TITLE: Efficacy Testing of VELPAR-L (Hexazonone) for Brushing and Weeding Immature Mixed Stands

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(a) Wide Distribution
(b) Limited
   (i) Internal - Branch only
   (ii) External - Designated
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COPIES TO

Kootenay Lake District
Nelson Region
Silviculture Branch

Approved:
Manager -  
D.L. Oswald  

(Video)
Working Plan for Efficacy Testing of VELPAR-L for Brushing and Weeding in Mixed Conifer Plantation (SX86705N)

I. LOCATION

II. OBJECTIVES
1. To test the efficacy of hexazinone on Sitka alder, cottonwoods, and willow.
2. To monitor the effect of hexazinone on immature Douglas fir and Engelmann spruce.

III. LAYOUT AND CALIBRATION
Four treatment types will be employed. One area will have VELPAR-L applied at 2ml/spot and the other area at 4ml/spot. A spot gun will be used to apply the undiluted product using the same grid spacing on both area. A control treatment will also be established for demonstration purposes and a manual treatment. Details of the application are shown in the following table:

<table>
<thead>
<tr>
<th>Treatment Area (m)</th>
<th>ha</th>
<th>Grid Spacing (Metres)</th>
<th># Spots</th>
<th>Dose/Spot</th>
<th>VELPAR-L (litres)</th>
<th>Equivalent kg ai</th>
<th>Equivalent kg ai/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>50m x 50m</td>
<td>0.25</td>
<td>1.0 x 2.0</td>
<td>1250</td>
<td>2 ml</td>
<td>2.5</td>
<td>0.60</td>
<td>2.4</td>
</tr>
<tr>
<td>50m x 50m</td>
<td>0.25</td>
<td>1.0 x 2.0</td>
<td>1250</td>
<td>4 ml</td>
<td>5.0</td>
<td>1.20</td>
<td>4.8</td>
</tr>
<tr>
<td>50m x 50m</td>
<td>0.25</td>
<td>Control</td>
<td>0</td>
<td>0 ml</td>
<td>0.0</td>
<td>0.00</td>
<td>0.0</td>
</tr>
<tr>
<td>50m x 50m</td>
<td>0.25</td>
<td>Manual</td>
<td>0</td>
<td>0 ml</td>
<td>0.0</td>
<td>0.00</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>2500</td>
<td></td>
<td></td>
<td>7.5</td>
<td>1.80</td>
<td>7.2</td>
</tr>
</tbody>
</table>

IV. PHOTO POINTS
The 1.0 ha trial will be established approximately 300 to 500m uphill of the upper switchback. Photo points will be established.

V. TARGET SPECIES
1. alder (Alnus sinuata) 2-2.5m; 80%
2. cottonwoods (Populus trichocarpa) 4-6m; 10-15%
3. willow (Salix sp.) 2-3.0m; 5-10%

Comments: Approximately 10,000 stems per hectare of brush.
VI. CROP TREES

Douglas-fir (*Pseudotsuga menziesii*), Engelmann spruce (*Picea engelmannii*)

VII. MONITORING

The treatments will be monitored according to Ministry of Forests SX-0 trial guidelines, using twenty circular 10m² plots per treatment unit. Assessments will be conducted after 1, 2, 3, and 5 growing seasons.

VIII. ESTABLISHMENT

The spot applications will be conducted in May, 1986.

IX. REPORTING

An interim report will be completed by January, 1987, with the final report due January, 1990. Data collating and report writing will be undertaken by the Regional Research Officer.

X. SITE PARAMETERS

AREA: + 1.0 ha
SOILS:
LFH: disturbed
Texture: SiL SL
C.F. %: 15-20
Depth to Impermeable: 3m
ASPECT: East
SLOPE: 20 - 40%
SLOPE POSITION: Mid - Upper
ELEVATION: 945 - 1006 m
B.G.C. ZONE: ICHA2
B.G.C. ASSOCIATION: 1: Paxistima-Orthilla
EDATOPE: 3-4/C

REGENERATION: Douglas-fir plantation with ingrowth of hemlock, cedar, white pine, and Englemann spruce. Approximately 1,000 well-spaced stems per hectare (total density: 3,500 sph).

OVERSTORY RESIDUALS/SNAGS: Less than 10 per ha: 10-15 m high

SLASH: + 40% (moderate)

MACHINE TRAFFICABILITY: Poor

HYDROLOGY: Well drained. Check for location of active drainage channels after spring runoff.
WILDLIFE/FISHERIES/RECREATION VALUES: There are no fisheries or wildlife values directly affected by this trial. Recreation activities in the immediate area are hunting, 4-wheel driving and snowmobiling.

SETTLEMENTS: Meadow Creek


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