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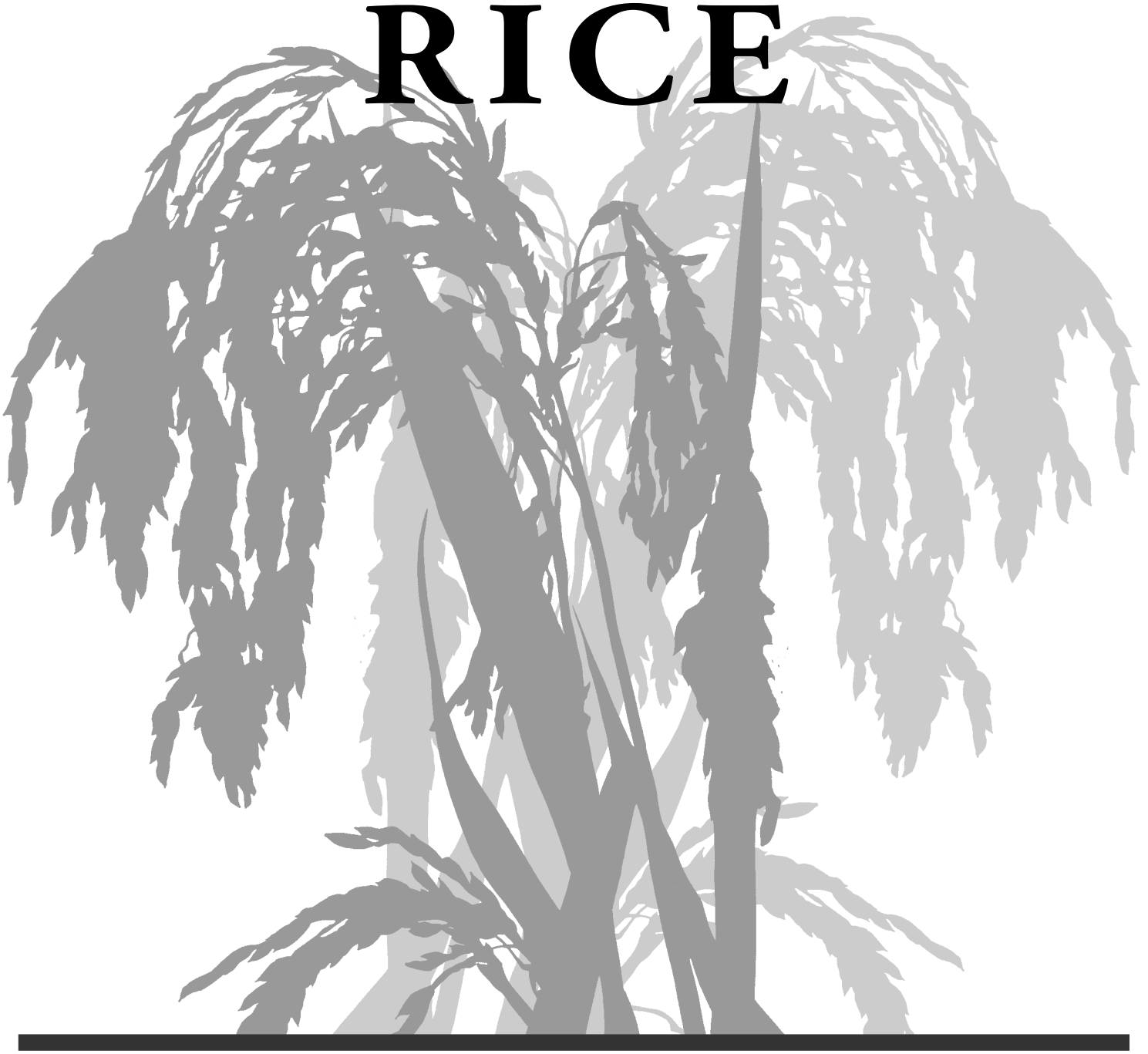
MISSISSIPPI RICE



VARIETY TRIALS, 2013

MAFES

Mississippi Agricultural & Forestry Experiment Station • George M. Hopper

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NOTICE TO USER

This Mississippi Agricultural and Forestry Experiment Station Information Bulletin is a summary of research conducted under project number MIS-1530 at the Delta Research and Extension Center in Stoneville, Mississippi, and several other locations shown on the map on the second page. It is intended for colleagues, cooperators, and sponsors. The interpretation of data presented in this publication may change after additional experimentation. This information is not to be construed either as a recommendation for use or as an endorsement of a specific variety or product by Mississippi State University or the Mississippi Agricultural and Forestry Experiment Station.

This report contains data generated as part of the Mississippi Agricultural and Forestry Experiment Station research program. Joint sponsorship by the Mississippi Rice Promotion Board is gratefully acknowledged.

Trade names of commercial products used in this research project are included only for clarity and understanding. All available names (i.e., trade names, chemical names, experimental product code names or numbers, etc.) of products used in this research project are listed in the tables and footnotes contained in this report.

Mississippi Rice Variety Trials, 2013

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Rice Variety Trial
ON-FARM TEST LOCATIONS

(Mississippi Delta shaded)

Mississippi Rice Variety Trials, 2013

Introduction

The USDA Farm Service Agency certified 122,641 planted acres for rice in the Delta counties of Mississippi, according to the November 2013 estimate. This amount represented a 3% decrease in acreage from 2012 and a 44% decrease from the 10-year average. It is the lowest acreage in Mississippi since 1977 (**Table 1**). The effects of lower yields and prices in 2010 and 2011, coupled with high soybean and corn prices, lingered to keep rice acreage low. Rice was planted in 16 Delta counties in 2013. Bolivar County planted the most — approximately 34,000 acres. Tunica County planted approximately 25,000 acres. For a full listing of estimated planted acres by county, see **Table 2**. Rice acreage included 15 cultivars. The most popular cultivars were CLXL745, Rex, and CL152, which were planted to 19%, 15%, and 15% of the acreage, respectively. Clearfield® cultivars were planted on 65% of the acreage — 35% pure lines and 30% hybrids. Twenty-six percent of the acreage was planted to conventional pure lines, and the remaining 8% was planted to conventional hybrids. For a detailed list of cultivars by percent of acres planted, see **Table 3**. For the first year since 2001, Rex replaced Cocodrie as the most widely planted conventional pure line. In general, Rex performed well across the Delta.

Rice planting began as early as March 14; however, due to a relatively cool and wet spring, planting and stand establishment were slow. Specifically, an estimated 13% of the acreage was planted by the end of April, compared with 95% planted by the same time in 2012 and an average of 64% planted over the previous 5 years. In 2013, rice planting did not reach 95% until the end of May. Based on Stoneville weather records, temperatures from March to June averaged 3–4° lower relative to the 84-year average. This deviation from the average caused the 2013 growing season to be ranked as one of the coolest on record. In addition to this slow start, crop progress was slower compared with 2012 and the recent 5-year average.

Table 1. United States Department of Agriculture National Agriculture Statistics Survey history of Mississippi rice acreage by year, 1949–2013.

Year	Acres	Year	Acres	Year	Acres	Year	Acres
1949	5,000	1969	60,000	1989	235,000	2009	243,000
1950	7,000	1970	51,000	1990	250,000	2010	303,000
1951	26,000	1971	51,000	1991	220,000	2011	157,000
1952	40,000	1972	51,000	1992	275,000	2012	129,000
1953	51,000	1973	62,000	1993	245,000	2013	129,000
1954	77,000	1974	108,000	1994	313,000	2014	—
1955	52,000	1975	171,000	1995	288,000	2015	—
1956	44,000	1976	144,000	1996	208,000	2016	—
1957	31,000	1977	111,000	1997	238,000	2017	—
1958	39,000	1978	215,000	1998	268,000	2018	—
1959	44,000	1979	207,000	1999	323,000	2019	—
1960	44,000	1980	240,000	2000	218,000	2020	—
1961	44,000	1981	337,000	2001	253,000	2021	—
1962	49,000	1982	245,000	2002	253,000	2022	—
1963	49,000	1983	161,000	2003	234,000	2023	—
1964	49,000	1984	190,000	2004	234,000	2024	—
1965	50,000	1985	188,000	2005	263,000	2025	—
1966	55,000	1986	198,000	2006	189,000	2026	—
1967	55,000	1987	198,000	2007	189,000	2027	—

The mild growing season positively impacted rice grain yield and quality. In November, USDA predicted Mississippi farmers to average 7,500 pounds per acre (167 bushels per acre), which would set a new yield record for Mississippi. The previous record of 7,350 pounds per acre (163 bushels per acre) was set in 2007. Producers across the state have reported favorable yields. In general, late-planted rice in 2013 also has performed better than normal. Excessive day- and night-time temperatures have been shown to decrease whole milled rice and increase grain opaqueness (chalk). Mild temperatures in 2013 should produce good milling and improve the appearance of polished white rice. Finally, harvest weather was excellent until late September, allowing harvest to proceed at a good pace. Though rains became more frequent in late September through October, lodging was minimal relative to recent years, partly due to increased planting of stiff-strawed cultivars like Rex and CL152.

Table 2. United States Department of Agriculture Farm Service Agency certified rice acres planted by county in Mississippi, 2009–2013.

County	2009	2010	2011	2012	2013
Adams	240	0	0	192	0
Attala	0	0	10	0	0
Bolivar	72,333	80,255	50,813	34,956	33,734
Carroll	205	0	0	0	0
Coahoma	14,761	25,032	11,370	8,797	8,109
DeSoto	859	1,156	335	553	1,190
Grenada	171	321	328	282	282
Holmes	1,485	1,448	234	141	121
Humphreys	3,656	8,241	1,996	1,955	1,475
Issaquena	783	2,702	880	890	1,115
Jackson	55	35	0	0	0
Lee	10	11	8	10	3
Leflore	17,107	20,144	6,754	5,328	3,905
Panola	4,777	6,446	5,383	5,901	5,523
Quitman	11,031	20,170	6,360	8,440	8,766
Sharkey	1,951	5,390	855	306	433
Sunflower	38,227	45,676	19,351	14,253	13,635
Tallahatchie	14,081	19,314	6,267	6,460	6,964
Tate	905	994	869	828	934
Tunica	23,913	27,041	23,167	21,696	24,603
Washington	29,507	35,736	18,854	14,687	11,480
Yazoo	1,841	1,907	2,273	765	0
Total	237,898	302,019	156,107	126,440	122,641

There are many reasons for conducting on-farm rice variety trials. Advanced experimental lines are evaluated under various production environments, providing the breeding program necessary information to select lines for release as public varieties. Specific information includes yield and milling performance, insect and disease susceptibility, and lodging. By placing these trials at multiple locations throughout the Delta, rice lines and varieties are exposed to conditions and practices common to commercial production that cannot always be reproduced at the experiment station. In addition to providing the breeder and agronomist worthwhile information, these trials provide growers with side-by-side comparisons of the currently available rice varieties and hybrids. This information can be used to guide variety selection in the following year. Variety selection is one of the most important decisions a grower makes in production planning. Growers should attempt to select varieties that offer the best combination of yield and quality, while also considering the variety's susceptibility to yield-limiting factors. Furthermore, breeders and agronomists use the variety trials as an educational tool for growers, private consultants, industry personnel, and research and Extension staff. Frequently, these trials are used to give interested parties the "first look" at new or potential releases from Mississippi State University and other rice-breeding institutions, as well as private industry.

Table 3. Listing of the acreage by varieties planted in Mississippi in 2013.

Clearfield hybrid	Pct. of acres[1]	Clearfield pure line	Pct. of acres	Total clearfield
CLXL745	19.1	CL152	14.8	**66%**
CLXP4534	8.0	CL111	10.8	
CLXL729	2.0	CL151	9.9	
CLXP756	1.0			
Conventional hybrid	**Pct. of acres[1]**	**Conventional pure line**	**Pct. of acres**	**Total conventional**
XL723	4.0	Rex	14.9	**34%**
XL753	3.9	Cocodrie	7.2	
		Sabine	2.8	
		Cheniere	1.1	
		Wells, Hidalgo	<1.0	
Total Hybrid	**38**	**Total pure line**	**62**	

[1]These data were based on 63,818 acres that were covered in the survey.

Test Procedures

A total of 38 entries including named varieties, hybrids, and experimental lines were planted at six on-farm locations. One location (Hollandale) was abandoned approximately a month after planting due to glyphosate drift. Entries included two Clearfield hybrids, four conventional hybrids, five Clearfield inbred varieties, and 12 conventional, publicly released, long-grain varieties. Seven advanced conventional experimental lines and eight advanced experimental Clearfield lines also were included. Individual plots consisted of eight drill rows 15 feet in length and spaced 8 inches apart. Varieties and experimental lines were planted at 85 pounds of seed per acre, and the hybrids were planted at 25 pounds of seed per acre. Seeds were planted approximately 1.25 inches deep into stale seedbeds at all locations. All entries were replicated three times at each location. Two on-farm locations (Minter City and Tunica) received all agricultural inputs based on the whole field. Due to other experiments being conducted in the same fields, the Choctaw, Clarksdale, and Stoneville sites received only one application of urea at 150 pounds of N per acre immediately before flood establishment. Herbicide, insecticide, and fungicide applications were made according to the need of the field at all locations. All management applications are included in **Tables 4–8** (Note: For more information on pesticide formulations and application rates, refer to pesticide product label information available on the web or to the *2013 Weed Control Guidelines for Mississippi* [MSU Experiment Station Publication No. 1532]).

Agronomic and phenological data were collected at appropriate times during the growing season. Lodging ratings were obtained on a plot-by-plot basis. The entire plot was harvested with a small-plot combine equipped with a computerized weigh system and moisture meter. Due to differences in maturity, the majority of the entries at each location were required to have achieved appropriate moisture levels before harvest. Average harvest grain moisture for each entry is reported in **Tables 4–8**. Subsamples of each entry were collected at harvest. Those subsamples were used to determine milling, chalk, bushel weight, and 1,000-seed weight analyses. Replicated research has shown that the border effect common in small-plot research produces increases in grain yields of 10% for inbred varieties and 15% for hybrids. Readers should compare plot yields for entries in a relative manner, rather than looking at just reported yield potential alone.

All relevant data were subjected to analysis of variance procedures using SAS statistical software. The least significant difference test at the 5% significance level was used to differentiate between entries. If yield differences of two entries reported in **Tables 4–10** are greater than the LSD value reported, the entries are statistically different. In addition, a coefficient of variation (CV) was calculated for each test. This measurement is an indication of the level of precision of each test. A lower CV value indicates greater reliability of the test. The LSD and CV values for yield are reported in the footnotes of **Tables 4–8** and are included for all measured variables in **Table 10**.

Results

The performance of each entry in the five individual test locations is presented in **Tables 4–8**. On-Farm Variety Trials were planted over a range of about 5 weeks (Minter City planted April 9 and Tunica planted May 15). In general, plant stands were excellent with uniform emergence and optimum plant density. Emergence occurred over a 2-week period for April-planted tests and 7–10 days for the May-planted test. Growth rate was slow in April and early May; however, optimum conditions were encountered by mid-May and continued throughout the season. Naturally occurring straight head was observed at the Minter City location, which led to higher than normal variability since some replicates were impacted more than others. Additionally, clomazone (Command®) injury was observed at the Clarksdale location, which increased the variability of that test. Lodging was observed at the Minter City and Tunica sites. Rice yields were exceptional, ranging from 198 bushels per acre at Stoneville to 249 bushels per acre at Tunica. The CVs for yield ranged from 6–12%, which is respectable for yield tests. Milling yields tended to be normal for most entries.

A summary for grain yield for all entries at each location is provided in **Table 9.** Furthermore, yield and all other measured variables averaged over the five locations are provided in **Table 10**. Conventional hybrids provided by RiceTec Inc. (XL723 and XL753) demonstrated a yield advantage over conventional, pure line cultivars/experimental lines. Historically, hybrids performed 20% or greater relative to pure lines; however, this year, an experimental line from Arkansas (RU0801081) yielded only 10% less than XL753. Mermentau, a new cultivar from Louisiana, yielded 16% less than the XL753. Considering the fact that the plot border effect is greater on hybrids than pure lines, the actual field yields are expected to be very similar when comparing the highest-yielding hybrid to the highest-yielding pure lines. This was the second

year of testing Mermentau, and it has performed well both years. CLXL729 was the best-yielding Clearfield® hybrid. It produced 10% greater yields than CL142-AR. CLXL745, the most popular cultivar in Mississippi in 2013, produced 4–10% greater yields compared with the most popular Clearfield® pure lines. When considering the plot border effect difference for hybrids, CLXL745's performance would have been inferior to many of the popular Clearfield® pure lines in 2013. Hybrid vigor is more pronounced in stressful environments. Due to the highly productive climate present for the 2013 growing season, the magnitude of yield difference typically seen for hybrids was not observed.

Entries that begin with "RU" represent advanced breeding lines that have performed well in multiple stages of yield testing. These entries represent the best lines from different breeding programs for overall performance and are at the final stage of testing prior to a decision on their release. In the conventional experimental lines from Mississippi, RU1104077 has performed well for multiple years. It provides a good combination of grain yield, agronomics, and grain quality. RU1104077 has the "Newrex" cooking profile that makes it superior to almost all other commercially grown cultivars for parboil rice. The decision has been made to increase seed in 2014 for a possible release. RU1204154 is another conventional line that looks promising. It is a high-yielding semidwarf line that has excellent milling and low chalk. Mississippi has a number of advanced experimental Clearfield® lines. RU1104122 is a line that has yield performance similar to CL151, offers improved straw strength, and also has the Newrex cooking profile preferred by the parboil industry. It is being increased in the Puerto Rico Winter Nursery for large-scale testing in 2014. RU1204194 is another high-yielding Clearfield line with Southern U.S. long-grain cook type and considerably less chalk compared with CL151. This line will continue to be evaluated through 2014.

Table 11 provides agronomic, yield, and milling data from select rice varieties that have been included in on-farm tests for the last 3 years. Variety selection should include emphasis on performance stability over many environments. Varieties such as Cocodrie and Cheniere have been relatively stable over many years, thus they have been popular varieties in Mississippi and the Midsouth. Rex also has shown tremendous stability over multiple locations in Mississippi and other states.

Variety and hybrid reactions to common diseases and straight head disorder are found in **Table 12**. Decisions about the use of fungicides should be made considering a variety's susceptibility to a particular disease, the potential for the disease to cause economic loss, and efficacy of fungicides that are available to combat or prevent the respective disease.

Nitrogen fertilization rate guidelines are provided in **Table 13**. These guidelines were generated from N response studies conducted for newly released varieties over multiple years and sites. A combination of current economics, individual varieties' susceptibility to lodging, and yield potential are included in determining the rate guidelines. Annually, coarse-textured soils, commonly referred to as silt loams, require approximately 30 pounds of nitrogen per acre less than fine-textured or clay soils. When appropriate amounts of N are applied on all soils, the risks of disease and lodging are lessened without sacrificing yield and quality.

Suggested conventional varieties for Mississippi rice growers are Bowman, Cocodrie, Cheniere, Rex, Taggart, Templeton, and Wells. Sabine is often grown on limited acreage by contract. XL723 and XL753 are good choices for conventional hybrid rice production. For growers who need to utilize the Clearfield® technology to control red rice, CL111, CL142-AR, CL151, and CL152 pure lines will be available in 2013. Clearfield® hybrids, solely offered by RiceTec Inc. have demonstrated excellent yield potential; however, CLXL745 has not been stable across multiple locations and years. CLXL729 has been available for many years and still performs exceptionally well in Mississippi. Information for production of Clearfield® hybrid rice is offered by RiceTec Inc. Seed costs for Clearfield® rice have increased in recent years.

Clearfield® rice should be used as a tool with careful attention given to stewardship so the technology can last into the future. Stewardship should encompass minimizing the potential for outcrossing of red rice and Clearfield® rice. Stewardship should also include addition of postemergence and residual herbicides for grass control so that selection pressure is minimized. Incidences of ALS-resistant (Newpath®, Beyond®) barnyardgrass and sedges have increased in the last few years. Outcrossing and grass resistance jeopardize this important technology.

As has been demonstrated in previous years, no variety or hybrid is perfect. Each variety that is released has qualities or characteristics that add value to the marketplace. Varietal performance over time and in different environments should be considered when choosing which to plant. For varieties with high yield potential, consider risks such as lodging and disease and plan to manage for those yield-limiting factors. Multiple varieties, both Clearfield® and conventional, are recommended for average-sized rice farms to further spread the risks associated with rice production.

Table 4. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Choctaw, Mississippi, 2013.[1]

Entry	Yield[2]	Whole milled rice	Total milled rice	Chalk[3]	Harvest moisture	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]
	bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*
Conventional											
Antonio	229	60.9	72.3	4.0	18.1	46.5	38	88	0	1	25.6
Bowman	219	58.7	70.2	2.8	19.8	45.8	41	90	0	1	26.7
Cheniere	232	64.5	73.7	3.2	18.0	46.6	39	90	0	1	23.9
Cocodrie	217	64.3	72.8	5.3	17.0	45.0	38	91	0	1	24.5
Colorado	209	55.8	71.2	5.1	16.1	44.3	40	87	0	1	27.3
Mermentau	222	60.0	72.3	5.1	19.2	44.1	37	90	0	1	22.8
Presidio	185	60.8	71.4	2.0	15.9	44.4	38	88	0	1	25.7
Rex	214	60.6	69.4	7.2	18.6	45.1	42	88	0	1	28.5
RoyJ	212	55.2	72.1	3.3	22.0	42.8	44	94	0	1	25.5
Sabine	195	65.5	71.8	2.5	20.6	46.0	38	91	0	1	25.1
Taggart	220	47.9	70.2	3.6	20.0	45.5	45	94	0	1	28.2
Templeton	222	63.8	72.1	2.5	19.2	45.9	45	95	0	1	23.6
USH13001	278	48.3	68.8	3.3	19.8	39.1	47	88	87	4	28.3
USH13002	249	50.6	69.6	9.5	18.2	41.0	48	89	85	2	26.0
XL723	283	56.9	70.8	7.2	14.7	41.3	47	87	0	1	27.1
XL753	294	54.9	71	7.2	16.8	43.4	46	86	0	1	26.0
RU0801081	235	51.4	70.8	4.2	16.1	46.4	42	87	0	1	27.6
RU1104077	214	60.6	70.8	5.2	18.1	46.7	40	91	0	1	26.3
RU1104191	221	60.2	70.5	4.0	18.7	46.4	39	91	0	1	26.2
RU1204154	235	65.0	72.2	5.7	17.7	43.5	38	93	0	1	23.3
RU1204196	237	61.3	71.9	4.6	17.1	45.2	42	94	0	1	27.1
RU1204197	236	58.7	70.5	4.1	17.7	46.2	41	91	0	1	25.6
RU1204198	225	54.3	69.5	11.9	20.3	43.7	43	91	0	1	31.2
Clearfield											
CL111	231	59.1	72.1	6.4	16.7	45.3	41	91	0	1	26.8
CL142-AR	234	54.9	70.8	6.6	20.6	46.3	45	91	0	1	28.8
CL151	246	63.3	71.8	8.9	18.0	45.3	39	90	0	1	24.8
CL152	234	64.4	71.9	4.9	19.9	44.4	40	94	0	1	22.5
CL162	224	59.3	71.1	6.6	18.3	44.7	45	90	0	1	26.9
CLXL729	282	56.6	70.4	9.0	14.8	41.6	46	87	0	1	26.2
CLXL745	263	54.2	71.5	8.0	15.3	41.7	46	86	0	1	27.5
RU1004083	197	55.2	70.7	7.4	18.6	45.8	40	92	0	1	25.9
RU1104073	226	61.6	71.4	5.0	18.3	44.6	41	91	0	1	24.2
RU1104122	232	60.0	70.6	9.9	17.6	44.7	42	91	0	1	27.1
RU1104154	223	63.4	71.8	5.0	17.8	45.1	41	89	0	1	25.3
RU1204114	230	64.3	72.7	4.7	18.2	44.6	39	91	0	1	24.0
RU1204122	232	63.2	72.1	4.8	19.5	44.1	40	94	0	1	23.8
RU1204156	224	62.9	71.8	4.3	22.0	45.2	40	95	0	1	24.8
RU1204194	258	62.0	71.1	2.8	18.2	44.7	43	91	0	1	26.4

[1]**Planting date:** April 10. **Emergence:** April 21–25. **Herbicides:** 22 fl oz/A Roundup PowerMax + 2 oz/A Valor SX + 21 fl oz/A 2,4-D Lo-Vol 6 on February 15; 18 fl oz/A Command + 1 qt/A Roundup PowerMax on April 13; 0.6 oz/A Regiment + 0.3 lb/A Facet on May 21. **Fertilizer:** 110 lb/A DAP on April 30; 326 lb/A urea on May 28. **Insecticide:** Karate Z at 1.8 fl oz/A on July 26. **Permanent flood:** May 31. **Drained field:** August 5. **Harvested:** August 27. **A difference of 22 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 5.8%.**
[2]Rough rice at 12% moisture.
[3]Winseedle chalk measurement.
[4]Days after emergence.
[5]Percent of plot that was lodged.
[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.
[7]Weight of 1,000 kernels.

Table 5. Performance of rice varieties, hybrids, and lines grown on Dundee silty clay loam soil near Clarksdale, Mississippi, 2013.[1]

Entry	Yield[2]	Whole milled rice	Total milled rice	Chalk[3]	Harvest moisture	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]
	bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*
Conventional											
Antonio	247	60.6	72.2	4.3	13.6	44.8	39	88	0	1	25.1
Bowman	246	55.5	70.9	2.3	14.3	45.4	42	92	0	1	27.1
Cheniere	252	59.2	73.2	2.0	13.1	45.1	38	91	0	1	23.1
Cocodrie	231	60.0	72.4	3.8	12.7	45.1	39	92	0	1	26.0
Colorado	210	54.7	71.1	4.8	12.2	43.5	40	86	0	1	26.3
Mermentau	243	59.1	71.1	4.0	13.5	44.0	39	91	0	1	24.0
Presidio	200	46.3	70.2	2.1	12.2	43.2	37	88	0	1	23.0
Rex	235	52.2	68.6	4.9	12.3	44.7	41	88	0	1	28.2
RoyJ	227	53.8	71.0	1.4	14.6	44.2	45	104	0	1	26.7
Sabine	208	63.9	71.7	1.6	14.6	46.2	37	93	0	1	25.4
Taggart	260	42.2	70.2	3.4	13.4	45.9	44	96	0	1	27.2
Templeton	237	50.5	71.9	2.9	13.6	46.2	41	97	0	1	23.8
USH13001	—	—	—	—	—	—	—	—	—	—	—
USH13002	—	—	—	—	—	—	—	—	—	—	—
XL723	261	49.7	70.2	7.6	11.9	40.9	42	92	0	1	25.6
XL753	278	53.9	72.6	6.4	12.9	41.8	44	90	0	1	24.6
RU0801081	264	46.7	70.8	3.1	12.9	44.7	43	90	0	1	26.9
RU1104077	236	50.6	70.1	2.8	14.5	46.4	40	92	0	1	28.1
RU1104191	255	48.0	69.8	3.3	14.4	46.1	41	91	0	1	26.1
RU1204154	244	59.5	71.6	2.4	13.7	43.7	37	93	0	1	23.1
RU1204196	246	57.3	72.3	2.5	13.3	45.5	41	94	0	1	25.9
RU1204197	229	59.1	70.8	3.2	13.7	45.2	40	92	0	1	25.3
RU1204198	218	46.9	68.8	9.7	15.1	43.7	42	90	0	1	30.6
Clearfield											
CL111	229	50.5	71.2	5.2	12.4	45.5	40	93	0	1	27.0
CL142-AR	235	41.3	70.0	6.3	14.2	46.3	44	93	0	1	27.7
CL151	226	55.7	71.6	7.3	14.4	45.3	38	101	0	1	24.3
CL152	246	56.5	71.5	4.8	13.7	44.9	39	94	0	1	22.9
CL162	231	47.5	70.5	4.0	13.5	44.0	42	90	0	1	25.2
CLXL729	280	51.3	70.4	6.1	11.8	41.2	45	91	0	1	25.3
CLXL745	229	50.9	71.4	3.5	11.5	40.6	45	87	0	1	25.4
RU1004083	254	43.5	70.8	5.5	13.1	44.8	39	88	0	1	25.2
RU1104073	247	50.3	71.0	4.1	12.8	44.2	41	91	0	1	24.1
RU1104122	240	56.3	70.0	6.2	13.0	45.0	41	92	0	1	27.8
RU1104154	205	53.7	70.9	3.6	14.7	45.0	40	93	0	1	25.0
RU1204114	244	54.8	71.9	5.6	13.3	44.5	40	91	0	1	24.0
RU1204122	240	57.0	72.2	4.4	14.3	44.5	39	91	0	1	23.6
RU1204156	226	61.9	71.9	3.7	14.6	45.9	36	99	0	1	24.2
RU1204194	252	56.7	71.3	3.7	14.0	44.8	40	91	0	1	25.7

[1]**Planting date:** April 17. **Emergence:** April 28–May 3. **Herbicides:** Gramoxone SL at 1qt/A + Command at 1 pt/A on April 20; RiceBeaux at 4 qt/A + Facet at 0.33 lb/A on June 4. **Fertilizer:** 326 lb/A urea on June 5. **Insecticide:** Lambda® at 3.66 fl oz/A on August 12. **Fungicide:** Quadris at 12 fl oz/A on July 17. **Intermittent irrigation initiated**: June 6. **Drained field:** August 20. **Harvested:** September 10. **A difference of 32 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 8.1%.**

[2]Rough rice at 12% moisture.

[3]Winseedle chalk measurement.

[4]Days after emergence.

[5]Percent of plot that was lodged.

[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.

[7]Weight of 1,000 kernels.

Table 6. Performance of rice varieties, hybrids, and lines grown on Dubbs silt loam soil near Minter City, Mississippi, 2013.[1]

Entry	Yield[2]	Whole milled rice	Total milled rice	Chalk[3]	Harvest moisture	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]	Straight head[8]
	bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*	*%*
Conventional												
Antonio	250	57.2	73.1	5.7	15.1	42.8	43	94	33	3	23.3	0
Bowman	228	53.7	72.6	2.7	16.0	45.1	41	104	0	1	24.9	0
Cheniere	267	63.1	75.2	3.2	14.1	44.3	40	98	0	1	21.7	0
Cocodrie	203	56.8	73.6	6.1	13.8	43.9	42	99	0	1	23.8	10
Colorado	213	49.6	71.5	5.6	14.2	41.7	43	85	33	3	24.1	2
Mermentau	255	59.6	72.8	7.3	15.3	43.5	42	97	2	1	21.9	3
Presidio	191	48.9	72.7	2.9	12.6	41.6	41	97	0	1	22.5	0
Rex	204	49.1	69.9	4.8	14.0	44.1	42	100	0	1	25.7	2
RoyJ	270	55.7	73.9	2.6	15.2	44.2	47	106	0	1	23.9	0
Sabine	216	59.0	73.2	2.6	13.9	44.4	41	100	10	1	22.5	0
Taggart	286	46.0	72.6	3.4	14.5	44.3	50	102	43	3	24.6	0
Templeton	221	51.5	72.9	3.3	13.9	45.2	46	101	13	2	22.0	7
USH13001	259	49.4	70.4	3.5	15.4	39.2	45	97	77	2	25.2	0
USH13002	224	48.3	70.6	4.7	15.0	40.7	46	101	87	2	26.0	7
XL723	274	56.2	72.5	4.4	13.9	41.1	46	100	0	1	25.7	0
XL753	233	49.3	72.6	5.8	14.6	42.3	44	102	0	1	25.2	0
RU0801081	256	47.4	72.0	3.6	14.4	44.3	46	94	23	3	25.2	0
RU1104077	242	51.0	72.1	3.1	14.8	45.3	42	100	1	1	23.2	2
RU1104191	230	48.9	71.5	4.1	14.9	45.4	41	101	0	1	24.7	0
RU1204154	250	52.3	73.1	2.3	13.9	43.4	40	98	3	2	21.1	0
RU1204196	236	59.3	73.9	3.8	14.1	44.3	42	98	3	1	24.1	0
RU1204197	188	58.5	73.6	6.1	13.7	43.9	42	97	0	1	23.8	27
RU1204198	227	49.3	72.0	4.7	13.9	43.0	45	99	0	1	24.8	0
Clearfield												
CL111	240	47.6	72.2	5.0	12.9	42.4	44	95	43	3	24.3	5
CL142-AR	264	39.4	72.6	5.1	14.1	45.5	50	98	25	3	23.6	0
CL151	264	47.6	73.4	7.2	13.8	42.5	43	90	52	4	22.8	5
CL152	258	60.9	73.2	5.9	13.8	44.1	42	101	0	1	23.3	0
CL162	220	45.5	71.6	4.8	14.5	41.4	45	97	25	3	25.1	0
CLXL729	242	53.1	71.1	5.1	14.0	41.0	46	104	0	1	25.3	0
CLXL745	244	51.0	72.2	4.2	14.5	40.7	46	99	13	2	26.3	0
RU1004083	222	43.9	72.3	5.7	15.4	44.2	43	100	10	2	23.9	0
RU1104073	225	51.6	73.2	3.8	13.7	43.4	41	100	2	1	22.6	0
RU1104122	233	54.3	72.2	5.9	12.9	42.5	41	100	28	2	23.6	0
RU1104154	219	54.4	73.3	4.6	14.2	43.5	44	99	0	1	22.8	35
RU1204114	239	54.8	73.3	5.9	14.8	42.0	44	96	27	2	24.7	3
RU1204122	264	59.1	74.5	4.7	14.9	43.3	43	99	0	1	21.9	2
RU1204156	181	62.6	74.9	3.5	15.8	45.1	40	105	0	1	21.2	48
RU1204194	229	54.6	73.1	3.2	13.6	42.3	43	97	40	3	23.3	0

[1]**Planting date:** April 9. **Emergence:** April 20–26. **Permanent flood:** May 3. **Harvested:** September 12. **A difference of 45 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 11.6%.**
[2]Rough rice at 12% moisture.
[3]Winseedle chalk measurement.
[4]Days after emergence.
[5]Percent of plot that was lodged.
[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.
[7]Weight of 1,000 kernels.
[8]Naturally occurring straighthead disorder was observed in the test. It is a result of "cut," coarse-textured soil.

Table 7. Performance of rice varieties, hybrids, and lines grown on Sharkey silty clay loam soil near Stoneville, Mississippi, 2013.[1]

Entry	Yield[2]	Whole milled rice	Total milled rice	Chalk[3]	Harvest moisture	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]
	bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*
					Conventional						
Antonio	170	60.1	72.0	7.8	15.2	44.6	34	79	0	1	23.6
Bowman	191	59.4	70.2	4.9	19.7	45.9	40	85	0	1	25.9
Cheniere	191	59.1	73.5	5.7	14.5	45.1	36	84	0	1	22.7
Cocodrie	158	59.4	72.8	12.8	14.7	44.5	33	84	0	1	23.4
Colorado	145	54.9	72.0	7.2	12.9	43.1	37	79	0	1	25.2
Mermentau	186	56.3	71.8	13.0	16.1	43.8	37	81	0	1	22.3
Presidio	166	56.9	70.3	5.1	14.3	43.5	38	79	0	1	23.7
Rex	185	57.5	69.3	11.0	16.4	44.0	40	80	0	1	27.4
RoyJ	183	52.5	71.0	4.6	23.1	43.5	42	87	0	1	25.2
Sabine	162	63.2	71.2	5.1	18.4	45.4	38	85	0	1	23.6
Taggart	188	44.7	69.4	7.3	18.8	46.2	44	90	0	1	27.9
Templeton	175	59.0	72.1	4.4	15.3	45.6	41	88	0	1	23.1
USH13001	243	49.1	69.6	6.0	17.9	39.2	44	83	0	1	27.0
USH13002	233	45.7	69.2	14.5	18.2	40.7	48	83	0	1	24.6
XL723	253	55.5	70.9	12.5	14.5	40.6	43	81	0	1	25.9
XL753	270	49.3	70.7	13.3	15.4	42.0	41	82	0	1	26.2
RU0801081	225	45.9	69.4	6.1	14.8	44.9	41	82	0	1	25.9
RU1104077	208	53.6	69.5	7.0	16.8	46.1	40	83	0	1	25.6
RU1104191	200	56.4	70.2	8.9	17.0	46.3	40	84	0	1	25.5
RU1204154	191	60.8	71.9	8.5	14.9	43.1	35	84	0	1	21.5
RU1204196	211	58.3	71.0	6.9	16.2	44.9	41	83	0	1	24.6
RU1204197	181	58.2	71.8	10.4	14.8	44.3	38	80	0	1	24.5
RU1204198	194	55.9	69.2	16.4	20.2	43.6	41	80	0	1	29.2
					Clearfield						
CL111	182	61.2	72.4	10.6	14.3	44.3	36	82	0	1	25.3
CL142-AR	201	52.5	71.2	9.0	18.2	45.8	44	86	0	1	26.9
CL151	204	59.5	71.4	13.3	16.1	43.9	38	84	0	1	23.4
CL152	200	56.4	70.5	9.7	16.4	44.2	38	85	0	1	21.8
CL162	178	50.1	69.3	10.4	15.8	44.0	40	82	0	1	25.5
CLXL729	263	54.2	70.5	12.2	14.2	40.8	43	79	0	1	25.6
CLXL745	222	55.5	71.2	9.6	13.8	40.8	42	80	0	1	25.9
RU1004083	183	46.1	69.9	10.0	15.0	45.3	37	83	0	1	25.1
RU1104073	194	54.7	71.8	7.2	16.2	44.3	37	82	0	1	22.5
RU1104122	211	57.5	69.8	15.1	16.3	43.9	41	82	0	1	25.4
RU1104154	192	59.6	72.3	8.8	15.8	44.1	39	82	0	1	24.1
RU1204114	187	57.7	71.9	9.4	14.9	43.5	37	82	0	1	21.7
RU1204122	190	60.9	72.5	8.0	17.6	43.4	38	86	0	1	22.4
RU1204156	183	61.7	71.1	6.5	21.0	45.1	35	88	0	1	23.1
RU1204194	237	60.9	72.2	8.1	17.7	43.6	42	83	0	1	24.8

[1]**Planting date:** April 22. **Emergence:** April 29–May 6. **Herbicides:** Roundup WeatherMax at 22 fl oz/A + Command at 1 pt/A on April 23; 1 gal/A Riceshot + 0.33 pt/A Grandstand + 0.75 oz/A Permit Plus + 1.2 qt/A Pendimethalin on May 21. **Fertilizer:** 326 lb/A urea on May 28. **Insecticide: Karate Z** at 2.3 fl oz/A on July 17 and August 8. **Permanent flood:** May 29. **Drained field:** August 15. **Harvested:** August 27. **A difference of 14 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 4.5%.**

[2]Rough rice at 12% moisture.

[3]Winseedle chalk measurement.

[4]Days after emergence.

[5]Percent of plot that was lodged.

[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.

[7]Weight of 1,000 kernels.

Table 8. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Tunica, Mississippi, 2013.[1]

Entry	Yield[2]	Whole milled rice	Total milled rice	Chalk[3]	Harvest moisture	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]
	bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*
Conventional											
Antonio	245	58.7	70.4	6.4	14.4	42.1	40	77	0	1	25.3
Bowman	237	54.4	69.7	3.9	15.5	42.2	39	80	0	1	25.0
Cheniere	243	63.6	72.3	4.7	15.2	41.4	39	83	0	1	22.7
Cocodrie	247	60.8	71.2	6.5	14.1	42.0	40	80	0	1	23.7
Colorado	248	53.4	69.4	6.3	15.8	40.7	42	76	58	3	24.9
Mermentau	263	62.4	71.1	9.1	14.3	41.9	39	77	0	1	22.9
Presidio	218	59.1	71.1	3.9	13.9	40.4	41	79	0	1	23.9
Rex	243	54.6	68.3	9.1	14.4	42.0	44	78	0	1	27.6
RoyJ	281	59.5	72.1	5.0	17.7	38.2	48	84	0	1	24.8
Sabine	221	60.8	70.5	4.1	15.0	42.6	40	83	0	1	22.5
Taggart	283	57.2	71.2	3.5	16.8	42.8	50	86	3	1	26.4
Templeton	260	61.1	72.0	3.5	15.4	43.6	47	83	17	1	22.6
USH13001	259	42.3	67.9	4.0	16.6	26.1	46	79	100	5	26.5
USH13002	221	44.9	67.7	6.7	17.6	36.4	48	80	100	4	24.7
XL723	290	56.7	70.5	9.4	14.3	38.8	48	80	83	4	26.4
XL753	313	51.2	70.7	12.5	14.2	40.7	46	79	50	2	26.1
RU0801081	264	52.6	71.0	3.8	13.7	43.2	45	77	25	2	27.3
RU1104077	241	49.3	68.4	5.6	14.3	43.4	41	80	0	1	24.0
RU1104191	249	50.7	68.9	8.0	14.4	44.0	43	77	0	1	25.5
RU1204154	236	58.6	70.4	4.0	14.5	41.2	38	80	33	2	21.9
RU1204196	229	57.2	71.3	5.3	16.3	42.6	44	83	92	5	25.0
RU1204197	259	60.4	70.8	7.1	18.0	38.5	45	83	58	3	24.0
RU1204198	254	54.5	68.4	7.4	16.4	35.6	44	84	0	1	28.0
Clearfield											
CL111	240	57.8	70.3	8.3	15.5	41.3	43	80	40	3	25.2
CL142-AR	267	54.0	70.7	4.5	19.3	42.3	49	82	25	2	25.1
CL151	240	58.7	70.5	8.6	17.5	41.2	42	79	100	4	22.5
CL152	233	60.1	68.8	7.6	14.7	39.0	43	83	0	1	19.5
CL162	235	52.4	69.7	5.0	16.3	40.1	44	79	67	4	26.0
CLXL729	273	51.5	69.5	11.0	14.4	39.7	47	79	65	3	26.1
CLXL745	285	46.1	70.1	6.9	13.7	39.8	48	76	100	4	27.0
RU1004083	250	45.0	70.9	7.6	13.9	43.5	41	76	0	1	25.7
RU1104073	242	58.2	70.0	6.6	14.5	40.0	43	78	5	1	22.6
RU1104122	233	58.2	70.5	11.7	17.1	40.5	40	82	50	3	23.5
RU1104154	254	58.3	71.6	8.5	14.0	41.7	43	79	0	1	22.9
RU1204114	213	57.9	72.3	8.0	16.7	41.6	42	82	50	3	22.0
RU1204122	231	60.0	72.4	7.9	17.5	39.6	42	86	28	2	21.8
RU1204156	249	63.1	70.8	4.3	15.3	43.0	41	88	17	2	22.3
RU1204194	213	60.2	71.2	7.1	20.6	38.8	41	84	42	3	23.2

[1]**Planting date:** May 15. **Emergence:** May 22–25. **Herbicides:** Command at 1 pt/A on May 16; Ricestar HT at 24 fl oz/A on May 22. **Fertilizer:** 292 lb/A 41-0-0-4 on June 4; 130 lb/A urea on July 3. **Fungicide:** Stratego at 17 fl oz/A on July 31. **Permanent flood:** June 5. **Drained field:** August 30. **Harvested:** September 26. **A difference of 31 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 7.6%.**
[2]Rough rice at 12% moisture.
[3]Winseedle chalk measurement.
[4]Days after emergence.
[5]Percent of plot that was lodged.
[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.
[7]Weight of 1,000 kernels.

Table 9. Average rough rice yields of varieties, hybrids, and lines evaluated in on-farm trials at five locations, 2013.

Entry	Choctaw	Clarksdale	Minter City	Stoneville	Tunica	Average	Stability[1]
	bu/A	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*	
			Conventional				
Antonio	229	247	250	170	245	228	15
Bowman	219	246	228	191	237	224	9
Cheniere	232	252	267	191	243	237	12
Cocodrie	217	231	203	158	247	211	16
Colorado	209	210	213	145	248	205	18
Mermentau	222	243	255	186	263	234	13
Presidio	185	200	191	166	218	192	10
Rex	214	235	204	185	243	216	11
RoyJ	212	227	270	183	281	235	17
Sabine	195	208	216	162	221	200	12
Taggart	220	260	286	188	283	247	17
Templeton	222	237	221	175	260	223	14
USH13001	278	—	259	243	259	260	6
USH13002	249	—	224	233	221	232	5
XL723	283	261	274	253	290	272	6
XL753	294	278	233	270	313	278	11
RU0801081	235	264	256	225	264	249	7
RU1104077	214	236	242	208	241	228	7
RU1104191	221	255	230	200	249	231	10
RU1204154	235	244	250	191	236	231	10
RU1204196	237	246	236	211	229	232	6
RU1204197	236	229	188	181	259	219	15
RU1204198	225	218	227	194	254	224	10
			Clearfield				
CL111	231	229	240	182	240	224	11
CL142-AR	234	235	264	201	267	240	11
CL151	246	226	264	204	240	236	10
CL152	234	246	258	200	233	234	9
CL162	224	231	220	178	235	218	11
CLXL729	282	280	242	263	273	268	6
CLXL745	263	229	244	222	285	249	10
RU1004083	197	254	222	183	250	221	14
RU1104073	226	247	225	194	242	227	9
RU1104122	232	240	233	211	233	230	5
RU1104154	223	205	219	192	254	219	11
RU1204114	230	244	239	187	213	223	10
RU1204122	232	240	264	190	231	231	12
RU1204156	224	226	181	183	249	213	14
RU1204194	258	252	229	237	213	238	8
Mean	232	236	236	198	249	231	
LSD	22	32	45	14	31	14	
CV	5.8	8.1	11.6	4.5	7.6	8.1	
Planting Date	April 10	April 17	April 9	April 22	May 15		
Emergence date	April 21–25	April 28–May 3	April 20–26	April 29–May 6	May 22–25		

[1]Stability is calculated by dividing the standard deviation by the mean and multiplying by 100. The lower the number, the more stable it is across multiple locations.

Table 10. Average agronomic and milling performance of varieties, hybrids, and lines grown at six on-farm locations, 2013.

Entry	Origin	Yield	Whole milled rice	Total milled rice	Chalk	Harvest moisture	Bushel weight	Plant height	50% heading	Lodging	Lodging	1,000 seed weight	Approximate seeds/pound
		bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*	*no.*
Conventional													
Antonio	TX	228	60	72	5.6	15.3	44.2	39	85	7	1.3	24.6	18454
Bowman	MS	224	56	71	3.3	17.1	44.9	41	90	0	1.0	25.9	17500
Cheniere	LA	237	62	74	3.8	15.0	44.5	38	89	0	1.0	22.8	19877
Cocodrie	LA	211	60	73	6.9	14.5	44.1	38	89	0	1.0	24.3	18682
Colorado	TX	205	54	71	5.8	14.2	42.7	40	83	18	1.7	25.6	17746
Mermentau	LA	234	59	72	7.7	15.7	43.5	39	87	0	1.1	22.8	19912
Presidio	TX	192	54	71	3.2	13.8	42.6	39	86	0	1.0	23.8	19091
Rex	MS	216	55	69	7.4	15.1	44.0	42	87	0	1.0	27.5	16507
RoyJ	AR	235	55	72	3.4	18.5	42.6	45	95	0	1.0	25.2	17986
Sabine	TX	200	62	72	3.2	16.5	44.9	39	90	2	1.1	23.8	19043
Taggart	AR	247	48	71	4.2	16.7	44.9	47	94	9	1.5	26.9	16888
Templeton	AR	223	57	72	3.3	15.5	45.3	44	93	6	1.2	23.0	19705
USH13001	Bayer	260	47	69	4.2	17.4	35.9	46	87	66	2.9	26.8	16957
USH13002	Bayer	232	47	69	8.9	17.3	39.7	48	88	68	2.3	25.3	17911
XL723	RT	272	55	71	8.2	13.9	40.5	45	88	17	1.5	26.1	17353
XL753	RT	278	52	72	9.0	14.8	42.0	44	88	10	1.3	25.6	17705
RU0801081	AR	249	49	71	4.2	14.4	44.7	43	86	10	1.5	26.6	17065
RU1104077	MS	228	53	70	4.7	15.7	45.6	40	89	0	1.1	25.4	17830
RU1104191	MS	231	53	70	5.7	15.9	45.6	41	89	0	1.0	25.6	17719
RU1204154	MS	231	59	72	4.6	14.9	43.0	38	89	7	1.4	22.2	20451
RU1204196	MS	232	59	72	4.6	15.4	44.5	42	90	19	1.9	25.3	17901
RU1204197	MS	219	59	72	6.2	15.6	43.6	41	89	12	1.5	24.6	18409
RU1204198	MS	224	52	70	10.0	17.2	41.9	43	89	0	1.0	28.8	15772
Clearfield													
CL111	LA-HA	224	55	72	7.1	14.4	43.8	41	88	17	1.7	25.7	17636
CL142-AR	AR-HA	240	48	71	6.3	17.3	45.2	46	90	10	1.7	26.4	17169
CL151	LA-HA	236	57	72	9.1	16.0	43.6	40	89	30	2.3	23.6	19253
CL152	LA-HA	234	60	71	6.6	15.7	43.3	40	91	0	1.0	22.0	20618
CL162	MS-HA	218	51	70	6.2	15.7	42.8	43	87	18	2.0	25.7	17622
CLXL729	RT	268	53	70	8.7	13.8	40.9	46	88	13	1.5	25.7	17650
CLXL745	RT	249	52	71	6.4	13.8	40.7	45	85	23	1.8	26.4	17169
RU1004083	MS	221	47	71	7.2	15.2	44.7	40	87	2	1.1	25.2	18029
RU1104073	MS	227	55	71	5.3	15.1	43.3	40	88	1	1.1	23.2	19552
RU1104122	MS	230	57	71	9.8	15.4	43.3	41	89	16	1.5	25.5	17802
RU1104154	MS	219	58	72	6.1	15.3	43.9	42	88	0	1.0	24.0	18884
RU1204114	MS	223	58	72	6.7	15.6	43.2	40	88	15	1.7	23.3	19485
RU1204122	MS	231	60	73	6.0	16.8	43.0	41	91	6	1.3	22.7	19982
RU1204156	MS	213	62	72	4.5	17.7	44.9	38	95	3	1.1	23.1	19619
RU1204194	MS	238	59	72	5.0	16.8	42.8	42	89	16	1.8	24.7	18379
Mean		231	55	71	5.8	15.7	43.3	42	89	10	1.4	24.9	
LSD		14	2	1	1.2	0.8	0.7	1	2	11	0.5	0.9	
CV		8.1	5.5	1.0	25.0	7.2	2.3	3.5	2.2	151.6	45.5	3.9	

Table 11. Average agronomic and milling performance of varieties, hybrids, and lines grown at on-farm locations from 2011–13.[1]

Entry	Origin[2]	Yield[3]	Whole milled rice	Total milled rice	Bushel weight	Plant height	50% heading[4]	Lodging[5]	Lodging score[6]	1,000 seed weight[7]	Approx. seeds/ pound
		bu/A	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*	*no.*
					Conventional						
Bowman	MS	221	57	70	44.0	40	91	5	1.1	25.7	17677
Cheniere	LA	224	61	72	42.7	38	88	3	1.1	22.2	20415
Cocodrie	LA	220	60	71	43.1	39	87	2	1.0	23.6	19225
Rex	MS	227	56	68	42.5	42	87	1	1.0	27.0	16849
RoyJ	AR	215	55	71	41.9	44	94	1	1.0	23.9	18991
Taggart	AR	227	50	70	43.7	46	92	5	1.2	26.6	17083
Templeton	AR	217	54	70	43.8	43	91	13	1.2	22.4	20308
XL753	RT	282	52	70	40.6	43	85	13	1.2	24.8	18320
RU1104077	MS	234	55	69	44.6	41	90	8	1.2	25.1	18066
RU1104191	MS	231	54	69	44.9	41	90	5	1.1	24.9	18213
					Clearfield						
CL111	LA-HA	233	56	70	42.5	41	86	32	2.1	25.0	18152
CL142-AR	AR-HA	237	48	70	44.0	47	89	19	1.4	26.4	17186
CL151	LA-HA	234	57	71	41.8	40	87	39	2.4	23.1	19655
CL152	LA-HA	226	59	69	42.3	41	90	4	1.1	21.5	21135
CL162	MS-HA	211	51	70	41.5	43	86	42	2.7	25.4	17841
CLXL745	RT	267	54	71	39.0	45	84	38	2.0	25.6	17752
RU1004083	MS	228	50	70	43.3	40	87	9	1.1	24.6	18512
RU1104122	MS	232	57	70	42.6	41	89	19	1.4	24.9	18237

[1]Data presented are the averages of 16 total sites that served as the On-Farm Variety Trials for 2011-13. Listed entries were included in all 3 years.
[2]AR = Arkansas; LA = Louisiana; MS = Mississippi; HA = Horizon Ag, in conjunction with the respective state; RT = RiceTec, Inc.
[3]Rough rice at 12% moisture.
[4]Days after emergence.
[5]Percent of plot that was lodged.
[6]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.
[7]Weight of 1,000 kernels.

Table 12. Reactions of rice varieties and hybrids to common diseases.[1]

Variety/ Hybrid	Sheath blight	Blast	Stem rot	Kernel smut	False smut	Brown leaf spot	Straight head	Lodging	Black sheath rot	Bacterial panicle blight	Narrow brown leaf spot	Leaf smut
Bowman	MS	S	S	S	S	R	MS	MS	MS	S	MR	—
Cheniere	S	S	S	S	S	MR	MR	MS	MS	MS	VS	MR
CL111	VS	S	VS	S	S	R	MS	S	S	S	S	
CL142-AR	MS	S	S	S	S	R	MS	MS	S	S	MS	
CL151	S	VS	VS	S	S	R	VS	S	S	VS	S	—
CL152	S	MS			S		MR	MR		MS	R	
CL162	S	S	S	S	S	—	MR	VS	S	MR	R	—
CL261	MS	MS	S	MS	S	R	S	MR	MS	S	S	
CLXL729	MS	MR	MS	MS	S	R	MR	S	MS	MR	MS	—
CLXL745	MS	MR	MS	MS	S	R	MR	S	MS	MR	MS	—
Cocodrie	S	S	S	S	S	MR	VS	MS	MS	VS	MS	MS
Mermentau	S	S					MS			MS		
Rex	S	VS					MR	MR		VS	VS	
RoyJ	MS	S	S	VS	S	MR	S	MR	MS	S	MR	
Sabine	S	S	S	S	S	R	—	MR	S	S	MS	—
Taggart	MS	S	S	S	S	—	—	MS	S	S	—	—
Templeton	MS	R	S	S	S	—	—	MS	S	S	—	—
Wells	S	S	S	MS	S	MR	MR	S	—	VS	R	—
XL723	MS	MR	MS	MS	S	R	MR	S	MS	MR	MS	—
XL753	R	MR								MR		

[1]Abbreviations: R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. Note: These ratings are subject to change as new or further information may become available.

Table 13. Nitrogen fertility rate guidelines.

Variety/ Hybrid	Clay soils[1]		Silt loam soils[2]	
	Preflood	Midseason	Preflood	Midseason
	lb/A	*lb/A*	*lb/A*	*lb/A*
Bowman	120–150	30–60	90–120	30–60
Cheniere	120–150	30–60	90–120	30–60
CL111	120	45	90–120	45
CL142-AR	120	45	90–120	45
CL151[3]	90–135	0–45	90	45
CL152[4]	120–150	45	120	45
Cocodrie	120–150	30–60	90–120	30–60
Mermentau[5]	120–150	30–60	90–120	30–60
Rex	120–150	45	120	45
Sabine	120–150	30–60	90–120	30–60

[1]Clay soils include soils with CEC greater than 20 $cmol_c\ kg^{-1}$.
[2]Silt loam soils include soils with CEC less than 20 $cmol_c\ kg^{-1}$.
[3]CL151 is highly prone to lodging.
[4]Two years and only three site years for clay and two site years for silt loam. Recommendations are subject to change with further locations.
[5]Only two site years of data for clay and four site years of data for silt loam.

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