

Expanding Agroforestry Production and Markets

FOR PRODUCER PROFITABILITY AND CLIMATE STABILIZATION



Cotton grows between rows of pine trees. © Shibu Jose, Center for Agroforestry, Missouri - USDA

The Nature Conservancy (TNC) and multiple partners across the United States launched a project in early 2023 to expand agroforestry plantings across 29 states (see map, p. 2). The five-year project is designed to catalyze significant private investments into the agroforestry industry while increasing producers' incomes and delivering environmental benefits such as enhanced carbon sequestration, soil health, biodiversity, and water quality.

Funding for the *Expanding Agroforestry Production & Markets for Producer Profitability and Climate Stabilization* project is through the USDA's [Partnerships for Climate-Smart Commodities](#), a funding initiative to drive natural climate solutions by financing partnerships that support the production and marketing of climate-smart agricultural and forestry commodities through pilot projects. In 2022, USDA announced more than \$3.1 billion in funding for 141 projects, with the requirement that each project include meaningful involvement of small and underserved producers.

Scaling Agroforestry Practices

Agroforestry—the intentional integration of trees and shrubs into crop and animal farming systems to create environmental, economic, and social benefits—currently represents less than 1% of U.S. agriculture. The project will offer regionalized technical assistance and outreach to farmers, thereby reducing barriers and creating pathways to increased adoption of agroforestry practices. Additionally, this program will provide \$36 million in direct incentive payments to farmers for tree planting, creating a national network of demonstration farms for education and outreach activities. This project will further develop and leverage new private financing options developed for agroforestry operations.

This effort, which includes targeted outcomes to address the needs of underserved farmers, will create **30,000 acres of new agroforestry plantings** over five years. Building a foundation for scaling agroforestry nationwide, the model for this project could eventually spur the adoption of practices like alley cropping, silvopasture, and windbreaks on tens of millions of acres of U.S. farmlands.

Climate Benefits of Agroforestry

In the United States, agriculture is responsible for almost 600 million tons of CO₂e emissions annually, or 11% of all the emissions in the U.S. Yet agroforestry has the potential to be a significant natural climate solution.

Agroforestry practices can sequester 2 to 8 tons of carbon per acre per year in plant biomass and soil, as well as through a reduction in practices that contribute to GHG emissions. Agroforestry also has the potential to expand to tens of millions of acres, sequestering hundreds of millions of tons of CO₂ per year.

A dramatic expansion of agroforestry could help move the whole agricultural sector towards carbon neutrality.



Learn more at:

[nature.org/agroforestryUSA](https://www.nature.org/agroforestryUSA)



or contact:

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Expanding Markets

A significant component of this project is to expand markets for climate-smart agroforestry commodities, like nuts, fruits, and timber, as well as livestock products produced in silvopasture settings, to further incentivize the planting of trees on millions of acres of working lands.

Project partners will work with companies and retailers to identify barriers and solutions to market growth, assess demand for agroforestry products, and develop business models to enable farmers to get their products to market. The enabling business activities created through this project have the potential to unleash market forces that could achieve significant expansion of agroforestry and associated climate benefits.

Proving the Science

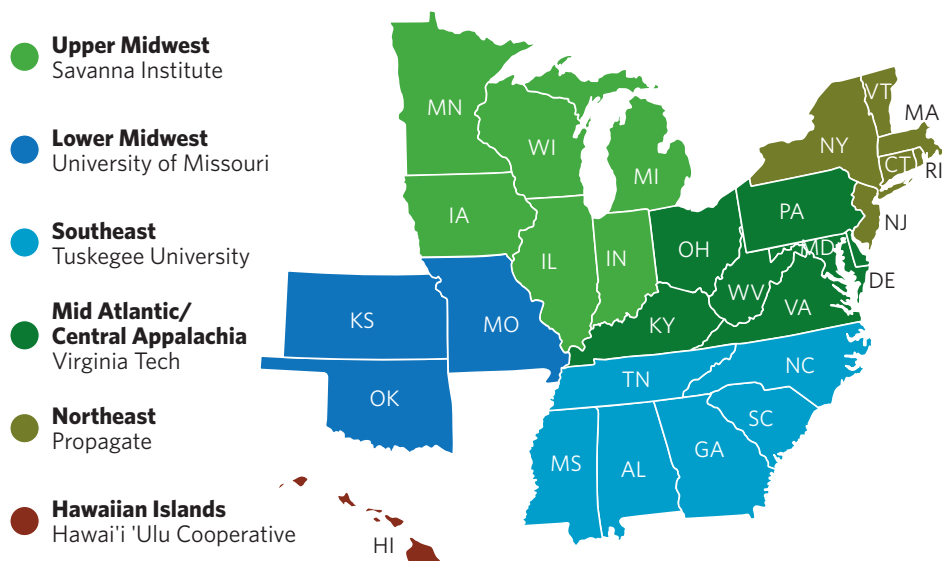
This effort has the potential to drive long-term climate solutions on U.S. agricultural lands by delivering scientific evidence for the carbon benefits of agroforestry. The program partners will collect, measure, and quantify the carbon benefits of the agroforestry products created through this undertaking. The project will pilot novel methods for quantifying carbon sequestration in agroforestry systems, enabling the potential for products to fetch higher prices from buyers seeking climate benefits. The data and the carbon rights will be owned by the landowners, and the purchasers of their products can communicate the carbon benefits to consumers.

Collaborating for Success

This project is bringing together leading businesses, academic institutions, and non-profit organizations working on agroforestry. TNC, which is responsible for grant administration, will work with six regional leads (see map) to manage the project, including coordinating with national partners to expand financing and develop markets for agroforestry commodities. The six regional leads are *Hawai'i 'Ulu Cooperative*, *Propagate*, *Savanna Institute*, *Tuskegee University*, *University of Missouri—The Center for Agroforestry*, and *Virginia Tech University*.

Other project partners include, but are not limited to:

1890 Consortium • Agroforestry Partners • Appalachian Sustainable Development • Applegate • Association of Temperate Agroforestry • Canopy Farm Management • Danone • Epic Institute • General Mills • Handsome Brook Farms • New York Tree Crops Alliance • Osage Nation • Practical Farmers of Iowa • Simple Mills • Trees for Graziers • University of Hawai'i at Manoa • University of Vermont • Walnut Level Capital • Working Trees • Yard Stick PBC



Agroforestry Systems

Agroforestry provides greater permanence than other agricultural practice changes, such as no-till and cover crops, which require annual implementation to retain sequestered carbon. Once established, trees can live for 50 to 300 years, building and retaining carbon in both biomass and soils for decades to centuries.

This project will focus on the following types of agroforestry plantings:



Alley Cropping: Planting rows of trees to create alleys where crops are grown. © Jim Robinson, USDA-NRCS



Windbreaks: Linear planting of trees and shrubs to reduce wind speed, preventing soil erosion, and protecting crops. © USDA



Silvopasture: Integration of trees and grazing livestock operations on the same land. © Jim Robinson, USDA-NRCS