Clearfield vs. Hybrid vs. Conventional Rice Varieties: Costs and Returns

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Conventional vs. Hybrid Rice Variety Comparison

- **Cocodrie**
  - Excellent yield potential, good lodging resistance, good milling quality, susceptible to sheath blight and straighthead, moderately susceptible to blast.

- **Cheniere**
  - Excellent yield potential, good lodging resistance, moderate resistance to straighthead, susceptible to blast and sheath blight.

- **XL723**
  - Very high-yielding, very good seedling vigor; fair milling yields, moderately resistant to sheath blight and blast as well as straighthead.
Clearfield vs. CLHybrid Rice Variety Comparison

• **CL 151**
  • Excellent yield potential, very susceptible to sheath blight, susceptible to blast and very susceptible to straighthead.

• **CL 161**
  • Good yield potential, very susceptible to sheath blight, susceptible to blast.

• **CLXL729**
  • Very high-yielding, fair milling characteristics, moderately resistant to sheath blight and blast as well as straighthead.

• **CLXL745**
  • Very high-yielding, good milling quality when harvested at optimum grain moisture, moderately resistant to sheath blight and blast as well as straighthead.

*2010 Rice Varieties & Management Tips*  
LSU Agricultural Center
# Results of 2007 Louisiana Rice Variety Trials

<table>
<thead>
<tr>
<th>Variety</th>
<th>50% Heading</th>
<th>Milling% Whl Tot</th>
<th>RRS</th>
<th>VML</th>
<th>EVG</th>
<th>MHS</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocodrie</td>
<td>79</td>
<td>59 - 68</td>
<td>8,031</td>
<td>4,612</td>
<td>6,859</td>
<td>7,157</td>
<td>6,665</td>
</tr>
<tr>
<td>Cheniere</td>
<td>82</td>
<td>61 - 71</td>
<td>8,572</td>
<td>5,159</td>
<td>6,291</td>
<td>6,800</td>
<td>6,705</td>
</tr>
<tr>
<td>XL723</td>
<td>79</td>
<td>60 - 71</td>
<td>9,328</td>
<td>8,496</td>
<td>8,670</td>
<td>8,999</td>
<td>8,873</td>
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<tr>
<td>CL 161</td>
<td>83</td>
<td>62 - 70</td>
<td>8,381</td>
<td>3,798</td>
<td>5,934</td>
<td>6,286</td>
<td>6,100</td>
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<td>CLXL729</td>
<td>80</td>
<td>59 - 70</td>
<td>9,196</td>
<td>8,693</td>
<td>8,604</td>
<td>9,463</td>
<td>8,989</td>
</tr>
<tr>
<td>CLXL745</td>
<td>77</td>
<td>54 - 72</td>
<td>8,783</td>
<td>8,771</td>
<td>7,996</td>
<td>9,183</td>
<td>8,683</td>
</tr>
</tbody>
</table>

Milling data – average of RRS, VML and EVG.
RRS = Rice Research Station, EVG = Evangeline Parish, VML = Vermilion Parish, MHS = Morehouse Parish.

# 2008 Rice Varieties & Management Tips
LSU Agricultural Center

Louisiana State University Agricultural Center
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# Results of 2009 Louisiana Rice Variety Trials

<table>
<thead>
<tr>
<th>Variety</th>
<th>50% Heading</th>
<th>Milling% Whl Tot</th>
<th>RRS</th>
<th>EVG</th>
<th>JFD</th>
<th>VML</th>
<th>RCH</th>
<th>Mean</th>
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</thead>
<tbody>
<tr>
<td>Cocodrie</td>
<td>85</td>
<td>65 - 72</td>
<td>6,929</td>
<td>5,584</td>
<td>5,598</td>
<td>8,129</td>
<td>8,978</td>
<td>7,044</td>
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<tr>
<td>Cheniere</td>
<td>86</td>
<td>69 - 73</td>
<td>7,430</td>
<td>6,850</td>
<td>7,795</td>
<td>8,447</td>
<td>9,630</td>
<td>8,031</td>
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<tr>
<td>XL723</td>
<td>83</td>
<td>61 - 72</td>
<td>6,912</td>
<td>9,958</td>
<td>8,575</td>
<td>9,274</td>
<td>12,250</td>
<td>9,393</td>
</tr>
<tr>
<td>CL 151</td>
<td>86</td>
<td>65 – 72</td>
<td>8,471</td>
<td>7,758</td>
<td>8,390</td>
<td>8,644</td>
<td>10,713</td>
<td>8,795</td>
</tr>
<tr>
<td>CL 161</td>
<td>87</td>
<td>66 - 72</td>
<td>7,116</td>
<td>7,106</td>
<td>6,408</td>
<td>7,657</td>
<td>8,988</td>
<td>7,455</td>
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<tr>
<td>CLXL729</td>
<td>85</td>
<td>60 – 71</td>
<td>7,971</td>
<td>10,503</td>
<td>9,607</td>
<td>9,910</td>
<td>12,287</td>
<td>10,055</td>
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<tr>
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<td>82</td>
<td>64 – 72</td>
<td>5,600</td>
<td>10,530</td>
<td>10,076</td>
<td>10,787</td>
<td>12,017</td>
<td>9,802</td>
</tr>
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</table>

Milling data – average of RRS, EVG, JFD and VML. 
RRS = Rice Research Station, EVG = Evangeline Parish, JFD = Jeff Davis Parish, 
VML = Vermilion Parish, RCH = Richland Parish.
# 2009 Rice Variety Trial Results Over 3 Locations

<table>
<thead>
<tr>
<th>Variety</th>
<th>50% Heading</th>
<th>Milling% Whl Tot</th>
<th>Main Crop</th>
<th>Ratoon Crop</th>
<th>Total Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocodrie</td>
<td>86</td>
<td>66.6 / 72.5</td>
<td>6,885</td>
<td>1,391</td>
<td>8,276</td>
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<tr>
<td>Cheniere</td>
<td>87</td>
<td>69.1 / 72.5</td>
<td>7,891</td>
<td>1,498</td>
<td>9,389</td>
</tr>
<tr>
<td>XL723</td>
<td>85</td>
<td>62.3 / 72.1</td>
<td>8,253</td>
<td>1,585</td>
<td>9,838</td>
</tr>
<tr>
<td>CL 151</td>
<td>87</td>
<td>65.5 / 72.2</td>
<td>8,501</td>
<td>1,617</td>
<td>10,118</td>
</tr>
<tr>
<td>CL 161</td>
<td>88</td>
<td>66.2 / 71.7</td>
<td>7,060</td>
<td>1,613</td>
<td>8,673</td>
</tr>
<tr>
<td>CLXL729</td>
<td>86</td>
<td>60.9 / 71.1</td>
<td>9,162</td>
<td>1,822</td>
<td>10,984</td>
</tr>
<tr>
<td>CLXL745</td>
<td>84</td>
<td>64.2 / 72.2</td>
<td>8,821</td>
<td>1,256</td>
<td>10,077</td>
</tr>
</tbody>
</table>
Potential Differences in Costs and Returns
Hybrid Rice Production compared to Conv/ Clearfield

- **Returns:**
  - Yield (main crop and ratoon crop)
  - Price (based on quality)

- **Costs:**
  - Seed (seeding rate and cost)
  - Nitrogen (main crop and ratoon crop)
  - Fungicide (acreage treated and rates)
  - Drying (based on yield)
  - Hauling (based on yield)
Differences in Seed Cost

- **Conventional Varieties:**
  - **Cheniere:** (90-125 lbs/acre water -seeded)
    - 100 lbs/acre @ $0.29/lb = $29.00/Acre
  - **XL723:** (general recommendation - 12 seeds/ft²)
    - $98.00/Acre
    + $69.00/Acre

- **Clearfield Varieties:**
  - **CL 151:** (60-90 lbs/acre drill-seeded)
    - 70 lbs/acre @ $0.80/lb = $56.00/Acre
  - **CLXL729/745:** (general recommendation - 12 seeds/ft²)
    - $146.00/Acre
    + $90.00/Acre
Differences in Nitrogen Cost on Main Crop

- **Conventional Varieties:**
  - **Cheniere:** (120-160 lbs/acre, 2 split applications)
    - 140 lbs/acre @ $0.42/lb = $58.80/Acre
  - **XL723:** (150 lbs/acre, 2 split applications)
    - 150 lbs/acre @ $0.42/lb = $63.00/Acre
      + $4.20/Acre

- **Clearfield Varieties:**
  - **CL 151:** (120-160 lbs/acre, 2 split applications)
    - 140 lbs/acre @ $0.42/lb = $58.80/Acre
  - **CLXL729/745:** (150 lbs/acre, 2 split applications)
    - 150 lbs/acre @ $0.42/lb = $63.00/Acre
      + $4.20/Acre
Differences in Nitrogen Cost on Ratoon Crop

- **Conventional Varieties:**
  - **Cheniere:** (75-90 lbs/acre, main crop harvest before Aug. 15)
    - 80 lbs/acre @ $0.42/lb = $33.60/Acre
  - **XL723:** (general recommendation - 100 lbs/acre)
    - 100 lbs/acre @ $0.42/lb = $42.00/Acre + $8.40/Acre

- **Clearfield Varieties:**
  - **CL 151:** (75-90 lbs/acre, main crop harvest before Aug. 15)
    - 80 lbs/acre @ $0.42/lb = $33.60/Acre
  - **CLXL729/745:** (general recommendation - 100 lbs/acre)
    - 100 lbs/acre @ $0.42/lb = $42.00/Acre + $8.40/Acre
Differences in Fungicide Cost

- **Conventional Varieties:**
  - **Cheniere:** (Stratego – 16-19 fl oz/acre)
    - 19.0 oz/acre @ $1.25/oz = $23.75/Acre
  - **XL723:** (No recommendation - ~60% acres treated)
    - 11.4 oz/acre @ $1.25/oz = $14.25/Acre
      - -$9.50/Acre

- **Clearfield Varieties:**
  - **CL 151:** (Stratego – 16-19 fl oz/acre)
    - 19.0 oz/acre @ $1.25/lb = $23.75/Acre
  - **CLXL729/745:** (No recommendation - ~60% acres treated)
    - 11.4 oz/acre @ $1.25/oz = $14.25/Acre
      - -$9.50/Acre
### Required Hybrid Rice Breakeven Yield Increase

**Owner-Operators or Cash Rent**

<table>
<thead>
<tr>
<th>Change in Production Cost for Hybrid Rice</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>69.00</td>
<td>69.00</td>
<td>90.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Nitrogen - Main</td>
<td>4.20</td>
<td>4.20</td>
<td>4.20</td>
<td>4.20</td>
</tr>
<tr>
<td>Nitrogen - Ratoon</td>
<td>--</td>
<td>8.40</td>
<td>--</td>
<td>8.40</td>
</tr>
<tr>
<td>Fungicide</td>
<td>(9.50)</td>
<td>(9.50)</td>
<td>(9.50)</td>
<td>(9.50)</td>
</tr>
<tr>
<td><strong>Total Change</strong></td>
<td><strong>$63.70</strong></td>
<td><strong>$72.10</strong></td>
<td><strong>$84.70</strong></td>
<td><strong>$93.10</strong></td>
</tr>
</tbody>
</table>

### Required Breakeven Yield Increase (lbs/A):

<table>
<thead>
<tr>
<th>Rough Rice Price</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ $12.00/cwt</td>
<td>627</td>
<td>710</td>
<td>834</td>
<td>917</td>
</tr>
<tr>
<td>@ $13.00/cwt</td>
<td>571</td>
<td>646</td>
<td>759</td>
<td>834</td>
</tr>
<tr>
<td>@ $14.00/cwt</td>
<td>524</td>
<td>593</td>
<td>697</td>
<td>766</td>
</tr>
<tr>
<td>@ $15.00/cwt</td>
<td>484</td>
<td>548</td>
<td>644</td>
<td>708</td>
</tr>
</tbody>
</table>

1. Total change in production costs excluding drying and hauling cost.
2. RBETYldInc = (increase in costs per acre) / (rough rice price per cwt – drying & hauling costs per cwt)
## Required Hybrid Rice Breakeven Yield Increase
### Tenant-operators (70/30 crop share)

<table>
<thead>
<tr>
<th>Change in Production Cost for Hybrid Rice</th>
<th>XL723 Main Crop Only</th>
<th>XL723 Main Crop + Ratoon</th>
<th>CLXL729/745 Main Crop Only</th>
<th>CLXL729/745 Main Crop + Ratoon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>69.00</td>
<td>69.00</td>
<td>90.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Nitrogen - Main</td>
<td>4.20</td>
<td>4.20</td>
<td>4.20</td>
<td>4.20</td>
</tr>
<tr>
<td>Nitrogen - Ratoon</td>
<td>--</td>
<td>8.40</td>
<td>--</td>
<td>8.40</td>
</tr>
<tr>
<td>Fungicide</td>
<td>(9.50)</td>
<td>(9.50)</td>
<td>(9.50)</td>
<td>(9.50)</td>
</tr>
<tr>
<td>Total Change</td>
<td>$63.70</td>
<td>$72.10</td>
<td>$84.70</td>
<td>$93.10</td>
</tr>
</tbody>
</table>

### Required Breakeven Yield Increase (lbs/A):

<table>
<thead>
<tr>
<th>Rough Rice Price per cwt</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
<th>Main Crop Only</th>
<th>Main Crop + Ratoon</th>
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</thead>
<tbody>
<tr>
<td>$12.00</td>
<td>896</td>
<td>1,014</td>
<td>1,191</td>
<td>1,309</td>
</tr>
<tr>
<td>$13.00</td>
<td>815</td>
<td>923</td>
<td>1,084</td>
<td>1,192</td>
</tr>
<tr>
<td>$14.00</td>
<td>748</td>
<td>847</td>
<td>995</td>
<td>1,094</td>
</tr>
<tr>
<td>$15.00</td>
<td>691</td>
<td>782</td>
<td>919</td>
<td>1,010</td>
</tr>
</tbody>
</table>

1 Total change in production costs excluding drying and hauling cost.
2 \[ \text{RBELYldInc} = \frac{\text{increase in costs per acre}}{(\text{rough rice price per cwt} - \text{drying & hauling costs per cwt}) \times \text{grower crop share %}} \]

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Hybrid vs. Conventional/ Clearfield Rice

Summary Points

- Gross returns from hybrid rice production are influenced by change in yield (+) and possibly change in price (+/-).
- Primary increase in hybrid rice production cost is in seed cost, although fertilization, drying and hauling are also higher, with fungicide cost potentially lower.
- For XL723 @ $15.00/cwt., breakeven main crop yield increase of 484 lbs/acre for owner-operators or cash-rented land and 691 lbs/acre for crop share tenant-operators (70/30).
- For CLXL729/745 @ $15.00/cwt., breakeven main crop yield increase of 644 lbs/acre owner-operators or cash-rented land and 919 lbs/acre for crop-share tenant-operators (70/30).
- Reductions in rough rice market price would increase required breakeven yield increases.
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