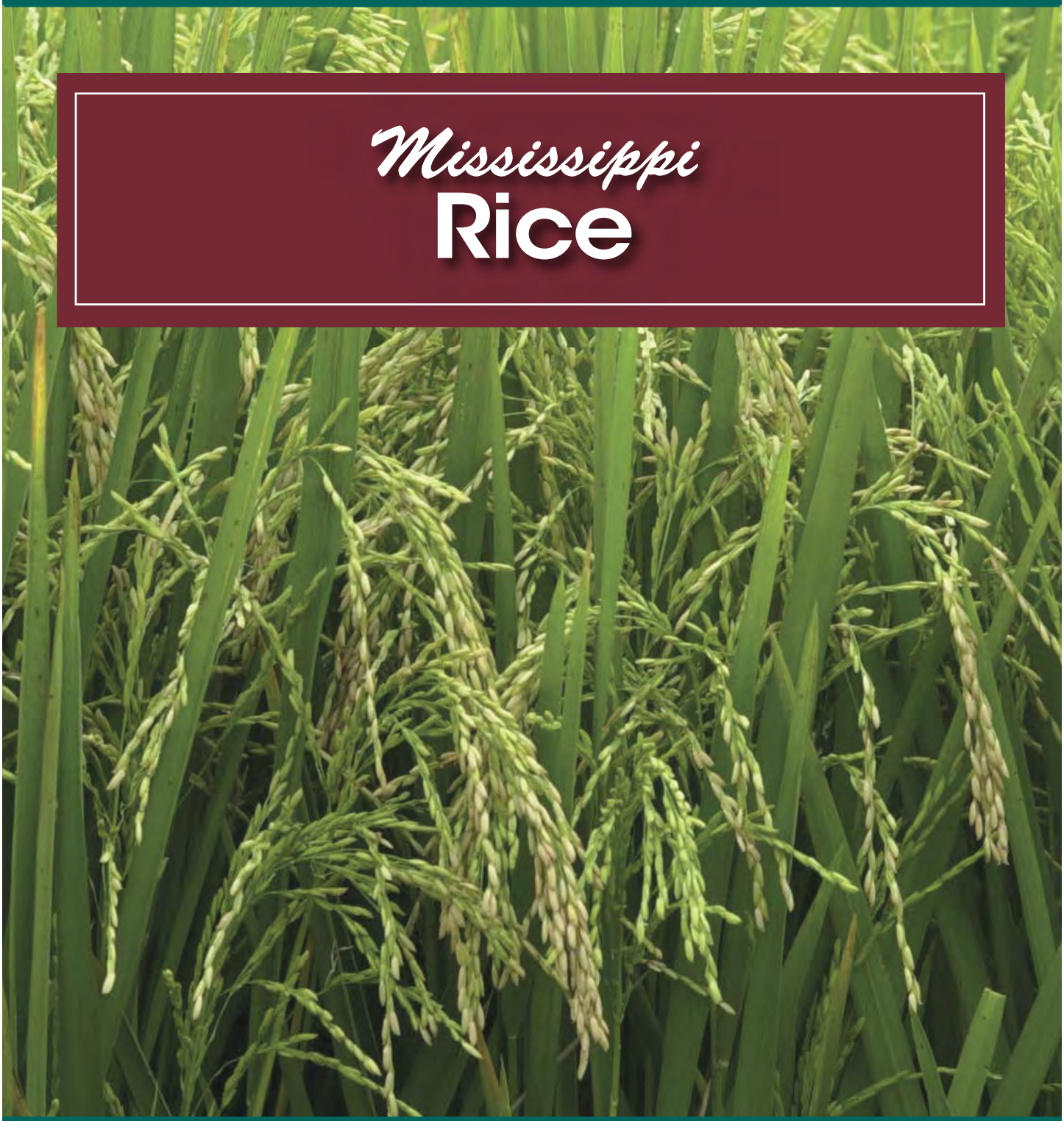
Information Bulletin 491 February 2015



Mississippi Rice

VARIETY TRIALS, 2014

Mississippi's Official Variety Trials

MAFES

Mississippi Agricultural & Forestry Experiment Station • George M. Hopper, Director

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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. 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, 2014

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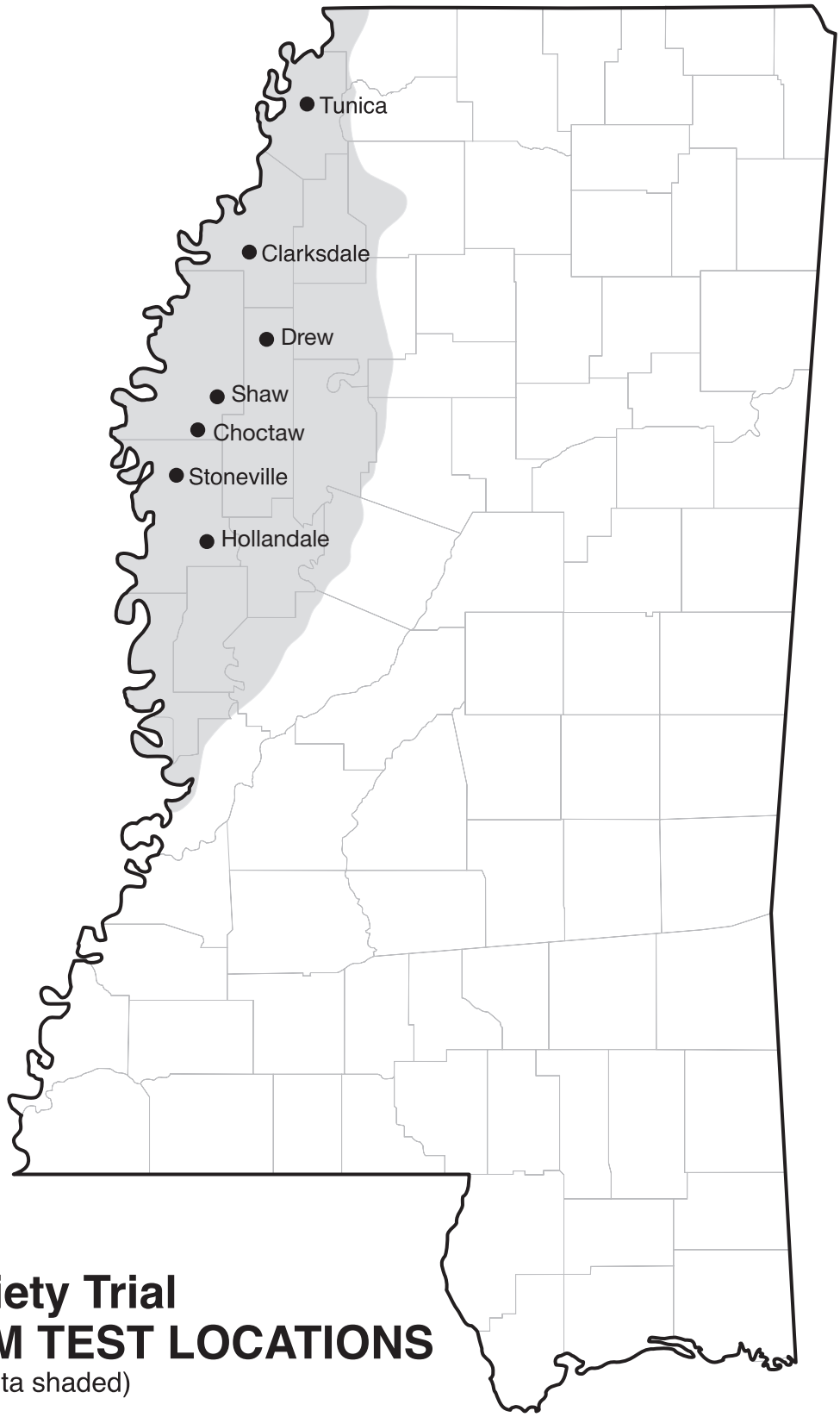
This research would not have been possible to conduct without the sustained and strong financial support of the Mississippi Rice Promotion Board, for which we are very grateful. We also would like to thank our rice grower-cooperators in key Mississippi rice-growing counties who generously extended assistance to us in terms of providing land and inputs, as well as for patiently bearing the inconvenience of having small experimental plots in their large production areas. We also acknowledge the contributions of Steven Felston, Myron Ridley, and Will Hardmand in maintaining the research plots in Stoneville.

This document was approved for publication as Information Bulletin 491 of the Mississippi Agricultural and Forestry Experiment Station. It was published by the Office of Agricultural Communications, a unit of the Mississippi State University Division of Agriculture, Forestry, and Veterinary Medicine.

Find variety trial information online at ***mafes.msstate.edu/variety-trials***.



Rice Variety Trial
ON-FARM TEST LOCATIONS

(Mississippi Delta shaded)

Mississippi Rice Variety Trials, 2014

INTRODUCTION

The USDA National Agricultural Statistics Service (NASS) in its November 2014 report estimated the area planted to rice in Mississippi to be 190,000 acres. This represents an increase of 66,000 acres or 53% more than the 2013 acreage of 124,000. Mississippi was forecasted to produce 13.7 million hundredweight (621,422 metric tons) during 2014, up 49% from the 2013 production level of 9.18 million hundredweight (416,398 metric tons). Average yield statewide was forecasted to increase by 200 pounds (or 2.9%) over the 2013 level to 7,200 pounds per acre (160 bushels per acre or 8,070 kilograms per hectare). The greatest average yield record for Mississippi, which was set in 2007, remains at 7,350 pounds per acre (163 bushels per acre or 8,238 tons per hectare).

Historically, the 2014 acreage still is 8% below the Mississippi 10-year average acreage of 206,000 (**Table 1**). However, the 2014 acreage was significantly greater than the 2013 acreage, which was 44% below the 10-year average. Seventeen counties, primarily in the Mississippi Delta, planted rice during 2014. Bolivar County continued to be the top rice producer with 47,000 acres, followed by the counties of Tunica (28,608 acres), Sunflower (25,241 acres), Washington (15,690 acres), and Quitman (15,665 acres). The complete listing of certified acres planted to rice in Mississippi from 2009–2014 is presented in **Table 2**. For 2014, rice was planted starting in March with some plantings in April and May resulting from heavy rainfall early in the growing season. These plantings led to about one-third of the total rice acreage still to be harvested by November 1, according to NASS.

Table 1. United States Department of Agriculture National Agriculture Statistics Survey history of Mississippi rice acreage by year, 1949–2014.

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	124,000
1954	77,000	1974	108,000	1994	313,000	2014	190,000
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	—
1968	67,000	1988	260,000	2008	229,000	2028	—

Table 2. United States Department of Agriculture Farm Service Agency certified rice acres planted by county in Mississippi, 2009–2014.

County	2009	2010	2011	2012	2013	2014
Adams	240	0	0	192	0	0
Attala	0	0	10	0	0	0
Bolivar	72,333	80,255	50,813	34,956	33,734	47,702
Carroll	205	0	0	0	0	0
Coahoma	14,761	25,032	11,370	8,797	8,109	14,453
DeSoto	859	1,156	335	553	1,190	2,316
Grenada	171	321	328	282	282	0
Holmes	1,485	1,448	234	141	121	203
Humphreys	3,656	8,241	1,996	1,955	1,475	3,426
Issaquena	783	2,702	880	890	1,115	483
Jackson	55	35	0	0	0	0
Lee	10	11	8	10	3	3
Leflore	17,107	20,144	6,754	5,328	3,905	6,000
Panola	4,777	6,446	5,383	5,901	5,523	10,188
Quitman	11,031	20,170	6,360	8,440	8,766	15,565
Sharkey	1,951	5,390	855	306	433	857
Sunflower	38,227	45,676	19,351	14,253	13,635	25,241
Tallahatchie	14,081	19,314	6,267	6,460	6,964	12,859
Tate	905	994	869	828	934	1,082
Tunica	23,913	27,041	23,167	21,696	24,603	28,608
Washington	29,507	35,736	18,854	14,687	11,480	15,690
Yazoo	1,841	1,907	2,273	765	0	867
Total	237,898	302,019	156,107	126,440	122,272	185,543

ON-FARM VARIETY TRIALS

On-farm varietal testing is a very important step of the varietal product development process. Conducting on-farm variety trials aids in the identification of experimental breeding lines and released varieties that are widely adapted to varying growing conditions, as well as those suited specifically to particular growing environments and even niche markets. Typically, advanced experimental lines are evaluated under various production conditions in the target population of environments to which they potentially will be released. Based on the performance of these lines in multilocation tests, the most promising lines are selected for possible release as varieties. The information collected on these lines at these tests could include, among others, yield and milling performance, insect and disease susceptibility, and tolerance to environmental stresses and lodging, which are all important factors for making breeding-related and line-advancement decisions.

By placing these on-farm trials at multiple key locations throughout the Mississippi Delta, we can expose rice lines and varieties to conditions and practices that are commonly used in commercial production in Mississippi. Many of these practices cannot always be reproduced at the experiment station, thus adding value to the on-farm evaluations. Growers are afforded the opportunity to evaluate current varieties and hybrids in commercial production side by side under their management conditions. The testing process, therefore, also helps local rice producers evaluate and decide on the most suitable variety to plant in their respective farms 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, the rice scientists can also use the variety trials as an educational tool for demonstrating the merits of the on-farm testing process to other research and Extension staff members, growers, private consultants, and rice industry personnel. Oftentimes, 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.

TEST PROCEDURES

For 2014, the On-Farm Variety Trials consisted of 36 entries, including four hybrids (two Clearfield and two conventional types), 15 named varieties (five Clearfield types and 10 publicly released conventional varieties), and 17 advanced breeding lines (eight Clearfield and nine conventional types). The trials were conducted at seven locations: Choctaw, Clarksdale, Drew, Hollandale, Shaw, Stoneville, and Tunica, all in the Mississippi Delta. 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. All crop management practices done at each location, as well as stresses encountered, are presented in **Tables 3–9** [Note: Readers who may be less familiar with pesticide formulations and application rates may wish to refer to pesticide product label information available on the web or in the *2015 Weed Control Guidelines for Mississippi* (MSU-ES Pub. 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 harvest moisture before the test was harvested. Average harvest grain moisture for each entry is reported in **Tables 3–9**. 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 results in increases in grain yields of 10% for inbred varieties and 15% for hybrids. Therefore, the plot yields reported for entries should be compared in a relative manner rather than looking at just the absolute values for the reported yield potential.

All relevant data were subjected to analysis of variance procedures using SAS statistical software. The least significant difference (LSD) test at the 5% significance level was used to differentiate between entries within a trial or location. If yield differences of two entries reported in **Tables 3–9** were greater than the LSD value reported, the entries are statistically different from each other. In addition, a coefficient of variation (CV) was calculated for each test. This measurement is an indication of the relative level of precision of yield estimates. Lower CV values indicate more precise estimate of the mean yield. The LSD and CV values for yield are reported in the footnotes of **Tables 3–9**, and are included for measured variables in **Table 11**.

RESULTS

The performance of each entry in the seven individual test locations is presented in **Tables 3–9**. On-Farm Variety Trials were planted over a range of about 6 weeks (Drew planted on March 25, and Stoneville planted on May 6). In general, plant stands were excellent with uniform emergence and optimum plant density for all locations. Among the diseases reported to have occurred at some point in the growing season were leaf and panicle blast, sheath blight, and false smut. However, none occurred to a level that was economically damaging. Lodging was observed at most locations but mostly only for one test entry. As in 2013, rice yields were high, with site averages ranging from 196 bushels per acre in Stoneville to 274 bushels per acre in Hollandale. The CVs for yield ranged from 3% to 10%, 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 10.** Furthermore, yield and all other measured variables averaged over the seven locations are provided in **Table 11**. The conventional hybrid XL753 developed by RiceTec, Inc., was the highest yielding of all entries across locations (average yield of 306 bushels per acre). The same hybrid also demonstrated a yield advantage over conventional pureline cultivars/experimental lines the previous year. Historically, hybrids have outperformed purelines by 20% or more in Mississippi. This year, however, several entries had yields that were within 80% or higher relative to XL753. These were the conventional varieties Lakast, Cocodrie, and Rex, and the Clearfield varieties CL111 and CL151. Considering the fact that the plot border effect is greater on hybrids compared to pure lines, the actual yields may be expected to be very similar when

Figure 1. Upcoming conventional variety release: RU1104077.

comparing the highest-yielding hybrid to the highest-yielding purelines. The continued good performance of Rex relative to the highest-yielding hybrid should help in further increasing its acreage in the future. In 2013, Rex became the most popular conventional pureline in Mississippi, occupying roughly 15% of the state's total rice area.

Entries that begin with "RU" represent advanced breeding lines that have performed well in multiple stages of yield testing. These 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 (**Figure 1**) has performed well for multiple years already and had a yield performance of 238 bushels per acre, which is comparable to Rex in the 2014 on-farm tests. This line provides a good combination of grain yield, agronomics, and grain quality. RU1104077 has the "Newrex" cooking profile that makes it superior to most all other commercially grown cultivars for parboiled rice. In 2014, in preparation for possible release, breeder seed was produced for this line in Puerto Rico during the winter and in Stoneville during the summer. This entry is likely to be commercially released as a new variety in 2015. Another conventional entry that has performed well during the past few years is RU1204154. It is a high-yielding, semidwarf line that has excellent milling and low chalk.

For Clearfield types, two advanced lines, RU1104122 and RU1204194, also yielded within 80% of the overall highest-yielding entry, XL753, and within 84% of the highest-yielding Clearfield hybrid, CLXL745 (average yield of 289 bushels per acre), which was the most popular Clearfield hybrid in Mississippi the previous year. During 2014, RU1104122 was considered for a limited release and named "CL163" (**Figure 2**). In addition to good yield performance that has consistently been comparable to CL151, CL163 offers lodging resistance and also has the "Newrex" cooking profile preferred by the parboiled-rice industry. In preparation for commercial release, breeder seeds of CL163 were produced in Puerto Rico and Stoneville during the 2014 winter and summer, respectively. RU1204194, on the other hand, continued to perform well in 2014. This Clearfield line has the Southern USA long-grain cook type and possesses considerably less chalkiness than CL151.

Table 12 provides the agronomic, yield, and milling data from select rice varieties that have been included in on-farm tests for the last few 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. As stated earlier, Rex has also shown tremendous stability over multiple locations both in Mississippi and other states in the Southern U.S. Rice Belt.

Variety and hybrid reactions to common diseases and straight-head disorder are found in **Table 13**. 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 14**. These guidelines were generated from multi-year, multisite N response studies conducted for newly released varieties. 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. By applying less N on silt loam soils, disease and lodging incidence are reduced without sacrificing yield and quality.

Based on this and previous years of on-farm trials, the suggested conventional varieties for Mississippi rice growers are Bowman, Cocodrie, Cheniere, Rex, Taggart, Templeton, Wells, Mermentau, and Lakast. Sabine is often grown on limited acreage by contract. XL753 and XL723 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 are the options. 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 it 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 variety 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.

Figure 2. Upcoming Clearfield® variety release: RU1104122 (CL163).

Table 3. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Choctaw, Mississippi, 2014.[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	203	64.1	69.6	3.8	16.0	44.8	39	86	0	1	22.8
Bowman	239	60.0	67.0	1.7	17.8	46.0	40	88	0	1	25.2
Cheniere	219	61.7	69.8	2.7	15.6	44.4	38	87	0	1	21.8
Cocodrie	200	62.6	69.2	4.8	16.5	44.9	38	87	0	1	22.6
Colorado	183	58.7	68.1	4.1	14.7	43.3	40	84	0	1	23.8
LaKast	241	57.3	67.9	3.7	16.1	44.1	44	88	0	1	24.6
Mermentau	212	62.1	68.4	4.0	17.4	44.2	38	88	0	1	21.6
Rex	222	58.9	66.0	4.3	16.6	44.8	42	90	0	1	25.6
RoyJ	212	56.7	67.0	1.7	20.2	43.4	45	97	0	1	23.4
Sabine	200	62.6	67.9	2.0	17.2	45.4	37	91	0	1	23.4
USH13001	199	51.5	65.5	3.7	21.0	38.5	46	89	95	4	26.2
XL753	275	59.6	68.5	6.3	15.6	44.9	43	85	0	1	24.8
RU1104077	234	60.1	66.6	2.4	17.0	46.3	41	88	0	1	24.4
RU1204154	218	62.5	68.8	3.4	15.0	43.7	37	90	0	1	21.6
RU1204196	220	61.2	68.6	4.7	15.9	44.0	43	86	0	1	23.8
RU1204197	208	60.5	68.1	4.0	16.1	45.2	41	86	0	1	23.6
RU1304122	188	64.2	70.8	4.6	15.0	45.3	42	88	0	1	20.8
RU1304154	221	61.5	68.4	3.5	15.7	45.2	39	88	0	1	24.0
RU1304156	193	63.9	70.5	3.6	15.1	45.1	44	88	0	1	20.6
RU1304157	209	63.4	69.4	4.4	16.1	45.3	39	87	0	1	23.8
RU1304197	221	62.5	68.2	3.3	16.0	43.0	39	88	0	1	21.8
Clearfield											
CL111	199	63.1	68.75	4.7	15.1	44.4	39	88	0	1	24.4
CL142-AR	209	58.4	66.95	6.9	19.4	47.1	48	92	0	1	25.4
CL151	242	63.0	68.75	6.9	16.5	45.1	40	88	0	1	23.0
CL152	204	61.8	67.7	3.0	17.2	44.2	40	91	0	1	20.8
CLJZMN	226	61.3	68.1	1.9	15.3	42.0	43	90	0	1	25.0
CLXL729	244	58.4	66.2	5.0	15.4	42.9	45	86	0	1	24.4
CLXL745	249	59.6	68.5	4.5	15.6	42.1	45	84	0	1	25.0
RU1104122	235	59.3	66.7	5.6	15.9	44.5	42	90	0	1	23.8
RU1201102	232	62.9	68.2	2.4	18.0	45.2	37	92	0	1	24.4
RU1204114	191	64.0	69.45	4.6	16.6	44.5	40	87	0	1	22.6
RU1204122	197	63.7	69.2	4.3	17.3	44.3	40	92	0	1	21.4
RU1204156	224	61.1	66.95	3.0	18.4	45.5	38	94	0	1	22.0
RU1204194	227	60.2	67.25	2.7	17.6	43.9	44	89	0	1	23.6
RU1304100	183	61.5	68.95	3.2	15.2	45.2	40	86	0	1	21.8
RU1304114	205	63.2	68.3	3.3	19.4	45.3	38	94	0	1	22.2

[1]**Planting date:** April 24. **Emergence:** May 3–7. **Herbicides:** 2-4,D at 21 fl oz/A, Roundup PowerMax at 21 fl oz/A, Valor SX at 2 oz/A, and Weather Guard at 0.5 oz/A on Feb. 21; Sharpen at 2 oz/A, Invade at 1 qt/A, and Command at 21 fl oz/A on May 5; RiceStar at 24 fl oz/A on May 10; Regiment at 0.65 oz/A, Quinstar at 5.5 oz/A, and SoySurf Extra at 1% on June 14; Clincher at 14 fl oz/A on June 22. **Fertilizer:** 110 lb/A DAP on May 10, 170 lb/A urea on June 16, 80 lb/A urea on June 25, 100 lb/A urea on July 7, and 100 lb/A urea on July 14. **Insecticide:** Karate at 1.8 fl oz/A on Aug. 12. **Fungicide:** Quilt XCel at 14 oz/A on July 30. **Permanent flood**: June 16. **Drained field:** Sept. 7. **Harvested:** Sept. 17. **LSD = A difference of 17 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 4.8%.**

[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 4. Performance of rice varieties, hybrids, and lines grown on Dundee silty clay loam soil near Clarksdale, Mississippi, 2014.[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	252.6	62.0	69.9	5.3	15.3	44.9	37	86	0	1	25.0
Bowman	254.9	58.8	68.6	2.0	16.0	45.5	38	88	0	1	28.0
Cheniere	216.5	56.3	70.8	2.7	14.7	44.0	38	87	0	1	22.2
Cocodrie	241.2	59.0	69.2	4.7	15.0	45.2	38	87	0	1	24.8
Colorado	238.2	54.9	68.6	3.3	14.3	44.0	39	84	0	1	26.8
LaKast	246.9	50.2	68.2	2.5	14.8	45.2	42	88	0	1	28.4
Mermentau	211.4	60.0	69.4	4.9	15.9	44.5	37	88	0	1	23.8
Rex	232.0	57.7	66.6	6.1	15.7	45.3	37	90	0	1	27.4
RoyJ	197.6	55.6	68.3	2.3	19.4	44.2	43	97	0	1	25.6
Sabine	216.8	61.7	69.1	2.0	16.0	45.8	38	91	0	1	24.4
USH13001	211.9	48.6	67.4	3.8	20.2	39.3	45	89	65	3	26.6
XL753	280.2	49.2	68.1	6.7	15.1	42.4	41	85	0	1	26.0
RU1104077	238.1	51.0	66.1	5.3	14.8	45.7	38	88	0	1	26.2
RU1204154	215.1	55.6	67.8	3.9	14.4	43.3	35	90	0	1	22.8
RU1204196	229.0	56.2	68.3	3.5	16.2	45.0	41	86	0	1	25.8
RU1204197	239.0	57.8	67.2	3.6	14.8	45.3	38	86	0	1	25.8
RU1304122	226.6	58.9	69.6	5.1	15.3	45.2	43	88	0	1	22.4
RU1304154	248.2	58.1	67.5	4.4	15.5	45.1	39	88	0	1	26.0
RU1304156	224.5	59.9	69.4	5.5	15.2	45.7	43	88	0	1	21.8
RU1304157	237.4	59.2	68.4	3.1	15.1	45.3	38	87	0	1	24.8
RU1304197	243.3	57.8	69.0	6.7	15.8	43.9	36	88	0	1	24.0
Clearfield											
CL111	252.1	57.8	68.7	7.9	14.9	45.1	39	88	0	1	25.8
CL142-AR	212.7	54.1	66.2	9.2	19.8	47.1	46	92	0	1	27.0
CL151	249.3	56.9	67.6	6.3	16.3	45.4	38	88	0	1	24.4
CL152	245.9	61.0	68.8	4.1	16.7	45.1	38	91	0	1	22.4
CLJZMN	241.4	61.2	69.4	1.2	15.6	43.1	42	90	0	1	26.8
CLXL729	280.1	52.7	67.2	5.8	14.2	42.0	42	86	0	1	25.6
CLXL745	284.6	52.2	69.0	5.5	14.2	42.0	43	84	0	1	28.2
RU1104122	239.4	55.7	67.4	8.4	15.8	44.6	39	90	0	1	26.4
RU1201102	229.4	61.3	68.7	1.8	16.9	45.7	36	92	0	1	26.0
RU1204114	236.2	57.4	68.8	4.0	14.8	44.9	38	87	0	1	23.8
RU1204122	246.1	60.4	69.4	5.5	16.6	44.2	40	92	0	1	23.2
RU1204156	237.4	60.7	68.2	4.9	17.0	45.3	38	94	0	1	23.8
RU1204194	257.2	57.8	68.4	4.2	16.3	44.4	43	89	0	1	26.4
RU1304100	226.2	57.5	68.7	4.1	14.2	45.8	38	86	0	1	23.0
RU1304114	215.1	61.7	68.3	2.5	17.9	45.9	37	94	0	1	24.0

[1]**Planting date:** April 26. **Emergence:** May 5–8. **Herbicides:** Roundup PowerMax at 1 qt/A on April 25; Ricebeaux at 1 gal/A on May 20; and Permit at 1 oz/A and Sharpen at 1 oz/A on June 3. **Fertilizer:** Bio-Maxx Liquid 2-12-12 on May 6, 100 lb/A AMS on May 21, 250 lb/A urea on June 3, and 100 lb/A urea on June 30. **Permanent flood**: June 12. **Drained field:** Aug. 22. **Harvested:** Sept. 10. **LSD = A difference of 26 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6.7%.**
[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 Sharkey clay soil near Drew, Mississippi, 2014.[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	258.7	62.9	71.2	3.2	14.9	44.8	40	93	0	1	23.0
Bowman	256.6	53.8	68.2	1.7	16.4	45.8	37	96	0	1	26.0
Cheniere	264.6	58.9	71.6	2.5	14.9	44.4	37	95	0	1	22.4
Cocodrie	269.4	59.1	69.9	3.4	15.3	45.0	39	95	0	1	23.2
Colorado	241.6	51.7	67.9	3.3	14.2	43.4	42	89	0	1	26.2
LaKast	297.6	51.7	69.6	1.8	14.4	45.1	44	93	0	1	27.8
Mermentau	276.1	59.6	69.5	4.3	15.8	44.3	39	93	0	1	22.8
Rex	284.8	52.6	67.1	5.9	14.7	44.8	41	93	0	1	28.6
RoyJ	256.0	56.5	68.9	1.3	18.9	44.6	43	100	0	1	23.6
Sabine	237.5	59.1	69.6	1.9	15.7	45.6	39	96	0	1	23.4
USH13001	225.0	45.9	65.2	1.8	17.8	39.3	41	96	100	5	26.0
XL753	322.5	50.6	69.8	5.7	14.2	43.2	42	92	0	1	24.8
RU1104077	257.8	53.3	67.0	2.5	15.0	46.3	39	95	0	1	24.8
RU1204154	235.2	58.3	69.1	3.1	15.4	44.2	36	97	0	1	22.2
RU1204196	258.1	57.9	69.1	3.0	15.1	44.7	40	95	0	1	25.2
RU1204197	257.9	56.7	67.8	2.5	15.2	45.2	41	95	0	1	24.8
RU1304122	256.0	60.3	70.3	3.1	14.4	44.9	42	93	0	1	21.6
RU1304154	264.2	57.2	68.2	3.1	14.6	45.0	41	96	0	1	24.6
RU1304156	250.9	60.8	70.8	2.8	13.9	45.1	42	93	0	1	21.6
RU1304157	261.5	59.0	69.1	3.5	14.9	45.3	40	94	0	1	24.2
RU1304197	242.0	50.4	69.4	5.3	14.3	43.3	38	90	0	1	23.4
Clearfield											
CL111	262.6	55.3	69.2	5.6	14.2	44.3	41	92	0	1	25.8
CL142-AR	255.8	47.0	67.8	7.5	18.4	47.5	44	98	0	1	26.4
CL151	287.3	55.9	68.7	6.2	14.8	44.5	39	93	0	1	23.8
CL152	252.4	59.7	69.0	3.0	15.5	44.5	41	96	0	1	21.2
CLJZMN	261.5	56.2	69.0	1.0	15.1	43.2	42	98	0	1	26.2
CLXL729	300.9	52.5	68.0	4.7	14.4	42.3	42	95	10	2	26.0
CLXL745	292.9	48.7	68.4	4.9	14.5	41.9	42	90	10	2	26.6
RU1104122	257.2	57.5	67.9	3.1	14.9	44.5	39	94	0	1	25.4
RU1201102	242.9	59.6	69.6	1.7	16.3	45.4	36	96	0	1	24.6
RU1204114	257.9	57.4	69.4	4.7	14.9	44.2	39	92	0	1	23.6
RU1204122	254.2	57.9	69.4	3.0	15.0	43.8	40	95	0	1	22.8
RU1204156	244.3	60.3	69.4	1.8	16.5	45.8	37	99	0	1	23.0
RU1204194	263.2	56.7	67.8	2.7	15.8	43.8	41	92	0	1	25.0
RU1304100	249.9	57.8	68.6	3.0	14.2	44.6	40	91	0	1	22.2
RU1304114	225.1	61.3	69.8	1.4	17.8	45.6	37	102	0	1	23.2

[1]**Planting date:** March 25. **Emergence:** April 13–15. **Herbicides:** Command at 1.3 pt/A and Roundup at 1.5 pt/A on March 1; SuperWham at 2.5 qt/A, Permit at 2/3 oz/A, and Quinstar at 16 oz/A on March 26; and Clincher at 15 oz/A on June 3. **Fertilizer:** 50 lb/A DAP and 50 lb/A AMS on March 24; 116 lb/A 41-0-0-4 on May 13; and 116 lb/A 41-0-0-4 on June 2. **Fungicide:** Stratego at 19 fl oz/A on July 3. **Insecticide:** Lambda at 3.2 oz/A on July 3 and Lambda at 3.2 oz/A on July 17. **Permanent flood**: May 16. **Drained field:** Aug. 10. **Harvested:** Aug. 25. **LSD = A difference of 16 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 3.7%.**

[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 Sharkey clay soil near Hollandale, Mississippi, 2014.[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	262.4	61.1	70.2	4.7	14.5	44.1	41	88	0	1	23.4
Bowman	250.4	58.0	67.6	2.8	15.4	46.1	42	94	0	1	23.6
Cheniere	280.4	61.6	71.9	3.5	14.2	44.0	40	90	0	1	20.8
Cocodrie	270.8	60.2	70.1	5.0	14.5	44.1	41	89	0	1	22.8
Colorado	224.5	52.5	68.4	5.3	14.0	42.7	42	85	27	2	25.0
LaKast	305.0	52.4	69.7	3.3	13.7	44.7	46	89	0	1	26.8
Mermentau	282.9	59.9	69.8	5.1	15.0	44.0	40	87	0	1	22.6
Rex	267.2	56.7	67.8	6.9	14.3	44.7	44	91	0	1	27.8
RoyJ	270.6	59.2	70.0	2.6	16.6	45.0	46	97	0	1	24.6
Sabine	246.0	63.8	70.7	2.5	14.2	45.6	40	90	0	1	24.2
USH13001	170.9	52.5	69.7	5.5	18.7	23.4	44	88	98	5	27.2
XL753	366.2	55.3	70.2	6.9	13.8	42.7	45	85	0	1	26.6
RU1104077	271.2	59.8	67.1	2.3	15.6	45.6	43	91	0	1	25.2
RU1204154	263.8	61.3	70.7	3.6	13.1	43.2	40	90	0	1	21.8
RU1204196	265.3	57.6	70.2	3.2	14.3	44.8	43	85	70	3	25.2
RU1204197	270.8	58.2	68.5	4.3	14.1	44.7	43	91	0	1	26.2
RU1304122	271.0	64.1	72.6	4.7	13.5	45.2	48	87	0	1	21.6
RU1304154	273.0	61.6	70.2	4.9	13.6	45.0	41	88	0	1	25.4
RU1304156	264.3	63.0	72.8	6.6	12.8	45.3	46	87	0	1	22.4
RU1304157	272.2	53.8	68.6	4.4	13.5	42.2	41	88	0	1	27.2
RU1304197	272.9	58.8	70.5	6.2	13.8	44.0	41	88	0	1	23.4
Clearfield											
CL111	293.3	58.9	70.4	8.0	13.4	44.0	44	87	0	1	24.6
CL142-AR	274.1	56.9	69.3	6.4	17.7	47.9	49	92	0	1	26.6
CL151	300.5	59.3	70.2	7.7	15.5	44.2	43	90	25	2.3	23.6
CL152	269.2	63.2	70.4	2.8	14.3	45.3	42	94	0	1	21.6
CLJZMN	275.6	61.1	69.6	1.2	13.8	42.7	45	89	0	1	26.4
CLXL729	325.1	58.6	69.6	5.8	14.8	42.0	48	87	7	1.3	26.2
CLXL745	335.3	57.1	70.9	6.3	14.2	43.0	47	88	13	1.3	27.2
RU1104122	290.6	60.4	69.4	5.1	15.1	46.1	44	92	8	1.3	24.0
RU1201102	266.4	62.2	69.8	2.4	15.2	46.0	39	91	0	1	25.2
RU1204114	278.7	61.1	71.1	3.9	15.2	44.2	43	90	0	1	23.2
RU1204122	274.7	63.5	71.6	3.4	14.8	44.2	43	90	0	1	22.4
RU1204156	269.4	63.7	70.9	2.9	14.7	45.7	41	92	0	1	23.4
RU1204194	251.9	63.4	71.0	4.4	18.7	43.7	47	89	10	1.7	24.6
RU1304100	252.7	57.9	69.8	4.3	13.2	44.4	41	89	0	1	23.2
RU1304114	289.4	63.3	70.8	3.3	15.5	45.4	42	89	0	1	22.6

[1]**Planting date:** April 24. **Emergence:** May 1–4. **Herbicides:** Command at 1.5 pt/A, Roundup PowerMax at 1 qt/A, and Sharpen at 2 oz/A on April 25; SuperWham at 1 gal/A and Facet L at 25 oz/A on May 21; Regiment at 0.4 oz/A and Facet L at 21 oz/A on June 7. **Fertilizer:** 50 lb/A AMS and 50 lb/A DAP with flush on May 22; 100 lb/A urea on June 9; 100 lb/A urea on June 18; 100 lb/A on June 30; and 100 lb/A on July 7. **Fungicide:** Quilt XL at 14 oz/A on July 18. **Permanent flood**: June 9. **Drained field:** Aug. 21. **Harvested:** Sept. 9. **LSD = A difference of 31 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6.8%.**

[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 7. Performance of rice varieties, hybrids, and lines grown on Dubbs silt loam soil near Shaw, Mississippi, 2014.[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	245.7	61.6	68.4	2.7	16.6	44.6	41	87	0	1	22.6
Bowman	223.5	56.0	65.2	1.6	15.7	45.6	44	90	0	1	25.2
Cheniere	257.7	61.6	70.0	2.1	16.0	45.0	40	88	0	1	21.2
Cocodrie	239.2	59.7	67.6	3.5	15.9	45.5	42	90	0	1	22.4
Colorado	253.3	53.0	65.9	2.8	15.3	43.9	41	86	0	1	25.2
LaKast	269.7	54.0	66.6	2.9	15.8	44.8	47	90	0	1	25.2
Mermentau	250.1	60.0	67.2	3.9	18.3	44.8	43	90	0	1	22.0
Rex	252.0	55.1	64.1	4.1	16.2	44.9	45	88	0	1	26.6
RoyJ	240.8	56.5	66.9	2.2	19.5	44.8	47	97	0	1	24.4
Sabine	223.5	59.5	66.6	1.3	17.0	47.3	41	94	0	1	23.0
USH13001	241.0	54.0	66.8	2.5	23.1	30.8	45	87	100	5	26.6
XL753	304.5	56.1	66.9	5.0	15.5	43.0	46	88	0	1	25.4
RU1104077	223.3	55.4	64.4	2.5	15.5	45.8	41	87	0	1	25.0
RU1204154	239.9	60.0	66.6	2.2	16.9	44.3	39	91	0	1	22.6
RU1204196	252.3	62.8	69.2	3.5	15.6	45.8	45	90	0	1	25.8
RU1204197	248.8	57.5	66.2	3.3	16.5	45.7	43	91	0	1	24.2
RU1304122	252.8	63.2	70.1	3.1	15.0	45.2	45	88	0	1	21.0
RU1304154	252.4	58.2	66.6	3.6	17.1	45.7	43	91	0	1	23.6
RU1304156	242.7	62.8	69.6	3.2	15.4	45.5	48	88	0	1	20.4
RU1304157	250.9	62.1	69.1	3.2	16.8	45.3	43	89	0	1	23.6
RU1304197	226.5	56.2	66.6	3.6	15.2	43.3	41	87	0	1	21.8
						Clearfield					
CL111	267.5	61.3	67.9	3.3	15.2	45.2	44	86	0	1	24.6
CL142-AR	218.0	56.0	64.8	6.7	20.2	46.8	48	91	0	1	24.8
CL151	271.7	60.5	67.4	5.6	16.0	45.1	43	88	0	1	23.6
CL152	237.2	60.6	67.6	2.6	15.9	44.8	43	94	0	1	19.8
CLJZMN	260.2	59.8	67.2	1.2	16.4	43.4	42	88	0	1	25.6
CLXL729	292.3	55.8	65.1	4.3	15.0	42.1	45	88	0	1	25.4
CLXL745	311.7	57.2	65.8	5.1	14.5	42.1	47	82	0	1	26.0
RU1104122	236.9	57.0	65.9	4.5	15.3	44.5	42	90	0	1	25.4
RU1201102	249.3	61.2	67.6	1.8	18.2	46.0	40	92	0	1	23.2
RU1204114	246.6	62.2	68.6	3.6	16.0	45.2	43	87	0	1	24.4
RU1204122	242.6	62.1	68.6	2.5	17.2	44.5	42	93	0	1	22.6
RU1204156	235.3	60.7	66.9	1.9	19.2	46.1	41	93	0	1	23.4
RU1204194	251.9	60.6	68.5	2.9	16.2	44.0	43	87	0	1	24.2
RU1304100	229.7	61.1	68.1	2.6	15.8	45.9	42	87	0	1	22.0
RU1304114	227.1	60.6	67.2	1.5	20.3	46.1	42	93	0	1	22.6

[1]**Planting date:** April 21. **Emergence:** May 1–4. **Herbicides:** Command at 1 pt/A and Roundup PowerMax at 1 qt/A on April 25; Regiment at 0.6 oz/A and Soy SurfXtra at 12.8 fl oz/A on May 27. **Fertilizer**: 200 lb/A urea on May 27, 100 lb/A urea on June 10, and 100 lb/A on June 25. **Fungicide**: Quilt XL at 21 oz/A on July 18 and Quilt XL at 14 oz/A on July 28. **Permanent flood**: May 27. **Drained field:** Aug. 15**. Harvested:** Sept. 9. **LSD = A difference of 28 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 7.0%.**

[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 silty clay loam soil near Stoneville, Mississippi, 2014.[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	174.7	61.6	68.7	6.6	14.9	45.0	34	82	0	1	23.8
Bowman	208.8	58.3	67.6	2.0	15.0	46.4	37	78	0	1	25.6
Cheniere	211.4	60.7	70.4	5.1	15.5	44.6	35	83	0	1	22.0
Cocodrie	191.0	58.4	69.3	7.1	14.8	45.2	34	83	0	1	23.2
Colorado	153.3	53.5	67.2	8.7	14.2	37.3	37	75	0	1	23.6
LaKast	216.8	54.0	67.7	4.8	13.7	45.1	38	81	0	1	25.0
Mermentau	186.8	62.7	69.1	6.7	14.5	44.8	35	80	0	1	22.4
Rex	202.0	58.8	65.8	5.7	14.8	45.3	38	84	0	1	27.0
RoyJ	219.3	58.0	69.1	3.2	15.9	44.6	41	88	0	1	24.2
Sabine	189.8	61.4	68.4	2.5	15.3	45.9	35	84	0	1	23.8
USH13001	199.7	48.6	65.9	3.6	17.4	39.3	44	83	100	5	25.8
XL753	243.8	46.3	67.1	11.5	13.9	42.6	42	82	0	1	25.0
RU1104077	206.7	54.8	67.0	3.2	14.6	47.1	38	85	0	1	24.8
RU1204154	200.9	56.5	68.4	3.4	13.4	44.1	34	82	0	1	22.6
RU1204196	203.0	58.7	67.8	5.0	14.0	44.9	39	81	0	1	25.4
RU1204197	173.9	56.2	67.3	7.2	14.8	43.3	35	81	0	1	24.6
RU1304122	196.6	61.9	70.0	5.4	14.4	45.7	40	82	0	1	21.4
RU1304154	159.9	57.3	67.7	5.4	14.1	45.2	34	80	0	1	24.2
RU1304156	192.5	59.3	68.6	5.6	13.9	45.6	41	82	0	1	21.8
RU1304157	169.1	57.6	67.6	10.0	14.5	44.8	34	81	0	1	23.2
RU1304197	212.0	60.1	67.8	5.3	14.5	43.9	36	82	0	1	22.8
Clearfield											
CL111	176.2	54.9	67.8	8.8	14.1	45.4	36	77	0	1	26.0
CL142-AR	217.8	43.8	67.4	6.6	16.2	47.1	43	86	0	1	25.6
CL151	234.1	59.0	68.3	9.3	15.4	45.5	36	84	0	1	23.8
CL152	170.1	60.3	68.4	4.0	14.5	44.8	37	85	0	1	22.0
CLJZMN	195.4	59.4	67.8	1.0	13.9	43.3	37	85	0	1	26.4
CLXL729	223.6	56.2	66.9	5.7	14.4	43.8	45	82	0	1	25.0
CLXL745	214.0	47.6	66.9	6.5	13.7	42.1	42	82	0	1	25.8
RU1104122	209.3	54.7	67.2	7.1	14.6	46.1	38	84	0	1	25.4
RU1201102	200.2	61.8	68.2	2.8	14.5	45.8	35	84	0	1	25.0
RU1204114	168.7	55.6	68.8	7.1	14.5	44.9	36	81	0	1	23.8
RU1204122	191.3	56.6	68.1	6.9	14.6	44.2	37	83	0	1	22.8
RU1204156	207.0	60.5	70.0	5.6	14.7	45.4	34	90	0	1	23.6
RU1204194	200.7	61.3	68.2	4.7	15.5	45.1	38	82	0	1	25.0
RU1304100	151.8	54.9	67.6	5.1	14.6	45.7	36	81	0	1	22.4
RU1304114	190.0	62.5	67.9	3.2	15.2	45.6	35	88	0	1	23.6

[1]**Planting date:** May 6. **Emergence:** May 12–15. **Herbicides:** Roundup Weathermax at 22 fl oz/A and Command at 1 pt/A on May 7; and Regiment at 0.6 oz/A, AIM at 1.5 oz/A, and Permit Plus at 2/3 oz/A on June 5. **Fertilizer:** 326 lb/A urea on May 28. **Insecticide:** Karate Z at 2.3 fl oz/A on July 17 and Aug. 8. **Permanent flood**: June 19. **Drained field:** Aug. 26. **Harvested:** Sept. 17. **LSD = A difference of 31 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 9.7%.**

[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. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Tunica, Mississippi, 2014.[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	248.9	66.4	72.4	3.9	15.2	45.8	41	95	0	5	22.0
Bowman	226.6	55.8	69.6	1.3	15.6	46.3	44	97	0	1	24.2
Cheniere	266.1	64.4	73.4	3.0	14.8	44.8	40	95	0	1	21.0
Cocodrie	255.7	65.1	72.1	3.2	15.1	46.6	42	96	0	1	22.2
Colorado	274.7	59.8	71.0	3.9	15.0	44.8	41	89	0	1	24.2
LaKast	291.9	58.5	71.4	3.2	13.6	44.1	47	94	0	1	23.8
Mermentau	261.8	64.9	71.8	4.5	14.6	45.2	43	91	0	1	20.6
Rex	250.9	57.8	68.6	4.0	15.1	45.6	45	94	0	1	24.4
RoyJ	281.8	59.7	71.3	2.6	15.3	44.2	47	101	0	1	23.0
Sabine	215.4	59.4	70.4	2.4	14.6	46.4	41	97	0	1	23.4
USH13001	241.2	43.0	67.0	3.0	17.2	30.0	45	91	100	5	24.4
XL753	346.9	50.7	70.6	6.1	15.1	42.9	46	93	0	1	24.2
RU1104077	235.9	51.6	69.4	1.7	15.2	47.6	41	97	0	1	23.2
RU1204154	240.8	55.6	70.2	3.2	14.0	44.6	39	97	0	1	21.6
RU1204196	269.4	60.1	70.9	3.3	14.4	45.6	45	96	0	1	23.8
RU1204197	260.7	60.4	69.9	3.0	15.2	46.0	43	92	0	1	22.6
RU1304122	263.7	62.9	72.4	2.9	14.2	46.3	45	94	0	1	20.4
RU1304154	244.9	62.3	70.4	3.6	14.6	45.7	43	91	0	1	23.2
RU1304156	242.1	62.6	72.5	3.6	13.8	46.5	48	93	0	1	20.6
RU1304157	254.2	62.8	71.0	2.2	14.5	46.3	43	91	0	1	23.0
RU1304197	262.2	59.3	70.8	3.8	14.7	44.0	41	95	0	1	21.4
					Clearfield						
CL111	268.8	61.0	71.4	3.7	13.6	45.5	44	93	0	1	24.4
CL142-AR	247.2	36.5	69.6	6.3	16.0	47.9	48	96	0	1	25.8
CL151	295.8	60.2	71.3	5.1	15.0	45.5	43	94	0	1	22.2
CL152	232.3	60.3	70.7	2.4	14.7	45.5	43	96	0	1	21.2
CLJZMN	241.3	59.8	69.6	1.2	13.2	43.0	42	93	0	1	25.4
CLXL729	321.7	55.1	69.6	4.7	14.3	43.7	45	96	0	1	23.4
CLXL745	332.4	56.9	71.8	3.6	14.5	42.3	47	89	0	1	24.0
RU1104122	240.0	58.7	69.8	4.9	14.6	45.2	42	97	0	1	22.4
RU1201102	247.1	60.9	70.6	1.7	15.0	46.4	40	96	0	1	24.4
RU1204114	247.3	60.2	71.2	2.5	14.9	45.3	43	94	0	1	21.8
RU1204122	232.0	59.4	70.9	2.5	15.1	44.9	42	97	0	1	21.6
RU1204156	242.1	62.3	70.7	2.5	14.9	46.3	41	100	0	1	21.6
RU1204194	269.9	62.2	71.0	3.0	15.3	45.0	43	95	0	1	23.2
RU1304100	240.5	58.2	71.1	2.3	13.9	46.0	42	90	0	1	21.4
RU1304114	229.5	62.5	70.7	1.9	15.2	46.1	42	100	0	1	21.8

[1]**Planting date:** April 21. **Emergence:** May 5–8. **Herbicides:** Glyphosate at 22 fl oz/A and Command at 20 fl oz/A on April 21; and Broadhead at 8 fl oz/A on June 11. **Fertilizer:** 100 lb/A 41-0-0-4 on June 4, 100 lb/A 41-0-0-4 on June 11, 100 lb/A 41-0-0-4 on June 18, 130 lb/A urea on June 25. **Fungicide:** Quilt XL at 14 oz/A on July 21 and Mustang Max at 3.7 fl oz/A on Aug. 6. **Permanent flood**: June 19. **Drained field:** Aug. 27. **Harvested:** Oct. 1. **LSD = A difference of 27 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6.5%.**
[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 10. Average rough rice yields of varieties, hybrids, and lines evaluated in on-farm trials at seven locations, 2014.

Entry	Choctaw	Clarksdale	Drew	Hollandale	Shaw	Stoneville	Tunica	Average	Stability[1]
	bu/A	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*	
				Conventional					
Antonio	203	253	259	262	246	175	249	235	14
Bowman	239	255	257	250	224	209	227	237	8
Cheniere	219	217	265	280	258	211	266	245	12
Cocodrie	200	241	269	271	239	191	256	238	13
Colorado	183	238	242	225	253	153	275	224	19
LaKast	241	247	298	305	270	217	292	267	12
Mermentau	212	211	276	283	250	187	262	240	15
Rex	222	232	285	267	252	202	251	244	11
RoyJ	212	198	256	271	241	219	282	240	13
Sabine	200	217	238	246	224	190	215	218	9
USH13001	199	212	225	171	241	200	241	213	12
XL753	275	280	323	366	305	244	347	306	14
RU1104077	234	238	258	271	223	207	236	238	9
RU1204154	218	215	235	264	240	201	241	231	9
RU1204196	220	229	258	265	252	203	269	242	10
RU1204197	208	239	258	271	249	174	261	237	15
RU1304122	188	227	256	271	253	197	264	236	14
RU1304154	221	248	264	273	252	160	245	238	16
RU1304156	193	225	251	264	243	193	242	230	12
RU1304157	209	237	262	272	251	169	254	236	15
RU1304197	221	243	242	273	227	212	262	240	9
				Clearfield					
CL111	199	252	263	293	268	176	269	246	17
CL142-AR	209	213	256	274	218	218	247	234	11
CL151	242	249	287	301	272	234	296	269	10
CL152	204	246	252	269	237	170	232	230	14
CLJZMN	226	241	262	276	260	195	241	243	11
CLXL729	244	280	301	325	292	224	322	284	13
CLXL745	249	285	293	335	312	214	332	289	15
RU1104122	235	239	257	291	237	209	240	244	10
RU1201102	232	229	243	266	249	200	247	238	9
RU1204114	191	236	258	279	247	169	247	232	17
RU1204122	197	246	254	275	243	191	232	234	13
RU1204156	224	237	244	269	235	207	242	237	8
RU1204194	227	257	263	252	252	201	270	246	10
RU1304100	183	226	250	253	230	152	241	219	17
RU1304114	205	215	225	289	227	190	230	226	14
Mean	216	238	261	274	249	196	259	242	
LSD	17	26	16	31	28	31	27	16	
CV	4.8	6.7	3.7	6.8	7.0	9.7	6.5	3.2	
Planting Date	April 24	April 17	March 25	April 24	April 21	May 6	April 21		
Emergence date	May 3-7	April 28 - May 3	April 13-15	May 1-4	May 1-4	May 12-15	May 5-8		

[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 11. Average agronomic and milling performance of varieties, hybrids, and lines grown at seven on-farm locations, 2014.

Entry	Origin[1]	Yield[2]	Whole milled rice	Total milled rice	Chalk	Harvest moisture	Bushel weight	Plant height	50% heading[3]	Lodging[4]	Lodging[5]	1,000 seed weight[6]	Approximate seeds/pound
		bu/A	*%*	*%*	*%*	*%*	*lb*	*in*	*days*	*%*	*(1-5)*	*g*	*no.*
Conventional													
Antonio	TX	235	62.8	70.1	4.3	15.3	44.7	39	88	0	2	23.2	19545
Bowman	MS	237	57.2	67.7	1.9	16.0	45.9	40	90	0	1	25.4	17874
Cheniere	LA	245	60.7	71.1	3.1	15.1	44.4	38	89	0	1	21.6	20991
Cocodrie	LA	238	60.6	69.6	4.5	15.3	45.0	39	90	0	1	23.0	19715
Colorado	TX	224	54.9	68.1	4.5	14.5	42.4	40	84	4	1	25.0	18181
LaKast	AR	267	54.0	68.7	3.2	14.6	44.8	44	89	0	1	25.9	17500
Mermentau	LA	240	61.3	69.3	4.8	15.9	44.4	39	88	0	1	22.3	20398
Rex	MS	244	56.8	66.6	5.3	15.3	44.9	42	90	0	1	26.8	16958
RoyJ	AR	240	57.4	68.8	2.3	18.0	44.4	44	96	0	1	24.1	18827
Sabine	TX	218	61.1	69.0	2.1	15.7	45.9	38	92	0	1	23.7	19191
USH13001	Bayer	213	49.0	66.7	3.4	19.3	35.1	44	89	94	4	26.1	17385
XL753	RT	306	52.5	68.7	6.9	14.7	43.1	43	87	0	1	25.3	17975
RU1104077	MS	238	55.1	66.8	2.8	15.4	46.1	40	90	0	1	24.8	18306
RU1204154	MS	231	58.5	68.8	3.2	14.6	43.8	37	91	0	1	22.2	20477
RU1204196	MS	242	59.2	69.2	3.8	15.1	44.9	42	88	10	1	25.0	18160
RU1204197	MS	237	58.1	67.9	4.0	15.2	44.9	40	89	0	1	24.5	18498
RU1304122	MS	236	62.2	70.8	4.1	14.5	45.2	43	88	0	1	21.3	21300
RU1304154	MS	238	59.4	68.4	4.1	15.0	45.2	40	89	0	1	24.4	18585
RU1304156	MS	230	61.7	70.6	4.4	14.3	45.4	44	88	0	1	21.3	21300
RU1304157	MS	236	59.7	69.0	4.4	15.0	44.7	39	88	0	1	24.3	18716
RU1304197	MS	240	57.9	68.9	4.9	14.9	43.6	39	88	0	1	22.7	20038
Clearfield													
CL111	LA-HA	246	58.9	69.2	6.0	14.3	44.7	41	87	0	1	25.1	18098
CL142-AR	AR-HA	234	50.4	67.4	7.1	18.2	47.2	46	92	0	1	25.9	17500
CL151	LA-HA	269	59.2	68.9	6.7	15.6	45.0	40	89	4	1	23.5	19331
CL152	LA-HA	230	61.0	69.0	3.1	15.5	44.8	40	92	0	1	21.3	21329
CLJZMN	LA-HA	243	59.8	68.7	1.2	14.7	42.9	42	90	0	1	26.0	17481
CLXL729	RT	284	55.6	67.5	5.1	14.7	42.5	44	88	2	1	25.1	18057
CLXL745	RT	289	54.6	68.8	5.2	14.5	42.2	45	85	3	1	26.1	17385
RU1104122	MS	244	57.6	67.7	5.5	15.2	45.0	41	91	1	1	24.7	18391
RU1201102	AR	238	61.4	68.9	2.1	16.3	45.7	37	92	0	1	24.7	18391
RU1204114	MS	232	59.7	69.6	4.4	15.3	44.6	40	88	0	1	23.3	19473
RU1204122	MS	234	60.3	69.5	4.0	15.8	44.2	40	92	0	1	22.4	20268
RU1204156	MS	237	61.2	68.6	3.2	16.5	45.6	38	94	0	1	23.0	19764
RU1204194	MS	246	60.3	68.9	3.5	16.5	44.1	42	89	1	1	24.6	18477
RU1304100	MS	219	58.4	69.0	3.5	14.4	45.2	40	87	0	1	22.3	20372
RU1304114	MS	226	62.1	69.0	2.5	17.3	45.6	39	94	0	1	22.9	19863
Mean		242	58.3	68.8	4.0	16	44	41	89	3	1	24.0	19003
LSD		16	1	2	0.5	0.8	1.5	1	2	6	0.4		
CV		7.9	5.6	1.5	35.0	7.4	4.3	5.8	2.7				

[1]AR = Arkansas; LA = Louisiana; MS = Mississippi; HA = Horizon Ag, in conjunction with the respective state; RT = RiceTec, Inc.
[2]Rough rice at 12% moisture.
[3]Days after emergence.
[4]Percent of plot that was lodged.
[5]Severity of lodging: 1=plants totally erect, 5=plants completely on ground.
[6]Weight of 1,000 kernels.

Table 12. Average agronomic and milling performance of varieties, hybrids, and lines grown at on-farm locations from 2012–14.[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						
Antonio	TX	225	61	71	44.1	38	87	3	1.4	23.9	18961
Bowman	MS	227	56	69	45.3	40	90	4	1.1	25.8	17611
Cheniere	LA	235	61	72	44.1	37	88	2	1.1	22.3	20313
Cocodrie	LA	224	61	71	44.3	38	87	1	1.0	23.7	19136
Colorado	TX	213	55	70	42.4	39	83	18	1.7	25.6	17751
Mermentau	LA	236	60	71	43.6	38	87	1	1.1	22.7	20005
Rex	MS	230	57	68	44.1	42	88	1	1.0	27.3	16641
RoyJ	AR	226	55	71	43.2	44	95	1	1.0	24.4	18576
Sabine	TX	205	61	70	45.0	38	90	9	1.3	23.9	19029
RU1104077	MS	231	54	69	45.7	39	89	7	1.2	25.1	18056
					Clearfield						
CL111	LA-HA	234	57	71	44.0	40	86	9	1.4	25.4	17831
CL142-AR	AR-HA	232	48	70	45.7	46	90	11	1.4	26.5	17136
CL151	LA-HA	246	58	71	43.8	39	88	19	1.8	23.4	19379
CL152	LA-HA	228	60	70	43.7	40	90	4	1.1	21.7	20905
CLXL745	RT	266	53	70	40.9	44	84	24	1.7	26.2	17324
RU1104122	MS	235	57	69	44.1	40	89	14	1.4	25.2	18041

[1]Data presented are the averages of 17 total sites that served as the On-Farm Variety Trials for 2012–14. 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 13. 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 14. Nitrogen fertility rate guidelines.

Varieties	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.

mafes.msstate.edu/variety-trials