Winter Broccoli Variety Evaluation

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Immokalee, FL.
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Table 1. Summary of cultural practices used for variety trial of Broccoli grown with seepage irrigation in Felda, FL. during winter 2011.

<table>
<thead>
<tr>
<th>Field history</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Experimental design</td>
</tr>
<tr>
<td>Irrigation</td>
</tr>
<tr>
<td>Plot size</td>
</tr>
<tr>
<td>Harvest size</td>
</tr>
<tr>
<td>Planting date</td>
</tr>
<tr>
<td>Fungicide</td>
</tr>
<tr>
<td>Linear ft per acre</td>
</tr>
<tr>
<td>Bed spacing (center to center)</td>
</tr>
<tr>
<td>Bed height</td>
</tr>
<tr>
<td>Bed width</td>
</tr>
<tr>
<td>Plant population</td>
</tr>
<tr>
<td>Distance between plants</td>
</tr>
<tr>
<td>Row run</td>
</tr>
<tr>
<td>Harvest date</td>
</tr>
<tr>
<td>1st</td>
</tr>
<tr>
<td>2nd</td>
</tr>
<tr>
<td>3th</td>
</tr>
<tr>
<td>4th</td>
</tr>
<tr>
<td>5th</td>
</tr>
<tr>
<td>Planting to 5th pick</td>
</tr>
</tbody>
</table>
Table 2. Sources of broccoli seeds

<table>
<thead>
<tr>
<th>Variety</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>BZ 1001</td>
<td>Enza Zaden</td>
</tr>
<tr>
<td>BZ 1004</td>
<td>Enza Zaden</td>
</tr>
<tr>
<td>Emerald Crown</td>
<td>Sakata</td>
</tr>
<tr>
<td>Green Gold</td>
<td>Sakata</td>
</tr>
<tr>
<td>Green Magic</td>
<td>Sakata</td>
</tr>
<tr>
<td>Imperial</td>
<td>Sakata</td>
</tr>
<tr>
<td>Ironman</td>
<td>Seminis</td>
</tr>
</tbody>
</table>

Table 3. Summary of temperature and total rainfall in Felda, FL. during winter 2011.

<table>
<thead>
<tr>
<th>Period</th>
<th>Temperature (°F)</th>
<th>Total rainfall (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>Min</td>
</tr>
<tr>
<td>Nov. 2011</td>
<td>69.3</td>
<td>58.6</td>
</tr>
<tr>
<td>Dec. 2011</td>
<td>66.1</td>
<td>53.6</td>
</tr>
<tr>
<td>Jan. 2012</td>
<td>58.0</td>
<td>41.5</td>
</tr>
<tr>
<td>Average/Total</td>
<td>64.5</td>
<td>51.3</td>
</tr>
</tbody>
</table>
Table 4. Total harvest marketable yield for selected broccoli varieties grown in Felda, FL during winter 2011.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Average size (lb)</th>
<th>Yield (ton/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BZ 1001</td>
<td>0.48a</td>
<td>5.17ab</td>
</tr>
<tr>
<td>BZ 1004</td>
<td>0.36c</td>
<td>4.01bc</td>
</tr>
<tr>
<td>Emerald Crown</td>
<td>0.45abc</td>
<td>5.40ab</td>
</tr>
<tr>
<td>Green Gold</td>
<td>0.46ab</td>
<td>5.85ab</td>
</tr>
<tr>
<td>Green Magic</td>
<td>0.48a</td>
<td>6.31a</td>
</tr>
<tr>
<td>Imperial</td>
<td>0.38bc</td>
<td>4.35bc</td>
</tr>
<tr>
<td>Ironman</td>
<td>0.37bc</td>
<td>3.01c</td>
</tr>
<tr>
<td>P. value</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Sig.</td>
<td>*</td>
<td>**</td>
</tr>
</tbody>
</table>

* Within columns, means followed by different letters are significantly different according to Duncan’s Multiple Range Test at 5%.
**Significance at $P \leq 0.01$. *Significance at $P \leq 0.05$. ns = Non-significance.
Table 5. Post-harvest yield categories for selected broccoli varieties grown in Felda, FL. during winter 2011.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Diameter (in)</th>
<th>Color (1-7)&lt;sup&gt;y&lt;/sup&gt;</th>
<th>Density (1-5)&lt;sup&gt;x&lt;/sup&gt;</th>
<th>Diameter (in)</th>
<th>Internal cavity (1-5)&lt;sup&gt;w&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>BZ 1001</td>
<td>4.54&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.16ab</td>
<td>1.65ab</td>
<td>1.12a</td>
<td>1.12</td>
</tr>
<tr>
<td>BZ 1004</td>
<td>4.07bc</td>
<td>3.25de</td>
<td>1.21b</td>
<td>0.97c</td>
<td>1.00</td>
</tr>
<tr>
<td>Emerald Crown</td>
<td>4.43ab</td>
<td>3.88bc</td>
<td>1.89a</td>
<td>1.03bc</td>
<td>1.00</td>
</tr>
<tr>
<td>Green Gold</td>
<td>4.29abc</td>
<td>2.97e</td>
<td>1.43ab</td>
<td>1.07ab</td>
<td>1.00</td>
</tr>
<tr>
<td>Green Magic</td>
<td>4.45ab</td>
<td>3.52d</td>
<td>1.80a</td>
<td>1.03bc</td>
<td>1.09</td>
</tr>
<tr>
<td>Imperial</td>
<td>4.44ab</td>
<td>4.42a</td>
<td>1.18b</td>
<td>0.96c</td>
<td>1.00</td>
</tr>
<tr>
<td>Ironman</td>
<td>3.94c</td>
<td>3.56cd</td>
<td>1.47ab</td>
<td>1.00bc</td>
<td>1.00</td>
</tr>
<tr>
<td>P. value</td>
<td>0.03</td>
<td>0.0001</td>
<td>0.01</td>
<td>0.006</td>
<td>0.10</td>
</tr>
<tr>
<td>Sig.</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>ns</td>
</tr>
</tbody>
</table>

<sup>a</sup>Within columns, means followed by different letters are significantly different according to Duncan’s Multiple Range Test at 5%.

**Significance at P ≤ 0.01. *Significance at P ≤ 0.05. ns = Non-significance.

<sup>y</sup>1 = light green and 7 = dark green

<sup>x</sup>1 = dense and 5 = spreading

<sup>w</sup>1 = none and 5 = severe hollow