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RICE INFORMATION

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Arkansas Rice Performance Trials, 2003-2005[1]

Variety selection is one of the most important management decisions made each year by rice producers. This choice is generally based upon past experience, seed availability, agronomic traits and variety yield potential. When choosing a rice variety, grain and milling yields, lodging, maturity, disease susceptibility, seeding date, field characteristics, the potential for quality reductions due to pecky rice, and market strategy should all be considered. Variety performance data included in this publication are from the Arkansas Rice Performance Trials (ARPT), disease observation plots in grower fields, and from seeding date studies conducted during 2003-2005. Additional information can be found on the Arkansas Cooperative Extension website (www.uaex.edu) and the annual B.R. Wells Rice Research Series publication (http://www.uark.edu/depts/agripub/Publications/researchseries/).

Varieties grown in the Arkansas Rice Performance Trials (ARPT) in 2005 averaged **198** bu/A of rough rice compared to the state average yield of **148.9** bu/A as reported by the USDA Crop Reporting Service (http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb/2005/). This is consistent with the differences usually observed between small plot research and commercial field yields. 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 and milling yields, kernel size, maturity, lodging resistance, plant height and disease susceptibility.

The ARPT, seeding date studies, disease observation tests, and evaluations for pecky rice 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

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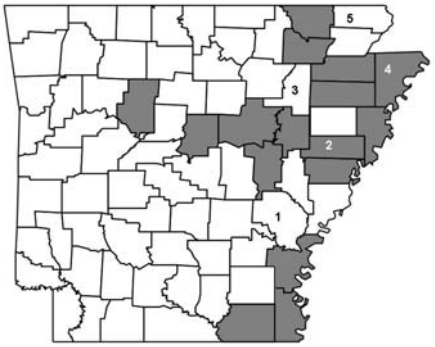
experimental lines and newly-released varieties from the breeding programs in Arkansas, Louisiana, Texas, Mississippi and California with established varieties currently grown in Arkansas. Descriptions of varieties included in the ARPT and disease observation tests are provided in Table 8 at the end of this report. The 2005 ARPT were conducted at six locations in Arkansas (Figure 1). Multiple locations each year allow for continued reassessment of the performance and adaptability of advanced breeding lines and commercial varieties to environmental conditions, soil properties, and management factors. Four maturity groups, early-season, very-short-season, short-season, and mid-season, were grown at each ARPT location. Twenty-six entries, which were either promising breeding lines or established varieties, were grown in each of the four maturity groups.



1. Stuttgart, Arkansas (Dewitt silt loam)
2. Pine Tree, Arkansas (Calloway silt loam)
3. Rutledge Farm, Jackson County (Amagon silt loam)
4. Keiser, Arkansas (Sharkey clay)
5. Ahrent Farm, Clay County (Beulah fine sandy loam)

Figure 1. Locations (1 - 5) of the Arkansas Rice Performance Trials and Rice Disease Monitoring Sites (shaded) conducted in 2005.

The 2005 ARPT tests were located at Stuttgart (RREC), Rohwer (SEREC), Pine Tree (PTBS), Keiser (NEREC), on the Rutledge farm in Jackson County, and on the Ahrent farm in Clay County (CC) and seeded on April 29, April 20, April 19, May 25, April 2, and April 15, respectively. Cultural practices varied somewhat among the ARPT locations, but overall the trials were grown under conditions of high productivity. Nitrogen was generally applied in a two-way split application with 100 lb N/A applied preflood and a single mid-season application of 30 to 60 lb N/A to ARPT tests located on Agricultural Experiment Stations. Phosphorus and potassium fertilizers were applied before seeding at the Stuttgart, Pine Tree, and Clay County locations.

The average yields for the 2003, 2004, and 2005 ARPT are listed in Table 1. Agronomic traits measured in 2004 are presented in Table 2 and the yield results from the 2005 ARPT are shown in Table 3. Averaged across all locations, Wells, Francis, and Jupiter were the top yielding conventional varieties in the 2005 ARPT (Table 3). The hybrids Rice Tec XP 710, XP 723, and CL XL8 were the highest yielding cultivars in the three year study (Table 1) but other hybrids were also promising (Table 3). ARPT yield data from 2003, 2004, and 2005 show that these same varieties tend to be the top yielding rice varieties in Arkansas each year. Francis, Wells, and Banks were the top three yielding conventional varieties from 2003 to 2005 (Table 1).

The most recent disease ratings for each variety are listed in Table 4. Ratings for disease susceptibility should be evaluated critically to optimize variety selection. Varieties should be selected for specific fields, relative to the potential yield limitations observed in historical yields.

For example, Francis and Wells are both susceptible to rice blast disease and should be planted in fields with low risk of this disease. Other varieties should be considered for fields that have limited water availability, poor water-holding ability, historical blast infestations, high risk of straighthead, and tree lines or other natural barriers that encourage long dew periods. 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 in different fields. Do not expect these ratings to be an absolute predictor of variety performance with respect to a particular disease in all situations.

Descriptions of the varieties tested in the 2005 ARPT are provided in Table 8. The only publicly-released varieties reported in the 2005 ARPT data not previously grown for commercial production are Spring, Trenasse, Jupiter, and Presidio. Spring is a very-short season, long grain variety with good yield potential. The maturity is approximately 5 days earlier than Jefferson and 10 days earlier than Wells. Trenasse is a very-short season, long grain variety released by Louisiana State University with good yield potential. The maturity is approximately the same as Jefferson. Jupiter is a new medium-grain variety released by LSU that has higher yield potential than Bengal and also provides resistance to bacterial panicle blight disease. Presidio is a long-grain variety similar to Saber released by USDA-ARS at Beaumont, TX. CL 131, a new Clearfield variety released by Horizon AG, BASF, and LSU, was also evaluated in 2005. CL 131 is a long-grain rice with shorter plant height, earlier maturity, and slightly higher yield potential than CL 161. New hybrids evaluated include Rice Tec XP XP 721, and Rice Tec CL XP730.

Each year replicated variety trials are established in numerous grower fields to monitor rice variety reaction to rice diseases (Tables 4 and 5). The counties where the 2005 Rice Disease Monitoring Plots (ARDMP) were located are shaded in Fig. 1. Yield information from these trials provides additional valuable information on how varieties and advanced experimental lines perform across the state when subjected to different environments and management practices. Variety disease reaction data from these trials are used to help establish disease susceptibility ratings presented in Table 4. In general, information from these trials on variety yield potential supports data from the ARPT. Similar to the ARPT, the top yielding conventional varieties in the ARDMP were Jupiter, Wells, Francis, Cheniere, and Bengal. Several new hybrids were evaluated and show outstanding yield potential.

Planting date studies are conducted annually to establish rice DD50 thresholds and to evaluate performance of new varieties over a range of seeding dates at the RREC (Tables 6 and 7). Results from 2002, 2003, and 2004 planting date studies can be found in Rice Information Sheet No. 151, 154, and 156, respectively. These publications are available either on the Cooperative Extension Service website (http://www.aragriculture.org) or at your local county Extension office.

Seeding date studies were drill seeded and then fertilized and flooded at the 5-leaf stage. Urea was applied as a single preflood application of 120 lb N/A to all varieties. Most varieties produced their highest yield when seeded on either March 21 or April 15 (Table 6). Later planted rice is more likely to head during the high temperatures commonly encountered during August and September. Temperatures above 95°F are detrimental to pollination and may result

in excessive blanking. Also, shorter vegetative growth with later planting and cool weather during grain fill results in less stored carbohydrates needed for grain filling (Table 6). Subsequently, late-planted rice tends to result in 17 - 68% reduction in yield potential. Banks, Cybonnet, Francis, Jupiter, Medark, Rice Tec XP729, Rice Tec XP716, Rice Tec XP 732, Rice Tec XP723 and Wells were among the most consistent varieties across all planting dates.

Growers are encouraged to seed newly released varieties 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 varieties to reduce the risk of disease epidemics and environmental effects. Varieties that have been tested under Arkansas growing conditions will reduce potential risks associated with crop failure. Additional information on specific varieties not listed in this publication is available upon request. Contact your local county Extension agent for more information.

ADDITIONAL INFORMATION SOURCES

Univ. of Arkansas Cooperative Extension Service Web www.uaex.edu

- Rice Information Sheet No. 148
- Rice Information Sheet No. 149
- Rice Information Sheet No. 151
- Rice Information Sheet No. 153
- Rice Information Sheet No. 154
- Rice Information Sheet No. 156

University of Arkansas Agricultural Publications
http://www.uark.edu/depts/agripub/Publications/

- B.R. Wells Rice Research Studies 2001 - 2004

Louisiana State University http://www.agctr.lsu.edu/Subjects/rice/RiceHome.htm

Table 1. Results of the Arkansas Rice Performance Trials averaged across the three-year period of 2003-2005.

Maturity Group and Variety	Grain Length[1]	Straw Strength[2]	50% Heading[3]	Plant Height	Milled Grain Weight	Pecky Rice[4]	Milling Yield				Grain Yield by Year			
							2003	2004	2005	Mean	2003	2004	2005	Mean
		Rating	Days	in.	mg	%	% Head Rice - % Total Rice				Bushels / Acre			
Very Short Season														
Jefferson	L	2.7	86	44	20.0	1.22	65 - 72	59-71	51-70	58-71	146	149	165	154
Rice Tec XP 723	L	3.0	85	44	19.8	0.82	-	66-73	60-71	63-72	-	200	219	210
Spring	L	4.0	80	42	16.5	0.54	65 - 71	62-72	51-69	60-71	153	145	157	152
Trenasse	L	3.0	84	44	19.3	0.88	64 - 70	64-72	57-70	62-71	179	172	177	176
Short Season														
Ahrent	L	3.3	88	46	16.4	1.27	65 - 69	64-71	57-68	62-70	165	159	159	161
Bengal	M	3.0	91	47	20.5	2.17	69 - 73	65-73	67-73	67-73	174	157	204	178
Cheniere	L	2.0	91	46	16.6	0.80	68 - 73	68-73	60-71	65-72	186	159	197	181
CL 161	L	2.0	91	47	16.4	1.33	69 - 72	-	62-70	65-71	178	178	187	181
Cocodrie	L	2.0	90	46	18.0	1.50	67 - 72	67-73	61-71	65-72	164	168	195	176
Cybonnet	L	2.0	91	46	17.6	0.87	69 - 72	69-74	61-71	66-72	180	163	202	182
Francis	L	3.0	89	46	17.0	0.73	66 - 72	65-72	62-71	64-72	198	177	210	195
Medark	M	2.0	89	46	20.5	0.81	67 - 71	68-73	66-72	67-72	174	171	195	180
Presidio	L	3.3	87	45	17.4	2.72	68 - 72	64-72	58-70	64-71	159	156	161	159
Rice Tec CLXL8	L	3.7	88	46	18.2	1.07	62 - 72	63-72	55-70	60-72	191	218	208	206
Rice Tec XP 710	L	3.7	91	47	21.0	1.16	65 - 72	63-72	58-71	62-72	235	200	255	230
Rice Tec XP 716	M	4.0	89	47	18.0	0.86	-	67-72	63-71	65-71	-	178	217	197
STG03IMI-261-177[5]	L	3.0	92	38	17.4	-	-	65-74	60-72	63-73	-	155	194	174
Wells	L	3.0	91	47	19.2	0.89	66 - 73	67-74	55-72	63-73	197	174	211	194
Mid-Season														
Banks	L	4	92	44	17.4	0.62	64 - 71	68-75	56-70	63-72	197	173	193	188
Drew	L	4	92	43	16.4	0.58	68 - 72	68-73	59-72	65-72	182	167	193	181
LaGrue	L	3	91	40	18.2	0.64	65 - 71	64-72	57-70	62-71	195	159	205	186

1 Grain Length: L=long grain; M=medium grain

2 Relative straw strength based on field tests using the scale: 0=very strong straw, 9=very weak straw.

3 Number of days from emergence until 50% of the panicles are visibly emerging from the boot

4 Average percent, by weight, in brown rice for stink bug damage.

5 STG03IMI-261-177 has been submitted to Horizon Ag as new proprietary Clearfield variety.

Table 2. Agronomic traits of selected varieties in the 2005 Arkansas Rice Performance Trials.

Maturity Group and Variety	Grain Type[1]	Straw Strength[2]	50% Heading[3]	Plant Height[4]	Milled Grain Weight	Pecky Rice[5]
		Rating	Days	in.	mg	%
Very Short Season						
Jefferson	L	3	85	40	19.8	1.42
Rice Tec XP721	L	3	81	42	19.7	1.20
Rice Tec XP723	L	3	85	44	19.8	0.97
Spring	L	4	79	42	16.6	0.43
Trenasse	L	3	84	40	19.1	0.88
Short Season						
Ahrent	L	4	87	42	16.0	1.06
Bengal	M	3	89	38	20.4	1.84
Cheniere	L	2	89	36	16.6	0.97
CL 131	L	2	88	33	16.8	1.14
CL 161	L	3	89	39	16.6	0.93
Cocodrie	L	2	89	38	17.7	1.68
Cybonnet	L	2	90	38	17.5	0.93
Francis	L	3	89	41	16.7	0.58
Jupiter	M	3	89	37	19.0	1.66
Medark	M	2	87	36	19.8	3.72
Presidio	L	3	87	37	17.2	0.59
Rice Tec CL XL8	L	3	87	44	17.9	0.87
Rice Tec CL XP730	L	4	87	46	18.9	1.19
Rice Tec XP710	L	4	90	45	21.0	1.14
Rice Tec XP716	M	4	89	47	18.0	1.5
STG03IMI-261-177[6]		3	91	39	17.4	-
Wells	L	3	90	41	19.2	0.94
Mid-Season						
4484	L	4	97	40	18.5	-
Banks	L	4	94	44	17.5	0.89
Drew	L	5	93	45	16.3	0.55
LaGrue	L	4	92	44	18.4	0.60

[1] Grain type: L=long grain; M=medium grain; S=Short grain

[2] Numerical rating for straw strength, lodging susceptibility increases as rating number increases.

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

[4] Plant height is the average distance from soil surface to the tip of erect panicle.

[5] Average percent, by weight, in brown rice for stink bug damage.

[6] STG03IMI-261-177 has been submitted to Horizon Ag as new proprietary Clearfield variety

Table 3. Results of the 2005 Arkansas Rice Performance Trials.

Maturity Group and Variety	Milling Yield					Grain Yield					
	Clay Co.	Jackson Co.	NEREC	RREC	Mean	Clay Co.	Jackson Co.	NEREC	PTBS	RREC	Mean
	% Head Rice - % Total Rice					Bushels / Acre					
Very Short Season											
Jefferson	53 - 69	45 - 70	53 - 71	53 - 71	51 -70	143	169	184	169	162	165
Rice Tec XP721	59 - 70	58 - 70	58 - 71	61 - 71	59 - 70	250	230	276	224	189	234
Rice Tec XP723	62 - 71	59 - 71	59 - 71	58 - 71	60 - 71	243	227	258	183	184	219
Spring	54 - 67	42 - 71	57 - 70	52 - 70	51 - 69	110	179	183	169	145	157
Trenasse	56 - 68	54 - 70	58 - 70	61 - 71	57 - 70	172	204	204	145	161	177
Short Season											
Ahrent	59 - 68	53 - 68	58 - 69	59 - 68	57 - 68	143	134	148	185	184	159
Bengal	69 - 72	68 - 73	68 - 73	62 - 72	67 - 73	218	184	212	217	190	204
Cheniere	56 - 69	61 - 71	61 - 72	63 - 72	60 - 71	204	190	213	195	181	197
CL 131	64 - 71	57 - 71	64 - 72	53 - 72	59 - 72	213	194	214	182	164	193
CL 161	63 - 69	58 - 71	65 - 71	62 - 71	62 - 70	213	183	205	163	168	187
Cocodrie	60 - 70	55 - 71	64 - 71	66 - 72	61 - 71	187	195	218	206	172	195
Cybonnet	62 - 70	56 - 71	66 - 72	60 - 72	61 - 71	229	196	214	189	183	202
Francis	61 - 70	60 - 71	65 - 72	64 - 72	62 - 71	204	193	241	222	192	210
Jupiter	68 - 71	68 - 71	68 - 72	63 - 72	67 - 72	213	198	225	219	191	209
Medark	64 - 72	69 - 72	68 - 71	63 - 72	66 - 72	209	175	203	201	189	195
Presidio	55 - 68	57 - 71	61 - 71	60 - 71	58 - 70	178	161	181	143	144	161
Rice Tec CL XL8	56 - 69	57 - 70	53 - 71	55 - 71	55 - 70	239	214	234	172	179	208
Rice Tec CL XP730	62 - 71	54 - 70	57 - 71	53 - 71	57 - 71	271	259	203	238	151	225
Rice Tec XP710	62 - 70	54 - 70	61 - 71	54 - 71	58 - 71	298	264	260	218	236	255
Rice Tec XP716	65 - 71	63 - 70	63 - 71	61 - 70	63 - 71	240	210	236	217	182	217
STG03IMI-261-177[2]	63 - 71	54 - 72	66 - 73	57 - 72	60 - 72	219	186	211	173	181	194
Wells	61 - 72	51 - 71	64 - 72	46 - 73	55 - 72	229	191	246	197	194	211
Mid-Season											
4484	63 - 68	60 - 70	58 - 68	44 - 65	56 - 68	222	210	203	176	171	196
Banks	62 - 69	50 - 70	65 - 71	50 - 69	56 - 70	215	199	152	208	190	193
Drew	65 - 71	52 - 71	66 - 73	55 - 72	59 - 72	195	188	214	186	183	193
LaGrue	61 - 70	50 - 69	64 - 70	52 - 70	57 - 70	225	200	221	198	182	205
Average	61 - 70	56 - 71	62 - 71	57 - 72	59 - 71	210	198	213	193	178	198

[1] HR-TR = %Head Rice - %White Rice; Milling data is the average of head rice and total rice yields from Clay Co., Jackson Co., and RREC.
[2]STG03IMI-261-177 has been submitted to Horizon Ag as new proprietary Clearfield variety

Table 4. Rice variety reactions[1] to diseases (2005).

Variety/Hybrid	Sheath Blight	Blast 2005	Stem Rot	Kernel Smut	False Smut	Brown Spot	Straight head	Lodging	Black Sheath Rot	Bacterial Panicle Blight
Banks	MS	MS	S	VS	S	R	MS	MS	MS	S
Bengal	MS	S	VS	MS	MS	VS	VS	MR	MR	VS
Cheniere	MS	MS	S	VS	S	R	MS	MR	MS	S
Clearfield 131	VS	S	S	S	MS	R	VS	MR	S	S
Clearfield 161	VS	S	S	S	S	R	S	S	S	S
Cocodrie	S	MS	S	VS	S	R	VS	MR	MS	S
Cybonnet	VS	MR	S	S	S	R	MS	MR	S	S
Francis	MS	S	S	VS	S	R	MS	MS	MS	VS
Jupiter	MS	MS	S	MS	MS	R	MS	MR	MR	R
MedArk	MS	S	S	MS	MS	R	MS	MR	MR	VS
Spring	S	S	VS	MS	MS	R	MS	S	MS	S
STG03IMI261-177	MS	S	S	MS	S	R	MS	MS	MS	S
Trenasse	VS	S	S	S	MS	R	VS	MS	MS	S
Wells	MS	S	S	MS	S	R	MS	MS	MS	S
RiceTec XL8	MS	MR	S	MS	MS	R	MS	MS	MS	MR
RiceTec CL XL8	MS	MR	S	MS	MS	R	S	S	MS	MR
RiceTec XP710	MR	MR	MS	MS	MS	R	VS	MS	MS	MR
RiceTec XP716	MR	R	S	MS	MS	R	MS	MS	MR	MR
RiceTec XP721	MS	S	S	MS	MS	R	S	MS	MS	MR
RiceTec XP723	MS	MR	S	MS	MS	R	MS	MS	MS	MR
RiceTec XP730	MS	MR	S	MS	MS	R	MR	S	MS	MR

[1] Reaction: R = Resistant; MR = Moderately Resistant; MS = Moderately Susceptible; S = Susceptible; VS = Very Susceptible. Reactions were established from both historical and recent observations from test plots and in grower fields across Arkansas. In general, these reactions would be expected under conditions that favor severe disease development including excessive nitrogen rates (most diseases) or low flood depth (blast).

[2] Based on reaction to common races of the rice blast fungus in Arkansas for the most part; however, Banks and other Pi-ta resistant gene based varieties are susceptible to Race IE-1k, a previously rare race that has increased in importance in the state since 2004. All rice varieties should be monitored periodically for blast since the blast fungus is capable of developing new races that can overcome known resistance genes.

Table prepared by R.D. Cartwright, Professor/Extension Plant Pathologist and F.N. Lee, Professor of Plant Pathology.

Table 5a. Performance of selected varieties in replicated rice disease monitoring tests located in grower fields in Arkansas during 2005.

Cultivar	Ashley	Chicot	Craighead	Crittenden	Desha	Faulkner	Lawrence	Mississippi	Mean[1]	C.V.
	----------Bushels/acre----------									%
AMS114-109	146	111	77	161	154	179	180	181	154	22
AMS114-33	153	144	84	158	179	177	167	185	156	17
Banks	178	140	137	174	188	193	180	180	174	11
Bengal	182	138	141	185	196	182	169	138	175	13
Cheniere	178	145	162	193	170	147	188	192	177	12
CL131	166	110	160	168	174	89	187	184	158	19
CL161	141	124	150	157	124	158	178	155	154	12
Cocodrie	166	98	166	170	161	166	189	176	168	14
Cybonnet	176	147	129	171	158	149	181	175	165	11
Cypress	159	120	147	158	142	152	174	158	155	10
Francis	168	137	152	171	167	191	183	195	176	10
Jupiter	185	151	177	192	181	162	197	143	187	14
Medark	156	121	179	178	197	152	187	159	173	13
Pace	170	131	132	157	139	181	183	196	167	14
Rice Tec XP710	205	155	206	216	170	226	219	65	198	22
Rice Tec XP716	181	127	158	195	204	192	214	71	183	21
Rice Tec XP721	171	151	171	206	132	156	226	171	192	18
Rice Tec XP723	191	168	181	205	218	194	228	187	202	10
Rice TecCLXL8	187	136	187	176	211	159	201	176	184	11
Rice TecCLXP730	196	119	184	199	172	220	227	114	187	18
Spring	184	121	149	130	157	167	176	169	152	24
STG03IMI261-177	155	130	143	179		160	172	155	155	10
Trenasse	147	112	134	163	121	172	208	189	162	16
Wells	172	127	139	191	185	200	190	204	179	12
Mean	171	132	152	177	170	172	192	163	**173**	**10**
LSD	**34.5**	**36.6**	**33.6**	**32.6**	**43.1**	**29.7**	**20.3**	**34.7**		
C.V. (%)	**12.4**	**17.2**	**13.6**	**10.4**	**14.2**	**10.2**	**6.5**	**13.1**		

[1]Mean = average across 15 locations

[2]C.V.= coefficient of variation, provides an indication of yield variability across environments. Lower numbers are better.

Table 5a. Performance of selected varieties in replicated rice disease monitoring tests located in grower fields in Arkansas during 2005 (con.).

Cultivar	Poinsett	Pope	Prairie	Randolph	St. Francis	White	Woodruff	Mean[1]	C.V.
	----------Bushels/acre----------								%
AMS114-109	144	189	159	184	164	179	103	154	22
AMS114-33	150	159	139	172	188	159	118	156	17
Banks	157	175	163	180	214	186	163	174	11
Bengal	179	180	162	198	211	189	167	175	13
Cheniere	200	193	137	196	193	196	172	177	12
CL131	125	166	151	177	199	173	149	158	19
CL161	158	146	143	166	192	173	138	154	12
Cocodrie	191	165	159	179	194	189	153	168	14
Cybonnet	184	160	167	191	176	169	140	165	11
Cypress		160	144		177	180	146	155	10
Francis	177	157	175	189	200	202	179	176	10
Jupiter	193	188	177	204	251	209	192	187	14
Medark	179	177	143	191	209	184	183	173	13
Pace	195	166	144	191	189	184	153	167	14
Rice Tec XP710	239	207	184	226	202	239	211	198	22
Rice Tec XP716	203	195	181	215	224	187	197	183	21
Rice Tec XP721	234	205	178	236	238	223	188	192	18
Rice Tec XP723	204	175	207	230	230	211	199	202	10
Rice TecCLXL8	191	178	183	217	199	188	175	184	11
Rice TecCLXP730	216	163	190	219	212	198	184	187	18
Spring	43	166	142	198	171	163	141	152	24
STG03IMI261-177		164	144		168		141	155	10
Trenasse	164	166	152	186	182	176	157	162	16
Wells	168	192	169	195	195	181	169	179	12
Mean	**177**	**175**	**162**	**197**	**199**	**189**	**163**	**172**	**10**
LSD	**34.7**	**27.2**	**14.0**	**22.9**	**35.3**	**18.0**	**25.5**		
C.V. (%)	**11.7**	**9.6**	**5.4**	**7.0**	**10.5**	**5.6**	**9.5**		

[1]Mean = average across 15 locations

[2]C.V.= coefficient of variation, provides an indication of yield variability across environments. Lower numbers are better.

Table 6. Influence of seeding date on grain yield of selected rice varieties studies conducted at the RREC during 2005.

Variety	Grain Yield[1]					Milling Yield				
	March 21	April 15	May 10	June 6	Mean	March 21	April 15	May 10	June 6	Mean
	Bushels/acre					%HR-%TR				
4484	200	151[18]	106	87[60]	136	57 - 69	65 - 71	53 - 64	65 - 70	60 - 69
Banks	188	159[30]	158	93[50]	149	60 - 69	63 - 69	57 - 68	62 - 70	60 - 69
Cheniere	175	184	136	103	150	61 - 70	65 - 71	60 - 69	67 - 73	63 - 71
CL 131	160	161	134	121[7]	144	58 - 68	68 - 72	61 - 69	69 - 73	64 - 71
CL 161	166[2]	148[22]	133	86[80]	133	62 - 68	68 - 71	62 - 68	69 - 73	65 - 70
Cybonnet	171	171[2]	146	115[17]	151	63 - 70	67 - 71	61 - 68	68 - 72	65 - 71
Francis	195	205[2]	150	83[50]	158	57 - 69	65 - 71	59 - 69	66 - 72	62 - 70
Jupiter	215	205[3]	161	95[23]	169	65 - 70	69 - 73	62 - 69	67 - 72	66 - 71
Medark	174	174	149	76[27]	143	67 - 71	68 - 72	63 - 70	63 - 71	65 - 71
Rice Tec CLXP730	199[17]	155[57]	198	130[63]	171	58 - 70	63 - 71	56 - 69	65 - 74	61 - 71
Rice Tec XP 716	213	187	202	159[23]	190	67 - 71	69 - 73	63 - 70	69 - 72	67 - 72
Rice Tec XP 721	195	204[8]	147	131[30]	169	58 - 70	59 - 71	54 - 70	62 - 71	58 - 71
Rice Tec XP 723	206[2]	235[13]	214	129[20]	196	58 - 69	64 - 72	57 - 70	65 - 73	61 - 71
Rice Tec XP 728	206[15]	177[38]	211	141[90]	184	51 - 69	61 - 71	51 - 69	62 - 72	56 - 70
Rice Tec XP 729	226[3]	206[23]	210	172[77]	203	57 - 69	63 - 71	57 - 69	66 - 72	60 - 71
Rice Tec XP 731	195[13]	194[68]	200	118[90]	177	57 - 69	61 - 71	54 - 69	66 - 73	60 - 71
Rice Tec XP 732	210[25]	194[5]	204	157[77]	191	58 - 69	66 - 73	58 - 69	66 - 72	62 - 71
Spring	155	107[100]	89	76[100]	107	53 - 69	52 - 71	51 - 70	59 - 69	54 -69
Trenasse	145[27]	110[83]	141	64[93]	115	55 - 67	61 - 69	57 - 68	64 - 71	59 - 69
Wells	195	192	158	113	164	61 - 72	64 - 73	57 - 71	66 - 74	62 - 72
Mean	189	176	162	112	160	59 - 69	64 - 71	58 - 69	65 - 72	62 - 70
$LSD_{(0.05)}$	25.9	44.6	31.1	32.0		3.5 - 1.3	2.3 - 1.1	3.0 - 1.3	2.7 - 1.4	
C.V., %	8.3	15.0	11.5	17.2		3.6 - 1.1	1.9 - 0.9	3.1 - 1.2	2.4 - 1.1	

[1]Superscripted number next to yield indicates percent lodging

Table 7. Influence of seeding date on days from emergence to ½" Internode elongation and 50% heading for selected rice varieties in seeding date studies conducted at the RREC during 2005.

Variety	Days to ½" Internode Elongation					Days to 50% Heading				
	March 21	April 15	May 10	June 6	Mean	March 21	April 15	May 10	June 6	Mean
	days after emergence					days after emergence				
4484	74	55	48	45	56	106	90	86	84	91
Banks	69	60	51	46	56	99	95	84	85	91
Cheniere	70	60	50	43	56	98	91	81	80	88
CL 131	67	58	49	45	55	98	91	81	79	87
CL 161	67	56	47	41	53	100	92	81	82	89
Cybonnet	69	58	49	40	54	98	90	81	80	87
Francis	--	--	--	--	--	96	89	81	78	86
Jupiter	74	63	54	52	61	99	91	79	78	87
Medark	--	--	--	--	--	96	89	78	74	84
Rice Tec CLXP730	64	56	44	41	51	99	89	79	81	87
Rice Tec XP 716	72	61	50	47	57	99	92	82	81	89
Rice Tec XP 721	65	52	44	40	50	87	79	73	64	76
Rice Tec XP 723	65	55	45	41	51	97	89	77	78	85
Rice Tec XP 728	67	57	46	41	53	94	89	77	69	82
Rice Tec XP 729	66	56	46	43	53	97	90	78	75	85
Rice Tec XP 731	65	56	45	40	52	95	89	77	74	84
Rice Tec XP 732	66	55	45	41	52	97	88	74	76	84
Spring	65	53	44	37	50	87	79	72	64	76
Trenasse	65	56	46	40	52	91	85	75	70	80
Wells	70	60	51	47	57	100	91	80	84	89
Mean	68	57	47	43	54	97	89	79	77	85

Table 8. General characteristics of varieties tested in the Arkansas Rice Performance Trials and Arkansas Rice Disease Monitoring Program.

Variety/Hybrid	Year Released & State	Pedigree	Highlights
Ahrent	2001 – Arkansas	Line from recurrent selection – many crosses and parents	A short season, long-grain with good grain and milling yield potential, and blast resistance from the recurrent selection program
Banks	2004 – Arkansas	LaGrue//Lemont/RA73/3/LaGrue/4/LaGrue	A short-season, long-grain LaGrue type rice with blast resistance.
Bengal	1992 – Louisiana	Mars/M-201//Mars	A short season, semi dwarf, medium-grain with good yield potential and milling quality. It has a preferred large grain size. Represented about 4.9% of 2005 rice acreage in Arkansas.
Cheniere	2003 – Louisiana	Newbonnet/Katy/3/82CAY21/Lemont//L-202	A very short season, semi-dwarf long-grain with good yield potential, less oil in bran than Cocodrie, and improved straighthead tolerance. It has L202 and Jodon cooking type.
CL 131	2005– BASF, Horizon Ag	Proprietary variety; Developed from Cocodrie	A midseason, semi-dwarf long-grain similar to CL 161 with shorter plant height, similar sheath blight susceptibility, ery susceptible to straighthead, and improved grain yield potential.
CL 161	2002 – BASF, Horizon Ag	Proprietary variety; Developed from Cypress	A midseason, semi-dwarf, long-grain similar to Cypress with high tolerance to Newpath herbicide. It is susceptible to sheath blight, susceptible to blast and straighthead. Represented about 19.1% of the 2005 rice acreage in Arkansas.
CL XL8	2003 – Rice Tec, Inc.	Proprietary Hybrid	A short-season, long grain with excellent yield potential and high tolerance to Newpath herbicide, moderate resistance to sheath blight, and resistance to blast. Represented about 2.4% of the 2005 rice acreage in Arkansas.
CL XP 730	2005– Rice Tec, Inc.	Proprietary Hybrid	A short-season, long grain with excellent yield potential and high tolerance to Newpath herbicide, moderate resistance to sheath blight, and resistance to blast.
Cocodrie	1997 – Louisiana	Cypress//82CAY21/Tebonnet	A short season semi-dwarf long-grain with good yield potential and milling quality. Represented about 9.4% of the 2005 rice acreage in Arkansas.
Cybonnet	2004 – Arkansas	Cypress//Newbonnet/Katy	A short season, semidwarf long grain with good yield potential and excellent milling quality similar to Cypress. It has blast resistance similar to Katy.
Drew	1996 – Arkansas	Newbonnet/Katy	A mid-season, long-grain with average yield potential and milling quality. It is blast resistant, straighthead tolerant, and has a larger kernel size than Kaybonnet.
Francis	2002 – Arkansas	Lebonnet/9902/3/Dawn/9695/Starbonnet/4/LaGrue	A very sort season, long-grain with excellent yield potential, susceptible to rice blast. Represented about 10.1% of the 2005 rice acreage in Arkansas.
Jefferson	1999 – Texas	Vista/Lebonnet//Rosemont	A very short season, semidwarf, long-grain rvariety with good yield potential. It is moderately susceptible to sheath blight and susceptible to blast.
Kaybonnet	1994 – Arkansas	Katy/Newbonnet	A short season, long-grain with good yield potential and good milling quality. It is resistant to rice blast and has a small grain size.
Koshihikari	Japanese variety	Norin 22/Norin 1	A premium quality short-grain with low yield potential and good milling quality. It is the standard for Japanese quality.

Table 8 (con.). General characteristics of varieties tested in the Arkansas Rice Performance Trials and Arkansas Rice Disease Monitoring Program.

Variety/Hybrid	Year Released & State	Pedigree	Highlights
LaGrue	1993 – Arkansas	Bonnet73/Nova76/Bonnet73/3/Newrex	A short season, long-grain with excellent yield potential and variable milling quality. It is susceptible to rice blast and kernel smut.
Maybelle	1990 – Texas	Skybonnet/L-201	Very short season long grain with good yield potential and poor milling quality.
Medark	2004 – Arkansas	Bengal/Short Rico	A short season, semidwarf, medium-grain with good yield potential and milling quality. It has a preferred large grain size.
Pirogue	2002 – Louisiana	PY 678	A short-season, short grain with good yield potential and good milling quality.
Saber	2001 – Texas	Gulfmont/RU8703169/Teqing	A mid-season, semidwarf long grain with resistance to some rice blast races. It has yield and quality characteristics similar to Cypress.
Spring	Experimental – Arkansas	RU9101001//Tebonnet/Katy/3/LaGrue	A very short season, long grain with good yield potential and rice blast resistance. It is one of the earliest maturing long-grain rice lines.
STG03IMI261-177	2006 - BASF, Horizon Ag	Proprietary variety; Developed from Wells	A midseason, semi-dwarf, long-grain similar to Wells with high tolerance to Newpath herbicide. It is moderately susceptible to sheath blight, susceptible to blast and moderately susceptible to straighthead.
Wells	1999 Arkansas	Newbonnet/3/Lebonnet/CI9902//Labelle	A short season, long grain with excellent yield potential, average milling quality, kernel size similar to Lemont, and susceptible to rice blast. Represented about 37.3% of the 2005 rice acreage in Arkansas.
XL 8	2002 – Rice Tec, Inc.	Proprietary Hybrid	A short-season long-grain hybrid with excellent yield potential, average milling quality, and moderate resistance to sheath blight and blast.
XP 710	Experimental – Rice Tec	Proprietary Hybrid	A short-season long-grain hybrid with good yield potential, average milling quality, and resistance to blast and moderately resistant to sheath blight.
XP 712	Experimental – Rice Tec	Proprietary Hybrid	A short-season medium-grain hybrid with good yield potential, average milling quality, and resistance to blast and moderately resistant to sheath blight.
XP 716	Experimental – Rice Tec	Proprietary Hybrid	A short-season medium-grain hybrid with good yield potential, average milling quality, and resistance to blast and moderately resistant to sheath blight.
XP 723	Experimental – Rice Tec	Proprietary Hybrid	A short-season long-grain hybrid with good yield potential, average milling quality, and resistance to blast and moderately resistant to sheath blight.