BATIAN COFFEE
A New Coffee Variety Resistant To Coffee Berry Disease And Coffee Leaf Rust

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Background

- Breeding work in coffee started in 1971 after the outbreak of Coffee Berry Disease (*Colletotrichum kahawae*) and Leaf Rust (*Heimelea vastrap*ix*) in the late 1960s.
- The main breeding goal has been to develop cultivars that combine resistance to diseases with improved yields and quality.
- In 1985, the first disease resistant hybrid cultivar, Ruiru 11, was released.
- Further research and development has culminated to the release of another disease resistant variety namely Batian.

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IMPORTANCE OF CBD & LEAF RUST

Merits of Batian
- It is true breeding and therefore seed production is made easier.
- Cherry ripening comes earlier than SL28 and Ruiru 11.
- It is high yielding with good bean and cup quality.
- Highly economical as no chemical control against CBD and Leaf Rust is required yet it remains high yielding.
- Suited for all coffee agro-ecological zones.

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TOWARDS THE NEW VARIETY

- After the release of Ruiru 11 in 1985, the breeding programme was advanced to address emerging issues.
- Farmers also wanted a variety with features similar to SL28 but resistant to CBD and Leaf Rust.
- The variety was selected from SL28- and SL34- backcrosses.
- Donor parents for resistance to diseases are of Arabica type.
- The breeder’s data for over ten years confirmed that the material qualified for release to farmers.
- The variety was recommended for full release in May 2010 and officially launched on 8 September 2010.

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AGRONOMIC PRACTICES

- Recommended Spacing: 2m x 2m giving a plant population of 2500 trees per ha.
- The new varieties are resistant to CBD and Leaf Rust. Other diseases should be controlled as recommended for other varieties.
- Other management practices are similar to those of traditional coffee varieties.
- Can produce up to 5 tons of clean coffee per ha under good management.

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### AGRONOMIC PERFORMANCE

<table>
<thead>
<tr>
<th>TEST STATUS</th>
<th>CLEAN COFFEE (t/ha)</th>
<th>CLEAN COFFEE (t/ha) ABOVE BEST CHECK</th>
<th>CLEAN COFFEE (t/ha) ABOVE MEAN OF CHECKS</th>
<th>CBD Score</th>
<th>CLR Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>BATIAN CANDIDATE</td>
<td>3.56</td>
<td>15.17%</td>
<td>16.57%</td>
<td>3.08</td>
<td>3.33</td>
</tr>
<tr>
<td>RUIRU 11 CHECK</td>
<td>3.02</td>
<td>4.15</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL28 CHECK</td>
<td>2.92</td>
<td>10.36</td>
<td>92.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN OF CHECKS</td>
<td>3.37</td>
<td></td>
<td></td>
<td>2.97</td>
<td>9.97</td>
</tr>
</tbody>
</table>

- Column 3 Represents Third Year Yield Data
- CLR Scale: <20 = Highly Resistant; 21-40 = Resistant; 41-60 = Moderate Susceptible; 61-80 = Susceptible; >80 = Highly Susceptible
- CBD Scale: 0-3 = Highly Resistant; 4-6 = Resistant; 7-9 = Susceptible; 10-12 = Highly Susceptible

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### CHERRY AND BEAN SIZE

![Graph of cherry and bean size](image)

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### Specialty Coffee of America Cupping Form

<table>
<thead>
<tr>
<th>Name: ____________________________</th>
<th>Date: _______</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fragrance</th>
<th>Flavour</th>
<th>Acidity</th>
<th>Body</th>
<th>Uniformity</th>
<th>Overall</th>
<th>Quality Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

### Scores

- **Fragrance**: 1 to 7 (1 = Very Poor, 7 = Excellent)
- **Flavour**: 1 to 7 (1 = Very Poor, 7 = Excellent)
- **Acidity**: 1 to 7 (1 = Very Weak, 7 = Very Strong)
- **Body**: 1 to 7 (1 = Very Thin, 7 = Very Full)
- **Uniformity**: 1 to 7 (1 = Very Variable, 7 = Very Uniform)
- **Overall**: 1 to 7 (1 = Very Poor, 7 = Excellent)

### Comments

- **Afterscent**: Notes the aftertaste of the coffee.
- **Balance**: Notes the balance between acidity, body, and strength.
- **Sweetness**: Notes the sweetness of the coffee.

### Final Score

- **Final Score**: Calculated based on the individual scores.

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Comparative sensory evaluation of commercial coffee varieties and Batian by CQI and Kenyan cuppers

<table>
<thead>
<tr>
<th>Sensory variables</th>
<th>Panel</th>
<th>Batian</th>
<th>R11</th>
<th>SL28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragrance/Aroma</td>
<td>KEN</td>
<td>7.86</td>
<td>7.29</td>
<td>7.43</td>
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<td></td>
<td>CQI</td>
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<td>7.67</td>
<td>7.58</td>
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<tr>
<td>Flavour</td>
<td>KEN</td>
<td>7.71</td>
<td>7.64</td>
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<td></td>
<td>CQI</td>
<td>8.00</td>
<td>7.42</td>
<td>7.50</td>
</tr>
<tr>
<td>Aftertaste</td>
<td>KEN</td>
<td>7.64</td>
<td>7.43</td>
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<tr>
<td></td>
<td>CQI</td>
<td>8.08</td>
<td>7.50</td>
<td>7.58</td>
</tr>
<tr>
<td>Acidity</td>
<td>KEN</td>
<td>7.93</td>
<td>7.50</td>
<td>7.64</td>
</tr>
<tr>
<td></td>
<td>CQI</td>
<td>7.92</td>
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<tr>
<td>Body</td>
<td>KEN</td>
<td>7.79</td>
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<td></td>
<td>CQI</td>
<td>7.83</td>
<td>7.75</td>
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<tr>
<td>Balance</td>
<td>KEN</td>
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<td>7.57</td>
<td>7.79</td>
</tr>
<tr>
<td></td>
<td>CQI</td>
<td>7.83</td>
<td>7.58</td>
<td>7.83</td>
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<tr>
<td>overall</td>
<td>KEN</td>
<td>7.86</td>
<td>7.57</td>
<td>7.71</td>
</tr>
<tr>
<td></td>
<td>CQI</td>
<td>8.17</td>
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Comments By Trade

- Good acidity
- Complex flavour
- Sweet
- Complex body
- Useful body

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