New Cultivar Options for Georgia Orchards

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New UGA cultivar release: 'Byrd'

- Parentage: 'Pawnee' x 'Desirable'
- Cross made by Dr. Darrell Sparks in 1989.
- Released in 2008.
- 46 nuts / lb
- 62% kernel

Flowering: Similar to 'Desirable' and 'Pawnee', early pollen shed and late pistil receptivity.
'Byrd'

• Advantages
  – Large nut with high % kernel
  – Very early harvest date, 2 days after 'Pawnee'.
  – No kernel spotting like 'Pawnee'
  – Good scab resistance.

• Limitations
  – Thin shell with potential for water split.
  – Will likely need fruit thinning.
  – Lack of long term trials.
New USDA cultivar release: 'Mandan'  

- Parentage – 'Osage' x BW-1  
- Cross made in 1985  
- Released for all growing regions  
- Harvest 1 week before 'Pawnee'
'Mandan' performance years 1-5 (2002-2006)

<table>
<thead>
<tr>
<th></th>
<th>Mandan</th>
<th>Desirable</th>
<th>Stuart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield (year 5)</td>
<td>3.4</td>
<td>2.7</td>
<td>0.6</td>
</tr>
<tr>
<td>% Kernel</td>
<td>57</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Nuts/Lb</td>
<td>49</td>
<td>47</td>
<td>50</td>
</tr>
<tr>
<td>Leaf Scab</td>
<td>1.5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Nut Scab</td>
<td>1.7</td>
<td>3</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Flowering: Similar to 'Desirable' and 'Pawnee', early pollen shed and late pistil receptivity.
'Mandan'

**Advantages**
- Early harvest, 2-4 days before 'Pawnee'
- Good size and % kernel.
- Better scab resistance than 'Desirable' and 'Pawnee'

**Limitations**
- Despite high % kernel often did not fill kernel tips.
- Dark kernel color and spotting.
- Kernel cupping.
### 2009 'Pawnee', 'Mandan', 'Byrd'

<table>
<thead>
<tr>
<th></th>
<th>Nuts / Lb</th>
<th>% Kernel</th>
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</thead>
<tbody>
<tr>
<td>Pawnee</td>
<td>56</td>
<td>57</td>
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<tr>
<td>Mandan</td>
<td>48</td>
<td>57</td>
</tr>
<tr>
<td>Byrd</td>
<td>54</td>
<td>62</td>
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</table>
Which to plant?

'Pawnee' – No, scab is too severe, spotting and veining is bad in some years.

2005 sprayed Pawnee nuts. Off-color Pawnee
Which to plant?

• 'Mandan' vs. 'Byrd' – Too soon to know, I would plant some of both.
• Need a pollinator, 'Mandan' and 'Byrd' will not pollinate each other.
New USDA cultivar release: 'Lakota'

- Parentage: 'Mahan' x 'Major'
- 67 nuts/lb
- 57% kernel
- Excellent scab resistance
- Harvest 1 week after 'Pawnee'
- Will pollinate and be pollinated by 'Desirable', 'Pawnee', 'Byrd', 'Mandan'
'Kanza'

68 nuts / lb.

51% kernel

• **Advantages**
  – Similar nut to 'Elliot'
  – Cold hardy
  – Early harvest similar to 'Pawnee'

• **Limitations**
  – Small nut size
  – Tends to alternate
New USDA cultivar release: 'Apalachee'

- Parentage: 'Moore' x 'Schley'
- 85 nuts/lb
- 55% kernel
- Extensively tested at Muckalee plantation in Albany.
- Flowering similar to 'Desirable'.
- Early mid-season harvest. 3 weeks after 'Pawnee'
'Apalachee'

• Advantages
  – Precocious and consistently productive.
  – Good % kernel and shell out.
  – Strong tree form.

• Limitations
  – Smaller nut size than most growers want.
Excel

Quality for years 1-8.

<table>
<thead>
<tr>
<th></th>
<th>Yield</th>
<th>Nuts/lb</th>
<th>% Kernel</th>
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<tbody>
<tr>
<td>Excel</td>
<td>6.9</td>
<td>45</td>
<td>51</td>
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<tr>
<td>Desirable</td>
<td>6.8</td>
<td>52</td>
<td>53</td>
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<tr>
<td>Stuart</td>
<td>7.2</td>
<td>52</td>
<td>45</td>
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</table>

- Georgia seedling
- Large size
- Low % kernel (thick shell)
- Hard to shell without chipping
Excel

- No scab so far.
- Clean tree.
- Bright pretty kernel

<table>
<thead>
<tr>
<th></th>
<th>Leaf Scab</th>
<th>Nut Scab</th>
<th>Black Aphid</th>
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<tbody>
<tr>
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<td>1.5</td>
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<tr>
<td>Stuart</td>
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<td>2.0</td>
<td>2.0</td>
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Pest resistance years 2003-2006.