6X 813010

MANUAL CORE DISTRIBUTION ON NSR LAND

Draft Working Plan

J.D. Sherb

Ministry of Forests
Silviculture Branch
TITLE: Manual cone distribution on NSR Land.

Objectives:

1. To investigate the success in reforestation of manually distributing Pine cones.

2. To determine whether NSR Land can be restocked by an alternate to the expensive treatment of fill planting on lodgepole pine sties.

Scope:

This project will test the practical field option of regenerating small areas that were left NSR during various surveys for a variety of reasons. There is good reason to believe that the areas of NSR is due to lack of viable seed and not due to the treatment. Further, there is good reason to believe by picking only good parent material that the opetion be more viable than natural stand seed.

Results will be compared to adjacent site regeneration. These trials will be of considerable value as the logging methods improve resulting in lower numbers of cones on harvested Pine blocks.

Sites:

Testing will be conducted on two sites. The first, one year old dragging where insufficient cones were counted to support the theory that it will restock within the ARDP.

The second, an area beyond the ARDP (5-7 years) and classed NSR from reclassification or a regeneration survey.

If possible on the second site a comparison of random cone drop as compared to treated or screefed will be an option.
Experimentat Design:

An area in each block will be 5 hectares in size square, set out with compass hearing and each corner shall have 4" x 4" posts, metal tagged. Each cone drop shall consist of a twig of superior parent material with 3 cones attached, these will be staked within the sample design area as per the Silviculture Manual Appendix 6-18.

Measurements:

Yearly assessment of success of area with the option of actually doing field tallies as results appear. These should include the numbers of germinants on acceptable seed bed and not.
Re - two replicas - (one new, one old)

5 hectares each

"NEW BLOCK"

"OLD BLOCK"

1 twig - 3 cones - every 3 metres
March 29, 1984

Mr. J. Sherb  
Ministry of Forests  
1011-4th Avenue  
Prince George, B.C.  
V2L 3H9

Dear Sir:

Re: SX 843010 - Pine Cone Scattering Trial

Please find attached the final maps and summaries for the above mentioned trial as specified in the contract Schedule A.

If for any reason we have not met our contractual obligations, please inform us accordingly.

It has been our pleasure to provide the Ministry of Forests with our services.

Yours truly,
INTEGRATED SILVICULTURE SERVICES LTD.

Frank Wolfginger

Per: A.M.D. Todd, R.P.F.
Manager
Unit A - Baldy Hughes
- 3 ha in size
- boundaries - Due North 300m, South 300m,
  East 100m, West 100m
- plot located on South boundary at 150m centre
- plot size 21m by 12m
- 6 trees were needed for sufficient cones for unit A
- 20% of unit A was covered by snow at time of the trial

Site Description:
- poor disturbance (very little mineral soil exposed)
- light slash
- site preparation - Takla's heavy drag

Unit B - 13½ km - Pelican Forest Road
- 3.5 ha in size
- boundaries, N40°W 100m, S50°W 350m
  S40°E 100m, N50°E 350m
- Unit B was separated into 2 areas, a 2 ha area and 1 ha
  area; the two areas were separated by 0.5 ha where the
  control plot was located.
- plot located on NW boundary of 2 ha area
- plot size 21m by 12m
- 8 trees were needed for sufficient cones for unit B

Site Description:
- poor disturbance
- no indication of windrowing or burn as the History Records
  suggest
- light slash
- fines and duff heavy
- approximately 0.5 ha of the 3 ha unit was not treated due
to wet ground and heavy fines and duffs

Changes in Experimental Design:
- class 1 and 2 cones were gathered separately instead of 3 cones attached to a twig; this method was faster
- 20% of the cones dropped were on snow
- both units A and B are rectangular in shape

Boundary Layout:
- boundary layout took about 1 hour per unit, this included ribboning the boundary and placing the corner posts

Plot Layout:
- plot layout took 1 hour 15 minutes per unit, this included placing the cedar stakes at the location of the cones at 3.0 x 3.0m spacing and putting in the boundary of the control plot

Screeing:
Screeing was required on both units A and B due to the poor site disturbance. Occasionally screeing was difficult due to the frozen ground, however, this practice should be maintained to ensure a good seedbed for germination.

Problems:

Falling - considerable time was spent looking for good cone trees to fall due to heavy winds and snow conditions
- approximately 2 trees would have enough cones to complete 1 hectare
- in future, adequate cone supply should be secured prior to commencement of such practices
Picking - with daily temperatures climbing above 0°C, some difficulty was experienced in picking the cones - clipping twiglets with clusters of 3 cones proved to be too time consuming - 2 days were spent falling and picking cones to complete the 3 ha plot

Recommendations:
- Cones should be collected from nearby landings earlier in the year and placed in cold storage. This will reduce the chances of cones flexing open and the subsequent loss of seed.
- Projects such as this should be carried out after total snow amounts have melted unless sufficient disturbance and mineral soil were evident prior to snowfall.
- A screening tool should be carried at all times to provide a proper seedbed should one not exist.
*not to scale

* Tie - Due South 30 m from road junction

Mature Pl

Unit B - 13 1/2 Fea 100+ Turn

SX 84 301 6
* Tie N 50°W 20 m
From NE corner of landing

Legend:
- Secondary roads
- Landing
- Tie points

Unit A - Baldy Hughes
SX 84 301 G