



Silvopasture Cost Share Proposal — NRCS Format

This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number ENE23-187. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.



Trees For Graziers prepared this document with the aim of showing what an NRCS cost-share for silvopasture could look like, if it reflected the techniques that TFG has found effective in establishing trees in pastures. As of writing it is not being used by any NRCS office. Our goal is simply to lay out our methods in a way that fits within the NRCS format, so that it can be used as a template for NRCS decision-makers.

Please pay attention to the last page, which describes how we developed the proposal, borrowing from various sources as we tried to meld our techniques with the resources and format that NRCS uses.

Practice: 381 – Silvopasture

Scenario #9 - Establish hardwood trees in an existing pasture with adequate forage.

Scenario Description: Establishment of trees into an existing pasture that contains adequate native or introduced forage.

Before Situation:

10-acre pasture has inadequate livestock shelter resulting in loafing and overuse and wear of pasture on partially shaded field boundaries.

Resource Concerns include Degraded Plant Condition - Undesirable Plant Productivity and Health, Livestock Production Limitation -Inadequate Livestock Shelter.

After Situation:

Appropriate tree species are selected and the spacing and layout arrangement is determined for optimum stem density. The existing pasture sod is suppressed by mechanical or chemical means to provide competition control to benefit tree seedling growth. Trees are planted and properly protected until they are established well enough to allow livestock grazing without significant stand loss. All Resource Concerns listed above are addressed.

Feature Measure: Acres of silvopasture established

Scenario Unit: Acres

Scenario Typical Size: 10.00

Scenario Total Cost: \$21,221.68

Scenario Cost/Unit: \$2,122.17

Component Name	Description	Unit	Cost	QTY	Total
Truck, Pickup	Equipment and power unit costs. Labor not included.	Hours	\$28.44	32	\$910.08
Trailer, enclosed, small	Small enclosed trailer (typically less than 30' in length) pulled by a pickup to transport materials and equipment. Truck not included.	Hours	\$13.67	120	\$1,640.4
Hand Tools, Tree Planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only. Labor not included.	Hours	\$12.81	120	\$1,537.2
Site Prep	Mowing, hand scalping	Each	1.50	700	\$1,050
Tree, Hardwood, Seedling	Bare root hardwood seedlings 18 to 24 inches tall; includes containerized seedlings of 8 cubic inches or smaller. Includes materials and shipping only. (Based on the cost of 100 honey locust seedlings from Musser Forest, including 20% shipping and 6% taxes)	Each	1.68	700	\$1,176
Labor	Labor performed using basic tools such as power tools, shovels, and other tools that do not require extensive training. Includes layout, planting tree, installing shelter, polywire and mulch	Hour	\$28.71	120	\$3,445.20
Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$49.62	40	\$1,984.80
72" tree tube	Plantra tree tube	Each	\$5	700	\$3,500
84" fiberglass tree stake	Fiberglass stake, which flexes to withstand some animal abuse, and also is electrical insulator	Each	\$5	700	\$3,500
Polywire	Average of 20' of polywire, kept hot to protect trees from rubbing and browsing of livestock	Each	0.50	700	\$350
Wire Flags	Small vinyl flags attached to wire stakes, typically, 36 in. length, for marking tree rows	Each	0.12	700	\$84
Mulch	Wood Chips	Sq. Ft	\$0.58	2,800	\$1,624
Spiral Vole guards	Vinyl guards as physical barrier to deter above ground vole girdling	Each	\$0.60	700	\$420
		216.4	256.8		\$21,221.68

Sources:

- Lines 1, 2 and 3 come from [PA NRCS Scenario](#) for 612 Tree and Shrub Establishment, Scenario #5 - Low Density, Hardwood Tree/Shrub with Shelters.
- Line 4 (Site prep) comes from current estimates by TFG. Because most silvopasture projects at this point in time are applied on organic operations, herbicide is not a widely applicable site prep method
- Line 5 (seedling) assumes the use of a medium seedling, 18-24" tall. Based on the cost of 100 [honey locust seedlings from Musser Forest](#), including 20% shipping and 6% taxes.
- Labor hourly rates based on rates by PA NRCS Scenarios rates for general labor and supervisors. Hours based on time to complete all tasks listed, as recorded by TFG for similar silvopasture projects completed.
- Tree tube and stake rates based on the listed price for [Plantra tree shelters](#). Since the price for the combination tube and shelter is lower than buying the two separate, the cost of the two together (\$10) is split evenly in half
- Polywire. Comes from estimates used by TFG. Based on a cost of \$0.025/foot of polywire
- Wire flags. Based on PA NRCS Scenarios.
- Mulch. Based on PA NRCS Scenarios. 484 Mulching. Scenario #6 - Wood Chips. We recommend installing 4 square feet of wood chip mulch per tree.
- Vole guards. Based on TFG standard practices for reducing vole damage. Especially important given thick grassy vegetation on mostly organic farms, and inability to create large herbicide spots.