**Mississippi Rice**

**Variety Trials, 2015**

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**Introduction**

The United States Department of Agriculture (USDA) Farm Service Agency (FSA) reported in November 2015 that the rice production area for Mississippi during 2015 was 143,700 acres. While this represents a decrease of 42,800 acres (23%) compared to the 2014 rice area of 186,500 acres, it is still 21,000 acres (17%) more than the 2013 acreage of 122,700. The USDA National Agricultural Statistics Service (NASS), on the other hand, in November 2015, forecasted Mississippi to produce 10.8 million hundredweight (490,000 metric tons), down 23 percent from the 2014 production of 14.1 million hundredweight (640,000 metric tons). Average yield statewide for 2015 was forecasted at 7,200 pounds per acre, down 220 pounds from the record-breaking 2014 yield of 7420 pounds per acre (165 bushels per acre or 8,316 kg per hectare) that had surpassed the previous Mississippi yield record of 7350 pounds per acre set in 2007.

Historically, the 2015 acreage is about 31 percent below the Mississippi running 10-year average acreage of 189,000 (Table 1). However, it is still about 21,000 acres more than the lowest acreage that Mississippi growers planted to rice during the last 10 years of 122,700 in 2013. Similar to 2014, rice during 2015 was planted in 17 counties, primarily in the Mississippi Delta. Bolivar (42,139 acres), Tunica (25,833 acres), Sunflower (15,612 acres), Washington (13,027), and Quitman (12,220) were the top rice producers. These five counties also had the largest rice acreages during 2014. Table 2 provides the complete list of USDA FSA-certified acres planted to rice in Mississippi from 2009-2015.

Planting progress occurred intermittently between periods of rainfall for most of the state and at a much more rapid pace than in 2014, where record rainfall in April delayed planting in many areas. This year, as of April 15, only 30% of the total rice crop was planted; however by May 19, 93% of the rice acres were planted. This planting pace exceeded the three, five, and ten year historical average, resulting in most areas of the state being planted on time. The exception was in the far Northwest corner of the Delta, were rainfall delayed planting on many farms into early to mid-June.

Insect pest issues in 2015 were fairly average with respect to rice water weevil and army worm. Rice stink bug infestations were large for the first 10 to 20% of the crop that headed, with many calls from seasoned rice producers and consultants suggesting it was the worst pressure they have experienced. As more rice headed, infestations declined to a more manageable level. Disease pest pressure in 2015 was less than that experienced during 2014 primarily due to environment. Late season disease complexes took a toll on a limited number of acres. Particularly, panicle blast caused significant yield decreases in susceptible varieties in the central rice growing areas of Mississippi.

The greatest concern during 2015 and one that definitely contributed to yield reductions in the state was excessive heat coinciding with rice flowering and pollination. Stoneville weather data collected throughout the growing season shows that between July 11 and July 30 day time maximum air temperatures never fell below 95° F, followed by two days of cooler temperatures, but from August 2 through August 12 day time temperatures were again never below 94° F. Much of the early planted rice headed in this period and experienced some degree of heat-induced sterility. Great harvest weather allowed for probably the most timely and uninterrupted harvest we have ever experienced. When all was said and done, 2015 shaped up to be an average year yield wise in comparison to the two previous crops where record yields were achieved.

**On-Farm Variety Trials**

On-farm varietal evaluation is a vital step in the variety development process for many crops including rice.

Conducting variety trials under producers’ field conditions helps identify the released varieties or hybrids as well as elite experimental breeding lines that are best suited to specific growing environments, including niche markets. It also helps determine which specific entries are widely adapted to and/or have consistent performance across varying growing conditions. This information not only helps in future breeding, but also is important for proper release variety deployment. It is typical in on-farm variety trials for standard varieties and hybrids, new releases, and elite experimental lines to be evaluated in the target population of environments to which they will be released. In the case of elite breeding lines, based on their performance in these multilocation tests, the most promising are selected for nomination and possible release as new varieties. The information collected on these lines include yield and milling performance, insect and disease susceptibility, tolerance to environmental stresses, vigor and lodging scores. The data collected become the basis for making crossing, line advancement, and release decisions for the breeding lines being tested.

With the inclusion of released varieties from Mississippi and the US Mid-South as entries in the on-farm trials, the testing process also helps local rice producers determine the most suitable released variety to plant on their respective farms based on the test locations. By placing these trials at multiple key locations throughout the Mississippi Delta, varieties, hybrids and elite lines are exposed to the prevalent growing conditions and practices that are commonly used in commercial production in Mississippi. Many of these growing conditions and management practices cannot be reproduced at the Stoneville experiment station, thus giving great value to the on-farm evaluations from the research and development perspective. In return, growers are afforded the opportunity to evaluate side-by-side the current varieties and hybrids in commercial circulation, under their own management conditions. Ultimately, this process helps them in deciding which variety or hybrid to use on their farms the following year and in placing advanced seed orders for the chosen varieties accordingly from Mississippi seed producers/companies.

Variety selection is one of the most important decisions a grower makes in crop production planning. Growers should attempt to select varieties that offer the best combination of yield and quality factors while also considering the variety’s susceptibility to both biological and environmental factors that could limit yield potential. As grain quality is increasing becoming more important for improving US rice competitiveness, including the further expansion of the US rice export market, producers will benefit from having grain quality data for the commercial varieties evaluated in the variety trials. Millers, consolidators, and traders may also use this grain quality data for use in implementing ‘identity preservation’-related strategies that are also becoming important for increasing the quality of US rice. Rice research and extension specialists, on the other hand, can use the variety trials as an educational platform for demonstrating the merits of on-farm evaluation to other scientific or technical staff, growers, private consultants, rice industry personnel, students, and the general public. Through these trials, interested parties can have a “first look” at new or potential releases not only from Mississippi State University, but also from other participating rice breeding programs, including from the private industry.

**Test Procedures**

For 2015, the Rice On-Farm Variety Trials consisted of 29 entries including four hybrids (two Clearfield® and two conventional types), 14 named varieties (four Clearfield® types and ten publicly released conventional varieties), and 11 elite breeding lines (3 Clearfield® and 8 conventional types). The trials were conducted in seven locations from North to South of the Mississippi Delta, namely, in Tunica, Clarksdale, Ruleville, Shaw, Choctaw, Stoneville, and Hollandale (**Figure 1**). Individual plots consisted of 8 drilled rows, 15 feet in length, and spaced 8 inches apart. Varieties and experimental lines were planted at a seeding rate of 85 pounds of seed per acre while the hybrids were planted at 25 pounds of seed per acre. Seeds were mechanically drilled approximately 1.25 inches deep into stale seedbeds at all locations. All entries were replicated three times at each location using a randomized complete block experimental design. Crop management practices for each location, as well as the stresses encountered, are presented in **Tables 3-9.** [Readers who may be less familiar with pesticide formulations and application rates may wish to refer to pesticide product label information available on the internet or to the 2015 Weed Control Guidelines for Mississippi booklet that is available both in print and online (MSU-ES/MAFES Pub. No. 1532; <http://msucares.com/pubs/publications/p1532.pdf> )].

Agronomic and crop phenology 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 weighing system and moisture meter. Due to differences in maturity, the majority of the entries at each location were required to have achieved the appropriate harvest moisture level prior to the test being harvested. Average harvest grain moisture levels for each entry are reported in **Tables 3-9**. Subsamples of each entry were collected at harvest and these were used for measuring milling-related traits, chalkiness, bushel weight, and 1,000-seed weight parameters. For yield, previous replicated research has shown that the border effect common in small-plot research could result in increases in grain yield estimates of 10% for inbred varieties and 15% for hybrids. Therefore, the plot yields reported for the test entries should be compared in a relative manner rather than just through the absolute values for the reported yield potential.

Analysis of variance procedures were conducted for all relevant data gathered from the trials using SAS statistical software. The least significant difference (LSD) test at the 5% significance level may be used to calculate significant differences between entries. If the value of the yield difference between any two trial entries at a location, as computed from the yields reported in **Tables 3-9, is** greater than the LSD value for that particular location, the entries are deemed to be statistically different from each other. In addition, a coefficient of variation (CV) was calculated for each test. This measure is an indication of the variability or ‘noise’ in the trial, and thus the level of precision of each test. Lower CV values indicate greater reliability of the test. CV values of 10% or less are generally considered to be optimum for plant breeding trials and CV values above 25% are considered unacceptable. The LSD and CV values for yield in these tests are reported in the footnotes of **Tables 3-9**, and are included for the other measured variables in **Table 11**.

**Results**

To assist Mississippi rice producers in their variety selection process for 2016, preliminary results of the 2105 rice variety trials were immediately processed and made available online as early as October 1, 2015 via the Mississippi Crops Situation (<http://www.mississippi-crops.com/category/by-crop/rice/>) and Mississippi Agricultural and Forestry Experiment Station or MAFES (<http://www.mafes.msstate.edu/variety-trials/includes/crops/rice.asp>) websites.

Complete details on the performance of each entry at each of the seven test locations are presented in **Tables 3-9**. Planting times for the seven trials spanned about five weeks, starting from March 31 for both the Choctaw and Hollandale locations to May 6 for the Stoneville trial, which was the only trial planted on an experiment station. In general, plant stands were excellent, with uniform emergence and optimum plant density for all the locations. Among the diseases reported to have occurred at some point in the growing season were leaf blast, panicle blast, and sheath blight. However, none of these factors occurred to a level that was economically damaging, or that completely wiped out any test entry. Lodging was reported at four of the seven locations, with the most lodging occurring in Tunica and Choctaw. Bird damage occurred to some degree in Stoneville.

As in the past two years, the rice yields obtained from the 2015 trials were in the high category. The overall average yield across sites and entries was 220 bushels per acre (bu/a) or 22 bushels lower than the 2014 grand average yield of 242 bu/a. This decrease in overall average yield for the on-farm trials roughly mirrors the slight decrease expected in 2015 Mississippi yields based on the USDA NASS November 2015 forecast. The site yield averages ranged from 171 bu/a at Tunica to 270 bu/a at Hollandale. This is the second straight year for Hollandale to be the highest yielding location for the trials. The CV’s for yield ranged from 6 to 14% which is respectable for yield tests. Total milling yields tended to be normal for most entries but substantial differences among the trial entries were observed for whole milled rice.

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., topped the entries in terms of yield this year at 275 bu/a. The same hybrid was the highest yielding entry in both the 2014 (306 bu/a) and 2013 (278 bu/a) on-farm trials and has thus consistently demonstrated a yield advantage over the conventional pure line cultivar and experimental line entries. Following XL753 in terms of yield performance were three other hybrids, all developed by RiceTec. These were the conventional type hybrid XL760, and the two Clearfield® type hybrids CLXL729 and CLXL745.

Historically, hybrids have performed 20% or greater relative to pure lines or conventional varieties in Mississippi. During 2015, however, several entries obtained yields that were within 80% or higher as compared to XL753. These included the released conventional varieties Lakast and Rex, and the Clearfield® variety CL151. Moreover, five experimental lines (3 conventional and 2 Clearfield® types) had yields that were also about 80% or more of that for XL753. These were RU1404154, RU1404122, and RU1104077 for the conventional types and CLx2134 and CLMedium for the Clearfield® types. The elite line RU1104077 is currently being considered for varietal release by Mississippi State University. Considering the fact that the plot border effect is greater on hybrids as compared to pure lines, the actual field yields may be expected to be very similar when comparing the highest yielding hybrid to the highest yielding pure lines. In this year’s tests, the MSU-bred Rex had the second highest yield (238 bu/a) among conventional varieties. While it yielded about 7 bu/a lower than Lakast, its whole milled rice yield was significantly better than Lakast (61% versus 55%). During 2013, Rex became the most popular conventional pureline in Mississippi, occupying roughly 15% of the state’s total rice area. The continued good performance of Rex relative to the highest yielding hybrid and its better whole milled rice trait compared to the highest yielding conventional variety based on these on-farm trials should help in further increasing the acreage occupied by Rex in the future.

Entries that begin with RU designations are elite breeding lines that have performed well in the sequential, multistage, yield evaluation conducted by the MSU rice breeding program. They have usually been entered or are currently entered in the multistate Rice Uniform (hence, RU) Research Nursery or URRN. This evaluation system is conducted by public breeding institutions in the US to evaluate elite lines in other rice-growing states while sharing elite materials among US breeders. The entries represent the best lines from different breeding programs and are typically at the final stages of testing. Entries from Mississippi in the URRN have the number ‘4’ as the first digit of the last four digits of the RU designation (e.g. RU110**4**077).

For conventional experimental lines, RU1104077 (**Figure 2**) has performed well already for multiple years and is being considered for varietal release in the near future. For 2015, this line was the fifth-highest yielding among conventional types at 219.4 bu/a which, as in 2014, was comparable to Rex based on these 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 2015, in preparation for possible release, breeder seed produced by the breeding program during 2014 were provided to the Mississippi Agriculture and Forestry Experiment Station (MAFES) Foundation Seed unit for foundation seed production in Verona. This will make possible the registered/certified seed production for growers use as early as 2016.

Two other conventional variety-type elite line entries produced yields that were comparable to that of Rex and were also within 80% or more of the yield of the top-yielding hybrid entry. These were RU1404154 (232 bu/a) and RU1404122 (230 bu/a), both being tested for the first time in the on-farm variety trial and thus, will be tested again during 2016. RU1404122 showed excellent milling traits in this year’s tests, with 73% milling recovery and 64% whole milled rice, both among the highest values obtained in this year’s test.

For Clearfield® conventional types, two advanced lines developed by the Louisiana State University breeding program (CLx2134 and CLMedium) had yields that were both 232 bu/a and within 80% of the overall highest yielding entry XL753. Moreover, this yield level was only about 14% lower than that of the highest yielding Clearfield®-type hybrid CLXL729 (265 bu/a). The yield of these two new experimental Clearfield® lines were also comparable with the yield of the highest-yielding, conventional-type, commercial Clearfield® variety (CL151) entered in the trials with an average yield of 230 bu/a.

**Table 12** provides the agronomic, yield, and milling data for select rice varieties that have been included in on-farm tests for the last few years. Substantial variation was observed among the test entries for the milling traits and several high-yielding entries did not necessarily have the best grain quality characteristics among those tested. For example, among conventional varieties, Rex had significantly higher whole milled rice yield than Lakast, which was the highest yielding variety. The total yield of Rex, however, was still lower but still comparable to that of Lakast. Aside from these trait considerations for variety selection, performance stability over many environments and years also need to be looked at. Varieties such as Cocodrie and Cheniere have been relatively stable over many years, thus they have been popular varieties in Mississippi and the Mid-South. As stated earlier, Rex has also shown tremendous stability over multiple locations both in Mississippi and other states in the southern US 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, multi-site 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 subject to decrease without sacrificing yield and quality.

Based on past and this year’s on-farm trials, the suggested conventional varieties for Mississippi rice growers are Bowman, Cocodrie, Cheniere, Rex, Taggart, Mermentau, and Lakast. Sabine is often grown on limited acreage by contract. XL753 and XL760 are good choices for conventional hybrid rice production. For growers who need to utilize the Clearfield® technology to control red rice, CL111, CL151, CL152, CL163 and CL172 are the pure line 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 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 in previous years, no variety or hybrid is yet perfect. Breeders continue to develop new strains that not only satisfy the needs of growers, millers/processions, and consumers but also possess traits that allow the variety to perform well in an ever-changing environment. Nevertheless, each new variety release would be expected to have qualities or characteristics that add value to the marketplace. Ultimately, varietal performance over time and in different environments, in addition to economics, should be considered when choosing which variety among many options. This is where the regular conduct of on-farm trials derives great value for rice producers. For varieties with high yield potential, producers should consider risks such as lodging and disease and plan to manage for those yield-limiting factors to derive maximum benefit. Planting several varieties, both Clearfield® and conventional, may be needed in large rice farms to mitigate the risks associated with rice production.

Figure 1. Locations of the 2015 Rice On-Farm Variety Trials in the Mississippi Delta.

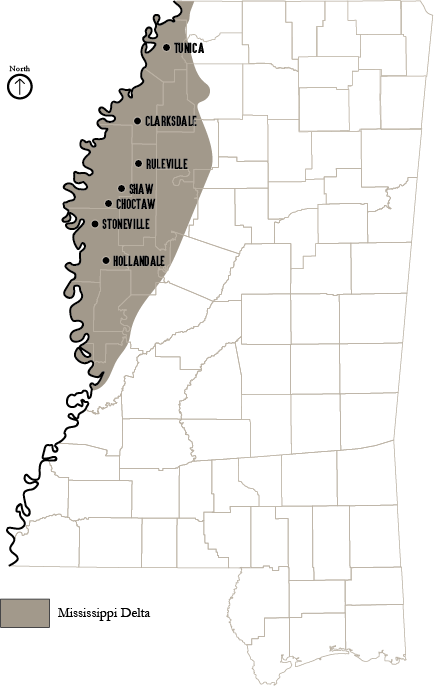


Figure 2. RU1104077, an MSU developed elite breeding line that is in the final stages of the variety release process.



Table 1. United States Department of Agriculture historical survey data of rice acreage in Mississippi (nearest '000) by year, 1949-2015.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | 123,000 |
| 1954 | 77,000 | 1974 | 108,000 | 1994 | 313,000 | 2014 | 186,000 |
| 1955 | 52,000 | 1975 | 171,000 | 1995 | 288,000 | 2015 | 144,000 |
| 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, 2009-2015.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **County** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| Adams | 240 | 0 | 0 | 192 | 0 | 0 | 0 |
| Attala | 0 | 0 | 10 | 0 | 0 | 0 | 0 |
| Bolivar | 72,333 | 80,255 | 50,813 | 34,956 | 33,734 | 47,702 | 42,139 |
| Carroll | 205 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coahoma | 14,761 | 25,032 | 11,370 | 8,797 | 8,109 | 14,453 | 9,933 |
| DeSoto | 859 | 1,156 | 335 | 553 | 1,190 | 2,316 | 99 |
| Grenada | 171 | 321 | 328 | 282 | 282 | 0 | 893 |
| Holmes | 1,485 | 1,448 | 234 | 141 | 121 | 203 | 195 |
| Humphreys | 3,656 | 8,241 | 1,996 | 1,955 | 1,475 | 3,426 | 2,576 |
| Issaquena | 783 | 2,702 | 880 | 890 | 1,115 | 483 | 345 |
| Jackson | 55 | 35 | 0 | 0 | 0 | 0 | 0 |
| Lee | 10 | 11 | 8 | 10 | 3 | 3 | 0 |
| Leflore | 17,107 | 20,144 | 6,754 | 5,328 | 3,905 | 6,000 | 5,059 |
| Panola | 4,777 | 6,446 | 5,383 | 5,901 | 5,523 | 10,188 | 5,966 |
| Quitman | 11,031 | 20,170 | 6,360 | 8,440 | 8,766 | 15,565 | 12,220 |
| Sharkey | 1,951 | 5,390 | 855 | 306 | 433 | 857 | 789 |
| Sunflower | 38,227 | 45,676 | 19,351 | 14,253 | 13,635 | 25,241 | 15,612 |
| Tallahatchie | 14,081 | 19,314 | 6,267 | 6,460 | 6,964 | 12,859 | 7,142 |
| Tate | 905 | 994 | 869 | 828 | 934 | 1,082 | 955 |
| Tunica | 23,913 | 27,041 | 23,167 | 21,696 | 24,603 | 28,608 | 25,833 |
| Washington | 29,507 | 35,736 | 18,854 | 14,687 | 11,480 | 15,690 | 13,027 |
| Yazoo | 1,841 | 1,907 | 2,273 | 765 | 0 | 867 | 914 |
| **Total** | 237,898 | 302,019 | 156,107 | 126,440 | 122,272 | 185,543 | 143,697 |

Table 3. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Choctaw, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 256.3 | 59.1 | 71.2 | 10.2 | 14.9 | 44.7 | 38 | 90 | 0 | 1 | 23.6 |
| Bowman | 216.5 | 57.9 | 69.2 | 6.9 | 18.0 | 46.0 | 39 | 95 | 0 | 1 | 24.4 |
| Cheniere | 237.8 | 62.6 | 73.0 | 5.5 | 14.8 | 44.2 | 35 | 93 | 0 | 1 | 21.5 |
| Cocodrie | 255.2 | 59.5 | 70.7 | 9.6 | 15.3 | 44.1 | 38 | 91 | 0 | 1 | 22.1 |
| Lakast | 280.7 | 46.7 | 69.0 | 7.1 | 14.6 | 43.6 | 41 | 91 | 9 | 2 | 26.2 |
| Mermentau | 227.8 | 61.0 | 70.0 | 11.8 | 18.0 | 44.3 | 37 | 92 | 0 | 1 | 22.0 |
| Rex | 254.9 | 59.2 | 68.0 | 6.6 | 16.0 | 44.2 | 44 | 92 | 0 | 1 | 27.1 |
| RoyJ | 233.1 | 56.5 | 71.2 | 5.3 | 17.6 | 44.8 | 42 | 96 | 0 | 1 | 23.6 |
| Sabine | 215.5 | 62.6 | 70.4 | 3.7 | 16.2 | 45.6 | 37 | 94 | 0 | 1 | 23.5 |
| Taggart | 282.6 | 49.7 | 69.6 | 6.7 | 15.4 | 45.3 | 45 | 95 | 0 | 1 | 25.8 |
| RU1104077 | 256.3 | 58.6 | 68.8 | 4.4 | 16.5 | 46.5 | 38 | 94 | 8 | 2 | 24.4 |
| XL753 | 243.5 | 54.7 | 69.2 | 8.8 | 15.8 | 40.1 | 45 | 94 | 52 | 3 | 23.5 |
| XL760 | 295.7 | 50.8 | 71.1 | 9.8 | 14.3 | 41.8 | 42 | 90 | 20 | 2 | 25.8 |
| RU1304154 | 252.5 | 58.0 | 68.9 | 8.1 | 15.0 | 44.1 | 37 | 93 | 0 | 1 | 24.0 |
| RU1204197 | 252.0 | 54.7 | 67.7 | 8.8 | 15.5 | 43.6 | 37 | 91 | 0 | 1 | 23.2 |
| RU1404122 | 232.8 | 59.9 | 71.8 | 6.3 | 17.6 | 44.3 | 39 | 94 | 15 | 2 | 21.4 |
| RU1404154 | 241.4 | 55.5 | 67.9 | 6.1 | 17.5 | 45.4 | 36 | 92 | 0 | 1 | 24.9 |
| RU1404156 | 230.6 | 49.7 | 70.3 | 6.2 | 14.7 | 44.0 | 36 | 92 | 5 | 1 | 24.2 |
| RU1404194 | 235.9 | 62.8 | 71.8 | 4.7 | 15.4 | 46.9 | 42 | 94 | 30 | 2 | 19.2 |
| RU1404198 | 242.8 | 61.1 | 71.2 | 5.5 | 15.0 | 43.5 | 40 | 93 | 0 | 1 | 27.5 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 243.1 | 54.2 | 70.0 | 9.8 | 14.3 | 43.3 | 39 | 89 | 37 | 3 | 24.2 |
| CL151 | 237.9 | 53.6 | 70.0 | 11.0 | 14.5 | 43.5 | 38 | 89 | 43 | 4 | 24.0 |
| CL152 | 241.2 | 54.3 | 68.8 | 8.6 | 15.7 | 43.1 | 38 | 91 | 0 | 1 | 20.5 |
| CL172 | 231.7 | 60.1 | 70.5 | 3.9 | 16.6 | 44.4 | 35 | 90 | 0 | 1 | 24.1 |
| CLMedium | 256.9 | 57.5 | 69.5 | 10.7 | 16.4 | 44.6 | 39 | 93 | 0 | 1 | 24.6 |
| CLXL729 | 279.9 | 53.6 | 69.3 | 9.7 | 14.2 | 40.7 | 40 | 91 | 35 | 2 | 25.3 |
| CLXL745 | 233.7 | 51.7 | 70.9 | 7.0 | 14.7 | 40.5 | 43 | 88 | 92 | 4 | 26.4 |
| CLx2134 | 263.6 | 59.4 | 70.3 | 5.3 | 14.6 | 43.2 | 36 | 91 | 15 | 2 | 23.2 |
| RU1204156 | 224.5 | 64.0 | 71.1 | 5.1 | 17.1 | 44.9 | 38 | 98 | 0 | 1 | 21.7 |
| **1Planting date:** March 31. **Emergence:** April 11-15. **Herbicides:** Sharpen at 2 oz/A, Command 4 EC at 21 oz/A, and Invade at 1%/A on April 5; Stam at 64 oz/A, Prowl at 32 oz/A, and Facet L at 32 oz/A on May 5. **Fertilizer:** 100 lb/A DAP/AMS on April 22; 150 lb/A urea on May 12; 100 lb/A urea on May 28; and 100 lb/A of urea on June 18. **Insecticide:** Karate at 1.8 oz/A on July 14. **Fungicide:** Stratego at 14 oz/A on July 6. **Permanent flood:** May 17. **Drained field:** July 28. **Harvested:** Aug. 18. | | | | | | | | | | | |
| **LSD = A difference of 27 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 8.9%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 4. Performance of rice varieties, hybrids, and lines grown on Dowling soil near Clarksdale, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 226.7 | 63.0 | 72.0 | 6.9 | 14.0 | 45.1 | 40 | 89 | 0 | 1 | 25.3 |
| Bowman | 216.2 | 61.7 | 70.8 | 2.5 | 16.2 | 46.1 | 41 | 96 | 0 | 1 | 26.6 |
| Cheniere | 201.2 | 65.8 | 73.8 | 2.6 | 14.5 | 44.0 | 39 | 92 | 0 | 1 | 22.6 |
| Cocodrie | 218.7 | 64.9 | 72.5 | 7.7 | 15.2 | 44.8 | 41 | 91 | 0 | 1 | 23.6 |
| Lakast | 252.2 | 47.8 | 69.6 | 6.1 | 14.2 | 45.4 | 44 | 89 | 0 | 1 | 27.5 |
| Mermentau | 197.8 | 64.5 | 71.4 | 6.2 | 17.3 | 44.0 | 42 | 92 | 0 | 1 | 22.9 |
| Rex | 241.6 | 60.7 | 68.6 | 5.8 | 14.6 | 45.0 | 43 | 90 | 0 | 1 | 28.7 |
| RoyJ | 195.8 | 59.9 | 72.0 | 2.4 | 16.8 | 44.8 | 44 | 99 | 0 | 1 | 22.7 |
| Sabine | 183.2 | 64.7 | 70.8 | 3.1 | 14.9 | 45.6 | 41 | 92 | 0 | 1 | 23.9 |
| Taggart | 237.7 | 56.1 | 70.5 | 4.3 | 16.2 | 45.6 | 47 | 91 | 0 | 1 | 27.0 |
| RU1104077 | 241.0 | 59.3 | 69.6 | 3.4 | 14.3 | 46.4 | 40 | 93 | 0 | 1 | 25.9 |
| XL753 | 247.9 | 49.0 | 70.8 | 9.1 | 12.9 | 42.3 | 44 | 89 | 0 | 1 | 26.0 |
| XL760 | 280.4 | 59.4 | 69.8 | 5.4 | 14.7 | 41.0 | 48 | 93 | 0 | 1 | 24.5 |
| RU1304154 | 207.6 | 63.2 | 71.0 | 7.0 | 14.8 | 44.8 | 42 | 95 | 0 | 1 | 25.1 |
| RU1204197 | 224.3 | 61.0 | 70.4 | 5.8 | 15.1 | 45.3 | 43 | 92 | 0 | 1 | 25.2 |
| RU1404122 | 236.8 | 64.3 | 72.8 | 3.1 | 15.8 | 44.5 | 41 | 92 | 0 | 1 | 22.1 |
| RU1404154 | 240.0 | 59.4 | 68.9 | 4.1 | 15.0 | 46.5 | 38 | 90 | 0 | 1 | 27.3 |
| RU1404156 | 230.5 | 51.2 | 70.8 | 5.0 | 14.2 | 44.7 | 40 | 89 | 0 | 1 | 24.8 |
| RU1404194 | 231.0 | 66.1 | 71.9 | 2.2 | 16.0 | 47.2 | 44 | 94 | 0 | 1 | 19.7 |
| RU1404198 | 211.9 | 59.7 | 70.3 | 4.8 | 14.5 | 42.9 | 43 | 92 | 0 | 1 | 27.8 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 210.3 | 55.9 | 70.2 | 6.9 | 12.5 | 44.0 | 40 | 86 | 0 | 1 | 25.3 |
| CL151 | 228.4 | 56.2 | 70.3 | 8.9 | 13.6 | 44.3 | 39 | 88 | 0 | 1 | 24.6 |
| CL152 | 219.4 | 55.4 | 69.0 | 7.1 | 14.0 | 44.0 | 39 | 92 | 0 | 1 | 21.3 |
| CL172 | 232.0 | 61.9 | 71.1 | 3.7 | 14.9 | 44.9 | 39 | 92 | 0 | 1 | 25.2 |
| CLMedium | 253.8 | 57.2 | 69.8 | 6.6 | 15.4 | 46.1 | 41 | 90 | 0 | 1 | 28.2 |
| CLXL729 | 281.6 | 53.8 | 68.9 | 8.5 | 12.6 | 41.1 | 43 | 90 | 0 | 1 | 26.0 |
| CLXL745 | 253.7 | 56.2 | 70.6 | 6.8 | 13.1 | 41.5 | 45 | 85 | 0 | 1 | 26.9 |
| CLx2134 | 239.5 | 60.3 | 70.5 | 3.4 | 13.9 | 44.2 | 41 | 88 | 0 | 1 | 24.8 |
| RU1204156 | 218.7 | 63.6 | 71.1 | 3.7 | 15.5 | 44.0 | 40 | 97 | 0 | 1 | 22.9 |
| **1Planting date:** April 9. **Emergence:** April 19-23. **Herbicides:** Facet at 0.4 lb/A and Prowl at 1 qt/A on April 21; Ricebeaux at 1 gal/A and Command at 1.7 pt/A on May 8; Ricestar at 21 oz/A and Facet L at 15 oz/A on May 22. **Fertilizer:** 50 lb/A AMS and 50 lb/A DAP on April 22; 250 lb/A 41-0-0-4 (Agrotain) on May 23; 75 lb/A urea on June 16; and 75 lb/A urea on June 26. **Permanent flood:** May 27. **Drained field:** Aug. 17. **Harvested:** Aug. 31. | | | | | | | | | | | |
| **LSD = A difference of 35 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 9.3%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 5. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Hollandale, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 266.2 | 61.3 | 71.0 | 9.3 | 19.6 | 43.7 | 41 | 91 | 0 | 1 | 23.9 |
| Bowman | 236.4 | 61.0 | 69.8 | 4.1 | 23.0 | 44.9 | 42 | 98 | 0 | 1 | 23.1 |
| Cheniere | 240.7 | 64.5 | 72.8 | 4.3 | 20.2 | 44.6 | 39 | 93 | 0 | 1 | 21.6 |
| Cocodrie | 269.9 | 61.7 | 70.9 | 9.5 | 20.4 | 43.8 | 42 | 93 | 0 | 1 | 22.7 |
| Lakast | 288.2 | 51.3 | 69.3 | 9.5 | 19.8 | 43.6 | 43 | 93 | 0 | 1 | 24.6 |
| Mermentau | 237.0 | 61.1 | 69.8 | 9.9 | 21.8 | 42.9 | 44 | 93 | 0 | 1 | 22.3 |
| Rex | 279.7 | 58.9 | 67.7 | 9.4 | 21.3 | 42.5 | 43 | 92 | 0 | 1 | 26.1 |
| RoyJ | 228.9 | 55.3 | 69.8 | 5.4 | 23.6 | 43.4 | 44 | 100 | 0 | 1 | 22.5 |
| Sabine | 225.2 | 65.1 | 70.5 | 4.4 | 20.7 | 44.9 | 40 | 91 | 0 | 1 | 23.3 |
| Taggart | 261.5 | 56.8 | 69.6 | 8.2 | 22.7 | 44.6 | 44 | 96 | 0 | 1 | 26.5 |
| RU1104077 | 259.4 | 59.0 | 69.0 | 3.6 | 19.6 | 45.5 | 40 | 92 | 0 | 1 | 24.6 |
| XL753 | 356.3 | 62.9 | 72.4 | 8.2 | 17.2 | 41.6 | 45 | 89 | 0 | 1 | 24.2 |
| XL760 | 348.1 | 57.9 | 69.7 | 9.3 | 19.5 | 39.9 | 48 | 92 | 0 | 1 | 23.7 |
| RU1304154 | 277.2 | 57.4 | 68.6 | 10.0 | 18.9 | 43.0 | 42 | 92 | 0 | 1 | 24.0 |
| RU1204197 | 274.7 | 57.1 | 68.6 | 10.3 | 21.0 | 42.7 | 44 | 91 | 0 | 1 | 23.5 |
| RU1404122 | 281.2 | 64.6 | 72.6 | 7.4 | 21.5 | 43.5 | 41 | 94 | 0 | 1 | 21.4 |
| RU1404154 | 263.9 | 57.9 | 68.5 | 6.5 | 21.6 | 44.3 | 40 | 91 | 0 | 1 | 24.1 |
| RU1404156 | 263.2 | 59.0 | 71.3 | 5.7 | 19.7 | 43.2 | 40 | 93 | 0 | 1 | 23.4 |
| RU1404194 | 251.7 | 65.2 | 71.9 | 4.8 | 23.2 | 46.0 | 44 | 95 | 0 | 1 | 18.8 |
| RU1404198 | 277.2 | 65.5 | 71.6 | 5.4 | 20.3 | 42.2 | 42 | 93 | 0 | 1 | 25.8 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 237.5 | 61.8 | 70.8 | 10.3 | 18.8 | 42.4 | 41 | 83 | 27 | 3 | 23.2 |
| CL151 | 282.4 | 63.2 | 70.7 | 12.1 | 19.6 | 43.6 | 42 | 92 | 35 | 2 | 23.9 |
| CL152 | 225.3 | 59.9 | 69.8 | 8.8 | 21.0 | 41.7 | 41 | 92 | 2 | 1 | 19.7 |
| CL172 | 241.0 | 63.8 | 71.1 | 4.5 | 20.2 | 44.2 | 39 | 91 | 0 | 1 | 23.1 |
| CLMedium | 269.2 | 66.6 | 70.2 | 9.7 | 21.0 | 44.3 | 42 | 95 | 0 | 1 | 25.3 |
| CLXL729 | 325.2 | 62.0 | 70.4 | 9.2 | 18.0 | 40.0 | 44 | 90 | 8 | 2 | 24.4 |
| CLXL745 | 351.3 | 65.0 | 72.6 | 7.8 | 18.0 | 40.6 | 48 | 87 | 5 | 2 | 25.5 |
| CLx2134 | 280.4 | 62.7 | 70.0 | 5.8 | 19.6 | 42.8 | 42 | 92 | 0 | 1 | 22.6 |
| RU1204156 | 224.7 | 63.5 | 70.4 | 6.5 | 22.4 | 44.1 | 41 | 98 | 0 | 1 | 21.7 |
| **1Planting date:** March 31. **Emergence:** April 10-13. **Herbicides:** Roundup at 1 qt/A, 2,4-D at 1 qt/A, and SelectMax at 16 oz/A on February 17; Command at 1.6 pt/A and Sharpen at 2 oz/A on March 31; Super Wham at 1 gal/A and Facet L at 21 oz/A on April 30; Regiment at 0.6 oz/A and Facet L at 21 oz/A on May 23. **Fertilizer:** AMS/DAP at 100 lb/A on May 5; Agrotain treated urea at 100 lb/A on May 25; 100 lb/A of urea on June 1; 100 lb/A urea on June 9; and 100 lb/A urea on June 16. **Insecticide:** Karate Z at 1.65 oz/A on July 18. **Permanent flood:** May 29. **Drained field:** Aug. 4. **Harvested:** Aug. 19. | | | | | | | | | | | |
| **LSD = A difference of 27 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6.2%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 6. Performance of rice varieties, hybrids, and lines grown on Alligator silty clay soil near Ruleville, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 212.0 | 67.2 | 73.2 | 7.3 | 16.5 | 44.3 | 42 | 92 | 0 | 1 | 23.6 |
| Bowman | 221.3 | 63.0 | 70.7 | 3.8 | 17.3 | 44.9 | 45 | 94 | 0 | 1 | 24.2 |
| Cheniere | 215.8 | 67.3 | 74.1 | 3.7 | 15.4 | 44.0 | 39 | 93 | 0 | 1 | 22.1 |
| Cocodrie | 216.7 | 66.7 | 72.9 | 9.6 | 16.2 | 44.5 | 42 | 92 | 0 | 1 | 22.6 |
| Lakast | 250.1 | 53.6 | 70.8 | 8.6 | 14.6 | 44.1 | 43 | 93 | 0 | 1 | 25.2 |
| Mermentau | 192.8 | 65.5 | 71.6 | 8.0 | 17.4 | 43.9 | 40 | 92 | 0 | 1 | 21.9 |
| Rex | 250.8 | 62.7 | 69.7 | 9.7 | 16.1 | 44.4 | 46 | 93 | 0 | 1 | 26.1 |
| RoyJ | 214.1 | 61.9 | 71.7 | 3.4 | 18.6 | 43.3 | 47 | 100 | 0 | 1 | 22.3 |
| Sabine | 193.8 | 66.6 | 71.5 | 3.4 | 16.1 | 45.1 | 41 | 93 | 0 | 1 | 23.1 |
| Taggart | 232.0 | 56.6 | 70.7 | 6.2 | 16.0 | 44.8 | 46 | 95 | 0 | 1 | 25.8 |
| RU1104077 | 258.4 | 61.9 | 70.0 | 4.1 | 15.3 | 46.0 | 41 | 93 | 0 | 1 | 23.9 |
| XL753 | 323.8 | 53.5 | 71.9 | 12.4 | 14.4 | 41.8 | 43 | 89 | 0 | 1 | 25.7 |
| XL760 | 300.1 | 58.2 | 71.3 | 10.7 | 14.5 | 40.3 | 48 | 92 | 0 | 1 | 24.6 |
| RU1304154 | 206.7 | 64.9 | 72.0 | 9.6 | 15.3 | 44.5 | 38 | 92 | 0 | 1 | 24.6 |
| RU1204197 | 202.4 | 64.2 | 71.3 | 9.8 | 15.6 | 45.6 | 42 | 94 | 0 | 1 | 23.6 |
| RU1404122 | 256.9 | 65.1 | 72.5 | 4.6 | 15.6 | 44.2 | 40 | 95 | 0 | 1 | 22.1 |
| RU1404154 | 237.6 | 63.3 | 69.9 | 4.9 | 16.8 | 45.6 | 38 | 91 | 0 | 1 | 25.2 |
| RU1404156 | 247.5 | 58.1 | 71.1 | 4.4 | 14.8 | 44.2 | 42 | 93 | 0 | 1 | 23.8 |
| RU1404194 | 195.7 | 66.5 | 72.3 | 2.6 | 16.4 | 46.4 | 43 | 98 | 0 | 1 | 19.2 |
| RU1404198 | 244.8 | 65.3 | 72.2 | 6.7 | 15.4 | 43.1 | 42 | 95 | 0 | 1 | 26.4 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 231.4 | 62.8 | 72.0 | 10.2 | 14.5 | 43.8 | 41 | 89 | 0 | 1 | 23.4 |
| CL151 | 250.1 | 62.6 | 71.7 | 13.5 | 15.0 | 43.7 | 39 | 89 | 0 | 1 | 22.7 |
| CL152 | 216.5 | 60.3 | 70.8 | 7.8 | 15.6 | 43.7 | 37 | 93 | 0 | 1 | 20.7 |
| CL172 | 240.8 | 65.0 | 71.8 | 4.8 | 15.8 | 44.7 | 38 | 93 | 0 | 1 | 23.3 |
| CLMedium | 257.9 | 62.1 | 70.0 | 8.7 | 17.0 | 44.6 | 43 | 92 | 0 | 1 | 25.5 |
| CLXL729 | 294.9 | 55.4 | 69.8 | 10.8 | 13.9 | 40.3 | 43 | 90 | 0 | 1 | 24.7 |
| CLXL745 | 287.6 | 59.1 | 72.1 | 10.4 | 13.7 | 40.7 | 43 | 89 | 0 | 1 | 26.1 |
| CLx2134 | 233.3 | 65.5 | 72.0 | 5.2 | 15.1 | 43.9 | 38 | 91 | 0 | 1 | 23.2 |
| RU1204156 | 205.3 | 65.4 | 71.6 | 5.0 | 15.1 | 44.3 | 38 | 97 | 0 | 1 | 22.6 |
| **1Planting date:** April 8. **Emergence:** April 17-21. **Herbicides:** Roundup at 1 qt/A and 2,4-D at 1.5 pt/A on February 6; Command at 1.1 pt/A and Facet at 32 oz/A on April 20; Permit at 0.75 oz/A, Agridex at 1 pt/A, and Asset at 11 oz/A on May 21. **Fertilizer:** 150 lb/A AMS and 20 lb/A Hydra Hume on May 1; 200 lb/A urea on May 14; 100 lb/A AMS on May 29; 75 lb/A urea on June 11; and 3 gal/A Delstar litter on July 10. **Insecticide:** Karate at 1.7 oz/A on July 25. **Fungicide:** Quilt at 14 oz/A on July 10. **Permanent flood:** May 20. **Drained field:** Aug. 14. **Harvested:** Aug. 27. | | | | | | | | | | | |
| **LSD = A difference of 22 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 5.6%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 7. Performance of rice varieties, hybrids, and lines grown on Forestdale silty clay soil near Shaw, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 212.0 | 65.3 | 73.6 | 5.1 | 16.1 | 42.6 | 37 | 87 | 0 | 1 | 22.0 |
| Bowman | 146.8 | 58.8 | 71.4 | 2.6 | 23.4 | 38.1 | 38 | 98 | 0 | 1 | 22.9 |
| Cheniere | 200.8 | 68.1 | 75.0 | 2.0 | 15.3 | 41.7 | 38 | 90 | 2 | 2 | 20.0 |
| Cocodrie | 201.3 | 65.8 | 73.4 | 4.7 | 16.1 | 42.8 | 39 | 88 | 0 | 1 | 22.2 |
| Lakast | 248.6 | 63.8 | 73.4 | 2.1 | 16.8 | 43.9 | 43 | 90 | 0 | 1 | 25.6 |
| Mermentau | 200.3 | 66.6 | 72.9 | 2.6 | 17.4 | 42.9 | 39 | 89 | 0 | 1 | 21.9 |
| Rex | 236.8 | 64.6 | 71.5 | 5.0 | 18.4 | 43.6 | 41 | 93 | 0 | 1 | 27.1 |
| RoyJ | 111.7 | 58.8 | 72.3 | 2.1 | 28.7 | 42.0 | 43 | 103 | 0 | 1 | 22.4 |
| Sabine | 162.6 | 66.4 | 73.1 | 1.9 | 18.9 | 44.1 | 40 | 93 | 0 | 1 | 22.7 |
| Taggart | 212.4 | 60.1 | 72.5 | 2.3 | 21.5 | 44.4 | 44 | 100 | 0 | 1 | 26.4 |
| RU1104077 | 171.5 | 60.9 | 71.7 | 1.6 | 21.9 | 44.6 | 38 | 99 | 0 | 1 | 23.5 |
| XL753 | 260.5 | 64.9 | 74.1 | 3.9 | 16.7 | 42.2 | 43 | 93 | 0 | 1 | 23.9 |
| XL760 | 247.4 | 63.9 | 73.1 | 3.0 | 21.2 | 40.6 | 50 | 100 | 18 | 2 | 24.5 |
| RU1304154 | 214.6 | 63.5 | 72.0 | 4.0 | 15.5 | 43.7 | 40 | 87 | 0 | 1 | 23.0 |
| RU1204197 | 208.0 | 62.8 | 71.9 | 4.3 | 16.3 | 42.6 | 42 | 86 | 0 | 1 | 23.8 |
| RU1404122 | 205.3 | 67.4 | 74.4 | 1.5 | 18.8 | 43.4 | 40 | 93 | 0 | 1 | 21.9 |
| RU1404154 | 225.9 | 60.9 | 70.3 | 3.8 | 17.9 | 43.4 | 39 | 90 | 0 | 1 | 23.5 |
| RU1404156 | 202.1 | 63.8 | 73.3 | 2.4 | 17.2 | 42.8 | 41 | 93 | 0 | 1 | 23.3 |
| RU1404194 | 182.0 | 65.9 | 73.3 | 1.2 | 19.6 | 45.4 | 43 | 97 | 0 | 1 | 19.1 |
| RU1404198 | 180.2 | 67.5 | 74.2 | 2.6 | 22.2 | 43.2 | 41 | 99 | 0 | 1 | 26.5 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 212.5 | 61.9 | 72.1 | 4.5 | 14.9 | 42.8 | 38 | 87 | 0 | 1 | 23.4 |
| CL151 | 223.1 | 65.9 | 73.4 | 4.0 | 16.0 | 42.9 | 39 | 89 | 0 | 1 | 22.5 |
| CL152 | 214.6 | 68.0 | 73.8 | 2.4 | 17.2 | 42.6 | 39 | 95 | 0 | 1 | 19.9 |
| CL172 | 197.6 | 66.4 | 73.6 | 1.9 | 19.1 | 43.6 | 39 | 93 | 0 | 1 | 22.8 |
| CLMedium | 215.0 | 62.3 | 71.2 | 4.4 | 16.9 | 44.9 | 34 | 88 | 0 | 1 | 24.7 |
| CLXL729 | 270.7 | 64.7 | 72.6 | 5.5 | 15.6 | 40.1 | 43 | 91 | 0 | 1 | 24.3 |
| CLXL745 | 231.3 | 65.5 | 73.9 | 4.1 | 16.6 | 40.5 | 44 | 90 | 7 | 2 | 25.1 |
| CLx2134 | 231.6 | 64.4 | 72.4 | 2.8 | 15.4 | 43.1 | 38 | 89 | 0 | 1 | 22.2 |
| RU1204156 | 200.1 | 66.4 | 73.2 | 2.2 | 16.6 | 42.9 | 39 | 96 | 0 | 1 | 21.1 |
| **1Planting date:** April 30. **Emergence:** May 5-10. **Seed Treatment:** CruiserMaxx 23.4 lb/A. **Herbicides:** Command 3ME at 1 pt/A, Sharpen 1.5 oz/A, and Roundup at 32 oz/A on May 5; Framework 3.3 EC at 2.4 pt/A, Halomax 75 at 0.75 oz/A, QuinStar at 0.67 oz/A, and Stam at 3 gal/A on May 20; and Clincher SF 15 oz/A on July 11. **Fertilizer:** 99.1 lb/A urea on June 10; 95 lb/A urea on June 22; 99.3 lb/A urea on June 29; 86 lb/A 18-46-0 on July 1; and 95.86 lb/A urea on July 23. **Permanent flood:** June 18. **Drained field:** Aug. 28. **Harvested:** Sept. 14. | | | | | | | | | | | |
| **LSD = A difference of 23 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 6.6%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 8. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Stoneville, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 151.5 | 62.2 | 72.1 | 4.5 | 17.4 | 43.7 | 42 | 91 | 0 | 1 | 22.9 |
| Bowman | 179.9 | 62.2 | 70.5 | 2.2 | 21.2 | 45.1 | 43 | 102 | 0 | 1 | 24.0 |
| Cheniere | 174.9 | 66.2 | 73.4 | 1.8 | 18.9 | 43.9 | 40 | 97 | 0 | 1 | 21.3 |
| Cocodrie | 160.4 | 63.6 | 72.4 | 4.4 | 16.6 | 44.3 | 46 | 94 | 0 | 1 | 22.4 |
| Lakast | 189.4 | 59.1 | 70.7 | 3.4 | 16.1 | 44.8 | 47 | 94 | 0 | 1 | 25.1 |
| Mermentau | 182.8 | 65.6 | 71.8 | 4.5 | 18.0 | 43.9 | 42 | 93 | 0 | 1 | 22.8 |
| Rex | 193.3 | 63.1 | 69.8 | 4.1 | 17.1 | 45.3 | 45 | 95 | 0 | 1 | 28.0 |
| RoyJ | 142.7 | 58.5 | 70.1 | 2.3 | 26.7 | 43.5 | 45 | 104 | 0 | 1 | 22.6 |
| Sabine | 133.6 | 63.4 | 70.9 | 1.9 | 20.5 | 45.1 | 41 | 98 | 0 | 1 | 23.9 |
| Taggart | 201.5 | 61.0 | 70.9 | 2.9 | 19.4 | 45.3 | 48 | 102 | 0 | 1 | 26.6 |
| RU1104077 | 195.2 | 62.1 | 70.0 | 1.9 | 20.1 | 45.8 | 42 | 101 | 0 | 1 | 24.7 |
| XL753 | 201.8 | 54.4 | 71.1 | 6.0 | 14.4 | 42.3 | 45 | 93 | 0 | 1 | 24.7 |
| XL760 | 229.9 | 60.1 | 70.4 | 3.4 | 17.0 | 41.8 | 52 | 98 | 0 | 1 | 24.5 |
| RU1304154 | 166.8 | 63.4 | 71.3 | 4.3 | 17.0 | 44.5 | 44 | 93 | 0 | 1 | 24.4 |
| RU1204197 | 149.3 | 60.8 | 70.9 | 5.0 | 15.7 | 43.8 | 43 | 91 | 0 | 1 | 23.8 |
| RU1404122 | 192.8 | 65.1 | 72.7 | 2.3 | 19.4 | 44.7 | 43 | 98 | 0 | 1 | 22.6 |
| RU1404154 | 220.3 | 60.2 | 69.3 | 3.6 | 19.3 | 43.9 | 41 | 94 | 0 | 1 | 23.2 |
| RU1404156 | 171.5 | 56.3 | 71.5 | 2.6 | 15.8 | 44.7 | 41 | 95 | 0 | 1 | 24.4 |
| RU1404194 | 162.5 | 66.3 | 72.3 | 1.7 | 20.1 | 46.3 | 44 | 98 | 0 | 1 | 20.5 |
| RU1404198 | 178.0 | 61.7 | 71.1 | 2.8 | 18.9 | 43.5 | 44 | 100 | 0 | 1 | 27.0 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 147.9 | 61.3 | 71.7 | 7.0 | 15.2 | 43.8 | 42 | 91 | 0 | 1 | 23.7 |
| CL151 | 191.0 | 64.3 | 71.9 | 4.9 | 17.7 | 44.6 | 42 | 95 | 0 | 1 | 23.2 |
| CL152 | 190.3 | 66.4 | 71.9 | 2.7 | 20.0 | 43.9 | 43 | 101 | 0 | 1 | 20.8 |
| CL172 | 168.5 | 64.8 | 71.5 | 2.0 | 19.0 | 45.0 | 39 | 97 | 0 | 1 | 24.0 |
| CLMedium | 181.0 | 59.8 | 70.5 | 3.4 | 16.2 | 46.6 | 42 | 91 | 0 | 1 | 26.9 |
| CLXL729 | 169.3 | 56.9 | 69.7 | 5.3 | 14.0 | 40.5 | 47 | 94 | 0 | 1 | 24.7 |
| CLXL745 | 176.1 | 57.0 | 70.7 | 5.9 | 14.8 | 40.9 | 47 | 91 | 0 | 1 | 25.3 |
| CLx2134 | 183.0 | 64.5 | 71.9 | 2.9 | 17.3 | 44.0 | 42 | 94 | 0 | 1 | 23.3 |
| RU1204156 | 188.8 | 65.2 | 72.1 | 3.4 | 22.4 | 44.7 | 43 | 99 | 0 | 1 | 22.2 |
| **1Planting date:** May 6. **Emergence:** May 12-17. **Herbicides:** Gramoxone at 2 pt/A and Command at 1 pt/A on May 8; Gramoxone at 2 pt/A, Facet at 43 oz/A, and Command at 1 pt/A on June 18; and Rice Shot at 4 qt/A, Facet at 43 oz/A, and Permit at 0.67 oz/A on June 22. **Fertilizer:** 180 lb/A urea on June 22. **Permanent flood:** June 24. **Drained field:** Sept. 15. **Harvested:** Sept. 22. | | | | | | | | | | | |
| **LSD = A difference of 25 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 8.4%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 9. Performance of rice varieties, hybrids, and lines grown on Sharkey clay soil near Tunica, Mississippi, 2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk3** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading4** | **Lodging5** | **Lodging6** | **1,000 seed weight7** |
|
|  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* |
| **Conventional** | | | | | | | | | | | |
| Antonio | 174.8 | 67.2 | 73.8 | 1.8 | 14.2 | 43.4 | 40 | 92 | 0 | 1 | 21.8 |
| Bowman | 127.9 | 60.9 | 70.7 | 1.2 | 17.0 | 45.0 | 40 | 94 | 0 | 1 | 21.3 |
| Cheniere | 172.3 | 67.2 | 74.2 | 1.1 | 14.4 | 43.1 | 39 | 91 | 0 | 1 | 19.7 |
| Cocodrie | 173.7 | 66.7 | 73.5 | 2.4 | 14.0 | 43.5 | 39 | 92 | 0 | 1 | 21.4 |
| Lakast | 209.0 | 63.5 | 74.6 | 2.4 | 14.5 | 43.7 | 43 | 92 | 12 | 2 | 23.9 |
| Mermentau | 176.1 | 66.4 | 72.5 | 1.5 | 15.2 | 44.0 | 41 | 95 | 0 | 1 | 20.4 |
| Rex | 209.4 | 63.2 | 71.1 | 2.9 | 13.9 | 43.1 | 41 | 94 | 0 | 1 | 24.7 |
| RoyJ | 82.0 | 63.5 | 72.5 | 0.7 | 19.9 | 43.1 | 45 | 100 | 0 | 1 | 21.5 |
| Sabine | 132.8 | 61.4 | 71.9 | 2.0 | 14.9 | 44.6 | 40 | 93 | 0 | 1 | 22.5 |
| Taggart | 92.0 | 61.9 | 72.2 | 1.3 | 18.1 | 44.3 | 44 | 101 | 0 | 1 | 24.3 |
| RU1104077 | 154.4 | 59.0 | 70.3 | 1.1 | 16.1 | 45.5 | 38 | 93 | 0 | 1 | 21.9 |
| XL753 | 290.7 | 57.0 | 74.4 | 2.9 | 14.0 | 41.9 | 46 | 90 | 20 | 2 | 22.6 |
| XL760 | 187.7 | 62.0 | 71.0 | 2.1 | 16.2 | 40.0 | 49 | 99 | 7 | 2 | 22.5 |
| RU1304154 | 164.5 | 66.6 | 72.8 | 1.5 | 14.3 | 44.3 | 43 | 93 | 10 | 1 | 22.6 |
| RU1204197 | 187.9 | 66.9 | 73.6 | 2.1 | 13.7 | 43.7 | 43 | 93 | 20 | 3 | 23.0 |
| RU1404122 | 207.0 | 64.8 | 74.1 | 1.6 | 14.8 | 43.9 | 43 | 97 | 5 | 1 | 20.6 |
| RU1404154 | 195.2 | 62.5 | 71.0 | 3.1 | 14.3 | 41.9 | 38 | 92 | 17 | 2 | 21.0 |
| RU1404156 | 169.3 | 55.6 | 73.4 | 1.1 | 14.2 | 43.0 | 41 | 93 | 3 | 1 | 21.5 |
| RU1404194 | 60.4 | 63.3 | 72.0 | 0.7 | 14.8 | 44.9 | 40 | 99 | 0 | 1 | 17.4 |
| RU1404198 | 122.4 | 62.7 | 72.8 | 1.9 | 15.2 | 42.6 | 42 | 100 | 0 | 1 | 23.5 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | 184.1 | 61.4 | 72.1 | 3.4 | 13.7 | 42.6 | 39 | 87 | 7 | 2 | 23.2 |
| CL151 | 196.8 | 59.9 | 72.8 | 3.7 | 13.9 | 41.8 | 39 | 90 | 25 | 2 | 21.8 |
| CL152 | 162.5 | 62.7 | 71.0 | 2.2 | 14.4 | 41.9 | 40 | 94 | 0 | 1 | 19.0 |
| CL172 | 131.2 | 65.3 | 72.9 | 1.4 | 15.8 | 44.2 | 39 | 94 | 0 | 1 | 22.7 |
| CLMedium | 188.9 | 51.4 | 70.9 | 3.1 | 14.7 | 44.0 | 42 | 89 | 0 | 1 | 22.6 |
| CLXL729 | 234.7 | 60.9 | 73.6 | 2.6 | 14.3 | 41.1 | 45 | 96 | 53 | 3 | 23.3 |
| CLXL745 | 232.8 | 57.2 | 74.5 | 2.0 | 13.8 | 41.2 | 44 | 92 | 60 | 4 | 24.0 |
| CLx2134 | 191.6 | 64.5 | 72.5 | 2.5 | 14.0 | 42.3 | 41 | 88 | 5 | 1 | 21.5 |
| RU1204156 | 134.8 | 65.1 | 72.3 | 1.7 | 15.5 | 43.5 | 41 | 97 | 0 | 1 | 20.2 |
| **1Planting date:** May 4. **Emergence:** May 10-15. **Herbicides:** Command at 0.167 gal/A and glyphosate at 1 qt/A on May 6; Facet 0.5 lb/A and Aim 1 oz/A on June 8. **Fertilizer:** 292 lb/A 41-0-0-4 on June 10; and 100 lb/A urea on July 15. **Insecticide:** Mustang Max at 0.029 gal/A on August 5. **Permanent flood:** June 22. **Drained field:** Aug. 28. **Harvested:** Sept. 24. | | | | | | | | | | | |
| **LSD = A difference of 38 bu/A is required for one variety to differ from another at the 5% probability level. C.V. = 13.7%.** | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | |

Table 10. Average rough rice yields of varieties, hybrids, and lines evaluated in on-farm trials at seven locations, 2015.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Location** | | | | | | | **Average** | **Stability1** |
| **Choctaw** | **Clarksdale** | **Ruleville** | **Hollandale** | **Shaw** | **Stoneville** | **Tunica** |
| *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* | *bu/A* |
| **Conventional** | | | | | | | | | |
| Antonio | 256.3 | 226.7 | 212.0 | 266.2 | 212.0 | 151.5 | 174.8 | 214 | 19 |
| Bowman | 216.5 | 216.2 | 221.3 | 236.4 | 146.8 | 179.9 | 127.9 | 192 | 22 |
| Cheniere | 237.8 | 201.2 | 215.8 | 240.7 | 200.8 | 174.9 | 172.3 | 206 | 13 |
| Cocodrie | 255.2 | 218.7 | 216.7 | 269.9 | 201.3 | 160.4 | 173.7 | 214 | 19 |
| Lakast | 280.7 | 252.2 | 250.1 | 288.2 | 248.6 | 189.4 | 209.0 | 245 | 15 |
| Mermentau | 227.8 | 197.8 | 192.8 | 237.0 | 200.3 | 182.8 | 176.1 | 202 | 11 |
| Rex | 254.9 | 241.6 | 250.8 | 279.7 | 236.8 | 193.3 | 209.4 | 238 | 12 |
| RoyJ | 233.1 | 195.8 | 214.1 | 228.9 | 111.7 | 142.7 | 82.0 | 173 | 35 |
| Sabine | 215.5 | 183.2 | 193.8 | 225.2 | 162.6 | 133.6 | 132.8 | 178 | 21 |
| Taggart | 282.6 | 237.7 | 232.0 | 261.5 | 212.4 | 201.5 | 92.0 | 217 | 28 |
| RU1104077 | 256.3 | 241.0 | 258.4 | 259.4 | 171.5 | 195.2 | 154.4 | 219 | 20 |
| XL753 | 243.5 | 247.9 | 323.8 | 356.3 | 260.5 | 201.8 | 290.7 | 275 | 19 |
| XL760 | 295.7 | 280.4 | 300.1 | 348.1 | 247.4 | 229.9 | 187.7 | 270 | 20 |
| RU1304154 | 252.5 | 207.6 | 206.7 | 277.2 | 214.6 | 166.8 | 164.5 | 213 | 19 |
| RU1204197 | 252.0 | 224.3 | 202.4 | 274.7 | 208.0 | 149.3 | 187.9 | 214 | 19 |
| RU1404122 | 232.8 | 236.8 | 256.9 | 281.2 | 205.3 | 192.8 | 207.0 | 230 | 14 |
| RU1404154 | 241.4 | 240.0 | 237.6 | 263.9 | 225.9 | 220.3 | 195.2 | 232 | 9 |
| RU1404156 | 230.6 | 230.5 | 247.5 | 263.2 | 202.1 | 171.5 | 169.3 | 216 | 17 |
| RU1404194 | 235.9 | 231.0 | 195.7 | 251.7 | 182.0 | 162.5 | 60.4 | 188 | 34 |
| RU1404198 | 242.8 | 211.9 | 244.8 | 277.2 | 180.2 | 178.0 | 122.4 | 208 | 25 |
| **Clearfield** | | | | | | | | | |
| CL111 | 243.1 | 210.3 | 231.4 | 237.5 | 212.5 | 147.9 | 184.1 | 210 | 16 |
| CL151 | 237.9 | 228.4 | 250.1 | 282.4 | 223.1 | 191.0 | 196.8 | 230 | 14 |
| CL152 | 241.2 | 219.4 | 216.5 | 225.3 | 214.6 | 190.3 | 162.5 | 210 | 12 |
| CL172 | 231.7 | 232.0 | 240.8 | 241.0 | 197.6 | 168.5 | 131.2 | 206 | 21 |
| CLMedium | 256.9 | 253.8 | 257.9 | 269.2 | 215.0 | 181.0 | 188.9 | 232 | 16 |
| CLXL729 | 279.9 | 281.6 | 294.9 | 325.2 | 270.7 | 169.3 | 234.7 | 265 | 19 |
| CLXL745 | 233.7 | 253.7 | 287.6 | 351.3 | 231.3 | 176.1 | 232.8 | 252 | 22 |
| CLx2134 | 263.6 | 239.5 | 233.3 | 280.4 | 231.6 | 183.0 | 191.6 | 232 | 15 |
| RU1204156 | 224.5 | 218.7 | 205.3 | 224.7 | 200.1 | 188.8 | 134.8 | 200 | 16 |
| Mean | 247 | 230 | 238 | 270 | 208 | 178 | 171 | 220 |  |
| LSD | 36 | 35 | 22 | 27 | 23 | 25 | 38 | 26 |  |
| CV (%) | 8.9 | 9.3 | 5.6 | 6.2 | 6.6 | 8.4 | 13.7 | 19.4 |  |
| Planting Date | March 31 | April 9 | April 8 | March 31 | April 30 | May 6 | May 4 |  |  |
| Emergence date | April 11-15 | April 19-23 | April 17-21 | April 10-13 | May 5-10 | May 12-17 | May 10-15 |  |  |
| 1Stability 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, 2015.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Entry** | **Origin1** | **Yield2** | **Whole milled rice** | **Total milled rice** | **Chalk** | **Harvest moisture** | **Bushel weight** | **Plant height** | **50% heading3** | **Lodging4** | **Lodging5** | **1,000 seed weight6** | **Approximate seeds/pound** |
|
|  |  | *bu/A* | *%* | *%* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* | *no.* |
| **Conventional** | | | | | | | | | | | | | |
| Antonio | TX | 214.2 | 63.6 | 72.4 | 6.4 | 16.1 | 43.9 | 40 | 90 | 0 | 1 | 23.3 | 19485 |
| Bowman | MS | 192.1 | 60.8 | 70.4 | 3.3 | 19.4 | 44.3 | 41 | 97 | 0 | 1 | 23.8 | 19087 |
| Cheniere | LA | 206.2 | 65.9 | 73.7 | 3.0 | 16.2 | 43.6 | 38 | 93 | 0 | 1 | 21.3 | 21358 |
| Cocodrie | LA | 213.7 | 64.1 | 72.3 | 6.9 | 16.3 | 43.9 | 41 | 91 | 0 | 1 | 22.4 | 20242 |
| Lakast | AR | 245.5 | 55.1 | 71.0 | 5.6 | 15.8 | 44.1 | 43 | 92 | 3 | 1 | 25.4 | 17844 |
| Mermentau | LA | 202.1 | 64.4 | 71.4 | 6.3 | 17.9 | 43.7 | 41 | 92 | 0 | 1 | 22.0 | 20610 |
| Rex | MS | 238.1 | 61.7 | 69.5 | 6.2 | 16.8 | 44.0 | 43 | 93 | 0 | 1 | 26.8 | 16922 |
| RoyJ | AR | 172.6 | 59.2 | 71.3 | 3.1 | 21.7 | 43.5 | 44 | 100 | 0 | 1 | 22.5 | 20165 |
| Sabine | TX | 178.1 | 64.3 | 71.3 | 2.9 | 17.5 | 45.0 | 40 | 93 | 0 | 1 | 23.3 | 19509 |
| Taggart | AR | 217.1 | 57.4 | 70.8 | 4.6 | 18.5 | 44.9 | 45 | 97 | 0 | 1 | 26.1 | 17423 |
| RU1104077 | MS | 219.4 | 60.1 | 69.9 | 2.8 | 17.7 | 45.7 | 39 | 95 | 1 | 1 | 24.1 | 18816 |
| XL753 | RT | 270.7 | 56.6 | 72.0 | 7.3 | 15.1 | 41.7 | 44 | 91 | 10 | 1 | 24.4 | 18628 |
| XL760 | RT | 269.9 | 58.9 | 70.9 | 6.2 | 16.8 | 40.7 | 48 | 95 | 6 | 1 | 24.3 | 18683 |
| RU1304154 | MS | 212.8 | 62.4 | 70.9 | 6.2 | 15.8 | 44.1 | 41 | 92 | 1 | 1 | 24.0 | 18953 |
| RU1204197 | MS | 214.1 | 61.0 | 70.6 | 6.6 | 16.1 | 43.9 | 42 | 91 | 3 | 1 | 23.7 | 19133 |
| RU1404122 | MS | 230.4 | 64.4 | 73.0 | 3.8 | 17.6 | 44.0 | 41 | 95 | 3 | 1 | 21.7 | 20894 |
| RU1404154 | MS | 231.6 | 59.9 | 69.4 | 4.6 | 17.5 | 44.4 | 38 | 91 | 2 | 1 | 24.2 | 18783 |
| RU1404156 | MS | 216.4 | 56.2 | 71.7 | 3.9 | 15.8 | 43.8 | 40 | 92 | 1 | 1 | 23.6 | 19214 |
| RU1404194 | MS | 188.5 | 65.1 | 72.2 | 2.5 | 17.9 | 46.1 | 43 | 96 | 4 | 1 | 19.1 | 23734 |
| RU1404198 | MS | 208.2 | 63.3 | 71.9 | 4.2 | 17.4 | 43.0 | 42 | 96 | 0 | 1 | 26.4 | 17225 |
| **Clearfield** | | | | | | | | | | | | | |
| CL111 | LA-HA | 210 | 59.9 | 71.3 | 7.4 | 14.8 | 43.2 | 40 | 87 | 10 | 2 | 23.8 | 19099 |
| CL151 | LA-HA | 230 | 60.8 | 71.5 | 8.3 | 15.8 | 43.5 | 39 | 90 | 15 | 2 | 23.2 | 19533 |
| CL152 | LA-HA | 210 | 61.0 | 70.7 | 5.6 | 16.9 | 43.0 | 39 | 94 | 0 | 1 | 20.3 | 22396 |
| CL 172 | AR-HA | 206 | 63.9 | 71.8 | 3.2 | 17.3 | 44.4 | 38 | 93 | 0 | 1 | 23.6 | 19237 |
| CLMedium | LA | 232 | 59.5 | 70.3 | 6.6 | 16.8 | 45.0 | 40 | 91 | 0 | 1 | 25.4 | 17874 |
| CLXL729 | RT | 264 | 58.2 | 70.6 | 7.4 | 14.7 | 40.5 | 43 | 91 | 14 | 2 | 24.7 | 18402 |
| CLXL745 | RT | 246 | 58.8 | 72.2 | 6.3 | 15.0 | 40.8 | 45 | 89 | 23 | 2 | 25.6 | 17724 |
| CLx2134 | LA-HA | 232 | 63.0 | 71.3 | 4.0 | 15.7 | 43.3 | 40 | 90 | 3 | 1 | 23.0 | 19764 |
| RU1204156 | MS | 200 | 64.7 | 71.7 | 3.9 | 17.8 | 44.0 | 40 | 97 | 0 | 1 | 21.8 | 20853 |
| Mean |  | 220 | 61.2 | 71.3 | 5.1 | 17 | 44 | 41 | 93 | 3 | 1 | 23.6 | 19365 |
| LSD |  | 26 | 3 | 2 | 1.9 | 1.5 | 0.8 | 2 | 2 | 7 | 0.3 | 0.8 |  |
| CV |  | 19.4 | 6.0 | 1.8 | 49.6 | 15.0 | 2.4 | 5.2 | 2.9 |  |  | 4.7 |  |
| 1AR = Arkansas; LA = Louisiana; MS = Mississippi; HA = Horizon Ag, in conjunction with the respective state; RT = RiceTec, Inc. | | | | | | | | | | | | | |
| 2Rough rice at 12% moisture. | | | | | | | | | | | | | |
| 3Winseedle chalk measurement | | | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | | | |
| 7Weight of 1000 kernels. | | | | | | | | | | | | | |

Table 12. Average agronomic and milling performance of varieties, hybrids, and experimental lines grown at on-farm locations from 2013-2015.1

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **﻿Entry** | **Origin2** | **Yield3** | **Whole milled rice** | **Total**  **milled rice** | **Bushel**  **weight** | **Plant**  **height** | **50%**  **heading4** | **Lodging5** | **Lodging**  **score6** | **1,000 seed weight7** | **Approximate seeds/pound** |
| *bu/A* | *%* | *%* | *lb* | *in* | *days* | *%* | *(1-5)* | *g* | *no.* |
| **Conventional** | | | | | | | | | | | |
| Antonio | TX | 226 | 62 | 72 | 44.3 | 39 | 88 | 2 | 1.3 | 23.7 | 19161 |
| Bowman | MS | 218 | 58 | 70 | 45.0 | 41 | 92 | 0 | 1.0 | 25.0 | 18154 |
| Cheniere | LA | 229 | 63 | 73 | 44.2 | 38 | 90 | 0 | 1.0 | 21.9 | 20742 |
| Cocodrie | LA | 221 | 62 | 72 | 44.3 | 39 | 90 | 0 | 1.0 | 23.3 | 19546 |
| Mermentau | LA | 225 | 62 | 71 | 43.9 | 40 | 89 | 0 | 1.0 | 22.4 | 20307 |
| Rex | MS | 233 | 58 | 68 | 44.3 | 42 | 90 | 0 | 1.0 | 27.0 | 16796 |
| RoyJ | AR | 216 | 57 | 71 | 43.5 | 44 | 97 | 0 | 1.0 | 23.9 | 18993 |
| Sabine | TX | 199 | 62 | 71 | 45.3 | 39 | 92 | 1 | 1.0 | 23.6 | 19248 |
| RU1104077 | MS | 229 | 56 | 69 | 45.8 | 40 | 91 | 0 | 1.1 | 24.8 | 18317 |
| **Clearfield** | | | | | | | | | | | |
| CL111 | LA-HA | 226 | 58 | 71 | 43.9 | 41 | 87 | 9 | 1.5 | 24.9 | 18278 |
| CL151 | LA-HA | 245 | 59 | 71 | 44.0 | 40 | 89 | 16 | 1.7 | 23.4 | 19372 |
| CL152 | LA-HA | 225 | 61 | 70 | 43.7 | 40 | 92 | 0 | 1.0 | 21.2 | 21448 |
| CLXL745 | RT | 261 | 55 | 71 | 41.2 | 45 | 86 | 17 | 1.7 | 26.0 | 17426 |
| 1Data presented are the averages of 19 total sites that served as the On-Farm Variety Trials for 2013-15. Listed entries were included in all 3 years. | | | | | | | | | | | |
| 2AR = Arkansas; LA = Louisiana; MS = Mississippi; HA = Horizon Ag, in conjunction with the respective state; RT = RiceTec, Inc. | | | | | | | | | | | |
| 3Rough rice at 12% moisture. | | | | | | | | | | | |
| 4Days after emergence. | | | | | | | | | | | |
| 5Percent of plot that was lodged. | | | | | | | | | | | |
| 6Severity of lodging: 1=plants totally erect, 5=plants completely on ground. | | | | | | | | | | | |
| 7Weight 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 |  |  |
| 1Abbreviations: 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 fertilizer rate guidelines for selected rice varieties.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Varieties** | **Clay soils1** | | **Silt loam soils2** | |
| **Preflood** | **Midseason** | **Preflood** | **Midseason** |
| 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 |
| CL1513 | 90-135 | 0-45 | 90 | 45 |
| CL152 | 120-150 | 45 | 120 | 45 |
| CL1634 | 120-150 | 45 | 120 | 45 |
| Cocodrie | 120-150 | 30-60 | 90-120 | 30-60 |
| Lakast4 | 120-150 | 30-60 | 90-120 | 30-60 |
| Mermentau | 120-150 | 30-60 | 90-120 | 30-60 |
| Rex | 120-150 | 45 | 120 | 45 |
| Sabine | 120-150 | 30-60 | 90-120 | 30-60 |
| 1Clay soils include soils with CEC greater than 20 cmolc kg-1. | | | | |
| 2Silt loam soils include soils with CEC less than 20 cmolc kg-1. | | | | |
| 3CL151 is highly prone to lodging. | | | | |
| 4Two site-years of data for both clay and silt loam soils. Recommendations are subject to change with further testing. | | | | |