**TRIAL SUMMARY**

**TITLE:** Species and Stock type Trial on a Coastal Alluvial Site

**OFFICER I/C:** Bob Wilson

**LOCATION:**

**REGION/DISTRICT:** PRIMEE Rupert/Kalum Forest District

**OBJECTIVE:** To test species suitability of amabilis fir, grand fir, and lowland cedar to a coastal alluvial site. To validate expected superior survival and growth of transplanted western red cedar.

**PROGRESS:** Working Plan Prepared

**NEXT SCHEDULED ASSESSMENT/TREATMENT:**
- Establishment Report, Fall 1991
- Interim Report, Fall 1992
- Final Report, Fall 1993

**REPORT DISTRIBUTION:**
- Resource Officer, Kalum Forest District
- Resource Officers, Prince Rupert Region
- Vancouver Forest Region
- MOF Library
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Species and Stock Type Trial on a Coastal Alluvial Site
Working Plan

Les Priest
Aldermere Forestry Services
for
Kalum Forest District
B.C. Forest Service
April, 1991
Introduction

The alluvial flats bordering the lower Skeena River are some of the most productive forestry sites in the country but plantation forestry as practised locally has become more and more difficult. Common practice has been to blade the site and plant sitka spruce, western hemlock and western red cedar, or, to blade the site and plant cottonwood. Hemlock, cedar and cottonwood have proved to be quite palatable to the high populations of meadow voles (Microtus pensylvanicus Ord.) that frequently occur on these sites. Damage and mortality have ranged from 20% to 80% (estimation) in recent years. In addition, hemlock is a species palatable to porcupines which are another local pest present in high numbers. Sitka spruce is less palatable to voles than the other trees but is susceptible to the spruce leader weevil (Pissodes strobi).

A larger stock size of cedar would be more resistant to stem girdling by voles and would better justify the expense of the manual brushing and weeding that will be required on these sites. Amabilis fir (Abies amabilis (Dougl.) Forbes) occurs nearby but does not occur on the site itself. Grand fir (Abies grandis (Dougl.) Lindl.) does not occur nearby but it's climatic preferences may be met by the test site. Yellow cedar (Chamaecyparis nootkatensis (D. Don) Spach) occurs nearby but is less vigorous than western red cedar or the true firs.

Objective:

To test species suitability of amabilis fir (Abies amabilis (Dougl.) Forbes), grand fir (Abies grandis (Dougl.) Lindl.) and yellow cedar (Chamaecyparis nootkatensis (D. Don) Spach) to the site. To validate expected superior survival and growth of transplanted (PBR 1+1) western redcedar (Thuja plicata Donn)

Specifically, the trial will test the survival, form and early growth of the four species.
Methods

Nine plots of one hectare or 100m² will be laid out. Western red cedar, amabilis fir and grand fir will each be randomly assigned to three plots each. 300 yellow cedar will be planted in three smaller plots, in a ten by ten grid.

Each one hectare plot will be planted operationally with approximately 680 seedlings. A sub plot of 50 seedlings will be randomly selected in each plot for survival measurements.

Each plot will have the corners marked with treated fence posts. Each survival plot will be marked with cedar stakes.

A random selection system will used to measure 30 seedlings of red cedar, amabilis and grand fir in each plot and, 20 seedlings of yellow cedar in each plot to establish baseline height and root collar diameter.

All seedlings will be operationally staked and skirted.

Seedling growth and survival will be measured at one, two and five years. Data will be analyzed by regional silviculture research.