

Advancing on-farm understanding and application of silvopasture technologies in Pennsylvania

a Northeast SARE grant

What is Silvopasture?

Silvopasture is an agroforestry practice that intentionally combines the production of trees, tree products, forage, and livestock on the same piece of land.

In a silvopasture system, trees provide long-term, high-value, timber products, and livestock generate short-term cash flow. Silvopasture results from one of two approaches:

- (1) Integrating livestock into an existing forested area, or
- (2) introducing timber crops onto existing pasture land.



Photo: Fork's Farm

Silvopasture offers potential for increased productivity, but it requires very intensive management. Consider the following:

Photo: Wes Lickus



1 Planning:

When designing a silvopasture system the manager must closely consider land-use goals – every farm will have a different silvopasture system based on goals, water and soil resources available, system design, existing forest/pasture options, and livestock used.

2 Site Preparation:

Extensive site preparation may include tree thinning, fence and water setups, and preparing the site with the appropriate tree and forage species. When choosing species to plant many variables should be considered, including: (1) livestock needs, (2) foresting goals, (3) the soil types, and (4) wildlife and pollinator needs.

Photo: Brett Chedzoy



3 Livestock Management:

Silvopasture requires intensive rotational grazing management. Livestock must be closely monitored, and frequently rotated, to avoid depleting forest resources. This practice involves active management, increasing labor time and costs.

Some Benefits

- **Vegetation control:** animals can control invasives and other unwanted vegetation.
- **Healthier forests:** trees are healthier and will grow faster, improving timber production.
- **Happier livestock:** shade and shelter protect animals from stressful weather conditions, increasing weight gain, milk yields, and conception rates.
- **Improved wildlife habitat:** wildlife and pollinators have sufficient food, water, and shelter to thrive.
- **Economic Gains:** Trees provide longterm income, and livestock short-term - this diversification provides the farmer with greater economic security.

Advancing on-farm understanding and application of silvopasture technologies in Pennsylvania

a Northeast SARE grant

About the Grant

Silvopasturing concepts are not new, but very little research has examined their potential use in the Northeast.

Over the last half century the practice of integrating livestock and forestry has been discouraged due to reoccurring conservation issues. Past methods, however, lacked the characteristics of *sustainability* and *intensive management* that silvopasture implies. Silvopasturing is an opportunity to integrate wooded areas within the overall farm operation, resulting in greater incentive for good stewardship through more deliberate and efficient land use. Management is the key to the success of silvopastures, but producers currently lack the information and decision support tools needed to implement the practices in the most effective manner possible.

Our project addresses these knowledge gaps and begins investigating these topics in Pennsylvania.

Photo: Fork's Farm



Summary:

In this project we are developing case studies on our two partner farms – the Dickinson College Farm and Wyebrook Farm. These studies are highlighting technical considerations when establishing and implementing silvopasture in both an open pasture situation and within an existing forest ecosystem. We aim to substantiate past research and deliver practical technical guidance, including lists of suitable tree and forage species as well as materials outlining important considerations during the process of establishing and maintaining silvopasture, ensuring greater success for those undertaking the practice.

Objectives:

1. Establish and maintain two silvopasture **demonstration sites** in both woods and open pasture
2. **Collect data** that explore and substantiate technical information for silvopasture systems
3. **Create networks** between practitioners, scientists, and technical advisors
4. Develop **technical guidance** (handouts, peer-reviewed journal articles, field days/workshops, websites, and technical tours) to educate about our results

Partners:

Dickinson
COLLEGE FARM



For more information about this grant or silvopasture practices, email: info@paglc.org