Economic Considerations

Integrating trees, forage and livestock creates a land management system to produce marketable products while maintaining long-term productivity. Economic risk is reduced because the system produces multiple products, most of which have an established market. Production costs are reduced and marketing flexibility is enhanced by distributing management costs between timber and livestock components.

Before a new silvopasture system is established, the landowner should explore thoroughly their economic and environmental considerations along with local land use, zoning, cost-share program and tax regulations. Forest and agricultural land may have separate zoning and land-use regulations accompanied by different tax assessments. Environmental requirements (e.g., planting trees, stream-side protection, wildlife habitat maintenance) also may vary with land use.

Silvopasture systems can be established on any land capable of simultaneously supporting trees and forage. Silvopasture systems can require a relatively large land base to sustain timber and livestock production continuity. Typically, silvopasture systems have been established on existing pasturelands by planting single or double rows of trees with forage corridors between them, or by clearing or thinning existing even-aged forested lands to establish such corridors.

Fig. 3. Table showing higher internal rate of return for silvopasture compared to other management options (Clason, 1999).
Initial Establishment Costs to Consider

Before jumping in to silvopasture, here are some cost considerations:

1) Site prep
   • Clearing site—either mechanically or with herbicide (cost of equipment + labor + cost of herbicides)
   • Tilling/Plowing rows for tree planting
   • Soil sampling and fertilizer amendments (If necessary)
2) Seedling costs
3) Labor associated with planting
4) Fencing
5) Establishing fire-breaks (if fire will be a management option)

Typically, the costs for establishing a silvopasture system in an existing pasture that does not involve extensive site preparation should be between $100-$120 dollars per acre.

Long term economic considerations:

- Tax value classification of system: Does your system qualify for tax breaks?
- Yearly cost for annual crop(forage establishment (seed, herbicide, labor, equipment, etc)
- Fence maintenance
- Cattle/herd management expenses
- Watering facilities/structures for cattle
- Fertilizer amendments (for forage and/or trees)
- Labor costs for pruning (see section on pruning under Timber Component)

The Natural Resource Conservation Service (NRCS) lists silvopasture as a practice that can be cost-shared under their EQIP (Environmental Quality Incentive Program). Contact your county NRCS office to learn more about this option.
Planning and Establishment Considerations

Southern pines (loblolly, longleaf, and slash pine) are compatible with forage production and livestock grazing when properly managed.

While a number of hardwood species have been successfully incorporated into silvopasture systems with grazing animals, these species typically take a longer time to establish and reach maturity, thus increasing the rotation period between timber harvests for the landowner.

Livestock must be intensively managed in silvopasture systems. Timing and duration of grazing must be carefully monitored to maintain site quality and tree seedling survival by minimizing damage to seedlings by trampling and rubbing, and preventing overgrazing and soil compaction. Depending on the density of forage, livestock must be rotated between ‘pastures’ to sustain growth and productivity of forages. Fencing or paddocking, periodic burning, rotational grazing, fertilization, placement of watering and/or supplemental feeding areas are all management tools that may be utilized to maintain an optimal system.