

# Agroforestry FACTSHEET



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## SILVOPASTURE

### WHAT IS IT?

**Silvopasture is an agroforestry system** that intentionally blends management of trees, forages, and livestock such that:

- The interactions among these components are **planned** and **managed**.
- The system is operated for and evaluated as a **single enterprise** rather than as separate parts.

### HOW IS IT IMPLEMENTED?

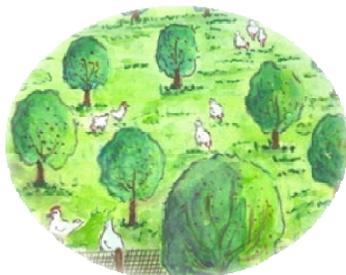
Both pastures and treed areas can be adapted to and managed for both timber and forage production. Management intensity will vary depending on the silvopasture design and desired results. For example, choices might include whether to maximize the production of animal forage and livestock with timber as a secondary product, or to target enhanced tree growth and co-manage for some enhanced forage and livestock values.



### BENEFITS

Incorporating long-term timber production with pasture and livestock management operations provides for both a **long-term** income and diversifies the enterprise, its product, and **annual** cash flow.

#### Benefits from adding trees and/or shrubs include:



- **Wood products** – Timber harvesting for: dimensional, engineered, and specialty wood products; fibre; and biomass for bioenergy.
- **Nuts and fruit** – A variety of orchard fruits, berries and nuts may be produced and marketed.
- **Wildlife** – Song birds, game birds and animal species are attracted by the food, nesting sites, and protection provided by trees.
- **Forage** – Some forage crops may benefit from partial shade, wind protection and enhanced soil moisture.
- **Livestock** – Through shading and sheltering, forested pasture may provide protected grazing with less environmental stress on the animal.

#### Benefits from adding forage include:

- **Forage** – Depending on the site, forage not used for your own livestock may be baled and sold as a source of supplemental income. Pasture may be rented to other producers especially if it supplies a resource when grazing resources are limited. Some forages can fix nitrogen.
- **Livestock** – Livestock can control weeds, graze competing vegetation, and improve nutrient cycling. They can provide short-term cash-flow to supplement long-term forest productivity.
- **Wildlife** – Adding forages diversifies the habitat available to wildlife species.

#### Other benefits of silvopastures:

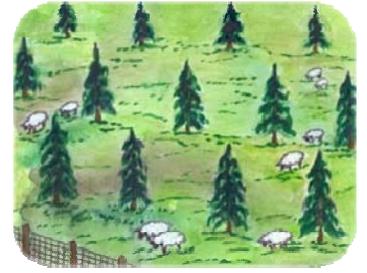
- Maintained or increased individual tree growth.
- Improved water quality.
- Aesthetics and property values.
- Land use planning, e.g. fuel management in interface areas.
- Carbon sequestration.
- Erosion control.
- Enhanced forage and browse for wild ungulates.

**Agroforestry is the intentional, integrated management of combinations of trees and/or shrubs with crops and/or livestock.**

**It combines agriculture, silviculture, and conservation practices in the same land use system.**

## CHALLENGES

- Silvopasture is more management intensive than conventional livestock grazing in either open pastures or forested landscapes.
- For a given land unit, timber and forage tenures may be held by separate individuals.
- There are few established silvopasture examples in B.C. although this is a more common practice in the southeast U.S.A. and parts of Europe.
- Supportive policy and operational guidelines are needed.



## PLANNING CONSIDERATIONS

Before a new silvopasture system is established, the implications of merging forestry and agricultural systems should be thoroughly explored. Conduct a resource inventory including personal skills and interests, equipment, site characteristics, fiscal resources, available tools, and external resources (people and programs). Interactions among the forages, trees and livestock all need to be considered over the variety of forage and tree growth stages. Assess your proposed enterprise in light of economic and environmental considerations, applicable regulation, and fit with your current operation.

## EXAMPLES OF SILVOPASTURE PRACTICES IN B.C.

Photo courtesy of J. Cunningham



**Pinantan Lake, Thompson Nicola** – Jay Springs Lamb Co. Overlapping grazing lease and woodlot license tenures facilitate a sheep silvopasture system. The production story is one of the value-added attributes of their direct-marketed products.

**Cranbrook, East Kootenay** – Kootenay Tree Farms. Fertilization and thinning of Christmas tree stands increases tree growth for the Christmas tree producer, and understory forage growth for the grazing lease holder. Grazing controls the forage impacts adjacent to the trees. Both the lease holder and the Christmas tree producer benefit.

**Cranbrook, East Kootenay** – Kootenay Tree Farms. Fertilization and thinning of Christmas tree stands increases tree growth for the Christmas tree producer, and understory forage growth for the grazing lease holder. Grazing controls the forage impacts adjacent to the trees. Both the lease holder and the Christmas tree producer benefit.



Photos courtesy of C. Willis



**Peace River Forest District** – Timber Range Impact Mitigation Committee.

Narrow forage alleys were created in densely regenerated aspen stands as a test approach to mitigating conflict between timber and grazing land tenure interests. Objectives were to address the loss of AUMs resulting from dense aspen regeneration following harvest while meeting the requirements of the Forest and Range Practices Act.

**Throughout British Columbia** – Livestock have been used to control and reduce vegetation competition with crop trees in young forest plantations. As the livestock, forage and tree resources are co-managed, these systems can be regarded as an extensive approach to silvopasture.

## FOR MORE INFORMATION CONTACT:

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