Evaluation of Depth of Planting on Seedling Performance
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On Seedling Performance

Invermere

C. Beliveau  
J. Maxwell
1. **Objective**

To compare the growth of stratified Interior Douglas-fir seedlings planted at four different depths above the root collar. Tree planting machines cannot consistently plant trees at specified depths. This trial assess seedling performance at planting depths not considered optimum.

2. **Location**

Unit D, Region 21, Compartment 12, Crown Land, Brewer Ridge, Invermere Forest District, Nelson Region.

3. **Trial Stock**

<table>
<thead>
<tr>
<th>Species</th>
<th>Stock Type</th>
<th>Nursery</th>
<th>Seedlot</th>
<th>Date Lift</th>
<th>Seedzone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fdi</td>
<td>1+0 PSB</td>
<td>313</td>
<td>Koksilah</td>
<td>87-12-08</td>
<td>4020</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7-8-9</td>
<td></td>
</tr>
</tbody>
</table>

4. **Plot Design**

The trial consists of two replications, each of 25 seedlings for four treatment types. The four treatments consist of seedlings hand planted at depths of 5, 10 and 15 cm above the root collar. All seedlings in this trial were stratified for stem heights of 20-25 cm. The spacing between treatment rows and trees is approximately 3 metres. Four corner posts painted blue mark the boundary of the plot location.

```
  5 cm 15 cm 10 cm 0 cm 10 cm 0 cm 5 cm 15 cm
  Rows 8    7    6    5    4    3    2    1
```

5. **Measurement**

<table>
<thead>
<tr>
<th>Estab/Plant</th>
<th>Fall 88</th>
<th>Spring 89</th>
<th>Fall 89</th>
<th>Fall 90</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spring 88</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Caliper</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Increment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Snow/Frost Damage</td>
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<td>X</td>
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<tr>
<td>Survival</td>
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<tr>
<td>Photography</td>
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<tr>
<td>Progress Reports</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
6. Site Prescription

Opening No: 82K040-26
Tenure: VCL
Licensee: 
Lic. No: 
C.P. #: 
B.G.C.: Sa/04
Moisture Regime: 3/4
Nutrient Regime: B/C
Soil Texture: SL
Veg. Compet: L
Slash % cover & Ht: 7.0
LPH Layer (cm): 0-3
Disturb Symbol & Yr: 86087
Site Prep: M-Windr
Aspect & Slope: S/10%
Timber Type: Se, Bl
Elevation: 1540
Site Class: M
AREA MECHANICALLY PLANTED 26 HA

PLANTED MID SUMMER 88 WITH SEEDLOT 29130 SN PSB 313 2+0. 25.4 K TREES PLANTED.
MESSAGE: Here is map of Brewer Ridge sale. It's best to travel on Hwy. 5 of Fairmont Hot Springs. Turn left at high on Westside Rd., left on Hawke Rd. Keep on main road to 11 km, CAT is parked there. If starter solenoid doesn't work, short starter. I can be reached in Victoria after midnight Friday @ 658-330. Fin.