

**DRAFT
WORKING PLAN**

SX 90113Q

COMPARISON of VARIOUS SPRUCE STOCK TYPES

SUMMER PLANTED on a SITE

in the MORICE FOREST DISTRICT

COLENE WOOD

Silviculture Branch

90-09-28

TITLE: Comparison of Various Stock Types Planted on a Site in the Morice Forest District.

INTRODUCTION: Experiences with regenerating brush prone backlog sites has led to the conclusion that for successful management, the appropriate silviculture regime consists of aggressive site preparation followed by planting with stock that has high performance potential.

Plantation maintenance options may be limited on some sites, further emphasizing the need for a regime with suitable stock performance.

The general understanding is that larger, sturdier stock will produce greater initial growth. Stock type trials offer the opportunity to assess and monitor growth of various stock types in field situations.

- OBJECTIVES:**
1. To compare:
 - a) outplanted seedlings of various stock types with
 - b) standard seedlings (PSB 313's)
 2. To collaborate with the licensee and compare Sx Trial methods and procedures with the licensee's operational trials.
 3. To establish a field trial for presentation and exhibition.

STOCK: Stock to be used:

<u>SPP/SEED LOT</u> <u>NURSERY</u>	<u>STOCK TYPE</u>	<u>REQUEST KEY</u>	<u>AGENCY</u>	<u>STORAGE</u>
Sw 3984	1+1 RL	88R02323AT	NW	
"	2+0 PSB 415B	8802313	NW	
"	1+0 PSB 313A	8902402A	NW	

TREATMENTS: All stock has been operationally grown. No special treatments will be applied.

LOCATION: The trial is located in the Morice Forest District, Prince Rupert Region, Opening ...

METHOD:

Two locations (termed "plots") will be established, using all 3 stock types. For each stock type, 140 seedlings (4 rows of 35 seedlings) will be planted at each location. A total of 420 seedlings will be planted and marked at each location, for a total of 840 seedlings for the trial.

The order of planting the rows follows a repeated sequence. A layout plan is included in the Working Plan.

The start and end of each row will be marked with a painted 4' cedar stake. Smaller cedar stakes will mark tree #10, #20, and #25. Each seedling will be flagged with wire markers, with two different colours to highlight alternating rows.

Silviculture Branch personnel will plant, mark, measure and evaluate seedlings for the trial. Seedlings will be planted using a planting shovel.

Of the 35 seedlings in each row:

- 10 - measured for height and calliper (#11-20)
- 25 - measured for survival and estimated for vegetation competition (#1-25)
- 10 - available for root examination and destructive sampling (#26-35)

Trees will be spaced 2.0 m apart in rows with rows spaced 3.0 m apart. For 3 stock types, a total of 12 rows are required at each location.

Comparisons will consist of measuring the seedlings' height growth, root collar calliper, survival and root development. Subjective comparisons of vegetative cover will also be recorded.

Vegetation cover will be determined by estimating the percentage of occupancy by all potentially competing species of vegetation within a 30 cm radius plot surrounding the seedling (to the nearest 10%).

SCHEDULE:	MEASUREMENT	S/90	F/91	F/92	F/95
	Height/Calliper	X	X	X	X
	Survival		X	X	X
	Vegetative Comp.	X	X	X	X
	Photography	X	X	X	X
	Establish Report		X		
	Interim Report			X	
	Final Report				X

REPORTS: Establish Report (Fall 1990) - this report will include original stock measurements and summary; maps (1:100 000) showing location of test sites, (1:10 000) showing location of trial plots within treatment blocks and a plot map showing the row order for stock treatment types; a completed FS 739 and ecological site evaluation. Trial locations will be documented on mylars and History Records.

DISTRIBUTION: Research Officers - All Regions
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 MoF Library
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