STRAW
POLYPROPYLENE	CELLOPHANE	WOOD FIBER	COAL

# Hemp Fiber Will Advance the Goals of Organizations...

## Many Nonprofits, A Singular Goal

Hemp fiber expands the focus of the new hemp industry, where CBD and marijuana have sucked nearly all the air out of the room.

Hemp wovens and nonwovens will provide a refreshing change of focus, to link a historic and established cotton industry to the new (and old) long fiber. The goal is a range of diverse industries, economic development/equity, with minimal environmental impact.

## Education, Economics & Environment

Hemp fiber will provide a new focus to connect economic and environmental opportunities in the US and around the world. Many nonprofits and NGOs have already laid the groundwork for the opportunity that hemp represents. Education is always at the forefront, with a number of key audience groups that must get on board, ASAP:

### Agriculture

Farmers and farm organizations have yet to be provided adequate information about hemp, since the signing of the 2018 Farm Bill.

## Investors

Investors and economic agencies have also been without a proper perspective on what is possible, as the 'wild-west' environment of CBD and marijuana has obscured what hemp fiber represents.

### B2B

Textile mills and manufacturers of hard and soft goods, from dog beds to brake pads will benefit greatly from a US fiber processing infrastructure.

### Research

The vast majority of research universities are barely involved with hemp. This is because their funding is still caught up in the 'hemp is marijuana' politics, while the hemp industry has spent more on lobbying than on hard research. This includes all hemp products, for medicinal as well as fiber.

## Consumers

Hemp is a very trendy word. Its appeal is limited mainly to early adopters and those interested in marijuana history and politics. Fiber will change that. Consumer education will come from innovative manufacturers who are ready to promote the value on a global scale.

## NGOs & Government Agencies

Organizations that seek to provide solutions to the issues we all face will find a tangible solution with hemp, combining economics and environment.

Integral LLC is Hem Mills' business development partner in the Atlanta area, focused on emerging technologies with environmental and economic benefit. Principal Bevan Suits has represented the hemp industry in Wisconsin, Georgia and across the US since 2018.

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## A Strategy for Growth and Renewal

Hem Mills was founded with a spirit of American optimism and common-sense. Hemp is a key renewable material, long overdue to benefit humanity.

[www.hemmills.com](http://www.hemmills.com)