

East Carolina University is exploring opportunities for the industrial hemp market in agriculture-rich eastern North Carolina.



demanding eco-friendly products and processes.

> **Hemp Uses**

Armed with the knowledge that hemp is part of a growing U.S. market and that consumers are more cognizant of the impact their purchases have on the environment, ECU set to

work on a plan for the future of hemp in North Carolina.

Nationally, CBD sales make up 23% of the overall hemp market. However, industrial applications and consumer textiles combine for more than 31% of the overall share, creating golden opportunities for eastern North Carolinians.

These industrial applications include the possibilities of apparel, denim, canvas, rope, paper, packaging, surfboards, paddleboards and construction materials. Hemp packaging may also play a crucial role in helping solve the looming plastics problems around the globe.

Wilmington-based entrepreneur Kyle Trivisonno and his company, ecoTEKindustries, have been early adopters of hemp, using the fiber cloth to create medical prosthetics that could offer a low-cost alternative to traditional carbon fiber products.

“All of us – entrepreneurs, researchers, farmers, creators and distributors – have to come together and empower one another in order to succeed,” Trivisonno says. “This is for the community; it’s not just for one single person. Moving forward, I’d like to see more innovation spaces available for startups to test their ideas and prototypes. We need the space and high-end manufacturing equipment to build hemp’s next great ideas.”

> **Future of Hemp**

The possibilities of a bright future are real. Think about this: in 2000, North Carolina produced fewer than 4 million pounds of sweet potatoes. Today, it leads the nation with 1.7 billion pounds grown each year. As the hemp industry in North

Carolina takes shape, ECU has dreams of replicating the state’s success with sweet potatoes.

To do that, ECU is establishing long-term goals. As part of its Hemp 2040 Plan, the university is committing resources – including its recently launched Economic Growth Collaboratory – to study what the hemp market requires to thrive.

Already the researchers are pinpointing industrial needs, from innovation hubs and maker spaces with advanced manufacturing equipment to stimulating development of dedicated hemp fiber processing facilities.

“There are certainly challenges to face when you’re building new agricultural and industrial supply chains,” Golden says. “We’re sensitive to those concerns, but the benefits we see hemp production providing the state are numerous. The country stands at a turning point in its agricultural history. We believe ECU and eastern North Carolina can lead that change, not merely be a part of it.”

Exemplary Innovation

ECU plans for the future of industrial hemp manufacturing.

East Carolina University is planting its roots in North Carolina’s emerging hemp industry.

When the U.S. Congress passed the Farm Bill last December, the industrial hemp market experienced a boom as the plant shifted from a crop outlawed across much of the nation to a multiuse, jack-of-all-trades product.

While the industry remains regulated – growers must apply for a license and are held to strict standards for plant THC content – hemp could find a home in agriculture-rich eastern North Carolina.

Innovators and entrepreneurs at ECU are using university resources to explore the hemp industry and its potential future in the region.

“Eastern North Carolina has historic agricultural and textile knowledge that makes growing hemp an exciting and real possibility,” Jay Golden, ECU vice chancellor for research, economic development and engagement and a professor of engineering and supply chain management, says. “We have the right climate, soil composition and farming background to turn hemp production into a valuable industrial manufacturing raw material.”

However, as with any new industry, the knowledge and infrastructure behind the production of the crop has yet to be built. That’s where ECU’s students, researchers and community partners come in.

> **Investigating Hemp’s Potential**

ECU’s research leadership sees hemp as a compelling crop that can create new job opportunities and sustain existing companies in the state. So far the market has been fixated on consumable hemp products, but ECU is looking at a different role for hemp – as a manufactured good that can create jobs and economic value in rural North Carolina.

During spring 2019, ECU put research students to work as part of its Rural Prosperity Initiative to investigate hemp’s promise as an agricultural commodity and industrial feedstock.

“There’s so much more to learn about hemp,” Madeline Fleishman, a student member of ECU’s RPI hemp research team, says. “We feel like we’re working on the next big, cutting-edge crop to come to agriculture. There are so many everyday products that can incorporate hemp into their production.”

What the faculty-supervised student team found were extensive uses for industrial hemp, ranging from cosmetics, fabrics, textiles and construction and insulation materials. It also discovered a growing hemp market in the U.S. The industry was valued at \$820 million in 2017 – a 16% increase from the previous year.

Additionally, a rising number of consumers are making purchasing decisions based on product sustainability, according to the 2019 CGS Retail and Sustainability Survey, and are



> Interested in partnering with ECU? Let us know how we can help you.

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Twine is one of many industrial products that can be created from hemp. Potential industrial products include cosmetics, fabrics, textiles and construction and insulation.



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