

Sustainable Canadian Agricultural Partnership

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Silvopasture In British Columbia Information Series

Unit 3.s.1. Managing Tree and Shrub Damage



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Silvopasture in BC Information Series Content Guide



Core Units

0. Series Overview

1. Introduction

2. Science Behind SP

3.1. SP BMPs - part 1

3.2. SP BMPs - part 2

4. SP Planning

Case Studies

2.c.1 Production Synergies:
Kootenay Tree Farms

2.c.2 Riparian Silvopasture:
Silver Hills Ranch

3.c.1 Small-lot SP: Just Another
Weed Patch Farm

3.c.2 Mature Forest to SP:
Indian Gardens Ranch

4.c.1 Planning on Crown Land:
SP Pilot Project

4.c.2 Adaptive Management at
Aveley Ranch

Supplemental Units

1.s. History of SP in BC

2.s.1. Light & Microclimate

2.s.2. Hydrology

3.s. Managing Damage

Unit 3.s.1. Managing Tree and Shrub Damage



Goal

Learn beneficial practices that may prevent or minimize damage to crop trees or shrubs in silvopastures.

Prerequisites

Units 3.1 and 3.2: Silvopasture BMPs.

Content

1. Review: Why tree and shrub damage occurs
2. Defer use / Monitor use
3. Individual tree protection
4. Fencing and other protection measures protecting larger areas; and,
5. Chemical and electronic devices.

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Trampling Damage

All trees and shrubs are susceptible to trampling until at least 50 to 60 cm tall.



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Browsing Damage

- Some browsing of non-preferred species is expected (<2% of stand) until the growing points are inaccessible.
- Severe damage can occur when no other feed is available.



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Considerations: Defer Use

- Until after trees are > 50-cm tall
- Annually, until bud set, or later into the growing season.



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Considerations: Monitor Use



- Livestock will turn to crop trees and shrubs once more preferred species are depleted.
- Monitor use and move animals after target species are grazed.
- The more intensive the livestock use, the more intensive the monitoring required.

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Considerations: Livestock Barriers for Individual Trees



Tree guards: mesh or solid tubes; combinations of both.



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Considerations: Obstacle Planting



Tree and shrub seedlings planted into the shelter of large rocks or coarse woody debris.

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Considerations: Install Fencing for Tree Clusters or Rows

- Variety of options at various cost points.
- Temporary electric fences are low cost and highly reconfigurable.



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Considerations: Other Livestock Barriers for Tree Clusters or Rows



Debris fencing

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Considerations: Other Livestock Barriers for Tree Clusters or Rows



Random elevated debris

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Considerations: Virtual Fencing

- Livestock fitted with GPS collars that communicate with towers to create a virtual zone.
- When the livestock reach the edge, an alarm is sounded.
- Livestock passing through the boundary receive a mild electric shock.
- Livestock generally modify their behaviour through learned experience.



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Considerations: Chemical Deterrents

- Odour that repels livestock or wild ungulates.
- Can be effective but they must be reapplied periodically.
- May also deter grazing in the immediate vicinity of the tree or shrub seedling.



Questions and Discussion

