INTERIM REPORT
SX8004
WESTERN HEMLOCK PAPERPOT TRIAL

Silviculture Branch
81-12-01
REPORT SX 8004

INTERIM X

FINAL

DATE 81-12-01

TITLE WESTERN HEMLOCK PAPERPOT TRIAL

Report Prepared by: P. Robson, F. Pendle (Signature)

P. Robson and F. Pendle (Typed)

Report & Distribution Approved by: R. Brown (Signature)

R. Brown (Typed)

(a) Wide Distribution X

(b) Limited

(i) Internal - Branch only

(ii) External - Designated

(iii) Ministry Only

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Reid Collins Ltd., Vancouver
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Approved:

Manager (Signature) R.C. Jones (Typed)
1. **Trial Number**

   Sx8004, Western Hemlock Paperpot Trial

2. **Location**

   Saunders Creek, Gold River, T.F.L. 19, Tahsis Co.; F.D. 8, Vancouver Region.

3. **Objective**

   To compare the survival, growth, and condition of western hemlock grown as paperpots and styroplugs.

4. **Trial Stock**

<table>
<thead>
<tr>
<th>Sp.</th>
<th>Seedlot #</th>
<th>Stock Type</th>
<th>Label</th>
<th>Grown at</th>
<th>No. Trees Planted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hw</td>
<td>3471</td>
<td>Paperpot</td>
<td>CPP 408</td>
<td>Reid Collins</td>
<td>786</td>
</tr>
<tr>
<td>Hw</td>
<td>3471</td>
<td>Styroplug</td>
<td>PSB 211</td>
<td>G. Timbers</td>
<td>801</td>
</tr>
<tr>
<td>Hw</td>
<td>2698</td>
<td>Paperpot</td>
<td>CPP 408</td>
<td>Reid Collins</td>
<td>883</td>
</tr>
<tr>
<td>Hw</td>
<td>2698</td>
<td>Styroplug</td>
<td>PSB 211</td>
<td>G. Timbers</td>
<td>880</td>
</tr>
</tbody>
</table>

5. **Plot Layout**

<table>
<thead>
<tr>
<th>Location (Opening #)</th>
<th>No. of Plots</th>
<th>Lines per Plot</th>
<th>Max. Trees per Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>1</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>M4</td>
<td>1</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

   A further 14-line plot at Upana Lake was abandoned because of the relatively large amount of unplantable ground.

6. **Planting Dates**


7. **Assessments**

   October 7/8, 1980
   November 3/4, 1981
8. **Seedlots**

Hw: 2698/B2/92E9/310 m/Burman River  
3471/B2/92E16/475 m/Ucona River  
both from S.Z. 1010

9. **Site Factors**

Biogeoclimatic subzone
Edatopic grid
Seedzone
Elevation, m
Aspect
Slope %
Topography
History
Former Stand
Site Class
Moisture
Vegetative Competition
Slash % and height
Organic layer, cm

CWHxbm
C4
1010
660
West
40
Lower slope
L. 79
HBC
Med.
M, locally wet
Light
20/30
0-15

10. **Estimated Cost of Production**

CPP 408  
PSB 211

10.5¢ per tree
9.4¢ per tree
11. Results

Table 1: Condition of Planted Trees (%) by Seedlot, Stock Type, and Location, After 1 & 2 Growing Seasons

<table>
<thead>
<tr>
<th>Location</th>
<th>Years After Planting</th>
<th>Seedlot 3471</th>
<th></th>
<th>Seedlot 2698</th>
<th></th>
<th>Seedlot 2698</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSB 211</td>
<td>CPP 408</td>
<td>Live</td>
<td>PSB 211</td>
<td>CPP 408</td>
<td>Live</td>
</tr>
<tr>
<td>Area</td>
<td>1</td>
<td>54</td>
<td>35</td>
<td>94</td>
<td>55</td>
<td>29</td>
</tr>
<tr>
<td>M2</td>
<td>2</td>
<td>85</td>
<td>4</td>
<td>1</td>
<td>90</td>
<td>69</td>
</tr>
<tr>
<td>Area</td>
<td>1</td>
<td>31</td>
<td>54</td>
<td>7</td>
<td>92</td>
<td>41</td>
</tr>
<tr>
<td>M4</td>
<td>2</td>
<td>77</td>
<td>6</td>
<td>2</td>
<td>85</td>
<td>63</td>
</tr>
<tr>
<td>Both Areas</td>
<td>1</td>
<td>40</td>
<td>46</td>
<td>6</td>
<td>92</td>
<td>46</td>
</tr>
<tr>
<td>Combined</td>
<td>2</td>
<td>80</td>
<td>5</td>
<td>2</td>
<td>87</td>
<td>65</td>
</tr>
</tbody>
</table>

Comments -

After two growing seasons:

(a) The survival of both types of stock is generally satisfactory, i.e. all except one are 75% or more.

(b) The falldown in survival between the second and first years is greater for CPP's than PSB's.

(c) Of the four available comparisons of survival between plugs and paperpots, the former did better in three of them, i.e. no change from first year results.

(d) What differences there are in quality are generally in favour of the PSB 211's.
Table 2: Heights (cm) at Planting & After 1 & 2 Growing Seasons, by Seedlot, Stock Type, and Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Stock Type</th>
<th>Seed Lot</th>
<th>Total Height When Planted</th>
<th>After 1 Year</th>
<th>After 2 Years</th>
<th>1st Year Increment</th>
<th>2nd Year Increment</th>
<th>Total Increment</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>PSB 211</td>
<td>3471</td>
<td>16</td>
<td>21</td>
<td>41</td>
<td>5</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>CPP 408</td>
<td>3471</td>
<td>13</td>
<td>19</td>
<td>37</td>
<td>6</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>M4</td>
<td>PSB 211</td>
<td>2698</td>
<td>20</td>
<td>24</td>
<td>45</td>
<td>4</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>CPP 408</td>
<td>2698</td>
<td>16</td>
<td>20</td>
<td>38</td>
<td>4</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Both Areas Combined</td>
<td>PSB 211</td>
<td>3471</td>
<td>16</td>
<td>20</td>
<td>36</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>CPP 408</td>
<td>3471</td>
<td>13</td>
<td>17</td>
<td>33</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
</tbody>
</table>

Comments:

(a) Seedlings overcame planting shock after one year and both stock types/seedlots are now growing satisfactorily.

(b) Increment of CPP's is relatively greater than PSB's when related to original seedling size.

(c) The initial height advantage of plugs over paperpots has been maintained or slightly increased over the two-year period.
12. Summary

(a) At this stage, differences in performance between the two stock types is slight.

(b) Such differences as there are are in favor of PSB 211's.

A final assessment of this trial is planned for 1985, including an examination of root development.