Agroforestry Education and Extension Opportunities with Cornell

Connor Youngerman and Jonathan Bates

Exploring the Opportunities for Agroforestry in Changing Rural Landscapes

Louise E. Buck and James P. Lassoie, Editors

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The Cornell Small Farms Program

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Our Work: All enterprises and experience levels

We support and uplift small-scale farming as a dignified, viable and meaningful livelihood by providing intentional, innovative and inclusive services.

We are committed to equity and inclusivity with the ultimate goal of supporting a diversity of farm ownership and operation in the state.

CORNELL Small Farms PROGRAM

Working Collaboratively to Support Small Farms

Through partnerships, we are creating new connections and building a network of support across NYS and beyond.

USDA

Association for Temperate Agroforestry

GARDEN · TEACH · RECYCLE · GREENMARKET grow NYC

ESL WORKS

FARM NYC SCHOOL

1865 THE UNIVERSITY OF MAINE Cooperative Extension

EQUICENTER AT THE WILLIAM & MILDRED LEVINE RANCH

FUNGI ALLY

MICHIGAN STATE UNIVERSITY EXTENSION

HEROIC FOOD

USDA National Agroforestry Center

Northeast/Mid Atlantic AGROFORESTRY

JUST FOOD JUSTICE FROM THE GROUND UP

Cornell Farmworker Program

Cornell CALS College of Agriculture and Life Sciences

Cornell Cooperative Extension

CADE Center for Agricultural Development & Entrepreneurship

U.S. Department of Veterans Affairs

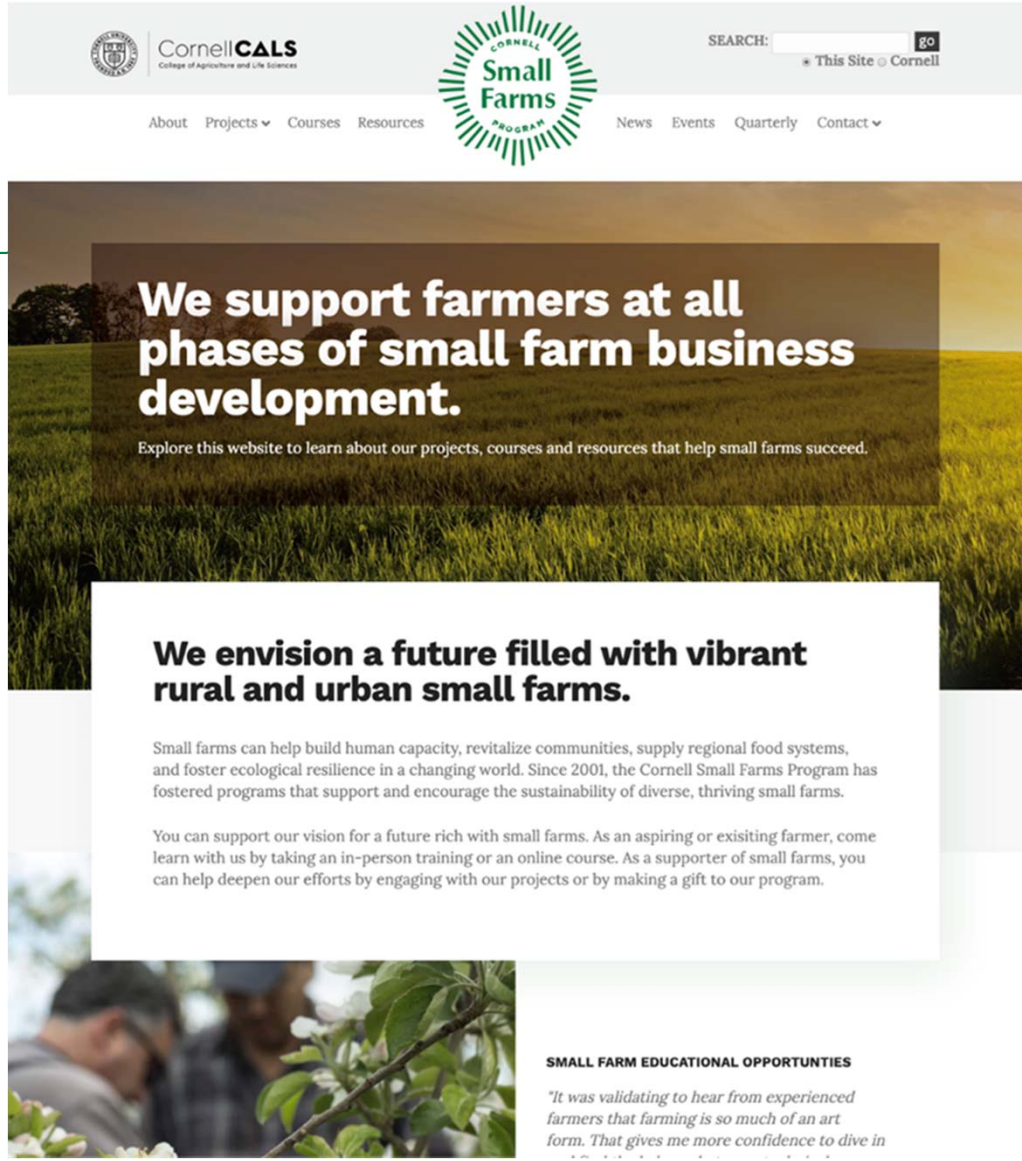
Cornell Cooperative Extension AGRICULTURAL WORKFORCE DEVELOPMENT

CORNELL Small Farms PROGRAM

We are a clearinghouse of information

http://smallfarms.cornell.edu

- Active projects
- Training opportunities
- Online courses
- News and updates
- Upcoming events across NYS



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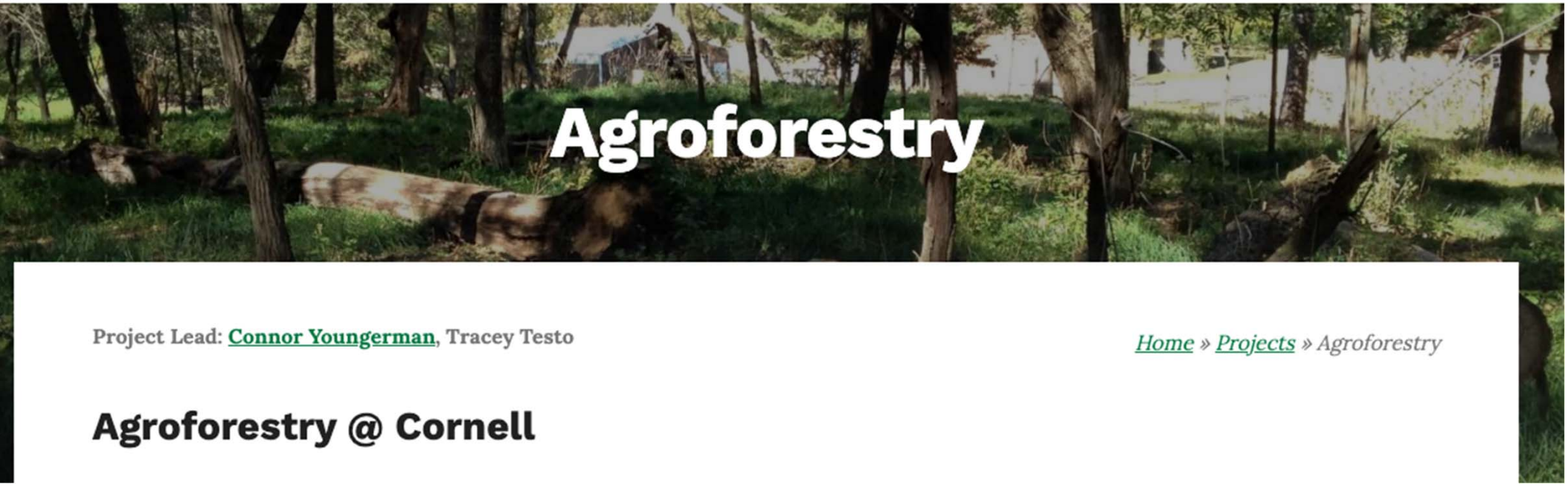


Agroforestry

Project Lead: Connor Youngerman, Tracey Testo

Agroforestry @ Cornell

We Offer Education & Training

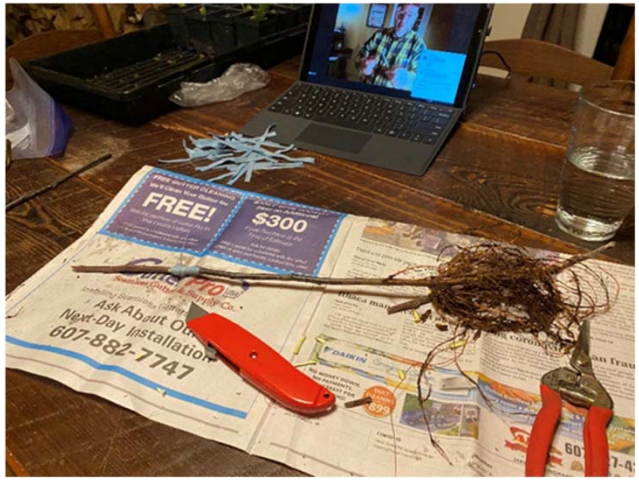
In Person Events

Virtual Courses

Courses/Workshops/ Seminars

Interactive

Hands On



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Agroforestry and Silvopasture Program Work Teams (YOU can join!)

Current State:

- 130 members of extension, farmers, government, nonprofits in NY and beyond
- Agroforestry adoption rates: NE is leading the way! 4.4% vs 1.5% nat'l
- Research opportunities: 30* SARE NY and PA combined since 1999; recent awards are encouraging…
- Catch 22…

Plans for 2026:

- Demos, workshops, "learn 'n dos"
- Agroforestry summit

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Farmer-Relevant Research 2026

- Basic science to increase adoption: forage, growth, establishment, survival
- Air pruned raised beds
- Hedge management
- Key species guides
- Cross geography

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Collaboration Opportunities

Tree root systems improve the cycling of nutrients, especially nitrogen, and also trap phosphorus and sediments. Agroforestry systems placed higher in the landscape can play this same role and thus reduce pressure on riparian forest buffers (NAC).

- Grants
- Workshops
- Propagation

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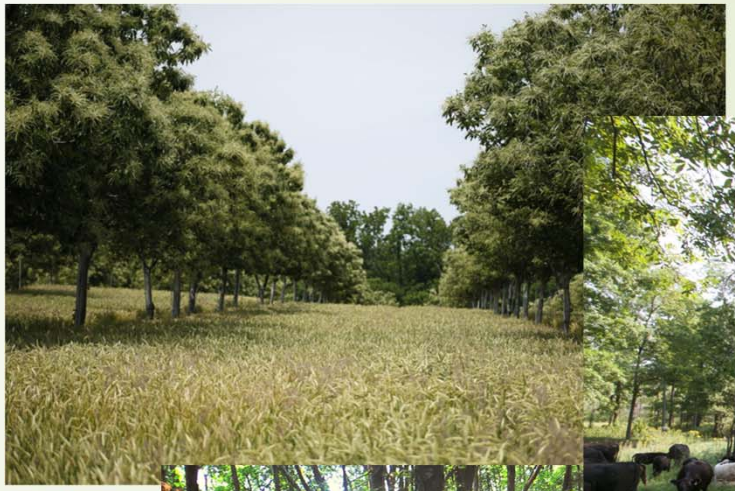
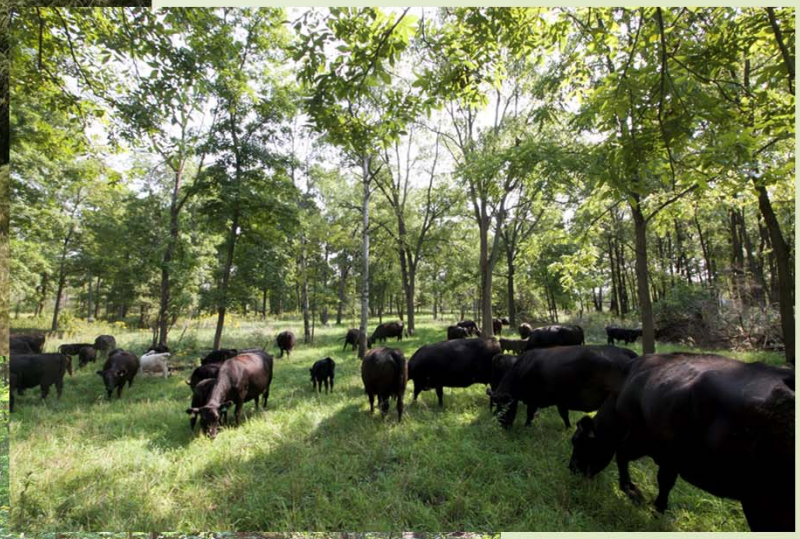
What is agroforestry?

"…the intentional integration of trees and shrubs into crop and animal farming systems to create environmental, economic, and social benefits."

"Farming with trees"





5 practices

- Silvopasture
  - 'by subtraction'
  - 'by addition'
- Alley Cropping
- Forest Farming
- Riparian Buffers
- Windbreaks

Agroforestry extension programming at CCE Tompkins

- General education and awareness
- Developing a demonstration farm network
- Addressing challenges:
  - Workforce development
  - Variety trials (pre-work complete, trials pending)
- Supporting opportunities
  - Supply chain development support
  - Piloting financial mechanisms for tree establishment period

Education and Awareness

Key challenge: Lack of awareness/publicly accessible examples of successful agroforestry

On-farm events – tours, 'Learn-and-Do' events

Workshops and presentations

- Presentations at Khuba International 'Strong Roots New Growth' Agroforestry Symposia

Farm visits and ongoing 1:1 support

Resource handouts, newsletter articles, content for social media

Agroforestry track at annual Cornell Extension In-Service

Demonstration farm network

Key challenge: Lack of awareness/publicly accessible examples of successful agroforestry

Proposed solution: Demonstration farm network to host outreach events, on-farm trials, case study and enterprise budget development

Next steps

- Secure funding (expected Oct ’25)
- In partnership with American Farmland Trust, Khuba International and Cornell Small Farms Program, identify and develop agreements with appropriate/exemplary farms to serve as demonstration sites
- Work with faculty and other researchers to develop enterprise budgets and on-farm trials with demonstration farms

Variety trials

Key challenge: Lack of appropriate tree nut varieties for commercial production

Proposed solution: On-farm and university experiment station trials

Timeline

- Survey work statewide in 2022-2024 identified ~20 promising varieties each of chestnut and hazelnut
- Five top hazelnut varieties clonally propagated by NYTCA
- Expect to plant out trials in Spring 2026, including genetics from Rutgers, Upper Midwest Hazelnut Development Initiative, Grimo Nursery, Z's Nutty Ridge
- Chestnut variety development/trials??

Workforce Development

Key challenge:

- Lack of tree-planting and -management capacity
- Lack of adequate nursery stock

Proposed solution: apprenticeship training including classroom curriculum, and on-farm practicum with a nursery or tree-planting contractor

Timeline

- Apprentice application period opening September 2025
- Curriculum under development, to be offered through Cornell Small Farms platform Jan-Feb 2026
- Apprentices begin work at host sites starting March 2026

Supply Chain Development

Key opportunity: Emerging markets for tree nuts and tree nut products

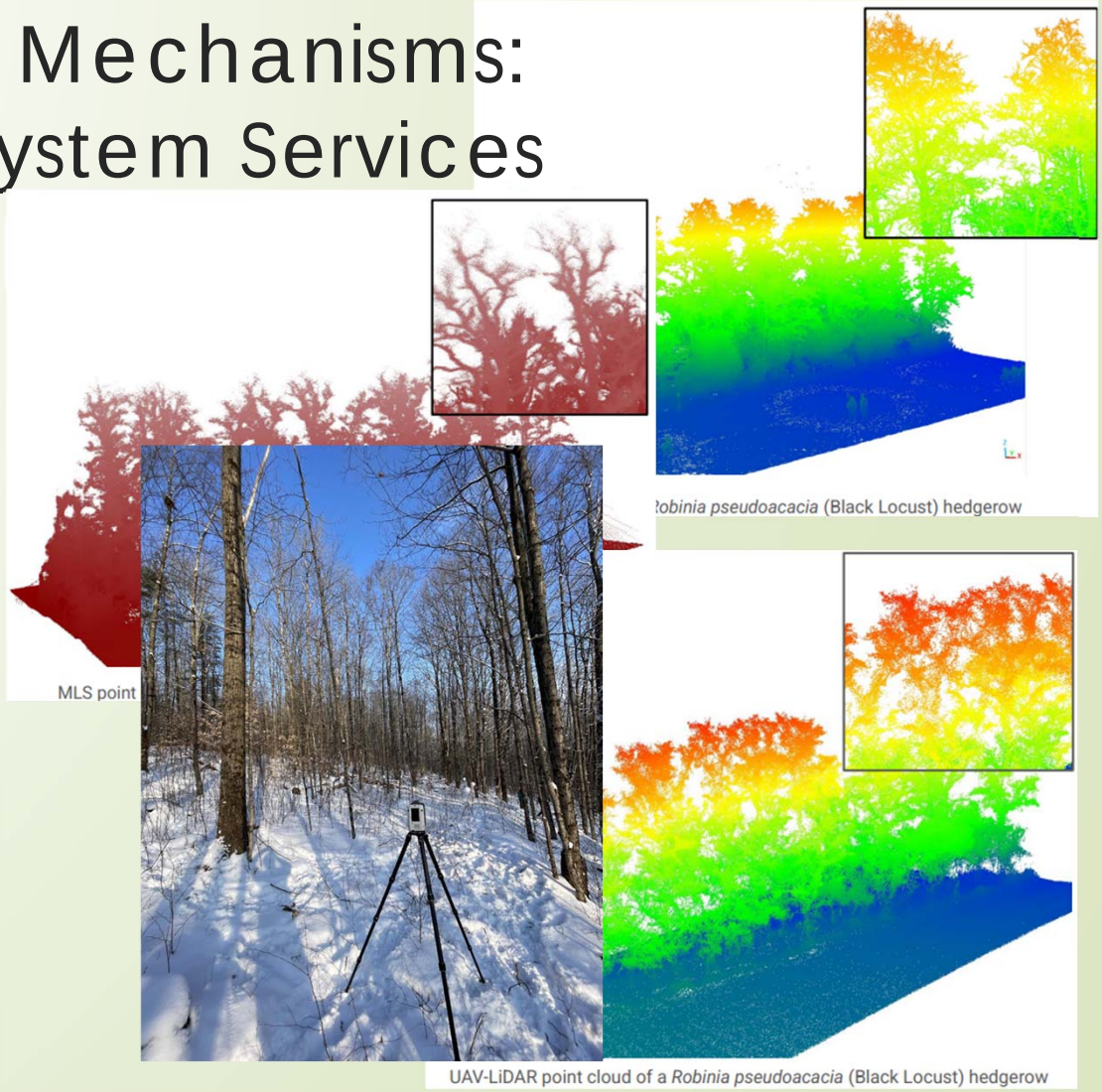
Supporting value chain development for processing local nut products

- Securing grant funding for equipment and product development
- Supporting organizational capacity development
- Building connectivity and networks among actors in the sector

Working closely with New York Tree Crop Alliance (NYTCA), Keystone Tree Crop Cooperative and Northern Forest Foods

Piloting Financial Mechanisms: Payment for Ecosystem Services

- Key opportunity: Emerging markets for ecosystem services
- Community-engaged effort to develop mechanisms for compensating farmers and land managers for ecosystem service provision
  - Aboveground carbon
  - Biodiversity
  - Hydrological outcomes
- Applied research program, collecting data and testing protocols on 12 farms
  - LiDAR measurement of aboveground carbon in small/medium scale agroforestry systems
  - Socioeconomic analysis of impacts of PES payments



Thank you!
Questions?

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