

Cropping Cloth

The potential of flax for linen



Midwest Linen Revival
Leslie Schroeder

Practical Farmers of Iowa
Annual Conference
January 2025

Meet flax



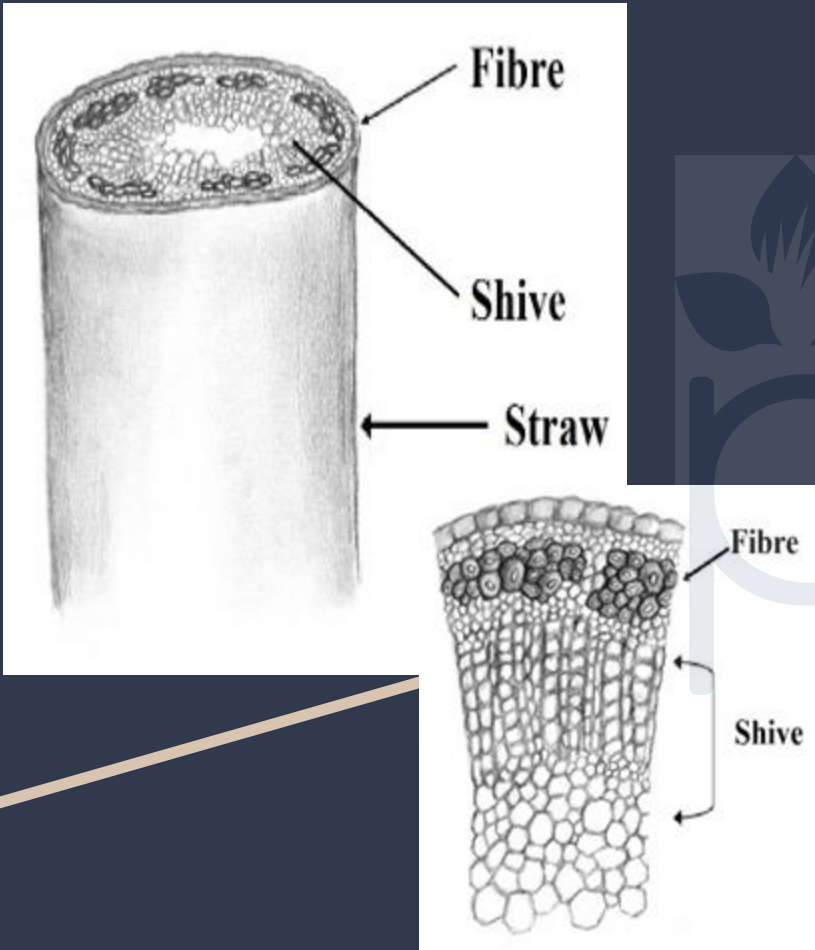
Linum usitatissimum

(*us-i-ta-tis-si-mum*)

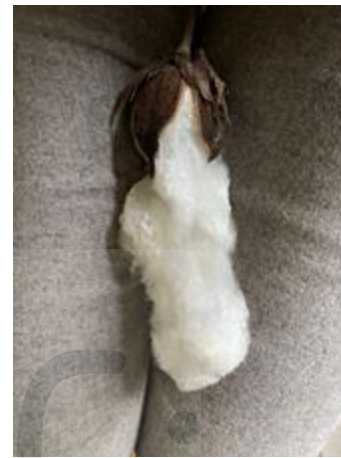


Handwerker, CC BY-SA 3.0 <<https://creativecommons.org/licenses/by-sa/3.0/>>, via Wikimedia Commons

What flax is:



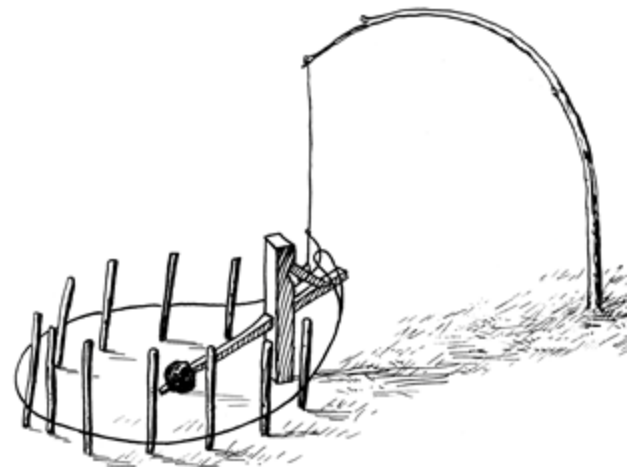
What's it not: COTTON



How I got here; on culture and belonging



Cordage



Folklore and Fairytails – the Cultural Fabric

- Rumpelstiltskin
- Sleeping beauty
- Three Fates
- Verses from Proverbs 31

From Swaddling Clothes to Shroud

Linen did it all . . .



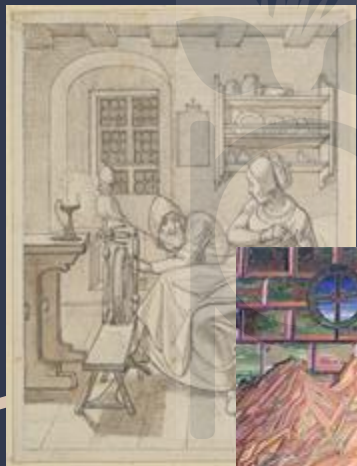


Straw into Gold Rumpelstiltskin:

A MAGAZINE OF MOVING PICTRES



"Rumpelstiltskin"
MAY 1, 1915
"Strawman"



The Curse of the Flax Spindle



What was Sleeping Beauty learning to spin?



MCAD Library, CC BY 2.0
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The Three Fates



Proverbs 31:10: "Who can find a virtuous woman? for her price is far above rubies." 13: She seeketh wool, and flax, and worketh willingly with her hands. 19: She layeth her hands to the spindle, and her hands hold the distaff. 24 :She maketh fine linen, and selleth it; and delivereth girdles unto the merchant.



"She seeketh wool and flax, and worketh willingly with her hands.
* * * * *
She layeth her hands to the spindle, and her hands hold the distaff."

Flax in Wisco



Albany Linen Mill, right, was built in 1892 and was used to manufacture linen toweling until it finally closed in 1907. Old woolen mill, left, originally occupied by the linen mill site, but was moved to south side of Main Street in 1892. In background, center, is the Nichols House Hotel.

<https://images.library.wisc.edu/WI/EFacs/WILocHists/Yesteryears/reference/wi.yesteryears.i0017.pdf>



Rolls of linen toweling are shown stacked up inside the old Albany Linen Mill. Part of linen mill crew shown here are, left to right: Barbra Friday, Grace Roberts, Libby Friday, Lila Gravenor, and Louisa Loeffel. At far right is Mr. Burk, the foreman.

So where did flax go?



“Cheap” cotton, slave labor; ‘cheaper’ petroleum



THE FIRST COTTON-GIN.—DRAWN BY WILLIAM L. BURGESS.—(SEE PAGE 814.)

Talking Trash about Fast Fashion



Linen's modest share of the global textile market – 2012-2020

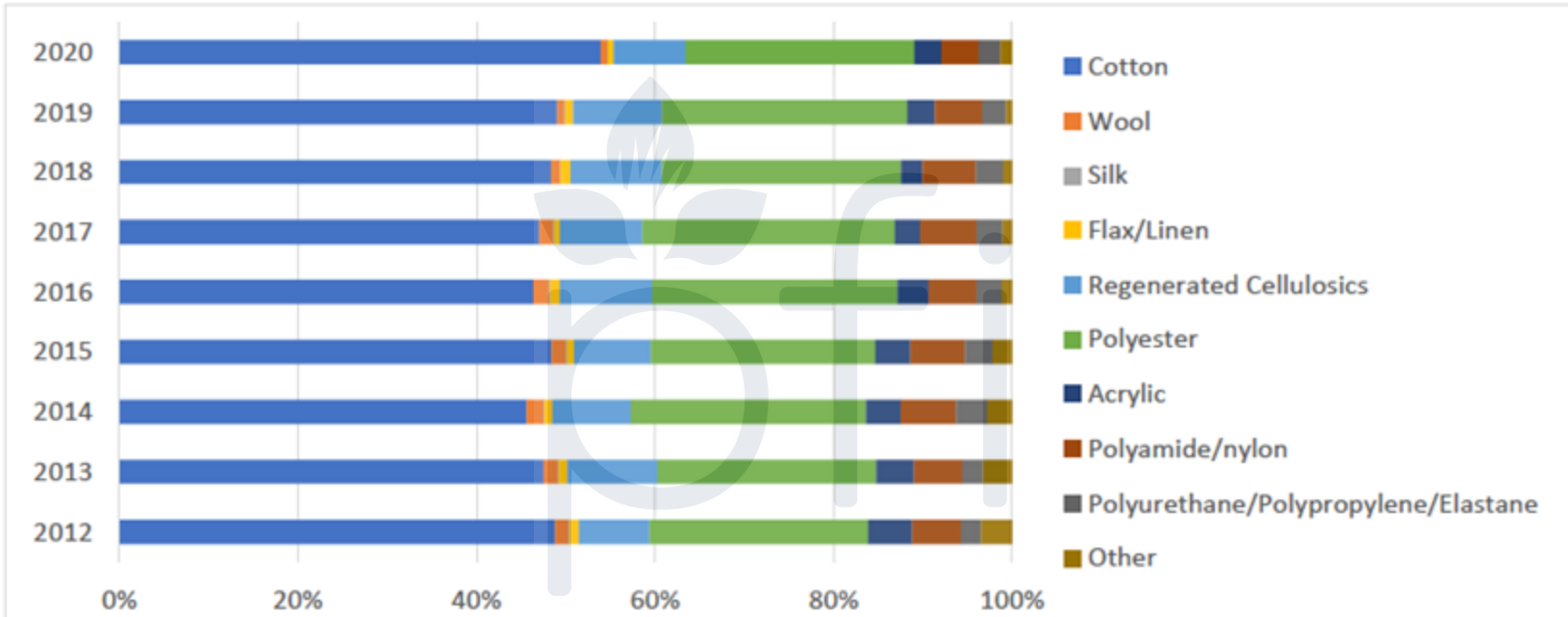
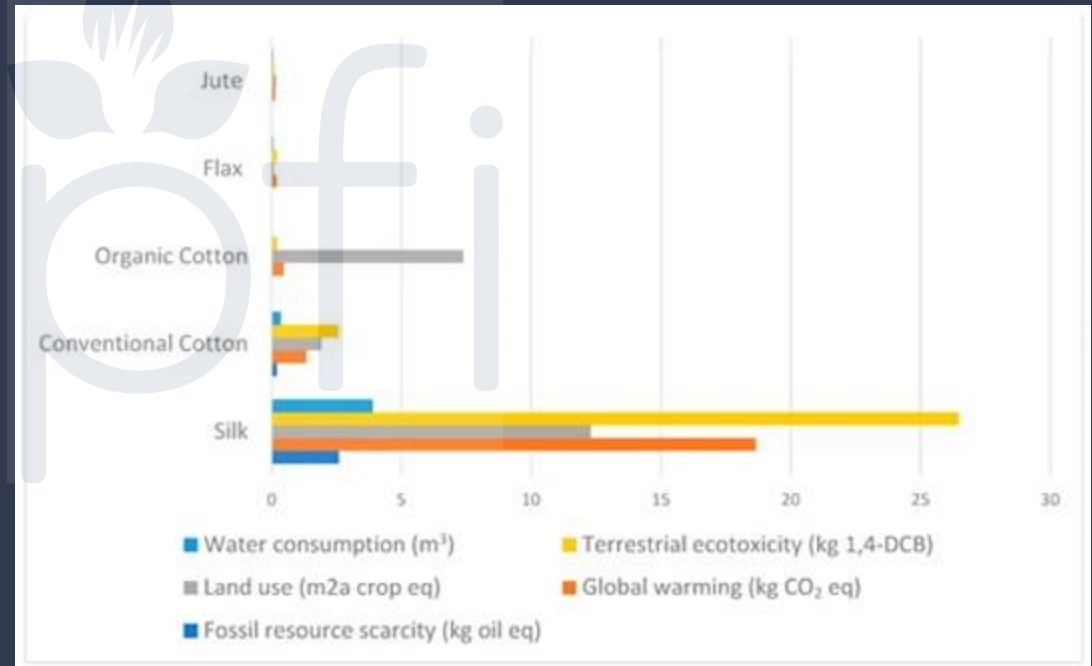


Figure 3: SCAP fibre composition, the aggregate fibre mix for retailers and brands reporting 2012-2020

WRAP, 2022, Banbury, WRAP Textiles Footprint Tool Data and Methods Report, Prepared by Sarah Gray, citing data from predecessor, Sustainable Clothing Action Plan (SCAP), <https://wrap.org.uk/sites/default/files/2022-11/Textiles%202030%20Footprint%20Tool%20Data%20and%20Methods%20Report.pdf>

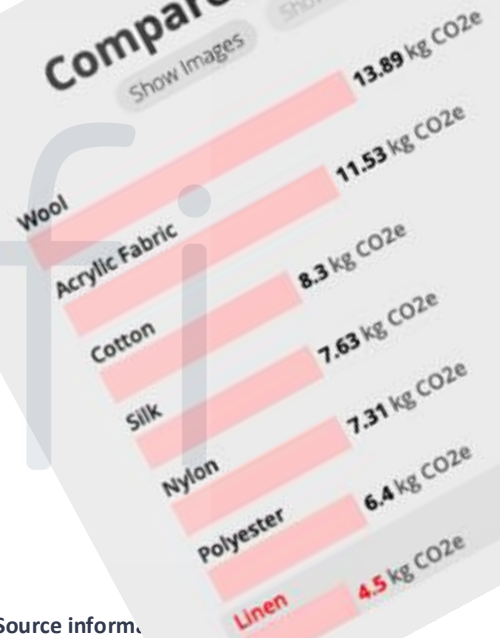
Flax is one of the most sustainable textiles without even trying



Linen – lowest carbon footprint ...?



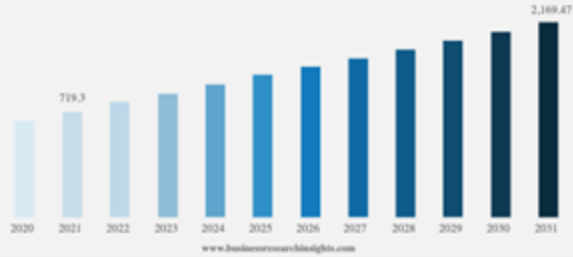
Compare Similar Items



Source information: Based on 150gsm material. Table 21 "A Carbon Footprint of Clothing and Opportunities for Savings" - Bernie Thomas, Matt Fishwick, James Joyce and Anton van der ... copyright. <https://www.wrap.org.uk/sites/files/wrap/Appendix%20IV%20-%20Carbon%20footprint%20report.pdf>
[How we calculate Equivalent Kilometers](#)

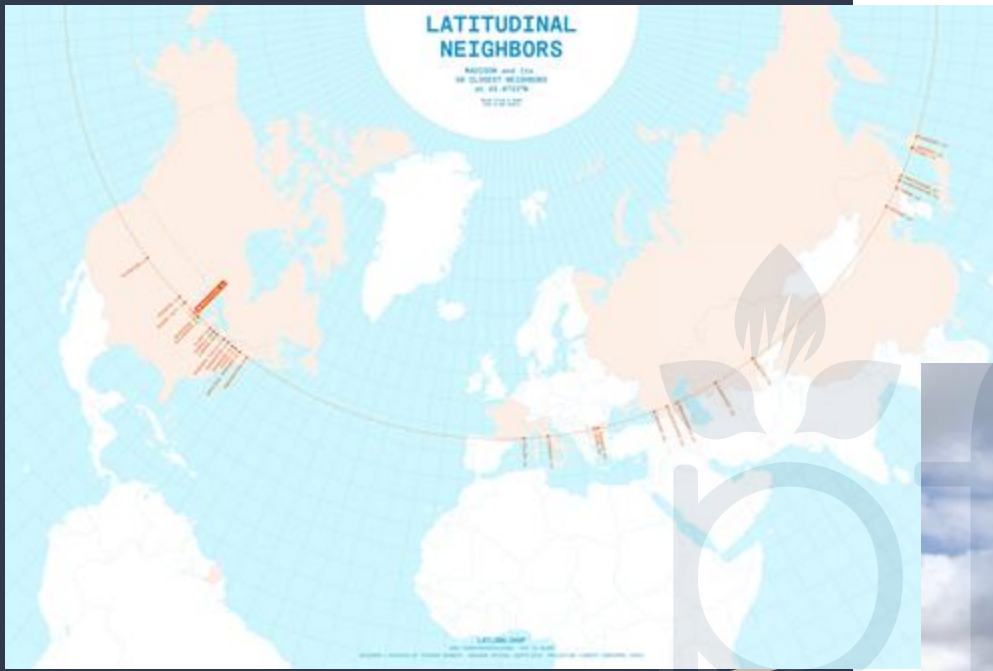
Demand for linen is projected to continue to grow

Global Linen Market Size, 2031 (USD Million)



2024 Milan Fashion Week Zenga





"Latitudinal Neighbors" by
Stephen Kennedy
LATLONG SHOP
latlongdotshop.etsy.com
Instagram: [@latlong.shop](https://www.instagram.com/latlong.shop)



Growing



ANNUAL FLAX

works well in a variety of rotation scenarios

needs a cool season start- planted in early spring

Needs good soil contact / tamping

Does not need irrigation

For fiber: #120/ac 90-100 days to harvest

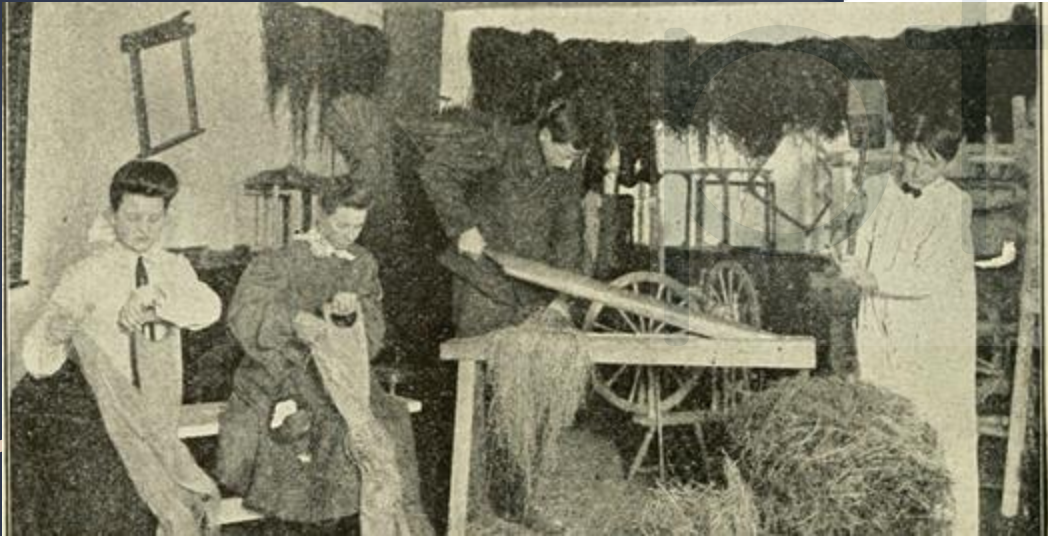
For oilseed: #35/ac 120 days to harvest

Field retting for fiber 1-3 weeks

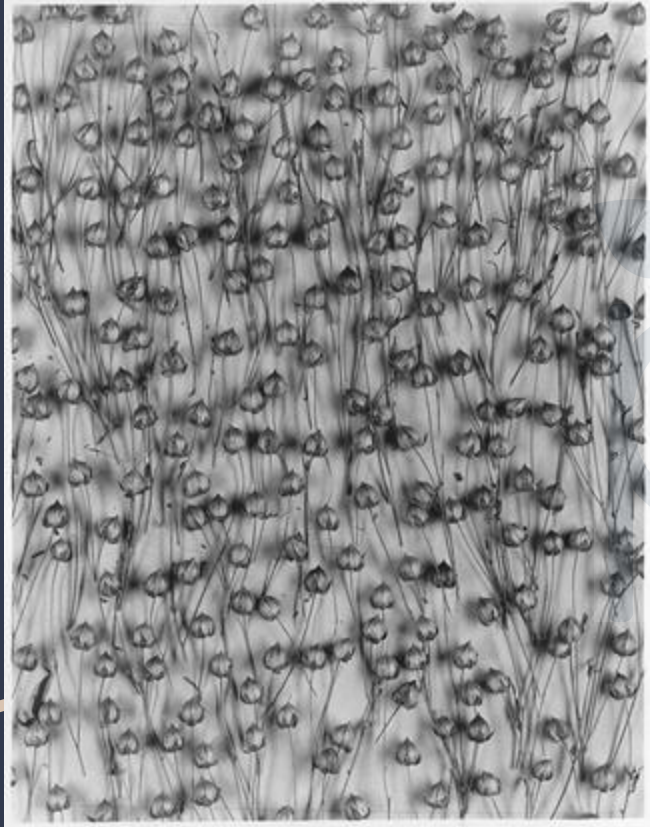
Pollinator friendly dicot



Establishing a flax industry in the Midwest, what is and what can be



Seed



Harvest equipment



Assessing the rett



Processing Infrastructure



What else we need



Secondary Markets

So much potential in every scrap of tow and shive!



In flax we trust



STARTINGBLOCK
MADISON'S STARTUP HUB



Extension
UNIVERSITY OF WISCONSIN-MADISON
Emerging Crops Accelerator



Our favorite flax nerd!



The Master's Tools Will Never
Take Down the Master's House



FIBERSHED

Local Fiber, Local Dye, Local Labor



Image courtesy of Fibershed

Our changing relationship with clothes



Help write the story of flax:

Experiment!

Talk about flax with everyone

Buy and wear linen

Like and follow FB & IG

Sign up for emails @ www.midwestlinenrevival.org



MIDWESTLINENREVIVAL.ORG



IG: MIDWESTLINENREVIVAL



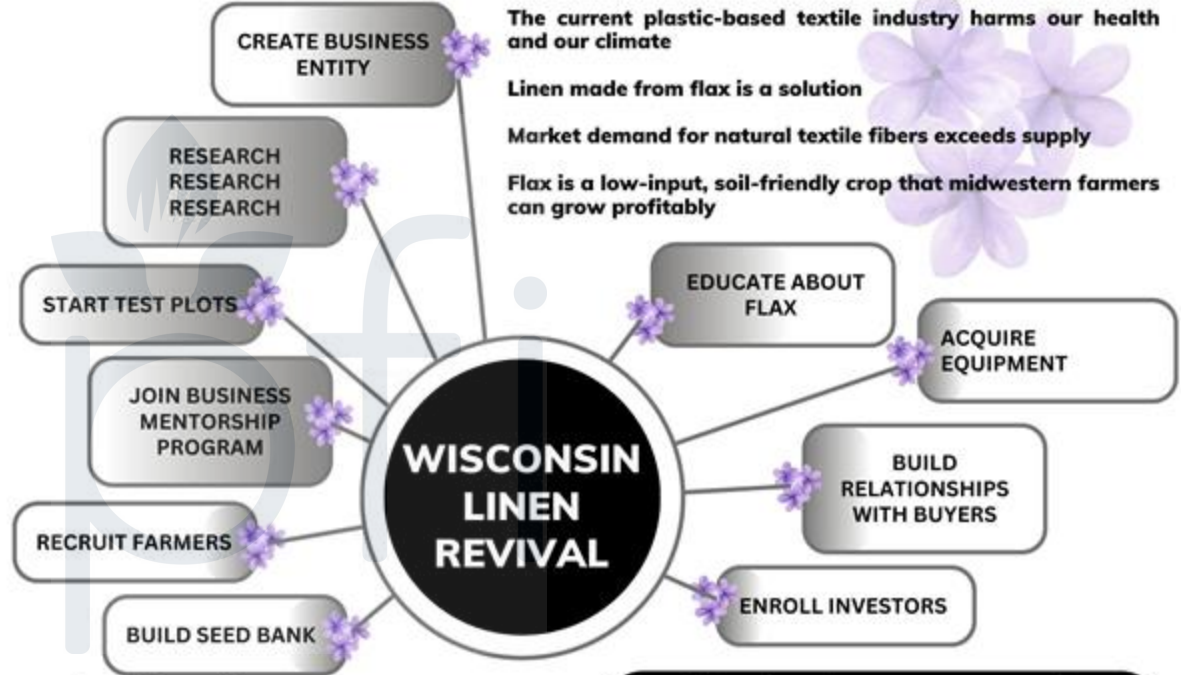
FB: MIDWESTLINENREVIVAL





Progress on our Journey

diversifying midwestern agriculture with local flax for local fiber and fashion



www.wisconsinlinenrevival.com



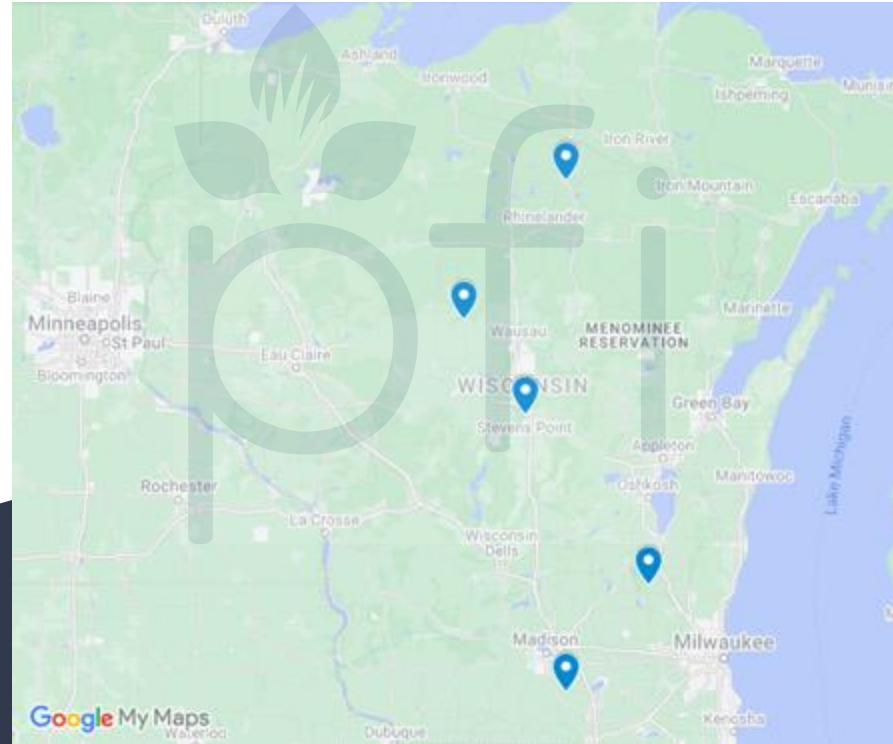
Research opportunities

- Seed genetics
- Enhance processing expertise
- Foster secondary markets

Here's where you come in

- Invite us to present to your community groups
- Buy and use clothing and home goods made from linen
- Invest in the project's long range needs: growing seed, growing flax, supporting funding sources

Locations of 2023 test plots



WLR near-term goals

- 2024 growing season off to an awesome start-Fiber, Oil and Trials
- Establish seed breeding program
- Process 2024 crops @ AURI & TapRoot\
- Continue exploring support and funding opportunities
- Locate or fabricate harvesting equipment, a puller/grubber
- Apply for SARE Partner Grant application Fall 2024

Leslie's speculation...



Your skin is the largest organ of your body

This is a slide about the origin of textiles,

IE bamboo isn't really a 'natural' fiber

Neither is 'super wash wool'

Yeah that's sad

<https://apnews.com/article/flight-attendants-uniforms-lawsuit-verdict-d542c91e823f8ebc0393d38f743f28d3>

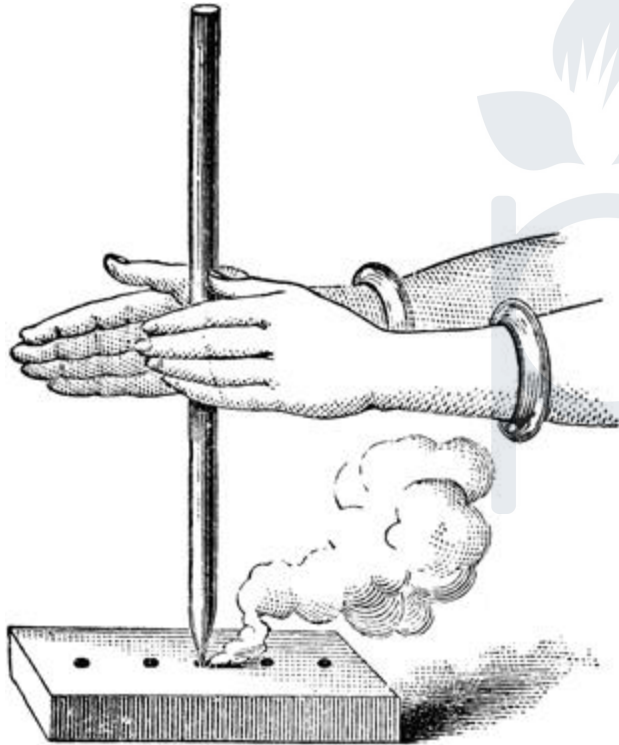
Flight attendants Rashes and Headaches

Occupational cancer is now the leading cause of death among firefighters, with firefighters having a 9% greater risk of being diagnosed with cancer and a 14% higher risk of dying from cancer than the general population [124].

Further, the firefighters were found to be exposed to potentially hazardous chemicals when extinguishing building fires, vehicle fires, and wildfires. They also encountered harmful substances in their protective gear, fire station air and dust, and diesel exhaust from firefighter trucks.

<https://scopost.com/news/november-2024/firefighters-may-be-exposed-to-chemicals-associated-with-breast-cancer/#:~:text=The%20analysis%20revealed%2012%20chemicals,that%20were%20associated%20with%20breast>

In order to give light one must first burn - Rumi



Expand our research team

- Seed breeding: develop Midwest specific climate change resilient seed strain
- Identify best Wisconsin counties to grow at scale
- Ideal crop rotation
- Ag. engineering design a puller/grubber

(P.S. we need YOU!)