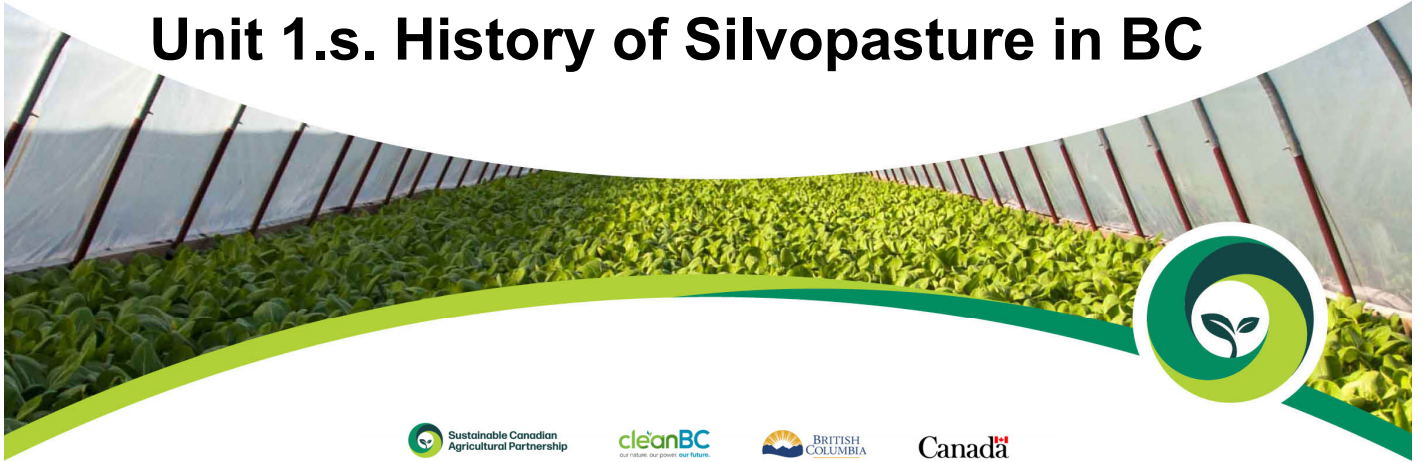


Sustainable Canadian Agricultural Partnership

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Silvopasture In British Columbia Information Series

Unit 1.s. History of Silvopasture in BC





Acknowledgment

This work has been funded by the Governments of Canada and British Columbia under the Sustainable Canadian Agricultural Partnership, a federal-provincial-territorial initiative.

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Insert local indigenous territorial acknowledgment.

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Silvopasture in BC Information Series Content Guide



Core Units	Case Studies	Supplemental Units
0. Series Overview		
1. Introduction		1.s. History of SP in BC
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3.1. SP BMPs - part 1	3.c.1 Small-lot SP: Just Another Weed Patch Farm	3.s. Managing Damage
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4. SP Planning	4.c.1 Planning on Crown Land: SP Pilot Project	
	4.c.2 Adaptive Management at Aveley Ranch	

This is a supplementary unit in a series on silvopasture in BC.

This presentation will provide greater depth and examples on how silvopasture interests and practices developed in the province.

Unit 1.s. History of Silvopasture in BC



Goal

Review the history of silvopasture and understand how interest and practices in integrated production developed.

Prerequisites

None.

Content

1. Indigenous Origins
2. Early Forest Grazing
3. Multiple Use Era
4. Convergence of Interests
5. Silvopasture by Design

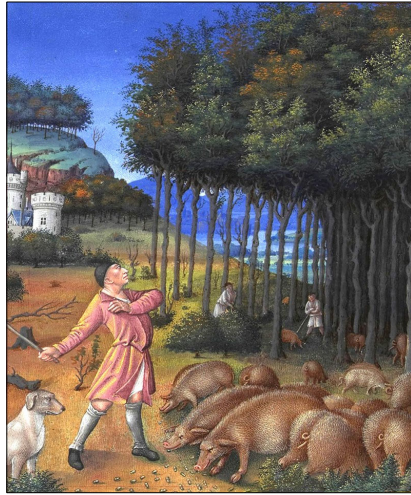
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The goal of this unit is to expand on the introductory historical content provided in Unit 1 and explain how present-day interests in silvopasture developed from various livestock management, silviculture and conservation interests.

Starting from Indigenous land management practices, through early livestock management and integrated resource use on Crown lands and into the modern era of managing for multifunctional landscapes.

History of Silvopasture in BC

Silvopasture is a new word and formal discipline rooted in ancient practices.



Medieval swineherd

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Silvopasture, as a formal activity is relatively new, but it is rooted in thousands of years of traditional Indigenous practices. These traditions have been blended with the science and management lessons learned from decades of integrating livestock use on BC's regenerating forestland and farm woodlots.

Indigenous Origins of Silvopasture

Indigenous people have used fire for thousands of years to remove forest cover.



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Indigenous people in the area now bounded by British Columbia have used fire for thousands of years to remove tree and shrub cover. They also did not actively suppress the naturally occurring wildfires that maintain open-forests.

These management actions were done, in part, to improve grazing values.

Prior to European and Asian contact, improved grazing opportunities created better habitat for native ungulates that could be hunted. Later, improved forage resources were used by both wildlife and horses.

This traditional use is the earliest expression of silvopasture principles in BC.

History of Silvopasture in BC

Early Forest Grazing: Conflicts and Compromise (1850s -1950s)



1860s cattle drive to Barkerville in the Cariboo goldfields.

Early forest grazing was a matter of circumstance, rather than by design.

Use concentrated in mature or selectively logged, low-elevation forests.

Crown and private lands suffered from over use.

BC's rapid colonial expansion coincided with discovery of gold, and large-scale cattle importations started at that time. Within 2 months of the first large groups of miners crossing the border in 1858, large herds of cattle were driven northward from the US territories up the Okanagan Valley and onward to the Cariboo gold fields.

Forest grazing began not by design, but as a matter of circumstance; in central BC open forests often were the only accessible forage resources until later land clearing and agricultural development created pastures.

As both colonial settlement and agriculture expanded over the ensuing century, so too did forest grazing. But early legislation only granted grazing rights, not responsibilities: e.g. Breeding Stock Act (1874). Beginning around 1911, concern with widespread over-use of range resources prompted the establishment of a provincial Commissioner of Grazing. Through the Commissioner, conservation measures were developed for grazing on Crown lands, although nothing specific was developed for forest grazing.

For most of the first century of the colonial period, grazing activity was concentrated in the Southern Interior, utilizing mature or selectively logged, low-elevation forests, as well as natural forest openings that were the result of soils, fires, and wetlands. Until the early 1960s most of the province's interior forest base was unlogged and offered limited value as rangeland.

History of Silvopasture in BC

Early Recognition of Diversification Needs

“Farm Woodlots” introduced in 1948.

Provides farmers and ranchers access to Crown timber.

Woodlots an important part of many agricultural operations.



1940s Interior logging truck.

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From early in the 20th century, there has been strong ties and overlap between interior agriculture and forestry. Many farmers and ranchers worked off-farm in the forest industry to supplement their incomes.

Many farms and ranches also maintained private woodlots for their own wood product needs and to generate revenues. In 1948, the Province recognized the importance of woodlots to interior agriculture and created the Farm Woodlot program. Under this system, farmers and ranchers could access small tenures of Crown timber, usually in areas adjacent to their private land holdings, as a means to further diversify their operations and generate income.

The Woodlot Licence Program in BC, established in 1979, incorporated the Farm Woodlot licenses with an expanded mandate. And woodlots and logging on both private farmland and in the Woodlot Licence program remain an important part of many BC agricultural operations.

History of Silvopasture in BC

Multiple Use Era (1960s to 1990s)

Major land use shifts:

- Extensive clear-cutting and expansion of forest road network.
- Cattle grazing and forage seeding on clear-cuts expanded.
- Fire suppression reduced low-elevation forest openings.
- Silvicultural concerns about forage seeding and livestock impacts intensified.



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Although some conflicts over forest grazing practices arose as early as the mid-1950s, there were generally few problems reported until the late 1960s.

Adoption of lodgepole pine as a commercial timber species at that time led to increased harvests of mid- to high elevation forests. And a shift to clear-cutting greatly increased the area of regenerating forestland and also access along an expanding forest road network.

The practice of forage seeding on roadsides, skid trails and landings for erosion control also increased at that time. Coincident to this was an expansion of ranching and demand for rangeland: thus large-scale forage seeding on clear-cuts to boost forage supplies began.

Expansion in mid-elevation forests was also coupled with a reduction in the use of low-elevation forests by livestock.

Aggressive fire suppression from the 1930s onward began to result in forest ingrowth and encroachment on low-elevation grasslands. As a consequence, ranching in BC became increasingly dependent on the transitory use of regenerating forestland. Ranching was also expanding north into the sub-boreal and boreal forests, where forests and wetlands provided the majority of the range resource.

Concerns over forest plantation damage by livestock and the impacts of seeded forages on natural tree regeneration intensified in the late 1960s through the early 1970s.

History of Silvopasture in BC



Multiple Use Era (1960s to 1990s)

- Research to address the compatibility of forage seeding, timber production and livestock.
- Multiple use through planning; Coordinated Resource Management Plans.
- Ministry of Forests Act (1979) directed coordinated and integrated use of Crown timber and range resources.
- Compatible management achieved with the Forest Practices Code and operational Range and Plantation Protection Plans.

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In the face of growing land use controversies, Agriculture Canada and the BC Forest Service conducted a series of research projects to address the compatibility of forage seeding, timber and livestock management between 1970 and the mid 1990s.

Administratively this period was characterized by efforts to promote multiple use through planning. It followed a model first developed in Oregon called Coordinated Resource Management Plans. These plans were employed not only in an attempt to integrate forest and range use, but also address wildlife, recreation and water management concerns.

In 1978 the Forests and Grazing Acts were re-written, and new legislation established and defined a policy of mandatory integrated use on public lands. This included the Ministry of Forests Act (1979) that directed the Minister of Forests to:

“...encourage maximum productivity of the forest and range resources in the Province;” and to “plan the use of the forest and range resources of the Crown, so that the production of timber and forage, the harvesting of timber, the grazing of livestock...are coordinated and integrated.”

Through all these research and policy efforts, a compatible management framework was achieved operationally in 1995 with the introduction of operational Range and Plantation Protection Plans, under the Forest Practices Code.

History of Silvopasture in BC

Convergence of Interests (1980s-2000)

- Woodlots with overlapping grazing tenures.
- Grazing and forage seeding as silvicultural tools:
 - Clearwater Agroforestry Trials (1985-1988)
 - Prince Rupert Forest Region Agroforestry Trials (1990s)
 - Sheep Vegetation Management Committee.
- Regional economic development initiatives.



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In the 1980s a variety of interests in forest and range management also started to explore using silvopasture as an opportunity to leverage the benefits from integration.

This represented a fundamental shift in the mindset away from viewing integration as a method to mitigate conflict, to an untapped opportunity to be captured.

A convergence of interests came together to trial and develop guidelines for the operational integration of livestock, forage seeding and silviculture. These included:

1. Woodlot operators with overlapping timber and forage tenures on Crown lands;
2. Those exploring the use of grazing and forage seeding as silvicultural tools to address the backlog of not satisfactorily restocked (NSR) forestland, such as:
 - The Clearwater Agroforestry Trials, as well as those in 100 Mile House Forest District, that piloted using sheep for vegetation management;
 - Trials in the Skeena and Bulkley Districts of the Prince Rupert Forest Region that tested cattle for vegetation management and companion seeding trials of forages that provided livestock feed and silvicultural benefits; and,
 - The BC Ministry of Forests Sheep Vegetation Management Committee was established to coordinate information and trials across the province.
3. A number of Interior community and economic development groups, that worked to fund and trial silvopasture-related work as a means to encourage rural diversification.

History of Silvopasture in BC

Modern Era: Silvopasture by Design



Interest in fully integrated silvopasture systems:

- > Positive results using livestock and forage seeding for silviculture.
- > Interest in diversifying.
- > Recognition of environmental co-benefits.

BC Agroforestry Initiative (2004 to 2013): demos and extension across the province.

Larger-scale silvopasture research and pilot projects.

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Based, in part, on positive results from using sheep and cattle for operational silvicultural prescriptions, as well as forage and legume seeding devoted to the same, there was growing interest in moving beyond compatible management to systems that capture the benefits from full integration. Interest in these integrated systems arose as tools complementary or supplementary to conventional practice.

On private and lease lands, woodlot and livestock operations were also interested in silvopasture as a means to sustainably diversify their operations. The BSE crisis for cattle and mountain pine beetle epidemic for forestry, punctuated the need for diversification.

There was also growing recognition of the environmental co-benefits from silvopasture to create true multifunctional landscapes supporting biodiversity, watershed values, climate mitigation and adaptation.

Supported by the BC Agroforestry Industry Development Initiative, from 2004 to 2013, a wide variety of silvopasture demonstrations and extension activities were carried out across the province.

The AIDI demos were followed by larger-scale collaborative silvopasture research and pilot projects led by the BC Ministry of Agriculture and Food and industry over the past decade into the present day.

Questions and Discussion



Opportunity for questions and group discussion.