EXOTIC HARDWOOD SPECIES TRIAL

A) Objective: To determine the growth potential of several exotic hardwood species on a CWHvm1 - 07 association.

B) Location:
Region: Prince Rupert
District: Kalum
Opening: 103I034-012

This trial is located approximately 45km West of Terrace on highway 16 West.

C) Trial Stock
<table>
<thead>
<tr>
<th>Quercus (Oaks)</th>
<th>Quercus Robar</th>
<th>- British</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quercus Rubra</td>
<td>- Red</td>
</tr>
<tr>
<td></td>
<td>Quercus Palustris</td>
<td>- Pin</td>
</tr>
<tr>
<td>Acer (Maples)</td>
<td>Acer Saccharum</td>
<td>- Sugar</td>
</tr>
<tr>
<td></td>
<td>Acer Saccharinum</td>
<td>- Silver</td>
</tr>
<tr>
<td></td>
<td>Acer Rubrum</td>
<td>- Red</td>
</tr>
<tr>
<td>Tilia (Basswood)</td>
<td>Tilia Americana</td>
<td>- Linden</td>
</tr>
<tr>
<td>Fraxinus (Ash)</td>
<td>Fraxinus Americana</td>
<td>- White</td>
</tr>
<tr>
<td>Juglans (Walnut)</td>
<td>Juglans Nigra</td>
<td>- Black</td>
</tr>
</tbody>
</table>

Height: Approximately 45cm
Age: 1 Year

D) History:
Planting occurred in the spring of 1989 with a follow-up manual brushing in the fall of 1989. Tree collaring occurred in 1990 to minimize vole damage.

E) Method:
There are approximately fifty trees per species. They are planted in 2 rows with twenty-five trees per row. All trees are spaced at 4 meter intervals. Trees have been staked and tagged. Each tree will be measured for RCD and height. Mortality will also be assessed.

F) Results:
Appendix 1 contains the summary of the RCD's, heights, mortalities and comments for each exotic species.

1) Survival (Figure 1) - The main cause of mortality has been due to vole damage. Linden has shown the highest survival therefore, it obviously is not a preferred food source of the vole. Sugar Maple is the most preferred food source of the vole.
Brush has caused some minor mortality losses. Brush causes snow press problems, provides vole habitat, and reduces light levels required by the shade intolerant hardwood species. Without brush control mortality losses would be dramatically increased. Another manual brushing treatment is required during the early summer of 1992. During the brush treatment great care must be taken to ensure mechanical damage is minimized.

2) Root Collar Diameter (Figure 2). At this time some trends are beginning to develop. These trends are clearly shown in figure 2. Brush within the trial area has caused some suppression and competition for light. Each exotic species has a different tolerance level which will affect the species ability to compete and perform. Tolerance ratings for the exotic species are listed below:

<table>
<thead>
<tr>
<th>Tolerant</th>
<th>Intermediate</th>
<th>Intolerant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maple</td>
<td>Ash</td>
<td>Walnut</td>
</tr>
<tr>
<td></td>
<td>Linder</td>
<td>Red Oak</td>
</tr>
<tr>
<td></td>
<td>British Oak</td>
<td>Pin Oak</td>
</tr>
</tbody>
</table>

General trends are showing that the intermediate tolerant species are performing as well as the shade tolerant species. Intolerant species are showing the effects of brush competition.

3) Height (Figure 3) - Trends that are currently developing can be clearly shown in figure 3. Diameter/height ratios are showing that many of the exotic species are prone to climatic damage (i.e. snow, wind). Species such as walnut, ash, red maple, sugar maple and red oak have diameter/height ratios right around 1. For trees to be less prone to climatic events this ratio should be greater than 1. Future monitoring will determine whether these ratios improve for those species listed.
G) Conclusion: Mortality has been the primary concern to date. Voles have caused the majority of the damage with minor mortality caused by brush competition. Tree collaring was done however, this didn’t occur until 1990 after voie damage was noted. Brushing will be required to minimize future tree losses and maximize yields.

Overall performance to date has been variable amongst the different species. This can be attributed to a number of factors. Shade tolerance of the different species has been a factor in tree development. Generally the more tolerant species have shown the best development and performance. Vole damage not only has caused mortality but also physical damage limiting the ability of the tree to maximize its potential. Brush has also had its impact on tree development and must be controlled regularly to allow the shade intolerant species a chance to develop.

H) Recommendations:


b) Next assessment of RCD, height, and mortality in fall of 1993.

c) Inclusion of other species such as black cherry, white oak, yellow birch and some of the hickories.
ROOT COLLAR DIAMETER (cm)

(FIGURE 2)
# JUGLANS NIGRA
## (BLACK WALNUT)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td>Manually cut</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td>Manually cut</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>0.50</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0.50</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>0.50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>0.50</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0.50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>0.50</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>0.60</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>0.60</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>0.35</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>0.70</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>0.60</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>0.40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>0.30</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>0.60</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>0.90</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
<td>0.60</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td></td>
<td>0.60</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>0.90</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td></td>
<td>0.80</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
<td>0.60</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>0.40</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td></td>
<td>0.40</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE** 0.58 54.3

**SURVIVAL** 47.2%

General – abscission layer has formed. Vole is major cause of mortality. Brush is a primary concern and should be treated in 1992
## FRAXINUS AMERICANA

**WHITE ASH**

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>0.90</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0.50</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>0.90</td>
<td>80</td>
<td>Vole</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>0.70</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>0.70</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0.30</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>0.60</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>0.60</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>0.70</td>
<td>80</td>
<td>Vole</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>1.20</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>0.70</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>1.10</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>0.70</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>0.60</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>0.20</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>0.90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>1.10</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.50</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>0.70</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>0.90</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>2.20</td>
<td>160</td>
<td>1st plant</td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>0.60</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>1.90</td>
<td>140</td>
<td>1st plant</td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>missed</td>
<td>missed</td>
<td>Not planted</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>0.70</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>0.90</td>
<td>100</td>
<td>Brush competition</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>0.20</td>
<td>30</td>
<td>Brush competition</td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>0.60</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>0.30</td>
<td>40</td>
<td>Depression</td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>0.90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>0.70</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>0.70</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>2.20</td>
<td>140</td>
<td>1st plant</td>
</tr>
<tr>
<td>41</td>
<td></td>
<td>0.70</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
<td>0.30</td>
<td>40</td>
<td>Brush competition</td>
</tr>
<tr>
<td>43</td>
<td></td>
<td>0.70</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td></td>
<td>1.00</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>0.90</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td></td>
<td>0.80</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>0.50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td>Vole</td>
</tr>
<tr>
<td>50</td>
<td></td>
<td>0.50</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td></td>
<td>0.60</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE** 0.80 | 77.7

**SURVIVAL 92.2%**
# Tilia Americana
(Basswood/Linden)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1.30</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1.50</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.60</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2.30</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2.20</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2.00</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2.50</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1.20</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2.80</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1.70</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1.70</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>2.50</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1.60</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>2.10</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>2.40</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>2.10</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>3.10</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>2.10</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>2.30</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1.60</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>2.80</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>2.30</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>2.20</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>4.20</td>
<td>210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>2.10</td>
<td>110</td>
<td>Manually cut</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>1.70</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>2.30</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>2.30</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>2.50</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>2.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>2.10</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>2.40</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>2.10</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>2.30</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>2.10</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>2.00</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>2.50</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>2.50</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>2.70</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>2.10</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>2.10</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>2.90</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>4.50</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>1.90</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>2.80</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>2.20</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>2.10</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>2.20</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>2.90</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>1.10</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE:** 2.28 134.4

**SURVIVAL:** 100%

- General - snow damage
- multiple shoots / no voie damage.
# ACER RUBRUM

(Red Maple)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>0.90</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>0.20</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>0.90</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>0.70</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>1.40</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>1.70</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>0.90</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>22</td>
<td>1.40</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>23</td>
<td>1.20</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>25</td>
<td>0.70</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>26</td>
<td>0.70</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>27</td>
<td>1.60</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>28</td>
<td>1.20</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>29</td>
<td>1.20</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>30</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>31</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>32</td>
<td>0.60</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>33</td>
<td>0.50</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>34</td>
<td>1.20</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>35</td>
<td>1.90</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>36</td>
<td>1.10</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>37</td>
<td>0.40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>38</td>
<td>1.00</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>39</td>
<td>0.20</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>40</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>41</td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>42</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>43</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>44</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>45</td>
<td>0.70</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>46</td>
<td>0.50</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>47</td>
<td>0.90</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>48</td>
<td>0.70</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>49</td>
<td>1.70</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>51</td>
<td>1.10</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>52</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>53</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>54</td>
<td>1.80</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE** 0.98 105.2

General - mortality caused by voles. Thin caliper compared to height.

**SURVIVAL 58%**
## QUERCUS PALUSTRIS  
(PIN OAK)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>1</td>
<td>0.75</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>0.40</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0.35</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1.10</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>1.10</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>mort</td>
<td>mort</td>
<td>Yole</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0.75</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>0.55</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>0.60</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>0.60</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>1.35</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>0.40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>mort</td>
<td>mort</td>
<td>Brush</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>0.90</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>1.00</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>1.15</td>
<td>90</td>
<td>Depression - Water</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>1.10</td>
<td>110</td>
<td>Depression - Water</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>0.50</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>0.35</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>0.80</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>0.70</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td>Depression - Water</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>0.40</td>
<td>40</td>
<td>Depression - Water</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>0.50</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>0.35</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>0.80</td>
<td>30</td>
<td>Brush competition</td>
</tr>
<tr>
<td>35</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>0.20</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>0.50</td>
<td>25</td>
<td>Browse Damage</td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>0.55</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td></td>
<td>1.10</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td></td>
<td>0.70</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>0.60</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td></td>
<td>0.45</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
<td>0.60</td>
<td>35</td>
<td>Brush competition</td>
</tr>
</tbody>
</table>

**AVERAGE**: 0.70

**SURVIVAL**: 74.5%
## ACER SACCHARINUM
(SILVER MAPLE)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.10</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1.10</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2.10</td>
<td>180</td>
<td>Browse</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>1.10</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.60</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>2.00</td>
<td>180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>1.80</td>
<td>180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>3.10</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>2.10</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>1.50</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>2.30</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.70</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>1.60</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>1.00</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.90</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>2.10</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>2.10</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>1.80</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>1.70</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>1.60</td>
<td>100</td>
<td>Snow damage</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>2.40</td>
<td>210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>2.10</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>1.70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>0.90</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>1.70</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>1.20</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>1.10</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>0.80</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.80</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>2.10</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>2.20</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>2.40</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>2.30</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>2.70</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE** 1.61 134.1

**SURVIVAL 70.94%**

General – Browse and snow damage. Vole is cause of mortality.
# QUERCUS ROBAR
(BRITISH OAK)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RC(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.55</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.45</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1.00</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1.30</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.80</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>2.10</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>2.10</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1.60</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.75</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.60</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>0.40</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>2.20</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.90</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>1.70</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>1.20</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>1.80</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.30</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>0.60</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>1.20</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>1.00</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>mort</td>
<td>mort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>1.60</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>1.20</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>2.10</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>2.00</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>1.10</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>1.90</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>2.20</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.50</td>
<td>40</td>
<td>Manually cut</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>1.00</td>
<td>20</td>
<td>Poor condition</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE**

<table>
<thead>
<tr>
<th>RC(cm)</th>
<th>HGT(cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.28</td>
<td>92.2</td>
</tr>
</tbody>
</table>

**SURVIVAL 59.2%**

General - Vole is reason of mortality. Brush is now competing and reducing vigor.
## QUERCUS ROBAR
### (RED OAK)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>0.50</td>
<td>50</td>
<td>New leader</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>0.90</td>
<td>60</td>
<td>Snow damage</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1.10</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1.00</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>1.00</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>0.70</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0.20</td>
<td>20</td>
<td>New leader</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>0.40</td>
<td>40</td>
<td>New leader</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>0.30</td>
<td>50</td>
<td>New leader</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>1.10</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>0.55</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>0.20</td>
<td>15</td>
<td>Lateral</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>1.10</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>1.10</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>1.10</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>0.90</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>0.40</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>0.60</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>0.65</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>0.60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>0.70</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>0.50</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>0.30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>1.10</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>0.65</td>
<td>85</td>
<td>Brush Competition</td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td></td>
<td>1.25</td>
<td>100</td>
<td>Brush Competition</td>
</tr>
<tr>
<td>42</td>
<td></td>
<td>0.30</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td></td>
<td>0.60</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>0.20</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
<td>mort</td>
<td>mort</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>0.90</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td></td>
<td>1.20</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td>1.20</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE**: 0.73  89

**SURVIVAL**: 61.5%

General – mortality is primarily from voles. However, brush is currently reducing vigor.
## ACER SACCHARINUM
### (SUGAR MAPLE)

<table>
<thead>
<tr>
<th>ROW #</th>
<th>TREE #</th>
<th>RCD(cm)</th>
<th>HGT(cm)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>1</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
</tr>
<tr>
<td>2</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.60</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.70</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.50</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.50</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.60</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1.10</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>0.50</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.70</td>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0.10</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>1.10</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>0.90</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>1.00</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>1.10</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>0.30</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>1.20</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>0.30</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.10</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>0.50</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>1.00</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>0.30</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>mort</td>
<td>mort</td>
<td>vole</td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE** 0.68 73.6

General - preferred species of vole.

**SURVIVAL 39.6%**