Introduction to Silvopasture

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What is Silvopasture?

• Silvopasture is an intentional combination of trees, forage plants and livestock in an integrated, and intensively managed system.
Why should we care?

• Production of high quality timber is the ultimate goal in silvopastoral systems located in temperate climates (Sharrow, 1999).
Why should we care?

• Annual income can be derived from livestock, hay production and/or grazing/hunting leases.
How is it different...?

• Silvopastoral systems employ improved forages and intensive tree and pasture management compared to range and woodlot grazing.
The history of silvopasture...

...adopting an existing tree stand to a silvopasture
October 1953

Slash pine
Coastal Bermuda grass
Private farm near Tifton, GA
August 1979

Bahiagrass seeded under mature pines

Private farm, Andalusia, AL
Bahiagrass seeded under planted slash pines
Rose Hill Plantation, Tallahassee, FL

August 1979
Pine-Pasture
Bahiagrass under pines grazed for 30 years
M. N. Hopkins farm, GA

September 1982
History tour...

...Experimenting with wider spacings...
September 1971

Slash pine, 12 x 12 ft spacing, age 15 (planted 1957)
Dallis grass (planted 1960)
June 1969

Slash pine, 12 x 12 spacing

Bahiagrass
June 1974

Slash pine, 20 x 20 ft spacing
Bahiagrass
Alapaha Experimental Range, GA
May 1969

Hay production / tree spacing study

Coastal Bermuda grass

Slash pine (?) planted in January 1967

Bermuda grass sprigged in March 1967
Hay production / tree spacing study
Slash pine, 10 x 48 ft spacing, planted in 1967
Bahiagrass
History tour…

…Some of the old (and present) management challenges…
Loblolly pine, 6 x 6 x 18 ft spacing, 605 TPA, age 15

Native ground vegetation

Alapaha Experimental Range, GA
August 2001

Loblolly pine conversion to silvopasture through thinning and grazing by goats

George Owens’ farm near Chipley, FL
August 2001

Loblolly pine pruning for quality timber production
George Owens’ farm near Chipley, FL
Preparing seedbed for improved forages
February 1967

Slash pine, 12 x 12 ft spacing, planted in 1957
Thinned and burned in February 1967
Coastal Bermuda grass
CATTLE DEMONSTRATION AREA
GRAZING TIMBER
IN COOPERATION WITH
U.S. FOREST SERVICE
WITH LACOCHEE STATE FOREST
Slash pine, 8 x 12 ft spacing, Pensacola bahiagrass

Native Pineywords Cattle

Withlacoochee State Forest, FL

July 1982
Slash pine
Bahiagrass
Withlacoochee State Forest, FL

September 1985
History tour…

…Comparative spacing studies…
October 1982

Slash pine, 4 x 8 x 40 ft spacing, age 12
Native ground vegetation
Avon Park, FL
Slash pine, 2 x 8 x 88 ft spacing, age 12

Native ground vegetation

Avon Park, FL

October 1982
History tour... 454 TPA

- 8 x 12 ft
- 4 x 24 ft
- 2 x 48 ft
- 6 x 8 x 24 ft
- 4 x 8 x 40 ft
- 2 x 8 x 88 ft

- 13 years later, the double-row spacing 4 x 8 x 40 ft produced more forage and as much wood as the single-row 8 x 12 ft control treatment.
History tour...

...Some other general trends...
GRASS YIELD (lb/ac)

YEARS AFTER PLANTING IN FIVE-YR-OLD SLASH PINE

BAHIA GRASS
DALLIS GRASS
BERMUDA GRASS
The present...

...double-row 4 x 8 x 40 ft spacing rules in Florida...
Loblolly pine, 4 x 8 x 40 ft, planted in 2000
Dixie crimson clover
George Owens’ farm near Chipley, FL
December 2001

Dixie crimson clover

George Owens’ farm near Chipley, FL
Slash pine, 4 x 8 x 40 ft, planted in 1984
Dixie crimson clover
George Owens’ farm near Chipley, FL
August 2001

Slash pine, 4 x 8 x 40 ft, planted in 1984

Pensacola bahiagrass

George Owens’ farm near Chipley, FL
In Summary

• History of intentional, integrated and intensively managed silvopastoral systems in the Southeast spans at least last 50 years.

• To date, silvopastoral systems have not been widely adopted by the landowners, despite the many potential benefits.
Future of silvopasture in the Southeastern U.S. depends also on the trainings like this one, and on what we’ll do with the information that will be presented in the subsequent presentations.