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Arkansas Rice Performance Trials, 2013-2015[1]

Cultivar selection is likely the most important management decision made each year by rice producers. This choice is generally based upon past experience, seed availability, agronomic traits, and cultivar yield potential. When choosing a rice cultivar, grain yield, milling yield, lodging, maturity, disease susceptibility, seeding date, field characteristics, potential for quality reductions due to pecky rice, and market strategy should all be considered. Cultivar performance data included in this publication are from the Arkansas Rice Performance Trials (ARPT), Producer Rice Evaluation Program (PREP) trials in grower fields, and from seeding date studies conducted during 2013-2015. Additional information can be found on the University of Arkansas Cooperative Extension Service website (http://www.uaex.edu/rice) and the annual B.R. Wells Rice Research Series publication (http://arkansasagnews.uark.edu/1356.htm).

Cultivars grown in the Arkansas Rice Performance Trials (ARPT) in 2015 averaged **167** bu/A of rough rice compared to the state average yield of **164** bu/A as reported by the USDA Crop Reporting Service (http://usda.mannlib.cornell.edu/usda/current/CropProd/CropProd-11-10-2015.pdf). Data averaged over years and locations are more reliable than a single year of data for evaluating rice performance for such important factors as grain yield, milling yield, kernel size, maturity, lodging resistance, plant height and disease susceptibility. It is critical to evaluate as many years of information as possible, particularly when extreme weather conditions occur which may unfairly impact results for certain cultivars in a given year.

The ARPT, PREP, and seeding date studies are supported through grower check-off funds administered by the Arkansas Rice Research and Promotion Board. These studies are conducted every year to compare promising new experimental lines and newly-released cultivars from the breeding programs in Arkansas, Louisiana, Texas, and Mississippi with established

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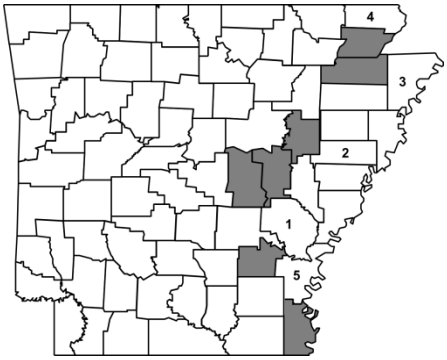
cultivars currently grown in Arkansas. Descriptions of cultivars are provided in Table 8 at the end of this report. The 2015 ARPTs were conducted at five locations in Arkansas (Figure 1). Multiple locations each year allow for continued reassessment of the performance and adaptability of advanced breeding lines and commercial cultivars to environmental conditions, soil properties, and management factors. Ninety entries, which were either promising breeding lines or established cultivars, were grown across a range of maturities.



1. Rice Research & Extension Center (RREC), Stuttgart, AR
2. Pine Tree Research Station (PTRS), Colt, AR
3. Northeast Research & Extension Center (NEREC), Keiser, AR
4. Trey Bowers Farm, Clay County, AR
5. Brandon Truax Farm, Desha County, AR

Figure 1. Locations (1 - 5) of the Arkansas Rice Performance Trials and Producer Rice Evaluation Program sites (shaded) conducted in 2015.

The 2015 ARPTs were located at the Rice Research & Extension Center (RREC) near Stuttgart, AR; Pine Tree Research Station (PTRS) near Colt, AR; Northeast Research & Extension Center (NEREC) near Keiser, AR; the Trey Bowers farm in Clay County (CLAY); and the Brandon Truax farm in Desha County (DESHA). The studies were seeded on April 22, June 5, May 4, April 30, and May 5, respectively. Cultural practices varied somewhat among the ARPT locations, but overall the trials were grown under conditions for high yield. Nitrogen was applied to ARPT tests located on Experiment Stations in a single application of 120-130 lbs N/acre at preflood on silt loam soils and 150 lbs N/acre on clay soils. Phosphorus and potassium fertilizers were applied before seeding at each location. ARPT tests located in grower fields were managed according to standard grower practices under conditions for high yield.

The average yields for the 2013, 2014, and 2015 ARPTs are listed in Table 1. RiceTec (RT) XL753, ARX1084, Caffey, and ARX1021 have been the highest yielding cultivars averaged across the past three years. Antonio, CL151, Mermentau, CL111, Roy J, and CL163 had the highest overall milling yields from 2013 to 2015. Agronomic traits and grain yields from the 2015 ARPTs are shown in Table 2. Averaged across all locations, RT XL753, RT XL760, RT CL XL729, RT CL XL745, and ARX1084 were the top yielding cultivars in the 2015 ARPT. Antonio, CL111, CL153, and CL172 had the highest overall milling yields of the long-grain cultivars in the 2015 ARPT. Jupiter and MM14 had the highest milling yields among medium-grain cultivars.

The most recent disease ratings for each cultivar are listed in Table 3. Ratings for disease susceptibility should be evaluated critically to optimize cultivar selection. Cultivars should be selected for specific fields relative to the potential yield limitations observed in historical yields. For example, LaKast and Roy J are both susceptible to blast disease and should be planted in fields with low risk of this disease. Other cultivars should be considered for fields that have limited water availability, poor water-holding ability, historical blast infestations, and tree lines or other natural barriers that encourage long dew periods. Potential for bacterial panicle blight should also be considered and fields with a history of this disease should be planted to relatively resistant cultivars (hybrids and Jupiter). Pureline varieties should be planted early and prior to planting hybrids. Also, pureline varieties should be managed as timely as possible to avoid unnecessary stress. Disease ratings are a general guide based on our expectations of the cultivar reaction under conditions that strongly favor disease; however, environment will modify the actual reaction of a cultivar in different fields. Also, resistance to diseases, such as blast, can be overcome by the pathogen over time. Do not expect these ratings to be an absolute predictor of cultivar performance with respect to a particular disease in all situations.

Each year replicated trials are established in numerous grower fields to evaluate rice performance under standard grower practices. The counties where the 2015 Arkansas Producer Rice Evaluation Program (PREP) trials were located are shaded in Figure 1. Grain yield and milling yield information from these trials provides additional valuable information on how cultivars and advanced experimental lines perform across the state when subjected to different environments and management practices (Tables 4, 5). Cultivar disease reaction data from these trials are used to help establish disease susceptibility ratings. Averaged across all locations, RT XL753, RT CL XL729, and RT XL760 were the highest yielding cultivars tested in the PREP trials. The highest yielding conventional varieties were LaKast, ARX1084, ARX1021, and CL153. The cultivars with the highest overall milling yields across locations were CL153, CL163, CL172, and Mermentau. Performance variability among the locations represents different environments, management practices, and susceptibility to various diseases present at specific locations.

Planting date studies are conducted annually to establish rice DD50 thresholds and to evaluate performance of new cultivars over a range of seeding dates at the RREC (Table 6). Results from previous years can be found in past Rice Information Sheets.

In 2015, planting date studies were drill-seeded and then fertilized and flooded at the 5-leaf stage. Urea was applied as a single pre-flood application of 120 lbs N/A to all cultivars. The highest grain yields were observed in plots seeded on April 3 (Table 6). The unique conditions of the 2015 season resulted in an atypical grain yield response to planting date. In most years grain yield decline from early planting to late planting is relatively linear. In 2015, yields generally declined later in the season, but some later planting dates performed equal to or

greater than earlier planting dates. A notable example was the May 5 planting date outperforming the April 21 planting date; as well as almost no yield decline from May 5 to May 19. RiceTec XL753 and XL760 were the most consistent cultivars across all planting dates and had the highest overall yields at most planting dates. Across all planting dates, the RiceTec hybrids XL753, XL760, and CL XL729 were generally the highest yielding. The highest yielding conventional cultivars were ARX1084 and LaKast. The highest yielding medium grain cultivar was ARX1021. Exposure to extended overcast conditions and generally erratic weather patterns during critical development stages in June, July, and August likely resulted in greater yield variability across planting dates (Table 7). CL111, CL151, CL153, and CL172 had the highest overall milling yields averaged across planting dates. Average milling yield for all cultivars generally increased with later planting dates.

Descriptions of the rice cultivars tested are provided in Table 8.

Growers are encouraged to seed newly released cultivars on a small acreage to evaluate performance under their specific management practices, soils, and environment. Growers are also encouraged to seed rice acreage in several cultivars to reduce the risk of disease epidemics and environmental effects. Cultivars that have been tested under Arkansas growing conditions will reduce potential risks associated with crop failure. Additional information on specific cultivars not listed in this publication is available upon request. Contact your local county Extension agent for more information.

ADDITIONAL INFORMATION SOURCES

University of Arkansas Cooperative Extension Service http://www.uaex.edu

- Rice Information Sheet No. 166
- Rice Information Sheet No. 167
- Rice Information Sheet No. 168
- Rice Information Sheet No. 169
- Rice Information Sheet No. 170
- Rice Information Sheet No. 171
- Rice Information Sheet No. 172
- Rice Information Sheet No. 173

ACKNOWLEDGEMENTS

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Table 1. Results of the Arkansas Rice Performance Trials averaged across the three-year period of 2013-2015.

Cultivar	Grain Length[1]	Straw Strength[2]	50% Heading[3]	Plant Height	Test Weight	Milled Kernel Wt[4]	Chalky Kernels[4]	Milling Yield by Year				Grain Yield by Year			
								2013	2014	2015	Mean	2013	2014	2015	Mean
		Rating	Days	in.	lbs/bu	mg	%	% Head Rice - % Total Rice				Bushels / Acre			
Antonio	L	2.0	80	37	43.6	20.3	1.94	65-70	66-72	62-70	**64-71**	191	174	141	**169**
Caffey	M	2.2	82	38	43.1	23.5	1.47	58-67	57-69	56-68	**57-68**	217	216	179	**204**
CL111	L	2.1	79	38	43.7	21.0	1.18	64-69	63-71	62-70	**63-70**	179	179	144	**167**
CL151	L	1.6	80	38	43.1	19.6	2.88	65-70	65-71	61-70	**64-70**	189	202	166	**186**
CL163	L	1.8	84	38	44.2	--	--	--	63-70	61-70	**62-70**	--	186	151	**168**
CL271	M	1.6	84	38	44.0	--	--	--	58-70	52-68	**55-69**	--	190	166	**178**
Jupiter	M	2.9	83	37	42.2	21.0	2.38	61-66	59-68	61-68	**60-67**	200	213	176	**196**
LaKast	L	2.5	80	41	43.4	21.6	1.04	63-70	62-71	56-68	**60-70**	203	202	162	**189**
Mermentau	L	1.4	80	37	43.3	19.6	1.88	65-69	66-71	63-69	**65-70**	190	181	161	**177**
MM14	M	--	83	35	44.5	--	--	--	52-69	61-69	**56-69**	--	196	155	**176**
Roy J	L	1.0	85	41	42.7	21.0	1.13	63-70	62-70	61-70	**62-70**	210	207	169	**195**
RT CL XL729	L	3.9	80	43	43.7	20.5	2.19	62-69	61-70	59-69	**61-69**	205	202	194	**200**
RT CL XL745	L	4.1	77	44	44.0	22.2	1.93	61-69	61-71	58-69	**60-70**	179	203	187	**189**
RT XL753	L	2.5	78	43	43.8	21.0	2.13	60-70	57-71	54-69	**57-70**	245	259	212	**239**
Taggart	L	1.8	84	43	43.0	22.5	1.02	62-69	60-70	58-70	**60-70**	205	200	167	**191**
Wells	L	2.1	82	40	43.2	21.4	1.37	62-70	57-70	57-70	**59-70**	196	192	161	**183**
ARX1021	M	2.3	77	38	43.0	22.8	2.47	58-67	55-69	56-68	**56-68**	212	235	165	**204**
ARX1084	L	1.8	81	40	43.0	21.5	1.40	62-68	61-69	60-69	**61-69**	226	218	186	**210**
Mean		**2.2**	**81.1**	**39.3**	**43.4**	**21.3**	**1.76**	**60-71**	**63-69**	**62-70**	**62-70**	**203**	**203**	**169**	**190**

[1] Grain Length: L=long grain; M=medium grain.

[2] Relative straw strength based on field tests using the scale: 1=very strong straw, 5=very weak straw; based on percent lodging (2012-2014 data due to no lodging in 2015).

[3] Number of days from plant emergence until 50% of the panicles are visibly emerging from the boot.

[4] Data from Riceland Grain Quality Lab, 2012-2014.

Table 2. Results of the Arkansas Rice Performance Trials at five locations during 2015.

Cultivar	Grain Length[1]	Straw Strength[2]	50% Heading[3]	Plant Height	Test Weight	Milling Yield	Grain Yield by Location and Planting Date					
							CLAY April 30	DESHA May 5	NEREC May 4	PTRS June 5	RREC April 22	MEAN
		Rating	Days	in.	lbs/bu	%HR-%TR	Bushels / Acre					
Antonio	L	--	75	37	46.9	62-70	162	139	166	122	118	**141**
Caffey	M	--	79	37	46.0	57-68	194	139	206	176	182	**179**
CL111	L	--	74	39	47.6	62-70	160	141	147	139	133	**144**
CL151	L	--	74	38	46.5	61-70	182	164	188	161	136	**166**
CL153	L	--	77	37	46.8	62-70	166	144	185	150	124	**154**
CL163	L	--	79	37	46.3	62-69	133	149	180	148	145	**151**
CL172	L	--	77	35	46.1	61-70	156	130	165	128	133	**142**
CL271	M	--	79	38	45.9	58-69	177	138	198	177	140	**166**
CL272	M	--	77	37	46.5	52-68	171	132	206	158	141	**162**
Jupiter	M	--	79	36	45.0	61-68	183	137	201	164	194	**176**
LaKast	L	--	74	41	47.4	56-68	178	150	184	148	149	**162**
Mermentau	L	--	76	37	46.5	63-69	174	167	187	140	137	**161**
MM14	M	--	77	33	46.5	61-69	173	135	169	134	166	**155**
Roy J	L	--	81	39	45.4	61-70	182	149	195	170	146	**169**
RT CL XL729	L	--	74	45	47.7	59-69	194	165	207	211	195	**194**
RT CL XL745	L	--	72	45	47.6	58-69	194	167	185	189	198	**187**
RT XL753	L	--	73	46	47.7	54-69	219	202	218	209	210	**212**
RT XL760	L	--	77	45	46.7	59-69	211	187	226	210	204	**207**
Taggart	L	--	80	41	46.0	59-70	182	157	194	159	143	**167**
Wells	L	--	78	39	46.5	57-70	179	149	182	165	131	**161**
MSX4077	L	--	80	37	46.3	58-69	130	137	177	109	133	**137**
ARX1021	M	--	73	36	46.1	56-68	180	129	200	142	173	**165**
ARX1084	L	--	77	39	46.1	60-69	189	169	232	171	172	**186**
Mean		--	**76.5**	**38.7**	**46.5**	**59-69**	**177**	**151**	**191**	**160**	**157**	**167**

[1] Grain Length: L=long grain; M=medium grain.

[2] Relative straw strength based on field tests using the scale: 1=very strong straw, 5=very weak straw; based on percent lodging (no lodging in 2015).

[3] Number of days from plant emergence until 50% of the panicles are visibly emerging from the boot.

Table 3. Rice Cultivar Reactions to Diseases and Lodging (2015).

Cultivar	Sheath Blight	Blast	Straight head	Bacterial Panicle Blight	Narrow Brown Leaf Spot	Stem Rot	Kernel Smut	False Smut	Lodging	Black Sheath Rot	Sheath Spot
Antonio	S	S	--	MS	MS	S	S	MS	MS	--	--
Bengal	MS	S	VS	VS	S	VS	MS	MS	MR	MR	--
Caffey	MS	MR	--	S	R	--	--	MS	--	--	--
Catahoula	VS	R	MS	S	MR	S	S	S	MR	S	--
Cheniere	S	VS	VS	VS	S	S	S	S	MR	MS	--
CL111	VS	MS	S	VS	VS	VS	S	S	MS	S	MS
CL151	S	VS	VS	VS	S	VS	S	S	MS	S	--
CL152	S	VS	S	S	MR	--	VS	S	--	--	--
CL153	S	MS	--	--	--	--	S	S	--	--	
CL163	S	S	--	MS	--	--	MS	--	--	--	--
CL172	MS	MS	--	MS	--	--	MS	S	--	--	--
CL271	S	MR	--	MS	MR	--	MS	--	--	S	--
CL272	S	S	--	VS	--		MS	--	--	--	--
Cocodrie	S	S	VS	S	S	VS	S	S	MR	S	--
Della-2	S	R	--	S	MS	--	--	--	--	--	--
Francis	MS	VS	MR	VS	S	S	VS	S	MS	S	--
Jazzman	MS	S	S	S	S	S	MS	S	MS	MS	--
Jazzman-2	VS	S	--	VS	MR	--	S	S	--	--	--
JES	S	R	VS	S	R	VS	MS	MS	S	MR	--
Jupiter	S	S	S	MR	MS	VS	MS	MS	MS	MR	--
LaKast	S	S	MS	S	MS	S	S	S	MS	MS	S
Mermentau	S	S	VS	MS	MS	--	S	S	MS	--	--
MM14	--	--	--	S	--	--	--	S	--	--	--
REX	S	S	S	S	MS	S	S	S	MR	S	--
Roy J	MS	S	S	S	MR	S	VS	S	MR	MS	--
RT CL XL729	MS	R	MS	MR	MS	S	MS	S	S	S	--
RT CL XL745	S	R	R	MR	MS	S	MS	S	S	S	--
RT CL XP756	MS	--	--	--	--	--	--	S	--	S	--
RT XL723	MS	R	S	MR	MS	S	MS	S	MS	S	--
RT XL753	MS	R	MS	MR	--	--	MS	S	MS	S	--
RT XL760	MS	--	--	--	--	--	MS	VS	--	--	--
Taggart	MS	MS	R	MS	MS	S	S	S	MS	MS	--
Wells	S	S	S	S	S	VS	S	S	MS	MS	--

Reaction: R = Resistant; MR = Moderately Resistant; MS = Moderately Susceptible; S = Susceptible; VS = Very Susceptible
Cells with no values indicate no definitive Arkansas disease rating information is available at this time. Reactions were determined based on historical and recent observations from test plots and in grower fields across Arkansas and other rice states in southern USA. In general, these ratings represent expected cultivar reactions to disease under conditions that most favor severe disease development.
Table prepared by Y. Wamishe, Assistant Professor/Extension Plant Pathologist

Table 4. Performance of selected cultivars in Producer Rice Evaluation Program trials located in grower fields in Arkansas during 2015.

Cultivar	Grain Length[1]	Grain Yield by Location Planting Date							
		Chicot May 5	Craighead April 27	Greene April 30	Lincoln April 8	Lonoke April 21	Prairie April 9	Woodruff April 8	MEAN
		Bushels / Acre							
CL111	L	170	141	178	223	194	145	172	**175**
CL151	L	165	169	192	225	185	153	147	**177**
CL153	L	172	166	173	234	195	190	143	**182**
CL163	L	166	103	137	216	190	196	161	**167**
CL172	L	151	150	133	197	170	184	151	**162**
CL271	M	163	165	157	189	175	176	162	**169**
CL272	M	174	164	170	210	193	177	161	**178**
Jupiter	M	152	141	142	195	181	175	139	**161**
LaKast	L	207	182	193	230	218	193	169	**199**
Mermentau	L	178	155	163	196	183	170	141	**169**
Roy J	L	171	177	151	192	205	209	152	**179**
RT CL XL729	L	231	206	243	287	248	192	161	**224**
RT CL XL745	L	211	190	228	268	243	152	174	**210**
RT XL753	L	245	198	244	257	250	227	193	**231**
RT XL760	L	239	197	202	252	261	202	154	**215**
Taggart	L	181	175	160	202	186	193	138	**176**
MSX4077	L	170	95	164	180	188	176	154	**161**
ARX1021	M	157	149	197	222	198	190	166	**183**
ARX1084	L	206	187	195	205	219	204	165	**197**
Mean		**185**	**164**	**180**	**220**	**204**	**184**	**158**	**185**

[1] Grain Length: L=long grain; M=medium grain.

Table 5. Performance of selected cultivars in Producer Rice Evaluation Program trials located in grower fields in Arkansas during 2015.

Cultivar	Grain Length[1]	Milling Yield by Location Planting Date							
		Chicot May 5	Craighead April 27	Greene April 30	Lincoln April 8	Lonoke April 21	Prairie April 9	Woodruff April 8	MEAN
		% Head Rice – % Total Rice							
CL111	L	67-72	66-72	67-71	63-68	61-69	46-67	52-69	**60-70**
CL151	L	67-72	66-71	67-72	63-68	64-68	42-68	53-69	**60-70**
CL153	L	66-71	67-72	67-71	64-67	65-69	46-67	53-70	**61-70**
CL163	L	68-73	67-72	64-69	60-64	63-67	55-67	56-69	**62-69**
CL172	L	67-72	65-71	64-70	63-67	64-69	53-68	50-68	**61-69**
CL271	M	67-72	67-70	70-72	62-67	51-68	38-67	43-67	**57-69**
CL272	M	67-72	67-72	68-71	60-66	43-67	34-67	42-68	**54-69**
Jupiter	M	66-71	62-68	68-71	61-64	62-67	57-68	54-68	**61-68**
LaKast	L	69-73	68-72	66-72	53-65	56-66	39-66	48-69	**57-69**
Mermentau	L	67-72	67-71	67-71	61-65	63-68	57-68	52-68	**62-69**
Roy J	L	68-72	66-71	62-70	60-68	65-70	46-68	49-67	**59-70**
RT CL XL729	L	69-73	65-71	66-71	60-66	52-65	44-66	50-68	**58-69**
RT CL XL745	L	68-73	67-72	68-73	63-69	55-68	45-68	53-69	**60-70**
RT XL753	L	67-72	68-72	69-74	59-67	46-67	39-67	52-69	**57-70**
RT XL760	L	66-71	68-73	65-71	58-66	61-66	45-66	54-68	**59-69**
Taggart	L	67-71	61-68	66-72	60-67	61-68	40-67	44-67	**57-69**
MSX4077	L	66-70	67-73	66-71	64-67	57-67	50-68	51-68	**60-69**
ARX1021	M	67-70	66-70	69-71	62-66	34-65	22-65	48-68	**52-68**
ARX1084	L	68-72	64-71	66-71	55-65	60-68	44-67	49-67	**58-69**
MEAN		**67-72**	**66-71**	**67-71**	**61-66**	**57-67**	**44-67**	**50-68**	**59-69**

[1] Grain Length: L=long grain; M=medium grain.

Table 6. Influence of seeding date on grain yield and milling yield of selected rice cultivars in studies conducted at the RREC during 2015.

Cultivar	Grain Yields (bu/A)							Milling Yield (%HR-%TR)						
	April 3	April 21	May 5	May 19	June 3	June 16[1]	Mean	April 3	April 21	May 5	May 19	June 3	June 16	Mean
CL111	173	152	171	143	104	--	149	62-69	65-71	65-71	65-70	67-72	--	**65-70**
CL151	182	141	178	178	135	139	163	62-69	67-70	66-71	67-71	67-72	--	**66-71**
CL153	179	157	170	174	121	133	160	63-68	66-69	66-70	66-70	66-71	--	**65-70**
CL163	170	141	172	177	137	--	159	57-65	63-69	63-69	64-69	65-69	--	**62-68**
CL172	163	139	167	162	140	136	154	64-69	66-70	65-70	66-70	66-71	--	**65-70**
CL271	176	126	174	174	140	136	158	63-68	63-69	64-70	63-71	69-71	--	**64-70**
CL272	178	146	183	175	130	--	162	62-68	63-70	59-70	60-70	67-70	--	**62-69**
Jupiter	183	157	165	161	161	151	165	63-66	66-68	65-69	66-69	66-68	--	**65-68**
LaKast	197	174	183	192	150	--	179	53-67	54-68	58-69	65-71	65-72	--	**59-70**
Mermentau	178	131	170	183	156	144	163	62-68	66-69	66-70	65-69	67-71	--	**65-69**
Roy J	193	142	165	180	169	160	170	56-68	63-70	65-71	65-71	67-72	--	**63-70**
RT CL XL729	226	212	227	229	181	169	215	56-66	56-68	61-69	65-71	66-71	--	**61-69**
RT CL XL745	180	198	201	194	157	--	186	57-68	55-69	60-71	63-71	65-72	--	**60-70**
RT XL753	225	227	232	225	191	202	220	55-68	51-70	56-70	61-71	65-72	--	**58-70**
RT XL760	233	212	224	235	204	191	221	56-67	62-70	62-70	65-71	66-71	--	**62-70**
Wells	159	139	170	179	146	--	159	53-68	60-70	56-70	60-70	66-72	--	**59-70**
MSX4077	189	141	171	167	140	--	162	58-67	63-69	60-69	64-69	65-69	--	**62-69**
ARX1021	222	178	178	149	148	--	175	63-67	63-70	58-69	53-68	67-69	--	**61-69**
ARX1084	211	164	192	209	185	181	192	55-67	60-69	61-70	66-71	65-70	--	**61-70**
Mean	**190**	**162**	**184**	**184**	**152**	**158**	**174**	**59-68**	**62-69**	**62-70**	**64-70**	**66-71**	--	**63-70**

[1] June 16 planting date not included in average due to bird damage at trial emergence. Values reported from plots with no bird damage only.

Table 7. Influence of seeding date on days from emergence to ½" internode elongation and 50% heading for selected rice cultivars in studies conducted at the RREC during 2015.

Cultivar	Days to ½" Internode Elongation				Days to 50% Heading						
	April 3	May 5	June 3	Mean	April 3	April 21	May 5	May 19	June 3	June 16[1]	Mean
	days after emergence				days after emergence						
CL111	--	--	--	--	86	76	72	72	67	--	**75**
CL151	--	--	--	--	87	77	72	73	67	--	**75**
CL153	62	46	37	**48**	89	79	75	74	68	--	**77**
CL163	67	52	45	**55**	88	82	77	76	77	--	**80**
CL172	68	51	43	**54**	92	82	75	74	69	--	**78**
CL271	68	54	46	**56**	92	81	79	77	77	--	**81**
CL272	67	53	43	**54**	92	80	76	76	73	--	**79**
Jupiter	71	54	47	**57**	95	82	78	77	74	--	**81**
LaKast	65	49	40	**51**	88	76	72	73	68	--	**75**
Mermentau	--	--	--	--	88	79	74	73	68	--	**76**
Roy J	--	--	--	--	92	84	79	81	77	--	**83**
RT CL XL729	--	--	--	--	86	76	74	72	66	--	**75**
RT CL XL745	--	--	--	--	84	74	72	70	66	--	**73**
RT XL753	--	--	--	--	85	75	72	69	67	--	**73**
RT XL760	63	47	39	**50**	89	81	78	77	71	--	**79**
Wells	67	50	43	**53**	91	80	75	75	72	--	**78**
MSX4077	68	54	46	**56**	91	84	78	79	77	--	**82**
ARX1021	66	51	44	**53**	86	75	72	74	68	--	**75**
ARX1084	67	50	42	**53**	89	79	75	75	73	--	**78**
Mean	**67**	**51**	**43**	**53**	**89**	**79**	**75**	**74**	**71**	--	**78**

[1] June 16 planting date not included in average due to bird damage at trial emergence.

Table 8. General characteristics of cultivars tested in the Arkansas Rice Performance Trials and Producer Rice Evaluation Program.

Cultivar	Year Released & Source	Pedigree	Highlights
Antonio	2012 – Texas	Cypress/Cocodrie	A short season, semi-dwarf long-grain variety with very good yield potential and milling quality. Similar to Cocodrie for agronomic characteristics.
Bengal	1992 – Louisiana	Mars/M-201//Mars	A short season, semi-dwarf medium-grain variety with good yield potential and milling quality. It has a preferred large grain size.
Bowman	2007 – Mississippi	RU8603006/3/Mars/Newrex//Tebonnet	A short season, high-amylose long-grain variety designed for canning rice market. Has good grain and milling yield potential and is susceptible to blast and moderately susceptible to sheath blight and straighthead.
Caffey	2011 – Louisiana	Bengal//Mercury/Rico/3/Mercury/Rico//Bengal	A short season, semi-dwarf medium-grain variety with excellent yield potential and milling quality. Susceptible to blast, sheath blight, and panicle blight.
Cheniere	2003 – Louisiana	Newbonnet/Katy/3/82CAY21/Lemont//L-202	A short season, semi-dwarf long-grain variety with good yield potential and milling quality comparable to Cypress. Susceptible to sheath blight and blast.
CL111	2008 – BASF, Horizon Ag	Proprietary variety: 9502008-A/Drew/3/CFX-29//AR 1142/LA 2031	An early season, semi-dwarf long-grain Clearfield variety similar to CL 131. Susceptible to blast, straighthead, and bacterial panicle blight.
CL151	2007 – BASF, Horizon Ag	Proprietary variety: CFX-26/4/Lemont/2001-5/3/Lemont//L-202/Taducan	A mid-season, semi-dwarf long-grain Clearfield variety similar to Cocodrie with good yield potential and high tolerance to Newpath herbicide. It is very susceptible to blast and straighthead, and susceptible to lodging and sheath blight.
CL152	2011 – BASF, Horizon Ag	Proprietary variety: Tacauri/3/Cypress//L-202/Tebonnet/4/CL161	A mid-season, semi-dwarf long-grain Clearfield variety similar to CL151 with good yield potential and high tolerance to Newpath herbicide. Improved lodging and chalk compared to CL151.
CL153	2016 – BASF, Horizon Ag	Proprietary variety: 950208-A//AR 1188/Cocodrie/3/CFX-26/9702128/4/Cheniere	A mid-season, semi-dwarf long-grain Clearfield variety similar to CL151 with good yield potential and high tolerance to Newpath herbicide. Susceptible to sheath blight, kernel smut, and false smut. Moderately susceptible to blast.
CL163	2015 – BASF, Horizon Ag	Proprietary variety: 248CO13E-1	A mid-season, semi-dwarf long-grain Clearfield variety with good yield potential and milling quality and high tolerance to Newpath herbicide. Susceptible to sheath blight and blast. Moderately susceptible to bacterial panicle blight. High amylose content.
CL172	2016 – BASF, Horizon Ag	Proprietary variety: 248Drew16C-1-3/6/LaGrue//Katy/Starbonnet/5/Newbonnet/Katy//RA73/Lemont/4/LeBonnet/9902/3/Dawn/9695//Starbonnet	A mid-season, semi-dwarf long-grain Clearfield variety with good yield potential and milling quality. High tolerance to Newpath herbicide. Moderately susceptible to sheath blight, blast, bacterial panicle blight, and kernel smut. Susceptible to false smut.
CL271	2014 – BASF, Horizon Ag	Proprietary variety: Neptune//Bengal/CL161	A mid-season, medium-grain Clearfield variety. High tolerance to Newpath herbicide. Moderately resistant to blast and narrow brown leaf spot. Moderately susceptible to bacterial panicle blight and kernel smut. Susceptible to sheath blight and black sheath rot.
CL272	2016 – BASF, Horizon Ag	Proprietary variety: Neptune//Bengal/CL161	A mid-season, medium-grain Clearfield variety. High tolerance to Newpath herbicide. Very susceptible to bacterial panicle blight. Susceptible to sheath blight and blast.

Table 8 (cont.). General characteristics of cultivars tested in the Arkansas Rice Performance Trials and Producer Rice Evaluation Program.

Cultivar	Year Released & Source	Pedigree	Highlights
CL XL729	2007 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain Clearfield hybrid with excellent yield potential and moderately susceptible to sheath blight, and moderately resistant to blast.
CL XL745	2008 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain Clearfield hybrid with excellent yield potential, moderately susceptible to sheath blight, and moderately resistant to blast, and susceptible to lodging. Reported to have improved tolerance to shattering.
CL XP756	2011 – RiceTec, Inc.	Proprietary hybrid	A mid-season, long-grain Clearfield hybrid with good yield potential and average milling quality. Similar to CL XL729.
CL XL4534	2013 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain Clearfield hybrid with good yield potential.
Colorado	2012 – Texas	Cocodrie/L-202	A short season, semi-dwarf long-grain variety with good yield potential and milling quality.
Della-2	2012 – Louisiana	Cypress//L-205/Della	A short season, semi-dwarf long-grain aromatic variety with good yield and very good grain quality. Improved lodging compared to Della.
Francis	2002 – Arkansas	Lebonnet/9902/3/Dawn/9695/Starbonnet/4/ LaGrue	A short season, long-grain variety with excellent yield potential, susceptible to rice blast and very susceptible to kernel smut. It is the best long grain for high pH and salt soils of NE Arkansas west of Crowley's ridge but should not be stressed for water due to blast concerns.
Jazzman	2009 – Louisiana	Chinese aromatic/Ahrent	A mid-season, Jasmine-type aromatic variety with good yield potential and milling quality.
Jazzman-2	2011 – Louisiana	RU0302195/RU0302125	A mid-season, Jasmine-type aromatic variety with fair yield and good milling compared to Jazzman. Susceptible to sheath blight, bacterial panicle blight, and straighthead.
Jupiter	2006 – Louisiana	Mercury//Mercury/Koshihikari/3/Bengal// Mercury/Rico	A mid-season, semi-dwarf, medium-grain variety with excellent yield potential and milling quality. It has a small grain size but has moderate resistance to bacterial panicle blight.
LaKast	2014 – Arkansas	LaGrue//Katy/Starbonnet/3/LaGrue	A mid-season, long-grain variety with excellent yield potential and good milling quality. Susceptible to blast and sheath blight.
Mermentau	2012 – Louisiana	AR1188/Cocodrie//9502088/LaGrue	A mid-season, semi-dwarf, long-grain variety with good yield potential and physical characteristics similar to Cocodrie, Cheniere, and Catahoula.
MM14	2014 – Missouri	Baldo/RU9201093	A mid-season, medium-grain variety with good yield potential. Susceptible to bacterial panicle blight.
Rex	2010 – Mississippi	Rosemont//Rexmont/IR36	A short season, semi-dwarf long-grain variety with excellent yield potential and good milling quality. Very good straw strength, but is susceptible to most diseases.
Roy J	2010 – Arkansas	LaGrue//Katy/Starbonnet/5/Newbonnet/Katy//RA73/Lemont/4/Lebonnet/9902/3/Dawn/9695//Starbonnet	A mid-season, long-grain variety with excellent yield potential and good milling quality. Excellent straw strength. Susceptible to blast and moderately susceptible to sheath blight.
Taggart	2009 – Arkansas	LaGrue//Katy/Starbonnet/5/LaGrue//Lemont/RA73/3/LaGrue/4/LaGrue	A mid-season, long-grain variety with very good yield potential and average milling quality. Resistant to straighthead. Moderately susceptible to sheath blight and rice blast.

Table 8 (cont.). General characteristics of cultivars tested in the Arkansas Rice Performance Trials and Producer Rice Evaluation Program.

Cultivar	Year Released & Source	Pedigree	Highlights
Wells	1999 – Arkansas	Newbonnet/3/Lebonnet/CI9902//La belle	A short season, long-grain variety with excellent yield potential, average to good milling quality, large kernel size similar to Lemont, but is susceptible to rice blast. Only moderately susceptible to kernel smut and most other diseases.
XL723	2005 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain hybrid with excellent yield potential, average milling quality; resistant to blast and moderately susceptible to sheath blight.
XL753	2011 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain hybrid with excellent yield potential. Resistant to blast, moderately susceptible to sheath blight and straighthead.
XL760	2014 – RiceTec, Inc.	Proprietary hybrid	A short season, long-grain hybrid with good yield potential.