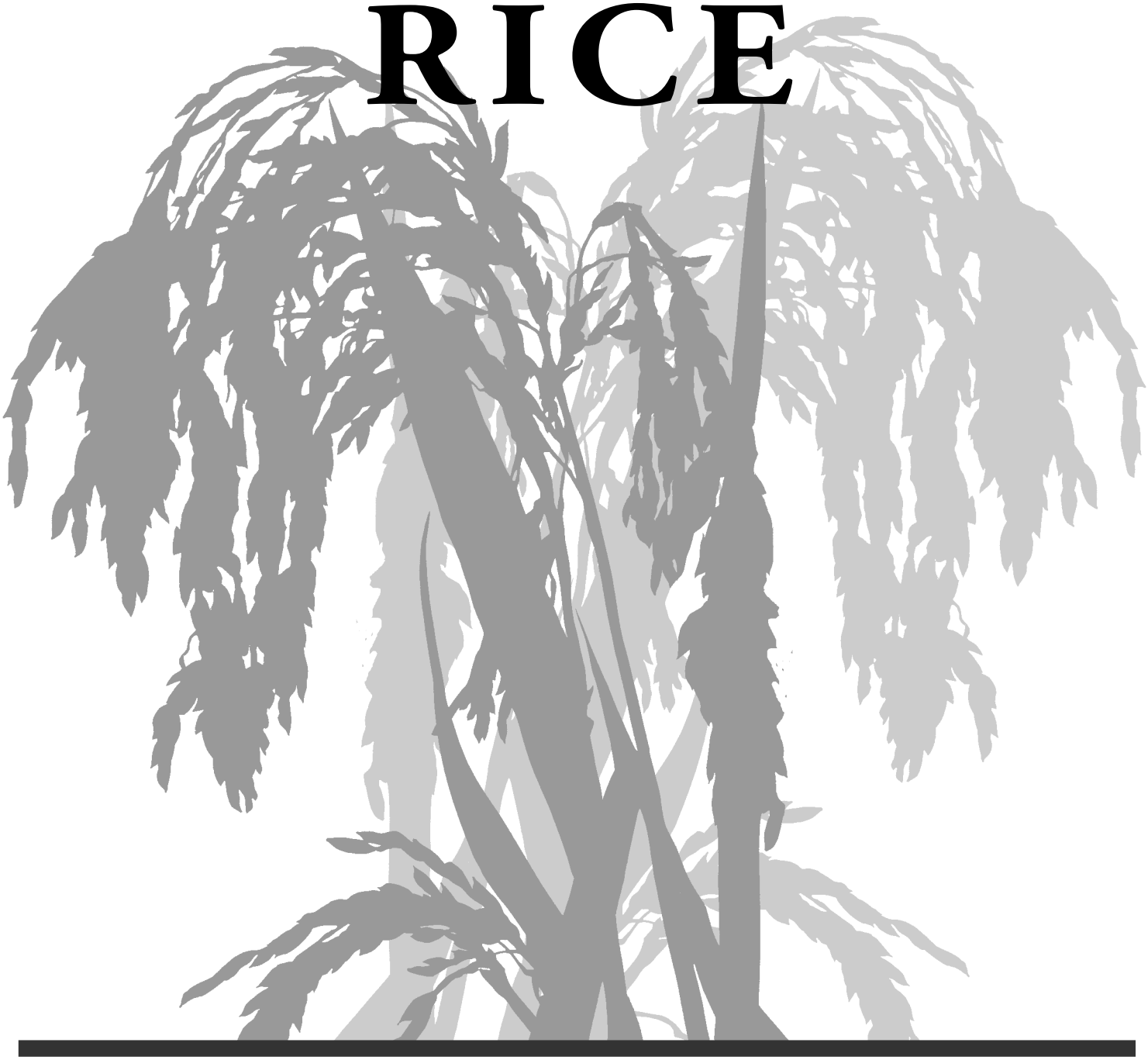
Information Bulletin 466 December 2011

# MISSISSIPPI RICE



# VARIETY TRIALS, 2011

MAFES

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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 third 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, 2011

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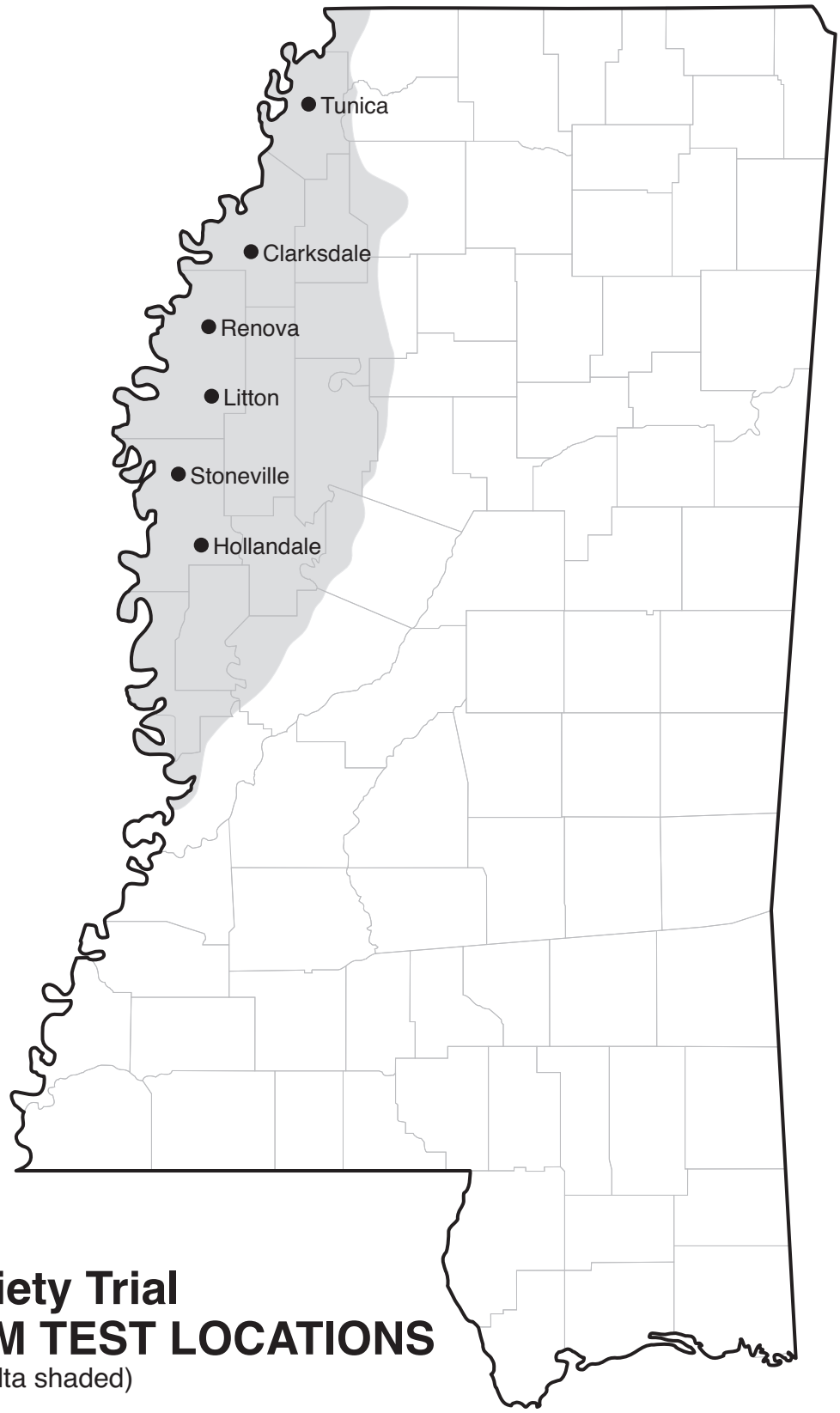


# Rice Variety Trial
# ON-FARM TEST LOCATIONS

(Mississippi Delta shaded)

# Mississippi Rice Variety Trials, 2011

## Introduction

The USDA projected that 153,000 acres of rice were harvested in the Delta counties of Mississippi in 2011. This represented a 50% decrease in harvested acreage from 2010 and a 36% decrease from the 30-year average. This acreage is slightly below the 162,000 acres harvested in 1983 and slightly above the 145,000 acres harvested in 1976. Two Clearfield® varieties and two Clearfield® hybrids accounted for approximately 70% of the total rice acreage. CLXL745 and CLXL729 were planted on 22% and 16% of the acreage, respectively. CL151 and CL111 were planted on 20% and 12% of the acreage, respectively. Cocodrie continued to be a favorite among conventional varieties and accounted for 18% of the acreage, whereas the conventional hybrid XL723 was planted on 7%. The remaining 5% was planted primarily to CL142-AR, CL162, Cheniere, Rex, and Sabine.

Rice planting began the last week of March and progressed at the 5-year average pace, which meant that 32% had been planted by April 17 and 70% by the end of April. Seedling growth was excellent for most of the spring, and heat unit accumulation allowed rice to progress ahead of the 5-year average. Approximately 33% of the rice planted reached the heading stage before July 15. By the end of July, 80% of the planted acreage had reached the heading stage. Rice harvest began as early as the first week of August and was in full swing by August 15. Harvest weather was warm and dry, thus harvest proceeded at a record pace.

Similar to 2010, the Delta encountered a period of excessive heat during the critical pollination stage for rice that was headed and pollinating the first week of August. The first seven days of August saw daytime temperatures exceed 100°F, and six of the seven nighttime temperatures were 80°F or more. Excessive day and nighttime temperatures during pollination caused sterility and reduced yield potential on a considerable amount of acreage. Specifically, based on variety planting date trials conducted at Stoneville, rice that was heading the last week of July through approximately August 10 was most susceptible to reduced yields due to sterility-induced blanking. Furthermore, the excessive heat also contributed to lower milling quality on rice that was maturing. Irrigation costs due to the heat and drought conditions were extremely high for most producers. Cash price for rice at harvest continued to be well below CBOT futures, which has applied pressure towards planting intentions for 2012. USDA yield prediction for Mississippi as of October was 7,100 pounds per acre (158 bushels per acre), which is up from 152 bushels per acre harvested in 2010.

The purposes for conducting on-farm rice variety trials are multiple. Advanced experimental lines are evaluated under various production environments, which gives 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 that are common to commercial production that cannot always be reproduced at the experiment station. In addition to providing the breeder and agronomist worthwhile information, growers are provided with side-by-side comparisons of currently available rice varieties and hybrids. This information can be used to guide variety selection in the succeeding 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 breeder and agronomists use the variety trials as an educational tool for research and extension staff, farmers, private consultants, and industry personnel. 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.

# Test Procedures

A total of 63 entries including named varieties, hybrids, and experimental lines were planted at six "on-farm" locations. Of these entries, 31 are included in this report. These 31 entries include eight conventional publicly released long-grain varieties, one public conventional medium-grain, three RiceTec conventional hybrids, two Bayer conventional hybrids, four Mississippi advanced breeding lines, seven Clearfield inbred varieties, one Clearfield medium-grain, three RiceTec Clearfield hybrids, and two Clearfield advanced breeding lines. Individual plots consisted of 8 drill rows 15 feet in length and spaced 8 inches apart. Varieties and experimental lines were planted at 90 pounds of seed per acre, and the hybrids were planted at 35 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. Four on-farm locations (Renova, Hollandale, Stoneville, and Tunica) received all agricultural inputs based on the whole field. Due to other experiments being conducted in the same field, the Litton and Clarksdale sites received only one application of urea at the rate of 150 pounds of N per acre immediately prior to 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 1 to 6 [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 to the *2012 Weed Control Guidelines for Mississippi* (MSU-ES/MAFES Pub. No. 1532)].

Agronomic data were collected at appropriate times during the growing season. Lodging ratings (percent of plot and severity) 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 had to have achieved appropriate harvest moisture prior to the test being harvested. Average harvest grain moisture for each entry is reported in Tables 1–6. Subsamples of each entry were collected at harvest. Those subsamples were used to conduct milling, bushel weight, and 1,000-seed weight analyses. Replicated research has shown that the border effect for plot grain yields is 10% greater for inbred varieties and 15% greater for hybrids. Plot yields for entries should be compared 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 1–6 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. Lower CV values indicate greater reliability of the test. The LSD and CV values are reported in the footnotes of Tables 1–6 and 8. Statistical analyses included all 63 entries, although only 31 entries are reported.

# Results

The performance of each variety in the six individual test locations is presented in Tables 1–6. On-farm variety trials were planted over a range of about one month (Stoneville planted April 8, and Tunica planted May 11). However, four of the six trials were planted April 13 and April 14. For the most part, stands were sufficient for plant population and uniformity. Growing conditions were excellent. Problems that would sacrifice data quality were minimal. Lodging appeared to be more than what is normally encountered; however, Tropical Storm Lee contributed to lodging at Litton, Clarksdale, and Tunica. Five of the six locations received a fungicide that is efficacious on sheath blight. Furthermore, environmental conditions were not optimum for sheath blight to limit yield potential. With the optimum planting dates, uniformity of rice stands, and minimal yield-limiting problems during the growing season, rice yields were exceptionally high and, averaged across all varieties, varied only slightly across all locations for the reported entries. The range was 219 bushels per acre at Litton to 258 bushels per acre at Renova. The CVs for yield ranged from 5% to 9%, which is very respectable for these types of trials. Milling yields were acceptable for most entries; however, similar to 2010, milling was down compared with 2009. Extreme heat, especially during the nighttime most likely contributed to lower milling compared with 2009. Lodging tended to be greater in 2011 than in recent years. Nitrogen was applied at a minimum of 150 pounds per acre at all locations. **Some varieties and hybrids do not require as much N to reach 95% or greater of the maximum yield potential, and thus are subject to lodging when fertilized excessively. Specifically, Bayer hybrids will not require more than 90 to 120 pounds of N to produce optimum yields. CL151 typically will not require more than 135 pounds of N to reach its optimum yield potential. These three entries are highly subject to lodging, especially at N rates that exceed 150 pounds per acre.**

Table 7 provides a six-location summary of grain yields for the 31 entries. In addition to yield, a stability value is provided. The smaller the stability value, the greater the chance the variety has for performing similarly with respect to yield across the six locations. Table 8 provides a summary across all locations for yield, milling, and other pertinent information for each entry. The conventional RiceTec hybrids demonstrated a clear yield advantage over conventional varieties (approximately 25%). Additionally, RiceTec's Clearfield hybrids demonstrated a yield advantage over the popular Clearfield varieties (approximately 17%). However, based on information presented earlier regarding the border effect, as well as large plot demonstrations, growers should not expect more than a 10–15% yield advantage when planting hybrids compared with high-yielding inbred varieties. For inbred varieties, CL142-AR and CL111 ranked first and second in grain yield, respectively. Remarkable yield gains have been made in Clearfield inbred varieties as it has just been a few years since growers who planted Clearfield varieties expected to obtain yields that were at least 10% less than conventional varieties.

Rex, released by MAFES in February 2010 and grown for registered seed in 2011 by many Mississippi seed growers, performed exceptionally well in 2011 (averaging 236 bushels per acre). Furthermore, no lodging was observed at any of the six locations for Rex. After finalizing the licensing agreement with BASF, CL162 was produced as registered seed in 2011. Furthermore, a small quantity was also sold as certified so growers could have limited acreage. CL162 performed well. It was superior to CL131 and CL181-AR; however, as expected, it was about 10% less in yield relative to CL111, CL142-AR, and CL151. CL162 has had favorable reviews for its grain size and milled appearance. It also stands better than CL151.

Entries that begin with RU represent advanced breeding lines that performed well in on-farm as well as multistate testing. RU1004083 and RU1104122 are Clearfield lines that produced yields similar to the commercially available CL111, CL142-AR, and CL151. Lodging resistance is also much improved for these lines compared with most commercially available Clearfield varieties.

Table 9 provides agronomic, yield, and milling data from select rice varieties that have been included in on-farm trials for multiple years. Variety selection should include emphasis on performance stability over many environments. Varieties such as Cocodrie and Wells have been relatively stable over many years, thus they have been popular varieties in Mississippi and the Midsouth for several years. As stated earlier, Rex has also shown tremendous stability over multiple locations in Mississippi and other states. Table 10 is included to provide a historical record of the performance of the varieties included as check varieties in the Uniform Regional Rice Nursery, which includes more than 170 experimental lines from Arkansas, Louisiana, Mississippi, and Texas.

Variety and hybrid reactions to common diseases and straighthead disorder are found in Table 11. 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 the efficacy of fungicides that are available to combat or prevent the respective disease.

Nitrogen fertilization rate guidelines are provided in Table 12. These guidelines were generated from multiyear, multisite N response trials conducted for newly released cultivars. A combination of current economics and individual cultivars' susceptibility to lodging and yield potential are included in determining the rate guidelines. Year after year, 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 subject to decrease without sacrificing yield and quality.

Suggested conventional varieties for Mississippi rice growers are Bowman, Cocodrie, Cheniere, Rex, Templeton, and Wells. Sabine is often grown on limited acreage by contract. Hybrid rice cultivars perform well in Mississippi. RiceTec, Inc., and Bayer should be contacted for seed availability. For growers who need to utilize the Clearfield technology to control red rice, CL111, CL131, CL142-AR, CL151, CL152, CL162, and CL181-AR varieties will be available in 2012. Clearfield rice hybrids perform well in Mississippi. Clearfield hybrids will be solely offered by RiceTec, Inc. Seed costs for Clearfield rice have increased substantially in recent years. Clearfield rice should be used as a tool with careful attention given to stewardship so that 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 residual and contact herbicides for grass control so that selection pressure is minimized. Incidences of Newpath-resistant barnyardgrass 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 1. Performance of rice cultivars and lines grown on Sharkey clay soil near Tunica, Tunica County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 241 | 5862 | 54 | 68 | 14.4 | 33.8 | 52 | 94 | 60 | 4 | 23.5 |
| Bowman | 196 | 5116 | 58 | 67 | 16.3 | 38.7 | 43 | 87 | 0 | 0 | 24.4 |
| Caffey[6] | 201 | 5967 | 66 | 72 | 14.9 | 42.4 | 39 | 81 | 0 | 0 | 27.6 |
| Catahoula | 226 | 5909 | 58 | 72 | 13.5 | 41.9 | 43 | 77 | 0 | 0 | 23.0 |
| Cheniere | 231 | 6335 | 61 | 71 | 13.1 | 39.5 | 43 | 78 | 0 | 0 | 21.7 |
| Cocodrie | 202 | 5630 | 62 | 72 | 13.0 | 40.0 | 42 | 75 | 0 | 0 | 22.5 |
| 01H10010 | 263 | 5916 | 50 | 67 | 15.1 | 34.0 | 50 | 84 | 80 | 4 | 23.6 |
| Rex | 239 | 6572 | 61 | 69 | 14.1 | 40.7 | 43 | 78 | 0 | 0 | 25.9 |
| RoyJ | 183 | 5104 | 62 | 72 | 18.2 | 38.2 | 45 | 84 | 0 | 0 | 22.6 |
| Taggart | 176 | 4271 | 54 | 69 | 16.8 | 39.7 | 45 | 83 | 0 | 0 | 26.8 |
| Templeton | 222 | 6096 | 61 | 71 | 14.3 | 40.9 | 44 | 79 | 5 | 1 | 21.2 |
| XL723 | 270 | 7649 | 63 | 71 | 12.8 | 37.6 | 50 | 76 | 0 | 0 | 24.5 |
| XP753 | 296 | 7469 | 56 | 71 | 12.7 | 38.1 | 47 | 73 | 0 | 0 | 22.9 |
| XP754 | 255 | 6323 | 55 | 71 | 16.7 | 35.9 | 44 | 81 | 35 | 2 | 23.3 |
| RU1004197 | 245 | 6611 | 60 | 70 | 13.2 | 40.4 | 42 | 74 | 0 | 0 | 23.8 |
| RU1104077 | 221 | 5772 | 58 | 70 | 15.1 | 41.4 | 42 | 82 | 0 | 0 | 23.7 |
| RU1104191 | 182 | 4747 | 58 | 70 | 15.2 | 41.8 | 39 | 82 | 0 | 0 | 23.6 |
| RU1104156 | 209 | 6104 | 65 | 70 | 15.2 | 39.0 | 39 | 78 | 0 | 0 | 24.2 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 217 | 5463 | 56 | 70 | 13.5 | 39.6 | 45 | 72 | 50 | 4 | 22.3 |
| CL131 | 150 | 4128 | 61 | 71 | 14.0 | 37.5 | 39 | 77 | 0 | 0 | 21.0 |
| CL142 AR | 261 | 4820 | 41 | 70 | 13.5 | 40.0 | 48 | 77 | 35 | 2 | 25.4 |
| CL151 | 197 | 5146 | 58 | 70 | 14.5 | 37.8 | 44 | 74 | 65 | 4 | 21.8 |
| CL152 | 216 | 6027 | 62 | 69 | 14.1 | 39.1 | 45 | 79 | 0 | 0 | 20.2 |
| CL162 | 211 | 5689 | 60 | 71 | 13.9 | 38.4 | 47 | 73 | 40 | 2 | 23.7 |
| CL181 AR | 225 | 5981 | 59 | 69 | 15.0 | 39.3 | 43 | 78 | 10 | 2 | 22.5 |
| CL261[6] | 229 | 6699 | 65 | 70 | 16.2 | 42.1 | 46 | 77 | 50 | 3 | 24.0 |
| CLXL729 | 269 | 7025 | 58 | 70 | 13.4 | 38.0 | 52 | 75 | 40 | 2 | 23.9 |
| CLXL745 | 300 | 7696 | 57 | 70 | 12.4 | 36.3 | 50 | 72 | 10 | 1 | 23.6 |
| CLXP756 | 285 | 6790 | 53 | 71 | 15.7 | 36.8 | 47 | 84 | 25 | 2 | 22.9 |
| RU1004083 | 264 | 7013 | 59 | 70 | 14.7 | 39.8 | 44 | 75 | 3 | 1 | 23.4 |
| RU1104122 | 249 | 6623 | 59 | 71 | 14.4 | 38.2 | 44 | 79 | 35 | 3 | 23.7 |

[1]**Planting date:** May 11. **Emergence:** May 24. **Herbicides:** Roundup® at 1 qt/A + Command® at 1.33 pt/A + Firstshot® at 0.9 oz/A on May 11; RicePro® at 1 gal/A + Crop Oil at 1pt/A on June 8. **Fertilizer:** 270 lb/A urea on June 9; 130 lb/A urea on June 30. **Insecticide:** Mustang Max® at 1 gal per 35 acres on July 27. **Fungicide:** Quilt XL® at 10.5 oz/A on July 27. **Permanent Flood**: June 10. **Drained Field:** Sept. 3. **Harvested:** Sept. 27. **A difference of 38 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 9%.**
[2]Rough rice at 12% moisture.
[3]Days after emergence.
[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.
[5]Weight of 1,000 kernels.
[6]Medium grain.

**Table 2. Performance of rice cultivars and lines grown on Alligator clay soil near Clarksdale, Coahoma County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 283 | 7001 | 55 | 66 | 19.2 | 33.4 | 50 | 104 | 87 | 4 | 25.4 |
| Bowman | 220 | 5854 | 59 | 69 | 16.0 | 42.8 | 42 | 96 | 0 | 0 | 24.8 |
| Caffey[6] | 218 | 6266 | 64 | 72 | 18.4 | 44.6 | 41 | 97 | 0 | 0 | 28.4 |
| Catahoula | 211 | 5312 | 56 | 70 | 15.2 | 42.4 | 43 | 93 | 0 | 0 | 23.7 |
| Cheniere | 164 | 4363 | 59 | 71 | 15.9 | 41.0 | 41 | 95 | 0 | 0 | 21.3 |
| Cocodrie | 227 | 5929 | 58 | 68 | 14.6 | 41.7 | 45 | 91 | 0 | 0 | 22.7 |
| 01H10010 | 255 | 6085 | 53 | 66 | 17.6 | 31.6 | 52 | 99 | 53 | 2 | 24.4 |
| Rex | 228 | 5326 | 52 | 66 | 14.4 | 40.2 | 46 | 90 | 0 | 0 | 25.4 |
| RoyJ | 185 | 4735 | 57 | 70 | 21.5 | 40.8 | 47 | 100 | 0 | 0 | 22.9 |
| Taggart | 222 | 5902 | 59 | 70 | 17.6 | 42.1 | 50 | 99 | 0 | 0 | 26.7 |
| Templeton | 198 | 5261 | 59 | 69 | 13.9 | 42.5 | 46 | 99 | 0 | 0 | 20.7 |
| XL723 | 315 | 7937 | 56 | 70 | 13.4 | 38.2 | 50 | 93 | 33 | 2 | 24.6 |
| XP753 | 320 | 7354 | 51 | 72 | 12.8 | 39.6 | 45 | 88 | 0 | 0 | 23.6 |
| XP754 | 283 | 8154 | 64 | 72 | 19.3 | 40.0 | 46 | 100 | 0 | 0 | 24.9 |
| RU1004197 | 219 | 5628 | 57 | 68 | 15.7 | 41.6 | 44 | 93 | 0 | 0 | 22.9 |
| RU1104077 | 249 | 6395 | 57 | 67 | 17.0 | 44.0 | 43 | 96 | 0 | 0 | 23.8 |
| RU1104191 | 237 | 6076 | 57 | 67 | 16.7 | 43.9 | 42 | 98 | 0 | 0 | 24.1 |
| RU1104156 | 231 | 5934 | 57 | 69 | 17.5 | 40.2 | 45 | 95 | 0 | 0 | 25.0 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 242 | 5873 | 54 | 69 | 14.7 | 40.0 | 46 | 91 | 83 | 3 | 24.0 |
| CL131 | 155 | 4046 | 58 | 68 | 14.9 | 38.4 | 39 | 95 | 0 | 0 | 21.8 |
| CL142 AR | 214 | 5014 | 52 | 69 | 15.4 | 40.7 | 52 | 95 | 17 | 1 | 26.6 |
| CL151 | 224 | 5548 | 55 | 69 | 16.6 | 38.4 | 43 | 92 | 83 | 4 | 23.2 |
| CL152 | 205 | 5443 | 59 | 66 | 17.6 | 41.2 | 45 | 99 | 0 | 0 | 20.7 |
| CL162 | 200 | 4853 | 54 | 68 | 18.0 | 37.4 | 48 | 92 | 33 | 2 | 23.7 |
| CL181 AR | 111 | 2537 | 51 | 64 | 18.7 | 33.0 | 42 | 97 | 0 | 0 | 23.2 |
| CL261[6] | 223 | 5325 | 53 | 65 | 17.1 | 38.4 | 46 | 91 | 80 | 3 | 23.0 |
| CLXL729 | 295 | 7165 | 54 | 68 | 13.3 | 37.8 | 51 | 96 | 70 | 2 | 23.6 |
| CLXL745 | 326 | 8352 | 57 | 71 | 14.0 | 37.6 | 48 | 89 | 23 | 1 | 23.9 |
| CLXP756 | 279 | 7914 | 63 | 73 | 20.3 | 39.6 | 45 | 100 | 0 | 0 | 24.2 |
| RU1004083 | 240 | 5721 | 53 | 70 | 15.6 | 42.1 | 44 | 91 | 0 | 0 | 22.5 |
| RU1104122 | 215 | 5706 | 59 | 68 | 18.0 | 40.9 | 43 | 98 | 0 | 0 | 23.5 |

[1]**Planting date:** April 13. **Emergence:** April 25. **Herbicides:** Facet® at 0.5 lb/A + Grandstand® at 10 oz/A + Regiment® at 0.5 oz/A on May 22. **Fertilizer:** 326 lb/A urea on May 19 (applied by MSU). **Insecticide**: Karate® at 1 gal per 75 acres on Aug. 5. **Fungicide**: Quadris® at 6 oz/A on July 6 and July 24. **Permanent Flood:** May 26. **Drained field**: Aug. 28. **Harvested:** Sept. 13. **A difference of 23 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 7%.**
[2]Rough rice at 12% moisture.
[3]Days after emergence.
[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.
[5]Weight of 1,000 kernels.
[6]Medium grain.

**Table 3. Performance of rice cultivars and lines grown on Sharkey clay soil near Renova, Bolivar County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 237 | 5545 | 52 | 67 | 19.6 | 33.5 | 45 | 96 | 90 | 4 | 26.2 |
| Bowman | 232 | 6360 | 61 | 71 | 18.0 | 41.9 | 44 | 88 | 17 | 0 | 25.3 |
| Caffey[6] | 237 | 7041 | 66 | 73 | 18.0 | 43.7 | 42 | 89 | 0 | 0 | 27.7 |
| Catahoula | 258 | 6728 | 58 | 71 | 14.2 | 41.6 | 46 | 86 | 0 | 0 | 23.2 |
| Cheniere | 264 | 7716 | 65 | 73 | 13.1 | 40.7 | 41 | 84 | 10 | 1 | 21.0 |
| Cocodrie | 263 | 7088 | 60 | 71 | 15.2 | 41.2 | 41 | 85 | 10 | 1 | 22.2 |
| 01H10010 | 213 | 4787 | 50 | 66 | 19.3 | 31.2 | 47 | 85 | 90 | 4 | 17.8 |
| Rex | 270 | 6935 | 57 | 68 | 14.2 | 41.1 | 45 | 83 | 0 | 0 | 25.5 |
| RoyJ | 223 | 5429 | 54 | 71 | 17.1 | 41.2 | 48 | 89 | 0 | 0 | 22.1 |
| Taggart | 255 | 6758 | 59 | 71 | 15.5 | 41.2 | 49 | 90 | 0 | 0 | 23.4 |
| Templeton | 233 | 5557 | 53 | 70 | 15.3 | 39.3 | 49 | 88 | 80 | 3 | 20.8 |
| XL723 | 318 | 8165 | 57 | 70 | 11.9 | 37.6 | 49 | 82 | 57 | 2 | 23.6 |
| XP753 | 340 | 8716 | 57 | 72 | 12.8 | 39.2 | 50 | 85 | 53 | 1 | 24.0 |
| XP754 | 276 | 6737 | 54 | 71 | 18.8 | 38.0 | 50 | 87 | 87 | 3 | 24.2 |
| RU1004197 | 274 | 7516 | 61 | 71 | 14.1 | 41.1 | 41 | 85 | 0 | 0 | 22.9 |
| RU1104077 | 243 | 6332 | 58 | 71 | 16.4 | 44.0 | 43 | 87 | 3 | 1 | 24.8 |
| RU1104191 | 250 | 6528 | 58 | 70 | 17.5 | 44.1 | 44 | 88 | 8 | 1 | 25.1 |
| RU1104156 | 255 | 7105 | 62 | 69 | 15.4 | 39.8 | 44 | 86 | 0 | 0 | 25.2 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 255 | 6663 | 58 | 70 | 13.7 | 39.3 | 43 | 80 | 77 | 4 | 24.2 |
| CL131 | 238 | 6640 | 62 | 72 | 12.7 | 40.8 | 38 | 82 | 20 | 1 | 21.1 |
| CL142 AR | 272 | 6971 | 57 | 72 | 16.2 | 42.6 | 47 | 83 | 73 | 3 | 25.4 |
| CL151 | 261 | 7047 | 60 | 72 | 14.7 | 38.3 | 41 | 81 | 83 | 4 | 22.3 |
| CL152 | 265 | 6920 | 58 | 68 | 14.2 | 41.5 | 41 | 85 | 0 | 0 | 20.6 |
| CL162 | 230 | 5596 | 54 | 69 | 14.7 | 39.5 | 42 | 82 | 83 | 4 | 24.6 |
| CL181 AR | 241 | 6296 | 58 | 69 | 15.6 | 40.7 | 38 | 85 | 0 | 0 | 23.1 |
| CL261[6] | 222 | 6101 | 61 | 70 | 14.5 | 43.9 | 41 | 85 | 43 | 2 | 23.9 |
| CLXL729 | 286 | 6696 | 52 | 68 | 13.2 | 38.7 | 47 | 81 | 50 | 2 | 23.4 |
| CLXL745 | 312 | 7999 | 57 | 71 | 12.3 | 37.2 | 48 | 80 | 90 | 3 | 24.9 |
| CLXP756 | 272 | 6856 | 56 | 72 | 18.8 | 37.5 | 46 | 86 | 90 | 4 | 23.6 |
| RU1004083 | 243 | 6243 | 57 | 71 | 15.4 | 41.5 | 45 | 86 | 50 | 3 | 22.9 |
| RU1104122 | 249 | 6502 | 58 | 70 | 14.6 | 41.2 | 43 | 86 | 57 | 3 | 24.7 |

[1]**Planting date:** April 14. **Emergence:** April 23. **Herbicides:** Super Wham ® at 4 qt/A + Facet® at 0.5 lb/A + Prowl® at 2 pt/A + crop oil at 1 pt/A on April 30; Permit® 0.5 oz/A on May 20; Clincher® at 15 oz/A + crop oil at 1 qt/A on June 6; Ultra Blazer® at 0.5 pt/A on June 21. **Fertilizer:** 50 lb/A DAP + 50 lb/A ammonium sulfate on April 30; 100 lb/A urea + Agrotain on May 20, June 6, and Jun 21; 100 lb/A urea on June 28. **Insecticide:** Karate Z® at 1 gal per 60 acres on July 28. **Fungicide:** Quilt XL® at 14 oz/A on July 15. **Permanent Flood:** May 24. **Drained field:** Aug. 15. **Harvested:** Aug. 30. **A difference of 22 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6%**

[2]Rough rice at 12% moisture.

[3]Days after emergence.

[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.

[5]Weight of 1,000 kernels.

[6]Medium grain.

**Table 4. Performance of rice cultivars and lines grown on Sharkey clay soil near Litton, Bolivar County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 272 | 6372 | 52 | 66 | 20.2 | 36.0 | 46 | 106 | 87 | 3 | 26.3 |
| Bowman | 199 | 5011 | 56 | 67 | 16.4 | 43.3 | 42 | 100 | 0 | 0 | 25.2 |
| Caffey[6] | 200 | 5578 | 62 | 72 | 18.3 | 44.8 | 41 | 98 | 0 | 0 | 28.8 |
| Catahoula | 173 | 4207 | 54 | 69 | 15.2 | 42.6 | 44 | 96 | 0 | 0 | 23.6 |
| Cheniere | 150 | 3925 | 58 | 70 | 17.3 | 41.6 | 39 | 97 | 0 | 0 | 21.7 |
| Cocodrie | 212 | 5616 | 59 | 68 | 15.6 | 42.7 | 43 | 97 | 10 | 1 | 22.5 |
| 01H10010 | 247 | 5993 | 54 | 68 | 17.4 | 34.3 | 47 | 102 | 87 | 3 | 25.4 |
| Rex | 210 | 4623 | 49 | 65 | 15.1 | 40.1 | 45 | 95 | 0 | 0 | 24.7 |
| RoyJ | 202 | 5182 | 57 | 70 | 17.7 | 42.2 | 45 | 103 | 0 | 0 | 24.2 |
| Taggart | 199 | 4734 | 53 | 69 | 14.5 | 43.5 | 48 | 101 | 0 | 0 | 26.6 |
| Templeton | 194 | 4618 | 53 | 68 | 13.5 | 43.4 | 45 | 100 | 30 | 1 | 21.3 |
| XL723 | 296 | 7317 | 55 | 69 | 12.8 | 39.0 | 49 | 95 | 73 | 2 | 24.6 |
| XP753 | 306 | 7433 | 54 | 70 | 13.5 | 39.4 | 45 | 93 | 17 | 1 | 23.1 |
| XP754 | 282 | 7486 | 59 | 72 | 19.1 | 39.7 | 44 | 101 | 83 | 2 | 24.8 |
| RU1004197 | 207 | 5322 | 57 | 69 | 15.6 | 40.8 | 42 | 95 | 67 | 3 | 22.3 |
| RU1104077 | 218 | 5393 | 55 | 66 | 15.7 | 43.6 | 42 | 101 | 0 | 0 | 24.3 |
| RU1104191 | 231 | 6041 | 58 | 68 | 17.2 | 44.6 | 43 | 101 | 0 | 0 | 24.2 |
| RU1104156 | 214 | 5189 | 54 | 67 | 14.4 | 38.8 | 44 | 95 | 60 | 2 | 24.0 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 232 | 5634 | 54 | 69 | 15.6 | 41.4 | 42 | 94 | 87 | 3 | 24.3 |
| CL131 | 199 | 4833 | 54 | 68 | 13.3 | 40.8 | 39 | 95 | 0 | 0 | 21.7 |
| CL142 AR | 195 | 4477 | 51 | 69 | 15.3 | 43.2 | 48 | 97 | 0 | 0 | 26.3 |
| CL151 | 201 | 4695 | 52 | 67 | 19.1 | 39.4 | 41 | 95 | 90 | 3 | 22.1 |
| CL152 | 163 | 4026 | 55 | 66 | 18.4 | 41.3 | 43 | 100 | 0 | 0 | 21.4 |
| CL162 | 192 | 4320 | 50 | 67 | 16.0 | 38.8 | 44 | 94 | 63 | 3 | 24.4 |
| CL181 AR | 135 | 3154 | 52 | 68 | 17.5 | 42.4 | 41 | 99 | 0 | 0 | 23.7 |
| CL261[6] | 185 | 4752 | 57 | 67 | 15.5 | 40.8 | 43 | 95 | 67 | 2 | 23.2 |
| CLXL729 | 284 | 6519 | 51 | 67 | 11.9 | 38.3 | 46 | 95 | 73 | 2 | 23.2 |
| CLXL745 | 297 | 7613 | 57 | 72 | 14.6 | 38.1 | 45 | 89 | 90 | 3 | 25.2 |
| CLXP756 | 291 | 7735 | 59 | 72 | 19.5 | 39.7 | 45 | 101 | 90 | 2 | 25.3 |
| RU1004083 | 200 | 4331 | 48 | 67 | 14.5 | 40.6 | 42 | 96 | 23 | 1 | 22.4 |
| RU1104122 | 202 | 5443 | 60 | 68 | 16.4 | 42.4 | 42 | 99 | 0 | 0 | 24.0 |

[1]**Planting date:** April 13. **Emergence:** April 22. **Herbicides:** Compadre® at 6.4 oz/A + Gramoxone Inteon® at 40 oz/A on March 25; Facet 75DF® at 0.25 lb/A + Aim® at 0.75 oz/A + Regiment® at 0.65 oz/A + Soysurf –xtra® at 12.8 oz/A on May 30. **Fertilizer:** 100 lb/A DAP + 100 lb/A ammonium nitrate on May 5; 285 lb/A urea on May 30; 150 lb/A urea on June 22. **Insecticides:** Karate® at 1.8 oz/A on May 30 and July 28. **Fungicides:** Quilt® at 14 oz/A on July 16. **Permanent flood:** May 28. **Drained field:** Aug. 27. **Harvested:** Sept. 10. **A difference of 17 bu/A is required for one variety to differ from another at the 5% significance level. C.V. = 5%.**
[2]Rough rice at 12% moisture.
[3]Days after emergence.
[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.
[5]Weight of 1,000 kernels.
[6]Medium grain.

**Table 5. Performance of rice cultivars and lines grown on Sharkey clay soil near Stoneville, Washington County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 216 | 5348 | 55 | 66 | 19.0 | 33.8 | 50 | 100 | 30 | 1 | 24.8 |
| Bowman | 235 | 6143 | 58 | 70 | 15.0 | 41.9 | 40 | 90 | 0 | 0 | 25.2 |
| Caffey[6] | 247 | 7004 | 63 | 70 | 15.2 | 42.0 | 41 | 90 | 0 | 0 | 27.5 |
| Catahoula | 250 | 6643 | 59 | 70 | 14.2 | 41.7 | 42 | 87 | 0 | 0 | 23.6 |
| Cheniere | 236 | 6269 | 59 | 70 | 13.6 | 38.3 | 39 | 86 | 0 | 0 | 21.1 |
| Cocodrie | 232 | 6254 | 60 | 70 | 13.8 | 40.1 | 43 | 86 | 0 | 0 | 23.1 |
| 01H10010 | 169 | 3725 | 49 | 66 | 22.7 | 34.1 | 50 | 92 | 60 | 3 | 24.0 |
| Rex | 250 | 6532 | 58 | 68 | 13.9 | 38.9 | 43 | 85 | 0 | 0 | 26.8 |
| RoyJ | 232 | 5647 | 54 | 69 | 16.2 | 39.4 | 45 | 94 | 0 | 0 | 21.4 |
| Taggart | 252 | 6228 | 55 | 70 | 14.9 | 40.2 | 50 | 93 | 0 | 0 | 26.4 |
| Templeton | 237 | 5856 | 55 | 68 | 14.5 | 41.1 | 48 | 92 | 0 | 0 | 20.7 |
| XL723 | 302 | 8164 | 60 | 70 | 12.8 | 37.4 | 49 | 84 | 0 | 0 | 24.4 |
| XP753 | 322 | 8268 | 57 | 71 | 12.4 | 39.4 | 46 | 84 | 0 | 0 | 23.8 |
| XP754 | 281 | 7448 | 59 | 71 | 16.2 | 38.5 | 47 | 92 | 40 | 2 | 22.2 |
| RU1004197 | 230 | 5890 | 57 | 67 | 13.3 | 39.7 | 40 | 85 | 0 | 0 | 22.3 |
| RU1104077 | 260 | 6783 | 58 | 68 | 14.2 | 41.8 | 41 | 91 | 0 | 0 | 24.6 |
| RU1104191 | 274 | 6791 | 55 | 68 | 14.4 | 42.3 | 42 | 89 | 0 | 0 | 24.2 |
| RU1104156 | 271 | 7446 | 61 | 69 | 14.6 | 40.1 | 41 | 86 | 0 | 0 | 26.5 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 231 | 5916 | 57 | 68 | 14.9 | 39.0 | 44 | 86 | 37 | 2 | 23.5 |
| CL131 | 235 | 6771 | 64 | 71 | 13.4 | 39.2 | 41 | 86 | 0 | 0 | 22.3 |
| CL142 AR | 276 | 6581 | 53 | 68 | 15.3 | 41.6 | 51 | 88 | 0 | 1 | 25.2 |
| CL151 | 252 | 6581 | 58 | 69 | 13.8 | 39.5 | 42 | 86 | 0 | 0 | 22.3 |
| CL152 | 231 | 5932 | 57 | 66 | 13.9 | 38.6 | 43 | 92 | 0 | 0 | 19.9 |
| CL162 | 217 | 5479 | 56 | 68 | 15.8 | 38.3 | 47 | 87 | 33 | 3 | 23.8 |
| CL181 AR | 238 | 6008 | 56 | 67 | 14.7 | 39.3 | 42 | 88 | 0 | 0 | 23.2 |
| CL261[6] | 209 | 5932 | 63 | 68 | 16.2 | 41.9 | 46 | 87 | 27 | 1 | 24.4 |
| CLXL729 | 274 | 7017 | 57 | 69 | 12.7 | 37.4 | 50 | 86 | 17 | 1 | 23.8 |
| CLXL745 | 286 | 7204 | 56 | 69 | 12.1 | 36.1 | 48 | 83 | 7 | 1 | 23.8 |
| CLXP756 | 277 | 6987 | 56 | 72 | 15.1 | 39.3 | 50 | 93 | 33 | 2 | 23.7 |
| RU1004083 | 251 | 6790 | 60 | 70 | 14.3 | 40.3 | 42 | 88 | 0 | 0 | 24.2 |
| RU1104122 | 255 | 6414 | 56 | 67 | 13.7 | 39.3 | 44 | 91 | 0 | 0 | 23.3 |

[1]**Planting date:** April 8. **Emergence:** April 19. **Herbicides:** Ricestar HT at 17 fl oz/A + Aim at 0.5 fl oz/A on May 6; Regiment at 0.6 oz/A + Permit at 0.5 oz/A + Aim at 0.75 fl oz/A + UAN at 1.0% v/v + Kinetic at 0.125% v/v on May 18. **Fertilizer:** 300 lb/A of urea on May 19; 100 lb/A of urea on June 20. **Insecticide:** Karate at 2.56 fl oz/A on July 18. **Permanent Flood:** May 19. **Drained field**: Aug. 10. **Harvested:** Aug. 29. **A difference of 28 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 7%.**
[2]Rough rice at 12% moisture.
[3]Days from emergence.
[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.
[5]Weight of 1,000 kernels.
[6]Medium grain.

**Table 6. Performance of rice cultivars and lines grown on Sharkey clay soil near Hollandale, Washington County, Mississippi, 2011.[1]**

| Entry | Yield[2] | Milled head rice | Whole milled rice | Total milled rice | Harvest moisture | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *lb/A* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* |
| | | | | | **Conventional** | | | | | | |
| Arize1003 | 226 | 4985 | 49 | 67 | 19.3 | 34.2 | 47 | 93 | 0 | 0 | 25.3 |
| Bowman | 223 | 5607 | 56 | 70 | 16.5 | 42.8 | 41 | 91 | 0 | 0 | 25.5 |
| Caffey[6] | 179 | 4267 | 53 | 70 | 16.9 | 43.0 | 38 | 91 | 0 | 0 | 27.3 |
| Catahoula | 220 | 4660 | 47 | 70 | 13.4 | 42.4 | 39 | 84 | 0 | 0 | 22.9 |
| Cheniere | 224 | 5956 | 59 | 71 | 13.1 | 40.3 | 39 | 88 | 0 | 0 | 20.9 |
| Cocodrie | 212 | 5732 | 60 | 70 | 15.0 | 41.7 | 39 | 87 | 0 | 0 | 23.2 |
| 01H10010 | 244 | 5170 | 47 | 65 | 19.6 | 35.7 | 48 | 93 | 0 | 0 | 24.3 |
| Rex | 216 | 5545 | 57 | 68 | 14.4 | 40.8 | 40 | 86 | 0 | 0 | 26.5 |
| RoyJ | 191 | 4546 | 53 | 71 | 16.9 | 40.9 | 42 | 92 | 0 | 0 | 22.6 |
| Taggart | 206 | 4535 | 49 | 71 | 16.3 | 42.7 | 46 | 91 | 0 | 0 | 26.8 |
| Templeton | 215 | 4751 | 49 | 70 | 14.4 | 41.9 | 44 | 89 | 0 | 0 | 20.5 |
| XL723 | 291 | 7340 | 56 | 70 | 13.3 | 38.1 | 47 | 86 | 0 | 0 | 24.3 |
| XP753 | 260 | 6073 | 52 | 71 | 15.0 | 38.0 | 43 | 88 | 0 | 0 | 23.0 |
| XP754 | 253 | 5696 | 50 | 70 | 19.6 | 37.8 | 44 | 93 | 0 | 0 | 23.8 |
| RU1004197 | 219 | 6009 | 61 | 71 | 13.7 | 41.2 | 39 | 90 | 0 | 0 | 22.9 |
| RU1104077 | 237 | 5646 | 53 | 69 | 15.2 | 42.0 | 41 | 90 | 0 | 0 | 24.7 |
| RU1104191 | 211 | 4743 | 50 | 68 | 14.9 | 43.3 | 41 | 88 | 0 | 0 | 25.3 |
| RU1104156 | 219 | 5625 | 57 | 69 | 14.2 | 39.7 | 38 | 86 | 0 | 0 | 25.1 |
| | | | | | **Clearfield** | | | | | | |
| CL111 | 274 | 6537 | 53 | 70 | 12.6 | 40.6 | 43 | 83 | 0 | 0 | 24.5 |
| CL131 | 238 | 6112 | 57 | 71 | 12.7 | 41.2 | 37 | 83 | 0 | 0 | 21.2 |
| CL142 AR | 273 | 4914 | 40 | 71 | 14.0 | 43.5 | 47 | 85 | 0 | 0 | 25.1 |
| CL151 | 253 | 5689 | 50 | 71 | 13.0 | 40.4 | 40 | 83 | 0 | 0 | 23.0 |
| CL152 | 249 | 6490 | 58 | 68 | 13.8 | 41.3 | 42 | 90 | 0 | 0 | 20.6 |
| CL162 | 233 | 5441 | 52 | 70 | 13.5 | 39.0 | 45 | 85 | 0 | 0 | 24.9 |
| CL181 AR | 230 | 5484 | 53 | 69 | 14.6 | 39.9 | 38 | 88 | 0 | 0 | 23.0 |
| CL261[6] | 221 | 6073 | 61 | 72 | 14.3 | 43.5 | 43 | 85 | 0 | 0 | 23.2 |
| CLXL729 | 254 | 5724 | 50 | 68 | 13.8 | 37.6 | 48 | 85 | 0 | 0 | 23.3 |
| CLXL745 | 233 | 5345 | 51 | 70 | 12.9 | 34.1 | 46 | 88 | 0 | 0 | 24.3 |
| CLXP756 | 249 | 5944 | 53 | 72 | 19.1 | 38.5 | 45 | 93 | 0 | 0 | 24.1 |
| RU1004083 | 249 | 5259 | 47 | 70 | 13.8 | 41.9 | 40 | 84 | 0 | 0 | 23.2 |
| RU1104122 | 254 | 6393 | 56 | 69 | 14.2 | 41.3 | 44 | 90 | 0 | 0 | 23.9 |

[1]**Planting date**: April 14. **Emergence**: April 22. **Herbicides**: Command® at 1.33 pt/A + Roundup® at 21 fl oz/A on April 13; Regiment® at 0.05 oz/A + Permit® at 0.5 oz/A + 1% Soy-surf on May 16. **Fertilizer**: Agrotain-treated urea at 200 lb/A preflood on May 17; urea at 100 lb/A on June 10; urea at 100 lb/A on June 17. **Date flushed**: April 27. **Insecticide**: Kaiso® at 1 gal per 7 acres on July 18. **Fungicide**: Quilt XL® at 14 oz/A on July 4. **Permanent flood**: May 17. **Drained field**: Aug. 14. **Harvested**: Aug. 29. **A difference of 25 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 7%**

[2]Rough rice at 12% moisture.

[3]Days after emergence.

[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.

[5]Weight of 1,000 kernels.

[6]Medium grain.

**Table 7. Average rough rice yields of varieties, hybrids, and lines evaluated in on-farm trials at six locations, 2011.**

| Entry | Tunica | Clarksdale | Renova | Litton | Stoneville | Hollandale | Average | Stability[2] |
|---|---|---|---|---|---|---|---|---|
| | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | |
| | | | | **Conventional** | | | | |
| Arize1003 | 241 | 283 | 237 | 272 | 216 | 226 | 246 | 10.7 |
| Bowman | 196 | 220 | 232 | 199 | 235 | 223 | 218 | 7.6 |
| Caffey[1] | 201 | 218 | 237 | 200 | 247 | 179 | 214 | 11.9 |
| Catahoula | 226 | 211 | 258 | 173 | 250 | 220 | 223 | 13.6 |
| Cheniere | 231 | 164 | 264 | 150 | 236 | 224 | 212 | 21.0 |
| Cocodrie | 202 | 227 | 263 | 212 | 232 | 212 | 225 | 9.7 |
| 01H10010 | 263 | 255 | 213 | 247 | 169 | 244 | 232 | 15.2 |
| Rex | 239 | 228 | 270 | 210 | 250 | 216 | 236 | 9.5 |
| RoyJ | 183 | 185 | 223 | 202 | 232 | 191 | 203 | 10.1 |
| Taggart | 176 | 222 | 255 | 199 | 252 | 206 | 218 | 14.2 |
| Templeton | 222 | 198 | 233 | 194 | 237 | 215 | 217 | 8.2 |
| XL723 | 270 | 315 | 318 | 296 | 302 | 291 | 299 | 5.9 |
| XP753 | 296 | 320 | 340 | 306 | 322 | 260 | 307 | 9.0 |
| XP754 | 255 | 283 | 277 | 282 | 281 | 253 | 273 | 5.1 |
| RU1004197 | 245 | 219 | 274 | 207 | 230 | 219 | 232 | 10.4 |
| RU1104077 | 221 | 249 | 243 | 218 | 260 | 237 | 238 | 6.8 |
| RU1104191 | 182 | 237 | 250 | 231 | 274 | 211 | 231 | 13.8 |
| RU1104156 | 209 | 231 | 255 | 214 | 271 | 219 | 233 | 10.6 |
| | | | | **Clearfield** | | | | |
| CL111 | 217 | 242 | 255 | 232 | 231 | 274 | 242 | 8.3 |
| CL131 | 150 | 155 | 238 | 199 | 235 | 238 | 203 | 20.4 |
| CL142 AR | 261 | 214 | 272 | 195 | 276 | 273 | 249 | 14.0 |
| CL151 | 197 | 224 | 261 | 201 | 252 | 253 | 231 | 12.1 |
| CL152 | 216 | 205 | 265 | 163 | 231 | 249 | 222 | 16.2 |
| CL162 | 211 | 200 | 230 | 192 | 217 | 233 | 214 | 7.6 |
| CL181 AR | 225 | 111 | 241 | 135 | 238 | 230 | 197 | 29.4 |
| CL261[1] | 229 | 223 | 222 | 185 | 209 | 221 | 215 | 7.4 |
| CLXL729 | 269 | 295 | 286 | 284 | 274 | 254 | 277 | 5.2 |
| CLXL745 | 300 | 326 | 312 | 297 | 286 | 233 | 292 | 11.0 |
| CLXP756 | 285 | 279 | 272 | 291 | 277 | 249 | 276 | 5.3 |
| RU1004083 | 264 | 240 | 243 | 200 | 251 | 249 | 241 | 9.1 |
| RU1104122 | 249 | 215 | 249 | 202 | 255 | 254 | 237 | 9.6 |
| Mean | 230 | 232 | 258 | 219 | 249 | 234 | 237 | |
| LSD | 38 | 23 | 22 | 17 | 28 | 25 | | |
| CV | 9 | 7 | 6 | 5 | 7 | 7 | | |
| Planting date | May 11 | April 13 | April 14 | April 13 | April 8 | April 14 | — | |
| Emergence date | May 24 | April 25 | April 23 | April 22 | April 19 | April 22 | — | |

[1]Medium grain.
[2]Stability represents the ability of the entry to perform similarly across the six environments. The lower the number, the more stable it performed.

**Table 8. Average agronomic and milling performance of varieties, hybrids, and lines grown at six on-farm locations, 2011.**

| Brand | Origin[1] | Average yield | | Milling yield | | Bushel weight | Plant height | 50% heading[3] | Lodging | Lodging[4] | 1000 seed weight[5] | Approximate seeds/pound |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Rough rice[2] | Milled head rice | Total | Whole | | | | | | | |
| | | *bu/A* | *lb/A* | *%* | *%* | *lb* | *in* | *days* | *%* | *(0-5)* | *g* | *no.* |
| | | | | | | **Conventional** | | | | | | |
| Arize1003 | Bayer | 248 | 5907 | 53 | 67 | 34.1 | 48 | 99 | 71 | 3 | 25.3 | 17929 |
| Bowman | MS | 219 | 5710 | 58 | 69 | 42.1 | 42 | 92 | 4 | 0 | 25.1 | 18072 |
| Caffey[6] | LA | 214 | 5979 | 62 | 71 | 43.5 | 41 | 91 | 0 | 0 | 27.9 | 16258 |
| Catahoula | LA | 223 | 5517 | 55 | 70 | 42.1 | 43 | 88 | 0 | 0 | 23.3 | 19468 |
| Cheniere | LA | 210 | 5683 | 60 | 71 | 40.3 | 40 | 89 | 2 | 0 | 21.3 | 21296 |
| Cocodrie | LA | 226 | 6097 | 60 | 70 | 41.3 | 42 | 88 | 4 | 0 | 22.7 | 19982 |
| 01H10010 | Bayer | 229 | 5142 | 50 | 66 | 33.4 | 49 | 93 | 74 | 3 | 23.3 | 19468 |
| Rex | MS | 237 | 5860 | 55 | 67 | 40.3 | 44 | 87 | 0 | 0 | 25.8 | 17581 |
| RoyJ | AR | 205 | 5163 | 56 | 70 | 40.5 | 45 | 94 | 0 | 0 | 22.6 | 20071 |
| Taggart | AR | 221 | 5459 | 55 | 70 | 41.7 | 48 | 93 | 0 | 0 | 26.1 | 17379 |
| Templeton | AR | 216 | 5350 | 55 | 69 | 41.6 | 46 | 92 | 24 | 1 | 20.9 | 21703 |
| XL723 | RT | 300 | 7841 | 58 | 70 | 38.0 | 49 | 87 | 35 | 1 | 24.3 | 18667 |
| XP753 | RT | 308 | 7485 | 54 | 71 | 39.0 | 46 | 86 | 15 | 0 | 23.4 | 19385 |
| XP754 | RT | 273 | 6877 | 56 | 71 | 38.5 | 46 | 93 | 50 | 2 | 23.9 | 18979 |
| RU1004197 | MS | 233 | 6176 | 59 | 69 | 40.8 | 41 | 88 | 14 | 1 | 22.9 | 19808 |
| RU1104077 | MS | 239 | 6021 | 56 | 68 | 42.9 | 42 | 92 | 1 | 0 | 24.3 | 18667 |
| RU1104191 | MS | 234 | 5892 | 56 | 68 | 43.4 | 42 | 91 | 2 | 0 | 24.4 | 18590 |
| RU1104156 | MS | 235 | 6227 | 59 | 68 | 39.6 | 42 | 88 | 13 | 0 | 25.0 | 18144 |
| | | | | | | **Clearfield** | | | | | | |
| CL111 | LA HA | 243 | 6019 | 55 | 69 | 40.0 | 44 | 85 | 68 | 3 | 23.8 | 19059 |
| CL131 | LA HA | 206 | 5461 | 59 | 70 | 39.8 | 39 | 87 | 4 | 0 | 21.5 | 21098 |
| CL142 AR | AR HA | 248 | 5464 | 49 | 70 | 42.0 | 49 | 88 | 25 | 1 | 25.7 | 17650 |
| CL151 | LA HA | 233 | 5775 | 55 | 69 | 39.0 | 42 | 86 | 64 | 3 | 22.5 | 20160 |
| CL152 | LA HA | 222 | 5788 | 58 | 67 | 40.6 | 43 | 91 | 0 | 0 | 20.6 | 22019 |
| CL162 | MS HA | 214 | 5199 | 54 | 69 | 38.6 | 45 | 86 | 51 | 3 | 24.2 | 18744 |
| CL181 AR | AR HA | 195 | 4827 | 55 | 67 | 39.1 | 40 | 90 | 1 | 0 | 23.1 | 19636 |
| CL261[6] | LA HA | 214 | 5778 | 60 | 68 | 41.7 | 44 | 87 | 54 | 2 | 23.6 | 19220 |
| CLXL729 | RT | 277 | 6618 | 53 | 68 | 38.0 | 49 | 87 | 51 | 2 | 23.5 | 19302 |
| CLXL745 | RT | 292 | 7351 | 56 | 70 | 36.6 | 47 | 84 | 46 | 2 | 24.3 | 18667 |
| CLXP756 | RT | 275 | 7056 | 57 | 72 | 38.6 | 46 | 93 | 49 | 2 | 24.0 | 18900 |
| RU1004083 | MS | 240 | 5832 | 54 | 69 | 41.1 | 43 | 87 | 16 | 1 | 23.1 | 19636 |
| RU1104122 | MS | 236 | 6172 | 58 | 69 | 40.7 | 43 | 91 | 17 | 1 | 23.9 | 18979 |
| Mean | | 238 | 5962 | 56 | 69 | 40 | 44 | 90 | 24 | 1 | 24 | — |
| LSD | | 17 | — | 3 | 1 | 1 | 1 | 1 | 16 | 1 | 1 | — |
| CV | | 11 | — | 7 | 2 | 4 | 4 | 2 | 122 | 118 | 4 | — |

[1]Origin: AR = Arkansas; LA = Louisiana; LA-HA = Louisiana released and marketed by Horizon Ag, LLC; MS = Mississippi; RT = RiceTec, Inc.
[2]Rough rice at 12% moisture. **A difference of 17 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 11%.**
[3]Days after emergence.
[4](0-5) 0 = plants totally erect, 5 = plants completely on ground.
[5]Weight of 1,000 kernels.
[6]Medium grain.

**Table 9. Annual and average grain yields along with agronomic and milling data averages of rice varieties grown in the Delta on-farm tests from 1991 to 2011.[1]**

| Variety or line | Grain yield [2] | | | | | | | 3-year avg. | Total | | Milling yield [4] | | Bushel weight | Plant height | Days to heading [5] | Lodging | 1000 seed weight [6] | Sheath blight [7] | Seeds/ pound |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | | Avg. [3] | Tests | Total | Whole | | | | | | | |
| | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *no.* | *%* | *%* | *lb* | *in* | *no.* | *%* | *g* | *score* | *no.* |
| **Conventional** | | | | | | | | | | | | | | | | | | | |
| Arize1003 | — | — | — | — | 255 | — | 248 | — | 252 | 11 | 68 | 56 | 36 | 47 | 100 | 40 | 26 | 2 | 17685 |
| Bowman | 178 | 208 | 216 | 200 | 198 | 198 | 219 | 205 | 202 | 44 | 68 | 54 | 44 | 40 | 89 | 13 | 25 | 4 | 18184 |
| Caffey[8] | — | — | — | — | — | — | 214 | — | 214 | 6 | 71 | 62 | 44 | 41 | 91 | 0 | 28 | — | 16258 |
| Catahoula | — | — | 202 | 193 | 182 | 213 | 223 | 206 | 203 | 30 | 71 | 57 | 43 | 40 | 86 | 3 | 24 | 3 | 19381 |
| Cheniere | 168 | 190 | — | 190 | 208 | 203 | 210 | 207 | 198 | 51 | 70 | 58 | 42 | 38 | 87 | 12 | 22 | 5 | 21389 |
| Cocodrie | 176 | 194 | 213 | 188 | 198 | 227 | 226 | 217 | 191 | 100 | 68 | 58 | 42 | 40 | 83 | 11 | 24 | 5 | 19594 |
| 01H10010 | — | — | — | — | — | — | 229 | — | 229 | 6 | 66 | 50 | 33 | 49 | 93 | 74 | 23 | — | 19468 |
| Rex | — | — | 212 | 219 | 212 | 211 | 237 | 220 | 218 | 24 | 68 | 57 | 42 | 42 | 84 | 0 | 26 | 3 | 17169 |
| RoyJ | — | — | — | — | — | — | 205 | — | 205 | 6 | 70 | 56 | 41 | 45 | 94 | 0 | 23 | — | 20071 |
| Taggert | — | — | — | — | 208 | 217 | 221 | 215 | 215 | 17 | 70 | 54 | 43 | 45 | 92 | 0 | 27 | 0 | 17012 |
| Templeton | — | — | — | 199 | 209 | 204 | 216 | 210 | 207 | 23 | 70 | 57 | 44 | 43 | 88 | 12 | 22 | 0 | 20479 |
| XL723 | — | — | — | — | — | — | 300 | — | 300 | 6 | 70 | 58 | 38 | 49 | 87 | 35 | 24 | — | 19385 |
| XP753 | — | — | — | — | — | — | 308 | — | 308 | 6 | 71 | 54 | 39 | 46 | 86 | 15 | 23 | — | 19386 |
| XP754 | — | — | — | — | — | — | 273 | — | 273 | 6 | 71 | 56 | 39 | 46 | 93 | 50 | 24 | — | 18979 |
| RU1004197 | — | — | — | — | — | — | 233 | — | 233 | 6 | 69 | 59 | 41 | 41 | 88 | 14 | 23 | — | 19808 |
| RU1104077 | — | — | — | — | — | — | 239 | — | 239 | 6 | 68 | 58 | 43 | 42 | 92 | 1 | 24 | — | 18667 |
| RU1104191 | — | — | — | — | — | — | 234 | — | 234 | 6 | 68 | 56 | 43 | 42 | 91 | 2 | 24 | — | 18590 |
| RU1104156 | — | — | — | — | — | — | 235 | — | 235 | 6 | 68 | 58 | 40 | 42 | 88 | 13 | 25 | — | 18144 |
| **Clearfield** | | | | | | | | | | | | | | | | | | | |
| CL111 | — | — | — | — | 208 | 224 | 243 | 225 | 225 | 17 | 70 | 60 | 42 | 42 | 84 | 24 | 25 | 2 | 18336 |
| CL131 | 161 | 187 | — | 179 | 176 | 181 | 182 | 188 | 182 | 37 | 70 | 59 | 42 | 36 | 87 | 9 | 22 | 6 | 20622 |
| CL142 AR | — | — | — | — | — | 231 | 248 | — | 240 | 12 | 68 | 50 | 42 | 46 | 86 | 13 | 26 | — | 17384 |
| CL151 | — | — | — | 194 | 220 | 225 | 233 | 226 | 218 | 23 | 70 | 57 | 41 | 40 | 85 | 42 | 23 | 2 | 20143 |
| CL152 | — | — | — | — | — | — | 222 | — | 222 | 6 | 67 | 58 | 41 | 43 | 91 | 0 | 21 | — | 22019 |
| CL162 | — | — | — | — | 207 | 199 | 214 | 207 | 207 | 17 | 70 | 58 | 41 | 43 | 84 | 19 | 25 | 2 | 18041 |
| CL181 AR | — | — | — | — | — | 191 | 195 | — | 193 | 12 | 67 | 56 | 41 | 40 | 88 | 1 | 24 | — | 19268 |
| CL261[8] | — | — | — | — | — | 181 | 214 | — | 198 | 12 | 69 | 63 | 43 | 43 | 85 | 29 | 24 | — | 19060 |
| CLXL729 | — | — | — | — | — | — | 277 | — | 277 | 6 | 68 | 53 | 38 | 49 | 87 | 51 | 24 | — | 19302 |
| CLXL745 | — | — | — | — | — | 268 | 292 | — | 280 | 12 | 71 | 57 | 38 | 45 | 80 | 31 | 25 | — | 18406 |
| CLXP756 | — | — | — | — | — | — | 275 | — | 275 | 6 | 72 | 57 | 39 | 46 | 93 | 49 | 24 | — | 18900 |
| RU1004083 | — | — | — | — | — | — | 240 | — | 240 | 6 | 69 | 54 | 41 | 43 | 87 | 16 | 23 | — | 19636 |
| RU1104122 | — | — | — | — | — | — | 236 | — | 236 | 6 | 68 | 56 | 41 | 43 | 91 | 17 | 24 | — | 18979 |

[1]Test locations were in farmers' fields extending from northern to southern Delta areas.
[2]Rough rice at 12% moisture content. Data columns for 1991 to 2002 were omitted, but their numbers were included in the average yield and total test numbers.
[3]Average of the three most recent years tested.
[4]Values for milling, agronomic characteristics, and sheath blight are accumulated means over all years of testing.
[5]Days after emergence.
[6]Weight of 1,000 kernels at 12% grain moisture content.
[7]Sheath blight scores using average percent of all plants infected on a plot basis.
[8]Medium grain.

**Table 10. Annual and average grain yields and agronomic characteristics of long-grain commercial varieties grown in the Uniform Regional Rice Nursery 1990–2011.**

| Variety[1] | Origin[2] | Grain yield | | | Years in test | Milling yield | | Plant height | 50% heading | Lodging |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | 3-yr. avg. | Avg. | | Total | Whole | | | |
| | | *bu/A* | *bu/A* | *bu/A* | *no.* | *%* | *%* | *in* | *days* | *%* |
| | | | | | **Conventional** | | | | | |
| Caffey[3] | LA | 203 | 216 | 215 | 5 | 67 | 53 | 39 | 85 | 3 |
| Catahoula | LA | 192 | 200 | 196 | 9 | 69 | 55 | 40 | 87 | 5 |
| Cheniere | LA | 189 | 195 | 194 | 12 | 68 | 55 | 37 | 85 | 6 |
| Cocodrie | LA | 215 | 202 | 192 | 17 | 67 | 55 | 39 | 83 | 6 |
| Francis | AR | 216 | 208 | 207 | 13 | 66 | 49 | 41 | 84 | 12 |
| Jazzman | LA | 196 | 194 | 195 | 6 | 68 | 60 | 41 | 89 | 0 |
| Jazzman 2 | LA | 168 | 158 | 162 | 4 | 67 | 58 | 37 | 84 | 0 |
| JES | AR | 223 | 215 | 215 | 3 | 68 | 59 | 37 | 88 | 0 |
| Jupiter[3] | LA | 216 | — | 223 | 2 | 65 | 60 | 38 | 87 | 0 |
| Presidio | TX | 177 | 190 | 189 | 13 | 68 | 54 | 39 | 83 | 5 |
| Rex | MS | 217 | 200 | 202 | 4 | 68 | 59 | 41 | 86 | 0 |
| Rondo | TX | 219 | 217 | 223 | 6 | 67 | 48 | 42 | 91 | 19 |
| Roy J | AR | 188 | 201 | 203 | 4 | 69 | 53 | 42 | 91 | 0 |
| Sabine | TX | 169 | 162 | 175 | 11 | 67 | 52 | 36 | 88 | 0 |
| Taggart | AR | 202 | 203 | 230 | 6 | 69 | 54 | 44 | 90 | 0 |
| Templeton | AR | 196 | 204 | 203 | 6 | 69 | 55 | 46 | 90 | 0 |
| Wells | AR | 194 | 199 | 196 | 16 | 69 | 49 | 42 | 84 | 3 |
| | | | | | **Clearfield** | | | | | |
| CL111 | LA | 206 | — | 206 | 2 | 68 | 59 | 40 | 84 | 0 |
| CL142 AR | AR | 186 | — | 189 | 2 | 68 | 51 | 42 | 89 | 1 |
| CL151 | LA | 219 | 223 | 223 | 3 | 68 | 59 | 39 | 85 | 3 |
| CL152 | LA | 213 | 200 | 197 | 4 | 67 | 59 | 41 | 85 | 15 |
| CL162 | MS | 211 | — | 205 | 2 | 67 | 55 | 43 | 84 | 0 |
| CL181 AR | AR | 194 | — | 182 | 2 | 67 | 56 | 35 | 88 | 0 |
| CL261[3] | LA | 155 | — | 157 | 2 | 66 | 58 | 38 | 84 | 0 |

[1]Rondo and Sabine have the Rexmont cooking and processing qualities; Jazzman, Jazzman 2, and JES are long-grain aromatics.
[2]Origin: AR = Arkansas, CL = Horizon Ag, LA = Louisiana, MS = Mississippi, TX = Texas.
[3]Medium grain.

**Table 11. 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 | MR | MS | S | MR | — |
| Catahoula | S | R | S | S | S | R | S | MS | MS | MS | 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 | |
| CL131 | VS | MS | S | S | S | R | VS | MR | S | VS | VS | — |
| CL151 | S | VS | VS | S | S | R | VS | VS | S | VS | S | — |
| CL161 | VS | MS | S | S | S | R | MS | MS | S | S | S | MS |
| CL142-AR | MS | S | S | S | S | R | MS | MS | S | S | MS | |
| CL162 | S | MS | — | — | — | — | MS | MS | — | MS | MR | MR |
| CL171-AR | VS | S | VS | S | S | R | MS | MS | S | S | S | MR |
| CL181-AR | VS | S | VS | S | S | R | MS | MR | S | VS | MS | |
| 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 | MS | S | S | S | S | MR | VS | MS | MS | VS | MS | MS |
| Rex | MS | S | S | S | S | MS | MS | MR | S | S | MS | MS |
| 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 | — |

[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 12. Nitrogen fertility rate guidelines.**

| Variety/ Hybrid | Clay soils[1] | | | Silt loam soils[2] | | |
|---|---|---|---|---|---|---|
| | Preflood | Midseason | Boot Split | Preflood | Midseason | Boot Split |
| | *lb/A* | *lb/A* | *lb/A* | *lb/A* | *lb/A* | *lb/A* |
| Bowman | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |
| Catahoula | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |
| Cheniere | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |
| CL111 | 120 | 45 | 0 | 90-120 | 45 | 0 |
| CL131 | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |
| CL142-AR[3] | 120 | 45 | 0 | 90-120 | 45 | 0 |
| CL151[3] | 90-135 | 0-45 | | 90 | 45 | 0 |
| CL162 | 120 | 45 | 0 | 90-120 | 45 | 0 |
| CL181-AR | 120-135 | 45 | 0 | 90-120 | 45 | 0 |
| Cocodrie | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |
| Rex | 120-150 | 45 | 0 | 120 | 45 | 0 |
| Sabine | 120-150 | 30-60 | 0 | 90-120 | 30-60 | 0 |

[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.


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