



Dandelions to Rubber Hydroponic System

The Global Rubber Challenge

Demand is outpacing a rubber supply chain the U.S. does not control.

9.7M

tons — global natural
rubber market

\$20B

annual market value

5×

price increase since
2001

+15%

forecast demand over
supply

Almost all natural rubber is tapped from tropical trees in Southeast Asia. The U.S. imports ~1.5 million metric tons a year — and as Asia, India, China and Brazil grow, global demand is set to exceed all available supply.



Rubber dandelion in bloom

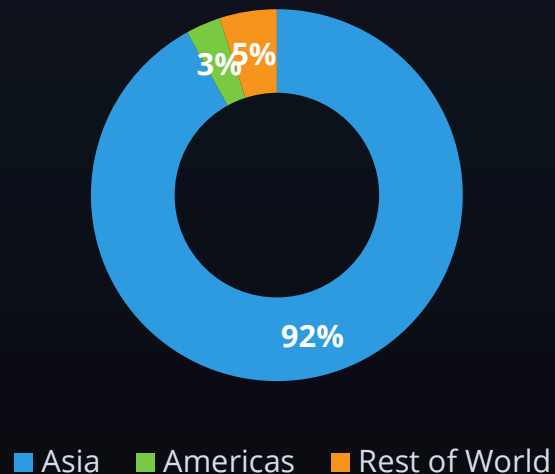


Rubber-bearing taproots

The Rubber 'Apocalypse'

92% of the world's natural rubber comes from Asia — almost none from the Americas.

Source of Natural Rubber



The Made-in-USA Advantage

- National security & supply-chain resilience
- Removes dependence on foreign products
- Timing is right to scale U.S. production
- Zero domestic competition today

The Solution: Rubber Dandelion

A domestic crop that produces the same natural rubber — without the tropics.



Proven Since the 1930s

Taraxacum kok-saghyz (rubber dandelion) was identified as an alternative natural rubber source in the 1930s and is well documented in scientific literature.



Identical Natural Rubber

TK yields high-quality natural rubber equivalent to that tapped from the Brazilian rubber tree — the same material, from a domestic crop.



Built for America

Unlike tropical rubber trees, the rubber dandelion thrives in temperate U.S. climates, enabling a secure domestic supply.

The Science Behind the Crop

World-class R&D is turning the rubber dandelion into a commercial-grade crop.

1

University Research Partnership

Ohio State University's OARDC research center in Wooster, OH is developing the Russian dandelion (TK) as America's domestic source of natural rubber.

2

Cross-Breeding for Yield

Selective breeding programs steadily improve rubber content, biomass and resilience — generation after generation.

3

Proprietary Seed Development

High-performance proprietary seed lines create a defensible, scalable commercial foundation for the venture.



OSU / OARDC research — Wooster, OH

The Greenfield Hydroponics CEA System

A full turnkey Controlled Environment Agriculture platform for indoor dandelion cultivation.



Computerized Control System



High-Density Vertical Towers



Water Control System



Fertigation & Nutrient Delivery



LED Illumination System



Setup & Installation

Optional add-ons: water-pipe infrastructure, power supply, and Atmospheric Water Generators.

From Pilot Plant to Commercial Scale

A proven pilot operation is the launchpad for domestic rubber production.

6,000 sq ft

operational pilot plant in Wooster,
OH

OSU OARDC

research & operations partner

Lorain, OH

planned commercial processing
plants

"There are over 40,000 things made with natural rubber, including 400 medical devices. Life as we know it wouldn't be possible without natural rubber."

— **Dr. Katrina Cornish, leading U.S. natural-rubber scientist**



Scientific Leadership



Dr. Katrina Cornish

Leading U.S. Natural-Rubber
Scientist

Dr. Cornish leads a program in alternative rubber production and bio-emergent materials — including converting food-processing wastes into value-added products and biofuels. She is internationally recognized as a principal authority on natural-rubber biosynthesis, production, properties and products.

Credentials & Focus

- PhD, Plant Biology — University of Birmingham (1982)
- BSc, Biological Sciences — University of Birmingham (1978)
- Focus — Domestic natural-rubber production & sustainability



CONTACT

Let's Grow Domestic Rubber

Partner with Greenfield Hydroponics to bring natural rubber production home.

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