

MINNESOTA BUSINESS VITALITY COUNCIL

Industrial Hemp Processing Working Group

Final Report and Recommendations



Working Group Charge

The Minnesota Business Vitality Council identified industrial hemp processing as an opportunity for Minnesota and charged a working group with developing a set of recommendations on how to accelerate growth in this new industry.

Working Group Membership

- Minnesota Department of Agriculture
- Agricultural Utilization Research Institute
- Minnesota Department of Employment and Economic Development
- Minnesota Department of Commerce
- Minnesota Department of Revenue
- Minnesota Department of Education
- Minnesota Department of Transportation

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Background

Industrial hemp has been grown in Minnesota under a pilot program since 2016. During the 2020 growing season, there were 461 licensed hemp growers growing hemp on 5,808 acres and 1,460,328 indoor square feet. There were 77 licensed hemp processors.

From 2018 to 2019, Minnesota saw a change in what varieties of hemp were being grown. In 2018, 88 percent of the hemp acres in the state were planted for production of hemp grain. In 2019, 74 percent of Minnesota hemp acres were being planted for production of cannabidiol (CBD). While CBD processing and sales have taken off, hemp grain and fiber processing are not coming online as quickly. There are currently no major hemp fiber processors in the Midwest. Processing of hemp grain is happening in Minnesota, but at a small scale.

Minnesota has the potential to be a leader in the industrial hemp industry. Minnesota farmers have shown they can grow hemp in all corners of the state. For the crop to be a viable option to diversify agricultural operations, new markets and processing capacity must be developed. Minnesota's proud culture of innovation and industry, especially in the agricultural and food space, is foundational to increasing production of hemp food processing and fiber manufacturing.

Potential for Grain and Fiber Processing in Minnesota

Much of what we know about the industrial hemp industry in Minnesota has been established by the Agricultural Utilization Research Institute (AURI) and can be found in their report [*Building an Industrial Hemp Industry in Minnesota*](#).

Hemp Grain

Hemp seeds, hemp hearts, and hemp oil have been classified as Generally Recognized as Safe (GRAS) food products by the FDA and are on the market in the U.S. In Minnesota these products are currently being produced at a small scale. Many of the hemp food ingredients on the shelves in the U.S. are imported from Canada. Minnesota is well positioned with a thriving food business sector to replace a portion of that market with Minnesota-grown hemp.

Hemp Fiber

There are over 10,000 products that can be made with hemp fiber. Hemp hurd, the inner core of the hemp stalk, can be made into paper, construction materials, fuel, mulch, animal bedding, and more. The long and short fibers in the stem can be made into textiles, biocomposites, insulation, paper, rope or twine, and even supercapacitor batteries. These products have environmental benefits, often replacing plastics or other nonrenewable materials with a biobased, renewable alternative. The development of hemp fiber as an industry in Minnesota would give growers additional markets and would build opportunity for economic development of primary and secondary hemp processing business.

Barriers to Hemp Processing Expansion

Applied Research

Prior to 2015, industrial hemp had not been grown or processed in Minnesota in over 50 years. Much of the knowledge and craft of the industry has been lost. Reestablishment and growth will take investments in applied research in mechanical processing techniques, food science, and application of hemp materials into high value products. The University of Minnesota and AURI have begun work in this area, but investments in research will need to be accelerated to fill the many knowledge gaps in this emerging industry.

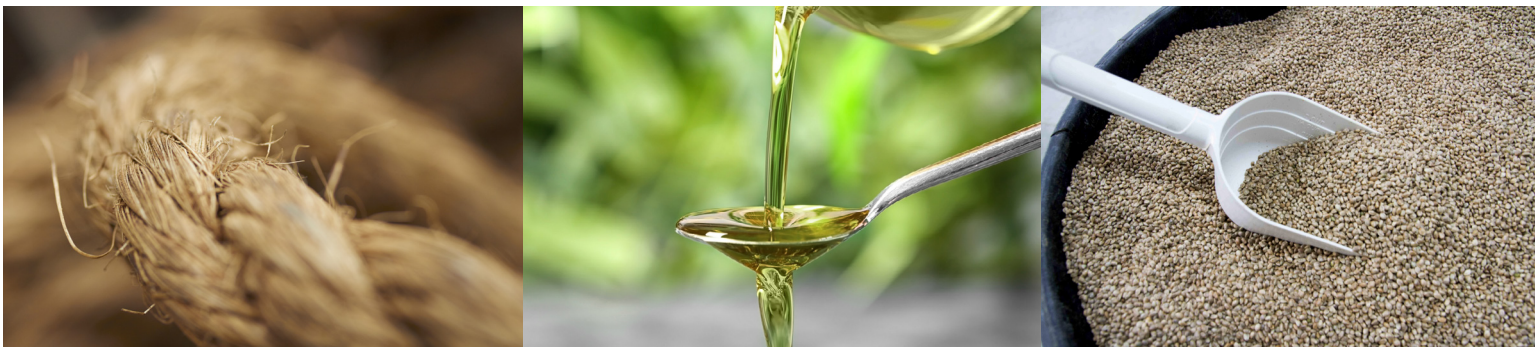
Banking, Insurance, and Financing

The deregulation of industrial hemp as an agricultural crop has led to many regulatory questions across sectors. Questions around legality arise when industrial hemp businesses seek banking, insurance, and financing options. While Minnesota has taken strides to clarify any requirements to working with a hemp business or grower, the industry is new and presents a lot of risk.

In addition, the financial capital needed to start up a processing business for fiber production is large. Processing equipment is expensive and is not even made in the U.S. at this time. A fully functioning fiber processing facility could cost above \$5 million just in equipment to get started. The combined cost with the risk associated with a new industry makes it difficult for businesses to access capital from traditional sources.

Communications and Outreach

Industrial hemp is still very much associated with marijuana. There is a certain stigma that comes with growing and processing the crop. The benefits of this crop to our agricultural landscapes, rural communities, and environment need to be better communicated to overcome this narrative.



RECOMMENDATIONS



1 Invest in applied research and demonstration opportunities for processing

- ▶ Continue investing in the Minnesota Department of Agriculture feasibility studies grants and focus on funding hemp projects with a fiber or grain focus.
- ▶ Invest in a phase two research project for the Minnesota fiber processing value chain led by AURI to make information on decortication equipment and processes publicly available to the industry. Include conversations with hemp industry leaders and end users to better understand material specifications for various markets.
- ▶ Demonstrate the potential of hemp products by creating an internal market for use by state agencies. For example, the proposed LCCMR project being led by MNDOT and AURI for a demonstration project for erosion control mats made with hemp fiber to be processed at AURI's Waseca research station.
- ▶ Demonstrate fiber decortication, cleaning, separation, and classification technology solutions within the state to the public. For example, host demonstration days through AURI, private companies, or industrial hemp associations.

2 Sponsor and coordinate an industrial hemp processing conference

- ▶ Coordinate an event to hold an industry-wide discussion on the potential of industrial hemp processing with invitations to thought leaders in the hemp processing space both in and outside of Minnesota.
- ▶ Based on conversations at the event, explore establishing a group of industrial hemp processing thought leaders to inform policies at the state level.

3 Coordinate Minnesota's financial assistance and regulatory programs

- ▶ Create a resource for hemp grain and fiber processing similar to the [Starting a Food Business Road Map](#) to help hemp processing businesses navigate state

assistance programs and the regulatory requirements to starting a hemp processing business.

- ▶ Prioritize industrial hemp processing projects throughout DEED and MDA loan and grant programs.

4 Develop a plan for coordinated communication and outreach about the industrial hemp industry

- ▶ Utilize the annual Minnesota Hemp Conference and seek out other relevant national or international conferences and tradeshows to promote Minnesota as a state to invest in this space.
- ▶ Develop messaging for Walz Administration to promote use of industrial hemp products including:
 - Agricultural crop diversity
 - Rural economic growth and job opportunities
 - Renewable product development
 - Carbon sequestration and climate change
- ▶ Coordinate efforts and partner with tribal governments interested in industrial hemp farming and processing.
- ▶ Reach out to existing Minnesota food companies and composite companies to promote use of hemp products.
- ▶ Include industrial hemp in agricultural education curriculum.

5 Continue communication with the banking industry about the risks surrounding this new industry

- ▶ Distribute technical guidance to banks about industrial hemp processing.
- ▶ Continue ongoing open dialogue between Department of Commerce and organizations representing banks across Minnesota.
- ▶ Distribute any economic analysis or feasibility studies to banking industry once finalized.