TREADMILL CREEK SLASHING TRIAL

in the

BOUNDARY FOREST DISTRICT

A "Level A" Small Scale Rate and Timing Trial Proposal

May 1990
Treadmill Creek Slashing Trial

PURPOSE

This trial will be done to examine the response of Trembling Aspen (Populus tremuloides Michx.) and Paper Birch (Betula papyrifera Marsh.) root systems within hand slashing treatments done at regular intervals throughout the growing season.

DESCRIPTION OF TRIAL

A series of 30m. wide cut-swaths with 10m. buffers will be established in a predominantly Aspen and Birch stand of young trees. Each swath will be cut at 14 day intervals beginning in early May and extending until early October. Permanent sample plots will be put in to record all phases of the project, and two control options are being considered. The first consists of one swath to be done using 'Vision' herbicide via frill injection or stem spray, at an optimum time in early fall. The second control is a 50m. square block in the center of the trial area to be left untreated.

The permanent sample plots will be remeasured and analyzed to determine the number and thrift of new sprouts and suckers after two and four growing seasons.

An attempt will also be made to correlate the seasonal development of the deciduous species with the timing and efficacy of each treatment.

DESCRIPTION OF THE SITE

The site is located on the western slope of the Christina Lake drainage approximately 19 km. north of Highway #3 and 37 km. east of Grand Forks by road. It lies in the Boundary Forest District of the Nelson Forest Region.

ASPECT: NE
ELEVATION: 1060 m. ASL

SLOPE: 0 TO 30%

BGC ZONE: ICHal
(zonal)

ASSOCIATION: 1
SITE CLASS: GOOD

SOILS: Glacial-fluvial deposits, deep, sandy loam to loam (at lower slopes) with minimal LF layers (0-5 cm., MOR humus), and large fragments in the first 60 cm. are <20%. The soil colour indicates a brunisol type having relatively good nutrient levels.
2.

TOPOGRAPHY:

The slopes range from 30% at the west side to nearly flat on the east and changes gradually across the block. The surface is even to slightly rolling with some water accumulation at the toe of the slope. The topography of the area lends itself quite well to this trial as the same conditions will occur in each of the cut-swaths all across the block, and a small variety of microsites will be encountered within each swath.

HISTORY:

PREVIOUS STAND: PL 640-G
CLEARCUT LOGGED in 1981 by Pope and Talbot Ltd.
BROADCAST BURNED in 1983
PLANTED in 1986 Se Pl 1+0 PSB
PRESENT LABEL: (derived from survival survey 1987)
Ac41 Se29 At21 Hw9 5-0.4m. 4545 st/ha.

The height of the deciduous is now approx. 3.5m.
It is felt that the 1987 survey incorrectly identified Birch as Cottonwood.

METHOD:

1. Sample stand prior to treatments and record stocking, distribution, sizes and ages of all vegetation.

2. Hand slash one swath in each two-week period on or about the dates given below. Each and every deciduous stem is to be completely cut or girdled depending on dbh.

3. Establish 20 permanent 1.78 m. radius plots in each treatment and photograph two plots. Record the number and species of treated stems by diameter class. Include for conifers within the plot the calliper and leader measurements as well.

4. Monitor the site after two and four growing seasons by measuring the number of new suckers and sprouts at each plot and the representative heights. Conifers shall be remeasured after four seasons.

...3
3.

TRIAL DESIGN (plan view):

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<th>Swath numbers</th>
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ORDER OF TREATMENT | SWATH NUMBER | DATE             
1                   | 11            | MAY 7           
2                   | 7             | MAY 22          
3                   | 6             | JUNE 4          
4                   | 2             | JUNE 18         
5                   | 12            | JULY 3          
6                   | 5             | JULY 16         
7                   | 8             | JULY 30         
8                   | 1             | AUGUST 13       
9                   | 4             | AUGUST 27       
10                  | 3             | SEPTEMBER 40    
11                  | 10            | SEPTEMBER 28    
12                  | 13            | OCTOBER 9       
                   | 9             | SEPTEMBER 4     

The order of treatment of the swaths was chosen from a table of random numbers.

This trial is submitted for your consideration and comment. We request the assignment of a SX trial number providing this trial meets the requirements of the SX trial program.