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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.

2010 Rice Varieties & Management Tips
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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.

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Results of 2007 Louisiana Rice Variety Trials

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

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
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Results of 2009 Louisiana Rice Variety Trials

Variety	50% Heading	Milling% Whl Tot	RRS	EVG	JFD	VML	RCH	Mean
Cocodrie	85	65 - 72	6,929	5,584	5,598	8,129	8,978	7,044
Cheniere	86	69 - 73	7,430	6,850	7,795	8,447	9,630	8,031
XL723	83	61 - 72	6,912	9,958	8,575	9,274	12,250	9,393
CL 151	86	65 - 72	8,471	7,758	8,390	8,644	10,713	8,795
CL 161	87	66 - 72	7,116	7,106	6,408	7,657	8,988	7,455
CLXL729	85	60 - 71	7,971	10,503	9,607	9,910	12,287	10,055
CLXL745	82	64 - 72	5,600	10,530	10,076	10,787	12,017	9,802

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.

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2009 Rice Variety Trial Results Over 3 Locations

Variety	50% Heading	Milling% Whl Tot	Main Crop	Ratoon Crop	Total Yield
Cocodrie	86	66.6 / 72.5	6,885	1,391	8,276
Cheniere	87	69.1 / 72.5	7,891	1,498	9,389
XL723	85	62.3 / 72.1	8,253	1,585	9,838
CL 151	87	65.5 / 72.2	8,501	1,617	10,118
CL 161	88	66.2 / 71.7	7,060	1,613	8,673
CLXL729	86	60.9 / 71.1	9,162	1,822	10,984
CLXL745	84	64.2 / 72.2	8,821	1,256	10,077

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*

	XL723		CLXL729/745	
Change in Production Cost for Hybrid Rice	Main Crop Only	Main Crop + Ratoon	Main Crop Only	Main Crop + Ratoon
Seed	69.00	69.00	90.00	90.00
Nitrogen – Main	4.20	4.20	4.20	4.20
Nitrogen – Ratoon	--	8.40	--	8.40
Fungicide	<u>(9.50)</u>	<u>(9.50)</u>	<u>(9.50)</u>	<u>(9.50)</u>
Total Change ¹	\$63.70	\$72.10	\$84.70	\$93.10
Required Breakeven Yield Increase (lbs/A):²				
@ \$12.00/cwt	627	710	834	917
@ \$13.00/cwt	571	646	759	834
@ \$14.00/cwt	524	593	697	766
@ \$15.00/cwt	484	548	644	708

¹ Total change in production costs excluding drying and hauling cost.

² $RBEY_{Inc} = (\text{increase in costs per acre}) / (\text{rough rice price per cwt} - \text{drying \& hauling costs per cwt})$

Required Hybrid Rice Breakeven Yield Increase Tenant-operators (70/30 crop share)

Change in Production Cost for Hybrid Rice	XL723		CLXL729/745	
	Main Crop Only	Main Crop + Ratoon	Main Crop Only	Main Crop + Ratoon
Seed	69.00	69.00	90.00	90.00
Nitrogen – Main	4.20	4.20	4.20	4.20
Nitrogen – Ratoon	--	8.40	--	8.40
Fungicide	<u>(9.50)</u>	<u>(9.50)</u>	<u>(9.50)</u>	<u>(9.50)</u>
Total Change ¹	\$63.70	\$72.10	\$84.70	\$93.10
Required Breakeven Yield Increase (lbs/A): ²				
@ \$12.00/cwt	896	1,014	1,191	1,309
@ \$13.00/cwt	815	923	1,084	1,192
@ \$14.00/cwt	748	847	995	1,094
@ \$15.00/cwt	691	782	919	1,010

¹ Total change in production costs excluding drying and hauling cost.

² $RBEY_{Inc} = (\text{increase in costs per acre}) / (\text{rough rice price per cwt} - \text{drying \& hauling costs per cwt}) \times \text{grower crop share \%}$

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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