Performance of ‘Cherryle’ and ‘Nacono’ in the UGA pecan variety trial

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‘Cherryle’ and ‘Nacono’ are two cultivars that were planted in 2002 in our variety trial at the Ponder Farm in Tifton County. These two cultivars were selected for trial as potential commercial cultivars for Georgia. The trees were given commercial quality care and yields and nut quality were monitored each year. ‘Cherryle’ is a cultivar that was tested by the Auburn pecan program and seemed to have some promise as a cultivar. ‘Nacono’ was released by the USDA in 2000. ‘Nacono’ is a selection from the cross ‘Cheyenne’ x ‘Sioux’ and was originally tested as USDA 74-5-55.

‘Cherryle’ is not precocious and in fact was fairly slow to come into production (Table 1). Early yields lagged behind both ‘Desirable’ and ‘Stuart’. However, high yields this year have raised the average to be similar to ‘Desirable’ and ‘Stuart’. We did have some limb breakage in our trees with this large crop. ‘Cherryle’ has a spreading canopy and we have noticed more limb breakage in this cultivar than in most others. It will be interesting to see the return crop on ‘Cherryle’ in 2014. Yields this year were high, and the trees may have benefitted from some crop thinning.

‘Cherryle’ produces a large sized nut with a thin shell and average nut quality was 40 nuts/lb. with 56% kernel (Table 2). The nuts generally shell well and have an attractive kernel (Fig. 1). Unfortunately, we did note in some years that kernel color was slightly dark. For this reason, ‘Cherryle’ is probably not a nut you would want to hold for a long time before selling. It is not unusual to see a small split in the nut suture, which may provide an entrance to fire ants. Harvest date

Table 1. Average yield of test cultivars each year from planting in 2002.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Trees</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherryle</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>7</td>
<td>29</td>
<td>36</td>
<td>44</td>
<td>52</td>
<td>90</td>
<td>22</td>
</tr>
<tr>
<td>Nacono</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>18</td>
<td>32</td>
<td>58</td>
<td>11</td>
<td>62</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirable</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>11</td>
<td>23</td>
<td>24</td>
<td>45</td>
<td>53</td>
<td>45</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Stuart</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>20</td>
<td>30</td>
<td>54</td>
<td>48</td>
<td>58</td>
<td>71</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

Dr. Patrick Conner

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of ‘Cherryle’ has been about 5 days ahead of ‘Desirable’.

Pest resistance of ‘Cherryle’ has been fairly good. This cultivar will scab, but a full schedule of fungicide sprays should control scab well. In 2013 nut scab was very severe on ‘Desirable’, but ‘Cherryle’ had only mild levels of nut scab. The only time severe scab was seen on ‘Cherryle’ was when young trees were left unsprayed. However, larger plantings of ‘Cherryle’ may show increased infection levels. I would rate ‘Cherryle’s scab resistance as similar to ‘Caddo’ and ‘Oconee’. ‘Cherryle’ does not appear to be particularly susceptible to aphids or sooty mold buildup on the leaves.

Right now I believe ‘Cherryle’ to be a middling cultivar, it has several nice features including a large, high quality nut, and decent pest resistance. However, ‘Cherryle’ takes a fairly

Table 2. Average nut quality of test cultivars 2002-2013.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Yield lbs./tree/year</th>
<th># Nuts/lb</th>
<th>% Kernel</th>
<th>Cluster Size (50% shuck split)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherryle</td>
<td>22</td>
<td>40</td>
<td>56%</td>
<td>2.7</td>
</tr>
<tr>
<td>Nacono</td>
<td>21</td>
<td>42</td>
<td>53%</td>
<td>3.0</td>
</tr>
<tr>
<td>Desirable</td>
<td>20</td>
<td>45</td>
<td>52%</td>
<td>2.5</td>
</tr>
<tr>
<td>Stuart</td>
<td>25</td>
<td>47</td>
<td>45%</td>
<td>2.6</td>
</tr>
</tbody>
</table>

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long time to come into production, and until this year it looked like yields were too low to be profitable. Other issues with this cultivar are the spreading tree shape and limb breakage which will make ‘Cherryle’ harder to manage in the orchard. We will likely monitor ‘Cherryle’ for a couple more years to see how it continues to perform as a mature tree.

‘Nacono’ is a USDA release which has not been recommended by UGA for planting in Georgia. I do not recommend ‘Nacono’ for planting, but we have been asked about it enough that I wanted to put out what information we have on it from our tests. We will no longer be testing ‘Nacono’ after this year. Yields from ‘Nacono’ have been similar to ‘Desirable’ and ‘Stuart’ (Table 1). ‘Nacono’ produces more as a young tree than these cultivars, but yields moderate at the tree ages. Trees began alternating with the first “OFF” year occurring in year 11. Crop thinning would likely be beneficial for older trees. ‘Nacono’ produces an attractive, large sized nut similar in appearance to ‘Mahan’ (Fig. 1). Overall, averages are 42 nuts/lb. with 53% kernel (Table 2).

The nuts shell well and produce a very attractive kernel which should command a good price. Harvest date is about a week ahead of ‘Desirable’. The ‘Nacono’ tree resembles its parent ‘Cheyenne’ in that it is smaller than normal although not as small as ‘Cheyenne’.

Pest resistance of ‘Nacono’ has not been good, and this is why I do not recommend ‘Nacono’ for planting in Georgia. Neither of its parents has much scab resistance, and ‘Nacono’ began showing a fair degree of scab susceptibility soon after planting. I believe that large acreages of ‘Nacono’ would have significant problems controlling scab. We are also beginning to see some signs of sooty mold buildup on ‘Nacono’, a trait which is a big problem in its parent, ‘Cheyenne’.

Both ‘Nacono’ and ‘Cherryle’ are type II (protogynous) cultivars and pollination charts can be found on our website:
(http://www.caes.uga.edu/commodities/fruits/pecan breeding/cultivars/cultivar_list.html).

<table>
<thead>
<tr>
<th>Table 3. Average pest resistance of test trees 2002-2013.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivar</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Cherryle</td>
</tr>
<tr>
<td>Nacono</td>
</tr>
<tr>
<td>Desirable</td>
</tr>
<tr>
<td>Stuart</td>
</tr>
</tbody>
</table>

\(^2\) 1=No scab, 2=Few stray spots, 3=Several spots with expanding lesions, 4=Stem scab or defoliation.

\(^5\) 1=No scab, 2=Few stray spots, 3=Obvious scab but no quality loss (0-10%), 4=10-50% shuck coverage, 5=50-100% covered, nut drop.

\(^x\) 1=No damage, 2=Light spotting, less than 25% leaves affected, 3=Moderate spotting, 25-75% leaves affected, 4=Heavy, black flakes on leaves and stems.

\(^w\) 1=none, 2=Light, some black on few leaves, 3=mild, black on most leaves, 4=Heavy, black flakes on leaves and stems.

Average score over all years and (average of worst year for each trait).

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