110th Annual Research Report

H. Rouse Caffey Rice Research Station

Crowley, Louisiana

2018

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Cover Photos

Production of F_1 seeds in greenhouse surrounded by paper bags to block pollen from other rice plants.

Applying foliar insecticides for evaluation of rice water weevil control.

Small plot combines harvesting research plots.

Production of F_1 seeds in small plots surrounded by plastic barriers to block pollen from other rice plants.

Packaging 50-lb bags of foundation seed rice.

Dermacor X-100-treated (left), CruiserMaxx-treated (center), and nontreated (right) rice seed.

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H. ROUSE CAFFEY
RICE RESEARCH STATION

Crowley, Louisiana

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Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service
Louisiana College of Agriculture

William B. Richardson, LSU Vice President for Agriculture

H. Rouse Caffey Rice Research Station

Donald E. Groth, Resident Coordinator

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INTRODUCTION

Research at the H. Rouse Caffey Rice Research Station (HRCRRS), Crowley, LA, is conducted by scientists with the LSU AgCenter's Louisiana Agricultural Experiment Station. The 2018 rice research program included breeding/variety development, biotechnology, variety testing, fertilization, soil and water management, cultural practices, weed control, insect control, disease investigations, rice economics, and agronomy extension programs. Crops grown in rotation with rice were evaluated relative to increasing the efficiency of land use. The aquaculture research program places emphasis upon production practices, forages, and multi-cropping of crawfish with agronomic crops. Another important area of work is the production and distribution of foundation seed. The HRCRRS also conducts research studies in improving species for coastal restoration. In addition, the state wide rice extension agronomist conducts numerous educational programs from the HRCRRS. Although most research work was performed by members of the Rice Station faculty, several faculty members from the Baton Rouge campus conducted research at this station as well.

The research activities of this station include both fundamental and applied research; although, the latter predominates because of the mission of the HRCRRS. Research accomplishments and general progress of the HRCRRS during 2018 are presented in this report representing the 110th Annual Research Report of the H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, and LSU Agricultural Center. It is significant that this research facility has been providing new technology to the Louisiana rice industry for more than 100 years.

In addition to research responsibilities of the HRCRRS faculty and cooperators, a large number of farmers, extension personnel, and others were trained and otherwise contacted during 2018. Approximately 500 people attended the annual HRCRRS field day to view plots and participate in discussions of research findings. Field days were also conducted in Acadia, Calcasieu, Evangeline, Jefferson Davis, Morehouse, St. Landry, and Vermilion parishes. In addition, the faculty participated in industry meetings, both on and off of the station, and worked individually with farmers and others in solving immediate problems. Several thousand people received services from the HRCRRS during 2018.

Projects at this station are conducted under the supervision of research scientists from the HRCRRS and also by cooperating personnel from certain departments of the Louisiana Agricultural Experiment Station. Following the reports, station personnel and cooperators in 2018 are listed.

MONTHLY RAINFALL DATA
H. ROUSE CAFFEY RICE RESEARCH STATION - CROWLEY, LA
2018

DATE	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YEAR TOTAL
1										.26	1.50	.11	
2		.12							2.18	.05			
3							.41		1.36				
4		.10		.27			1.07	.65	.56		.20		
5						.10					1.05		
6			1.13	.11		.53	1.01	.50					
7		.63		1.37			.09	.16	.87	1.16	.15		
8	1.03	.40		.02			.02	.19	.86	.13	1.03	1.45	
9	.05			.03			.45	.65		.05		.53	
10							.63	.31	.16	.02	.26		
11	.03	1.15	.26					.84	.60				
12	.60		.12				1.05	.74	.32		.46		
13									.11		.57	.11	
14		.28		1.09		.15						.56	
15				.18								.02	
16						.09				1.51			
17	.21					.50				.19			
18			.24			.22		.82		.60			
19						.12				1.13			
20		.12				.02		.21	.32		.55	.59	
21		.12						.62	.05	.12		.30	
22	.95	.03		1.08		.26		.21	.41	.02	.02		
23	.02				.05				.44	.02			
24							.26		.40	.20	.07		
25		.23								.64	.10		
26		1.38		.02					.21		.02	.05	
27					.18			1.38	.60			.13	
28	2.25					.07		.23	.05			4.21	
29			.43				.89	.98	.02				
30			.38				.51	.02	.12		.87	.07	
31							.13					.52	
MONTH TOTAL													
2018	**5.14**	**4.56**	**2.56**	**4.17**	**.23**	**2.06**	**6.52**	**8.51**	**9.64**	**6.10**	**6.85**	**8.65**	**64.49**
2017	10.16	2.01	3.54	5.70	9.88	9.30	5.45	11.67	.75	4.01	4.81	7.10	74.38

RICE BREEDING

GENETIC IMPROVEMENT OF RICE FOR LOUISIANA PRODUCTION[1]

A.N. Famoso, K.F. Bearb, C.A. Conner, G.J. Guidry, and B.L. Williams

INTRODUCTION

The primary objective of the Rice Breeding Project is the development of superior varieties for the Louisiana rice industry. The Breeding Project is developing improved genotypes of both long- and medium-grain types, which are both important in the state and region. A major area of emphasis is the development of Clearfield and Provisia herbicide-resistant varieties. The project is also placing emphasis on the development of special purpose types.

In addition to the primary objective of varietal development, the Breeding Project also conducts other research that may have direct and/or indirect contributions for varietal development. Included here are studies on milling quality, mutation breeding, date of planting, and herbicide tolerance of new varieties and experimental lines.

The 2018 rice breeding nursery included more than 40,000 breeding rows. Over 350 new breeding crosses were made, and 50 populations were screened in the greenhouse through Marker-Assisted Selection (MAS) focusing primarily on key traits, such as amylose, gel temp, grain shape, aroma, plant height, and blast resistance. On- and off-station testing included more than 8,000 yield plots. Preliminary Yield testing included over 2,100 new lines evaluated in 4,200 plots. The Regional Yield Test (RYT) was a new stage of testing that was added in 2018. This test consisted of 150 entries in their second year of yield testing. The RYT was conducted over four locations and 1,500 plots. Advanced stages of testing included the Cooperative Uniform Regional Rice Nursery (URN), which contained 240 experimental lines and checks (51 Louisiana entries). The Commercial Advanced (CA) trial consisted of 60 entries and was tested across seven locations. The Variety Yield trials consisted of 35 existing varieties tested across six locations.

[1] This research is supported in part by funding provided by rice producers through the Louisiana Rice Research Board.

COMMERCIAL ADVANCED TRIAL

The Commercial Advanced (CA) trial is a multi-location test conducted by the Rice Breeding Project in the major rice growing regions in Louisiana. The objective of this trial is to evaluate the adaptation and stability of commercial rice varieties and advanced experimental lines for a number of important agronomic and yield characteristics.

Trial locations in 2018 included the H. Rouse Caffey Rice Research Station (HRCRRS) at Crowley and seven on-farm test sites in Jefferson Davis, Evangeline, Vermilion, Acadia, Calcasieu, St. Landry, and Tensas parishes.

Sixty entries were tested in a randomized complete block design with two replications. Varieties and hybrids were seeded at 90 lb/A and 38 lb/A, respectively. Planting dates were: HRCRRS, March 14; Acadia, March 23; Evangeline, March 23; Jefferson Davis, March 20; St. Landry, March 27; Vermilion, March 13; and Tensas, May 10. Harvest dates were: HRCRRS, July 27; Acadia, Aug. 23; Evangeline, Aug. 9; Jefferson Davis, July 30; St. Landry, Aug. 21; Vermilion, Aug. 1; and Tensas, Sept. 17. Results from these trials are shown in Tables 1-8.

Table 1. Entry number, pedigree, grain type, and source information for entries in the Commercial Advanced trial, 2018.

ENTRY	PEDIGREE	GRAIN TYPE[†]	SOURCE[‡]
201	CPRS//CATAHOULA/CL111	L	LAES
202	CHENIERE/CL111	L	LAES
203	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	L	LAES
204	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	L	LAES
205	KBNT/CL111	L	LAES
206	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	L	LAES
207	CCDR/CL131	L	LAES
208	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	L	LAES
209	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/…	L	LAES
210	CCDR/JEFF//CFX-26/9702128/3/CL151	L	LAES
211	CCDR/JEFF//CFX-26/9702128/3/CL151	L	LAES
212	CCDR/JEFF//CFX-26/9702128/3/CL151	L	LAES
213	CCDR/JEFF//CFX-26/9702128/3/CL151	L	LAES
214	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/…	L	LAES
215	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	L	LAES
216	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//…	L	LAES
217	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	L	LAES
218	CL131/TRNS	L	LAES
219	CL131/3/CPRS/KBNT//9502008-A	L	LAES
220	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	L	LAES
221	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	L	LAES
222	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	L	LAES
223	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	L	LAES
224	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/…	L	LAES
225	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	L	LAES
226	CHNR/MRMT	L	LAES
227	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	L	LAES
228	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	L	LAES
229	CHNR/RU0901121	L	LAES

Continued.

Table 1. Continued.

ENTRY	PEDIGREE	GRAIN TYPE†	SOURCE‡
230	CHNR/11AY026	L	LAES
231	NEPTUNE//BNGL/CL161/3/BNGL/CL161	M	LAES
232	BNGL/CL161/3/NEPTUNE//BNGL/CL161	M	LAES
233	NEPTUNE//BNGL/CL161/3/JPTR	M	LAES
234	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//…	M	LAES
235	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	M	LAES
236	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	M	LAES
237	CAFFEY/CL261	M	LAES
238	CAFFEY/3/BNGL/9502065//EARL	M	LAES
239	MERMENTAU/JPTR	M	LAES
240	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	M	LAES
241	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	M	LAES
242	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//…	M	LAES
243	LFTE/BNGL//MARS	M	LAES
244	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	M	LAES
245	TRNS/BASF 1-10	L	LAES
246	CHENIERE/BASF 1-2	L	LAES
247	CHENIERE/BASF 1-6	L	LAES
248	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	L	LAES
249	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	L	LAES
250	CHENIERE//CCDR/JEFF/3/BASF 2-26	L	LAES
251	CPRS/BASF 1-14	L	LAES
252	PVL01	L	LAES
253	CL111	L	LAES
254	CL153	L	LAES
255	CL172	L	LAES
256	CL272	M	LAES
257	CLXL745	L	RICETEC
258	CHENIERE	L	LAES
259	JUPITER	M	LAES
260	TITAN	M	AAES

† L = Long grain and M = Medium grain

‡ AAES – Arkansas Agricultural Experiment Station, Stuttgart, Arkansas; LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU Agricultural Center, Crowley, Louisiana.

Table 2. Grain and agronomic performance of entries in the 2018 Commercial Advanced trial, Acadia Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
257	RICETEC	CLXL745	3	81	48	11786
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	4	87	44	9518
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//…	5	89	43	9508
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	87	45	8912
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	85	46	8373
256	CL272	CL272	4	87	41	8120
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	4	85	43	7662
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	5	88	43	7513
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	4	88	42	7458
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	4	89	41	7431
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	88	42	7259
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	86	43	7233
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	91	44	7188
207	172L1101	CCDR/CL131	4	88	43	7141
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	87	43	6796
247	PVL108	CHENIERE/BASF 1-6	6	87	43	6783
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	85	46	6730
205	172L2058	KBNT/CL111	4	91	44	6695
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/…	4	85	40	6646
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	4	90	41	6585
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	4	85	32	6442
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	83	42	6344
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	5	87	40	6216
218	1602097	CL131/TRNS	4	89	42	6189
251	173L2047	CPRS/BASF 1-14	5	89	40	6146
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/…	5	85	40	6128

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	5	86	41	6005
259	JPTR	JUPITER	6	88	38	5912
255	CL172	CL172	4	86	39	5770
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	79	45	5675
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	5	80	40	5605
201	172L3018	CPRS//CATAHOULA/CL111	4	88	42	5591
219	1402091	CL131/3/CPRS/KBNT//9502008-A	5	82	40	5582
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	4	81	44	5278
254	CL153	CL153	3	85	40	5276
258	CHNR	CHENIERE	5	86	37	5179
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	4	87	41	5136
253	CL111	CL111	4	81	40	5065
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/…	4	83	42	4816
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	4	44	21	4662
239	171M1628	MERMENTAU/JPTR	5	44	21	4609
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	86	35	4564
226	1702140	CHNR/MRMT	6	85	39	4510
202	172L3074	CHENIERE/CL111	4	89	42	4439
243	171M1836	LFTE/BNGL//MARS	5	42	19	4046
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	3	44	21	3597
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/…	4	85	38	3466
229	171L1773	CHNR/RU0901121	5	44	21	3335
252	PVL01	PVL01	5	45	20	3307
246	PVL080	CHENIERE/BASF 1-2	5	83	38	3235
237	1702165	CAFFEY/CL261	4	42	20	3095
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/…	6	45	19	2709

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	4	43	22	2613
238	1702143	CAFFEY/3/BNGL/9502065//EARL	3	43	21	2103
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	42	18	1924
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	5	43	16	1055
230	171L1781	CHNR/11AY026				
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028				
245	PVL038	TRNS/BASF 1-10				
260	TITAN	TITAN				

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 3. Grain and milling yields and agronomic performance of entries in the 2018 Commercial Advanced trial, Evangeline Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
260	TITAN	TITAN	3	84	36	11096
259	JPTR	JUPITER	5	88	38	10889
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	5	85	40	10275
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	4	86	38	10208
230	171L1781	CHNR/11AY026	4	87	41	10170
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	85	41	10124
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	84	36	10070
226	1702140	CHNR/MRMT	4	84	37	9908
243	171M1836	LFTE/BNGL//MARS	4	85	36	9890
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	81	37	9798
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	4	85	36	9795
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	4	83	38	9781
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	88	39	9745
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	90	38	9737
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	4	87	38	9622
254	CL153	CL153	4	86	39	9620
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	82	38	9615
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	4	86	37	9600
257	RICETEC	CLXL745	3	82	40	9554
219	1402091	CL131/3/CPRS/KBNT//9502008-A	5	83	35	9454
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	88	38	9442
238	1702143	CAFFEY/3/BNGL/9502065//EARL	4	83	37	9381
239	171M1628	MERMENTAU/JPTR	5	88	40	9373
255	CL272	CL172	4	86	36	9367
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	5	83	37	9288
252	PVL01	PVL01	4	90	40	9227

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/…	5	82	35	9137
229	171L1773	CHNR/RU0901121	4	86	40	9099
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	5	88	36	9077
218	1602097	CL131/TRNS	5	86	36	9028
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	4	81	37	8878
258	CHNR	CHENIERE	5	84	36	8878
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	79	37	8856
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	3	89	37	8827
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	5	81	35	8754
207	172L1101	CCDR/CL131	4	87	41	8672
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	4	87	38	8671
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//…	4	90	38	8659
251	173L2047	CPRS/BASF 1-14	5	81	38	8606
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	91	39	8531
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	86	38	8505
256	CL272	CL272	4	88	37	8467
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	3	88	38	8434
253	CL111	CL111	3	83	35	8413
237	1702165	CAFFEY/CL261	4	86	39	8396
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	90	40	8362
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	85	36	8360
247	PVL108	CHENIERE/BASF 1-6	5	82	41	8337
201	172L3018	CPRS//CATAHOULA/CL111	4	85	36	8328
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	4	89	37	8276
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	80	36	8264
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/…	5	83	36	8226

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	88	39	8125
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	5	88	37	8084
245	PVL038	TRNS/BASF 1-10	4	80	36	8076
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	90	41	8073
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//…	5	88	40	7987
205	172L2058	KBNT/CL111	3	89	40	7321
202	172L3074	CHENIERE/CL111	3	84	36	7299
246	PVL080	CHENIERE/BASF 1-2	3	81	38	7283

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 4. Grain and agronomic performance of entries in the 2018 Commercial Advanced trial, Jefferson Davis Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
257	RICETEC	CLXL745	4	86	44	10172
260	TITAN	TITAN	4	85	38	8749
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	5	87	40	8674
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	88	38	8347
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	5	86	35	8328
256	CL272	CL272	3	88	42	8274
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/…	5	85	35	8176
207	172L1101	CCDR/CL131	4	88	39	8167
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	6	84	37	7987
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	4	88	36	7985
239	171M1628	MERMENTAU/JPTR	4	87	41	7942
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//…	5	87	40	7919
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//…	5	87	36	7905
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	40	7896
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	88	39	7857
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	5	87	35	7835
218	1602097	CL131/TRNS	4	86	38	7773
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	4	85	38	7734
202	172L3074	CHENIERE/CL111	5	86	36	7729
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	89	41	7672
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//…	5	84	40	7666
255	CL172	CL172	4	86	38	7651
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	88	41	7635
230	171L1781	CHNR/11AY026	5	88	39	7618
254	CL153	CL153	4	84	39	7579
253	CL111	CL111	4	84	38	7577
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	85	38	7561
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	5	85	37	7547
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	4	88	39	7527
219	1402091	CL131/3/CPRS/KBNT//9502008-A	6	86	36	7522

Continued.

Table 4. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	4	88	39	7510
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	85	36	7482
201	172L3018	CPRS//CATAHOULA/CL111	4	87	36	7453
205	172L2058	KBNT/CL111	3	92	39	7422
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	5	88	40	7410
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	89	38	7361
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	4	85	37	7348
237	1702165	CAFFEY/CL261	4	88	39	7340
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/…	5	84	36	7321
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	4	85	37	7290
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/…	4	91	38	7284
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	89	36	7226
252	PVL01	PVL01	4	89	39	7226
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	89	37	7225
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	4	86	37	7212
229	171L1773	CHNR/RU0901121	6	84	38	7184
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	92	38	7180
259	JPTR	JUPITER	5	88	37	7161
226	1702140	CHNR/MRMT	5	87	37	7116
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	3	89	40	7067
238	1702143	CAFFEY/3/BNGL/9502065//EARL	4	88	36	7055
243	171M1836	LFTE/BNGL//MARS	4	87	35	7044
245	PVL038	TRNS/BASF 1-10	4	85	36	6986
247	PVL108	CHENIERE/BASF 1-6	4	84	40	6806
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	82	37	6414
258	CHNR	CHENIERE	5	86	36	6088
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	82	36	6076
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	6	84	37	5934
251	173L2047	CPRS/BASF 1-14	6	85	37	5839
246	PVL080	CHENIERE/BASF 1-2	4	82	39	5693

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 5. Grain and milling yields and agronomic performance of entries in the 2018 Commercial Advanced trial, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
257	RICETEC	CLXL745	3	85	44	10266	57.3	70.3
260	TITAN	TITAN	4	86	38	10156	26.7	67.1
237	1702165	CAFFEY/CL261	3	90	35	10102	57.9	70.3
218	1602097	CL131/TRNS	3	91	34	10050	58.9	67.2
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	4	91	35	9894	62.3	70.6
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	3	90	34	9824	43.5	68.6
243	171M1836	LFTE/BNGL//MARS	3	88	34	9686	55.0	69.1
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	4	86	38	9686	56.3	68.8
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	83	35	9675	47.5	66.3
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/…	4	92	32	9659	58.2	69.1
239	171M1628	MERMENTAU/JPTR	6	90	40	9637	55.2	66.1
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	4	90	35	9631	61.3	69.1
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	4	91	37	9608	63.9	68.2
226	1702140	CHNR/MRMT	4	92	36	9596	59.5	69.3
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	91	36	9555	58.1	68.3
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	90	36	9538	64.3	69.1
238	1702143	CAFFEY/3/BNGL/9502065//EARL	4	88	35	9528	57.5	67.1
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	92	36	9418	64.0	67.7
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	5	94	36	9395	61.0	69.3
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	5	90	35	9317	60.3	68.2
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	4	91	35	9305	54.5	68.3
256	CL272	CL272	3	91	37	9299	40.1	70.1
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	90	34	9299	54.3	70.0
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	4	90	35	9244	62.9	70.5
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	83	36	9199	46.5	66.7
258	CHNR	CHENIERE	4	89	34	9174	59.6	70.0

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
253	CL111	CL111	4	86	37	9044	58.2	68.7
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//…	4	92	35	8971	63.4	67.3
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	5	91	33	8925	62.9	68.4
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	87	37	8918	57.0	65.7
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	89	34	8912	58.6	70.3
254	CL153	CL153	4	90	34	8899	59.2	67.0
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	4	91	34	8857	59.9	68.2
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/…	5	89	33	8855	58.6	67.2
205	172L2058	KBNT/CL111	4	93	36	8839	60.4	67.5
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	92	37	8820	61.8	68.7
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	92	34	8818	58.8	66.1
245	PVL038	TRNS/BASF 1-10	3	88	32	8818	59.7	67.8
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	92	35	8779	59.4	66.4
255	CL172	CL172	4	91	34	8770	57.6	66.6
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	91	33	8746	58.2	67.3
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	90	39	8713	60.3	67.8
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	91	34	8701	59.1	69.0
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/…	4	92	32	8588	59.2	67.4
207	172L1101	CCDR/CL131	4	92	36	8570	60.8	68.4
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	4	90	33	8566	59.4	68.0
259	JPTR	JUPITER	4	93	36	8469	61.8	64.7
251	173L2047	CPRS/BASF 1-14	5	92	35	8466	42.3	65.8
230	171L1781	CHNR/11AY026	5	91	35	8464	58.1	69.8
219	1402091	CL131/3/CPRS/KBNT//9502008-A	5	89	29	8359	55.4	64.7
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	93	34	8354	62.3	70.3
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	4	86	35	8220	54.0	67.9

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	93	32	8206	59.5	68.1
201	172L3018	CPRS//CATAHOULA/CL111	4	92	35	8140	60.8	66.9
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/…	4	90	36	8077	54.8	67.2
252	PVL01	PVL01	4	94	35	8036	49.7	68.1
247	PVL108	CHENIERE/BASF 1-6	5	90	38	7958	55.2	70.8
246	PVL080	CHENIERE/BASF 1-2	4	83	35	7830	58.2	69.9
202	172L3074	CHENIERE/CL111	4	93	35	7486	58.6	67.3
229	171L1773	CHNR/RU0901121	5	93	33	7017	55.7	71.3

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 6. Grain and milling yields and agronomic performance of entries in the 2018 Commercial Advanced trial, Vermilion Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
257	RICETEC	CLXL745	4	86	42	10236	54.5	68.5
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4./…	3	83	38	8851	56.9	67.6
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//…	4	87	37	8637	54.8	68.8
239	171M1628	MERMENTAU/JPTR	5	91	41	8562	61.5	66.7
218	1602097	CL131/TRNS	4	86	36	8371	59.3	68.5
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	4	85	35	8291	60.8	71.1
226	1702140	CHNR/MRMT	4	87	36	8234	56.6	67.4
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	84	34	8170	58.0	67.9
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	5	83	34	8024	51.1	66.5
253	CL111	CL111	4	83	36	7969	56.6	68.3
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	4	87	37	7962	58.0	69.0
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	88	38	7918	60.3	69.1
259	JPTR	JUPITER	5	91	38	7918	62.5	65.6
243	171M1836	LFTE/BNGL//MARS	4	86	34	7913	59.4	67.9
237	1702165	CAFFEY/CL261	4	89	39	7816	62.5	68.4
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/…	5	87	36	7806	59.8	68.5
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	83	36	7774	48.3	65.9
230	171L1781	CHNR/11AY026	5	84	38	7722	59.3	69.3
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	6	89	38	7719	62.5	67.3
238	1702143	CAFFEY/3/BNGL/9502065//EARL	5	86	37	7679	56.2	65.9
201	172L3018	CPRS//CATAHOULA/CL111	3	86	37	7671	60.3	68.6
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	4	92	38	7631	61.3	69.8
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	4	87	36	7574	61.8	69.7
207	172L1101	CCDR/CL131	3	86	37	7498	62.2	69.7
260	TITAN	TITAN	7	88	38	7472	60.9	65.8
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	85	34	7451	58.3	68.0

Continued.

Table 6. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/…	4	85	35	7422	57.3	68.2
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	88	37	7417	60.5	67.6
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	92	41	7403	57.0	67.2
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/…	5	85	34	7355	57.1	66.4
254	CL153	CL153	4	88	34	7329	59.5	68.0
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	88	35	7309	59.6	67.9
219	1402091	CL131/3/CPRS/KBNT//9502008-A	5	86	33	7306	56.4	67.6
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	94	35	7233	61.5	65.4
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/…	5	96	38	7200	60.8	65.0
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/…	4	85	34	7185	57.6	68.4
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/…	4	87	35	7171	60.8	68.4
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	5	91	33	7151	60.7	69.2
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	93	38	7144	59.6	66.7
205	172L2058	KBNT/CL111	3	92	36	7090	60.9	68.5
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	6	91	36	7071	60.7	65.4
258	CHNR	CHENIERE	5	85	37	7038	57.1	68.1
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/…	5	87	38	6979	56.4	67.6
202	172L3074	CHENIERE/CL111	4	89	36	6884	59.2	68.7
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	4	91	35	6876	57.8	67.9
229	171L1773	CHNR/RU0901121	5	84	37	6872	55.9	69.5
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/…	4	91	38	6778	59.1	68.1
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	86	35	6741	58.6	67.9
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/…	4	89	36	6641	58.9	68.1
245	PVL038	TRNS/BASF 1-10	6	87	36	6538	58.0	66.4
246	PVL080	CHENIERE/BASF 1-2	5	85	37	6517	57.8	69.0
251	173L2047	CPRS/BASF 1-14	5	87	36	6512	53.3	65.6

Continued.

Table 6. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	5	91	36	6359	55.1	66.8
255	CL172	CL172	5	89	34	6232	55.6	66.2
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/…	5	93	37	6232	30.8	65.7
247	PVL108	CHENIERE/BASF 1-6	6	86	39	6148	61.3	69.4
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	5	84	36	6017	50.6	65.0
256	CL272	CL272	6	90	38	6004	52.4	65.0
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/…	4	89	35	5953	58.0	67.0
252	PVL01	PVL01	5	96	37	5408	44.2	62.8

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 7. Grain performance of entries in the 2018 Commercial Advanced trial, St. Landry Parish, Louisiana.

ENT	SOURCE	PEDIGREE	HTE	YIELD
257	RICETEC	CLXL745	38	11925
239	171M1628	MERMENTAU/JPTR	40	10709
243	171M1836	LFTE/BNGL//MARS	37	10100
213	172L1205	CCDR/JEFF//CFX-26/9702128/3/CL151	40	9946
212	172L1203	CCDR/JEFF//CFX-26/9702128/3/CL151	41	9864
238	1702143	CAFFEY/3/BNGL/9502065//EARL	37	9839
234	172M1668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/…	38	9815
244	171M1853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	40	9807
211	172L1202	CCDR/JEFF//CFX-26/9702128/3/CL151	46	9750
208	172L1147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	40	9667
229	171L1773	CHNR/RU0901121	39	9665
231	172M1603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	39	9637
218	1602097	CL131/TRNS	41	9495
233	172M1628	NEPTUNE//BNGL/CL161/3/JPTR	40	9431
232	172M1616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	42	9372
260	TITAN	TITAN	38	9347
259	JUPITER	JUPITER	38	9258
237	1702165	CAFFEY/CL261	42	9185
210	172L1201	CCDR/JEFF//CFX-26/9702128/3/CL151	40	9167
256	CL272	CL272	41	9152
227	171L1629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	39	9028
228	171L1644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	42	8898
216	172L1355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/…	42	8811
255	CL172	CL172	36	8725
258	CHNR	CHENIERE	38	8691
235	172M1702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	39	8652
224	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	41	8578

Continued.

Table 7. Continued.

ENT	SOURCE	PEDIGREE	HTE	YIELD
221	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	40	8577
225	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	39	8546
222	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	40	8522
215	172L1320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	40	8506
204	172L2034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	38	8420
226	1702140	CHNR/MRMT	38	8417
241	171M1817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	38	8404
203	172L3107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	39	8310
230	171L1781	CHNR/11AY026	39	8270
240	171M1811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	36	8253
253	CL111	CL111	42	8231
207	172L1101	CCDR/CL131	40	8160
236	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	39	8156
217	172L1376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	38	8145
248	173L2007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	39	8102
251	173L2047	CPRS/BASF 1-14	40	8050
209	172L1173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	37	8041
254	CL153	CL153	39	7918
242	171M1826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	38	7864
249	173L2008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	37	7820
219	1402091	CL131/3/CPRS/KBNT//9502008-A	38	7780
206	172L2067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	39	7763
205	172L2058	KBNT/CL111	39	7710
214	172L1264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/…	40	7583
247	PVL108	CHENIERE/BASF 1-6	40	7570
201	172L3018	CPRS//CATAHOULA/CL111	41	7479
202	172L3074	CHENIERE/CL111	43	7464

Continued.

Table 7. Continued.

ENT	SOURCE	PEDIGREE	HTE	YIELD
220	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	39	7425
252	PVL01	PVL01	37	7333
223	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/AR 1142/..	37	7312
250	173L2036	CHENIERE//CCDR/JEFF/3/BASF 2-26	43	7195
245	PVL038	TRNS/BASF 1-10	38	7136
246	PVL080	CHENIERE/BASF 1-2	40	5850

Table 8. Grain agronomic performance of entries in the 2018 Commercial Advanced trial, Tensas Parish, Louisiana.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
257	RICETEC	CLXL745	84	45	11497
260	TITAN	TITAN	83	38	11306
230	PY 781	CHNR/11AY026	86	39	10450
218	URN 006	CL131/TRNS	85	39	10278
237	URN 022	CAFFEY/CL261	86	38	9982
231	CLPY 603	NEPTUNE//BNGL/CL161/3/BNGL/CL161	86	36	9779
224	URN 207	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	83	38	9648
253	CL111	CL111	84	38	9545
234	CLPY 668	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/…	88	34	9384
208	CLPY 147	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	86	37	9313
243	PY 836	LFTE/BNGL//MARS	85	34	9297
239	PY 628	MERMENTAU/JPTR	87	38	9280
255	CL172	CL172	88	37	9255
232	CLPY 616	BNGL/CL161/3/NEPTUNE//BNGL/CL161	87	35	9121
241	PY 817	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	88	33	9046
202	CLPR 074	CHENIERE/CL111	86	36	9018
233	CLPY 628	NEPTUNE//BNGL/CL161/3/JPTR	87	35	8967
259	JPTR	JUPITER	89	36	8901
254	CL153	CL153	87	37	8786
227	PY 629	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	86	33	8770
248	PVS 007	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	85	37	8631
247	PVL 108	CHENIERE/BASF 1-6	87	41	8598
244	PY 853	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	86	36	8547
256	CL272	CL272	86	37	8510
242	PY 826	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	89	35	8479
213	CLPY 205	CCDR/JEFF//CFX-26/9702128/3/CL151	87	38	8458
236	URN 014	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	86	35	8315

Continued.

Table 8. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
226	URN 140	CHNR/MRMT	86	38	8212
207	CLPY 101	CCDR/CL131	85	38	8114
228	PY 644	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	85	32	8110
205	CLPS 058	KBNT/CL111	89	39	8057
201	CLPR 018	CPRS//CATAHOULA/CL111	86	40	8009
249	PVS 008	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	86	38	7997
235	CLPY 702	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	87	37	7912
206	CLPS 067	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	87	36	7906
225	URN 010	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	87	34	7905
212	CLPY 203	CCDR/JEFF//CFX-26/9702128/3/CL151	86	35	7805
240	PY 811	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	86	31	7779
203	CLPR 107	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	85	35	7704
210	CLPY 201	CCDR/JEFF//CFX-26/9702128/3/CL151	85	34	7495
251	PVS 049	CPRS/BASF 1-14	86	36	7471
220	URN 217	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	87	35	7457
222	URN 002	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	83	36	7454
238	URN 154	CAFFEY/3/BNGL/9502065//EARL	84	33	7452
221	URN 030	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	87	37	7327
250	PVS 036	CHENIERE//CCDR/JEFF/3/BASF 2-26	86	34	7270
217	CLPY 376	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	86	33	7215
229	PY 773	CHNR/RU0901121	88	38	7149
245	PVL 038	TRNS/BASF 1-10	84	36	7048
223	URN 026	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/…	85	34	6986
252	PVL01	PVL01	88	34	6963
258	CHNR	CHENIERE	88	35	6952
204	CLPS 034	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	89	37	6883
216	CLPY 355	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/…	84	36	6745

Continued.

Table 8. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
209	CLPY 173	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/…	88	32	6640
211	CLPY 202	CCDR/JEFF//CFX-26/9702128/3/CL151	85	32	6629
219	URN 212	CL131/3/CPRS/KBNT//9502008-A	86	30	6594
246	PVL 080	CHENIERE/BASF 1-2	80	36	5895
215	CLPY 320	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	87	41	5235
214	CLPY 264	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/…	84	33	2946

VARIETY YIELD TRIAL

Trial locations in 2018 included the H. Rouse Caffey Rice Research Station (HRCRRS) at Crowley and five on-farm test sites in Calcasieu, Evangeline, Jefferson Davis, Vermilion, and St. Landry parishes.

Thirty-five entries were tested in a randomized complete block design with two replications. Varieties and hybrids were seeded at 90 lb/A and 38 lb/A, respectively. Planting dates were: HRCRRS, March 14; Calcasieu, March 20; Evangeline, March 23; Jefferson Davis, March 20; St. Landry, March 27; and Vermilion, March 13. Harvest dates were: HRCRRS, July 27; Calcasieu, Aug. 13; Evangeline, Aug. 9; Jefferson Davis, July 30; St. Landry, Aug. 15; and Vermilion, Aug. 1. Results from these trials are shown in Tables 1-6.

Table 1. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, Calcasieu Parish, Louisiana.

ENT	VARIETY	VIG[1]	HDT	HTE	YIELD
333	XL760	4	83	46	13032
332	XL753	4	84	42	12432
334	GEMINI 214 CL	4	84	44	12362
331	CLXL745	3	83	44	11091
327	AR 1701124	3	84	38	9329
317	DIAMOND	3	85	42	8599
315	LAKAST	4	83	42	7636
328	AR 1701184	3	87	40	7449
309	PVL108	4	84	38	7255
316	ROYJ	3	90	44	7217
305	CL172	4	84	38	7059
318	THAD	3	85	36	7024
321	TITAN	3	85	37	6479
304	CL163	2	85	38	6424
311	CHENIERE	5	84	36	6409
335	CL261	3	85	40	6288
329	CAFFEY	3	89	38	6169
330	CL152	6	87	37	5997
301	CL111	3	82	39	5859
314	MERMENTAU	3	84	38	5735
320	JUPITER	5	89	36	5662
310	CATAHOULA	3	83	40	5498
324	JAZZMAN	3	85	40	5497
319	PRESIDIO	4	83	38	5287
308	PVL01	4	88	36	5191
323	DELLA-2	3	88	41	8557
319	PRESIDIO	5	86	38	8528
324	JAZZMAN	3	89	40	8455
310	CATAHOULA	4	84	42	8309
302	CL151	3	85	38	8288
335	CL261	4	87	42	8049
313	CYPRESS	4	86	39	7962
325	JAZZMAN-2	5	85	35	7695
322	BASMATI	4	83	39	7024
304	CL163	3	87	40	6636

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 2. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, Evangeline Parish, Louisiana.

ENT	VARIETY	VIG[1]	HDT	HTE	LODGING	YIELD	WHOLE	TOTAL
332	XL753	4	84	39	20	11928	66.6	74.4
320	JUPITER	6	86	37		11651	70.3	71.8
327	AR 1701124	3	82	38		11350	70.5	73.5
328	AR 1701184	2	87	40		10729	64.5	71.9
314	MERMENTAU	3	83	38		10686	63.5	72.3
321	TITAN	3	83	39		10606	69.3	72.7
333	XL760	4	88	47	30	10548	63.4	72.8
329	CAFFEY	3	89	41		10519	71.9	74.4
309	PVL108	3	84	40		10298	63.2	73.1
317	DIAMOND	3	85	42		10144	60.6	71.6
326	AR 1601124	3	86	38		9983	65.7	73.5
312	COCODRIE	4	84	39		9909	63.3	73.8
306	CL272	3	89	40		9813	71.1	73.9
330	CL152	6	89	23		9766	64.2	72.3
315	LAKAST	4	83	45	20	9598	54.8	71.7
331	CLXL745	4	82	40	75	9567	65.9	74.0
334	GEMINI 214 CL	4	89	46	60	9421	63.7	72.8
316	ROYJ	2	90	43		9381	59.6	71.4
308	PVL01	4	88	42	15	9316	59.2	73.0
311	CHENIERE	6	84	37		9209	57.6	75.9
305	CL172	4	84	38		9039	65.1	73.1
318	THAD	4	85	37		8973	61.9	71.5
303	CL153	3	83	36	40	8953	64.8	73.7
301	CL111	3	81	38	10	8813	62.1	73.7
307	CLJ01	4	91	39		8695	67.9	73.2
323	DELLA-2	3	88	41		8557	64.4	71.1
319	PRESIDIO	5	86	38		8528	63.2	72.4
324	JAZZMAN	3	89	40	30	8455	65.1	72.5
310	CATAHOULA	4	84	42	25	8309	66.6	74.1
302	CL151	3	85	38	15	8288	66.0	73.2
335	CL261	4	87	42	20	8049	71.1	73.1
313	CYPRESS	4	86	39		7962	65.8	72.7
325	JAZZMAN-2	5	85	35	40	7695		
322	BASMATI	4	83	39		7024	59.9	73.3
304	CL163	3	87	40	75	6636	59.8	71.9

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 3. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, Jefferson Davis Parish, Louisiana.

ENT	VARIETY	VIG[1]	HDT	HTE	YIELD
334	GEMINI 214 CL	4	87	47	11942
332	XL753	5	84	42	11295
333	XL760	5	87	47	10958
331	CLXL745	4	81	43	10447
321	TITAN	3	84	36	8999
327	AR 1701124	3	84	38	8716
306	CL272	3	89	42	8658
329	CAFFEY	4	86	37	8620
315	LAKAST	5	85	39	8430
302	CL151	4	85	37	8425
320	JUPITER	5	87	36	8370
317	DIAMOND	4	87	39	8351
335	CL261	3	85	41	8295
318	THAD	4	89	37	8236
309	PVL108	4	85	38	8218
314	MERMENTAU	4	85	37	8212
316	ROYJ	4	89	43	8149
305	CL172	3	87	38	7955
312	COCODRIE	4	85	39	7931
303	CL153	3	85	38	7895
304	CL163	3	88	41	7859
328	AR 1701184	3	88	39	7810
308	PVL01	4	90	38	7706
326	AR 1601124	4	87	39	7400
313	CYPRESS	5	88	37	7259
324	JAZZMAN	4	87	38	7123
319	PRESIDIO	4	83	39	7113
311	CHENIERE	6	86	37	7099
310	CATAHOULA	3	83	38	7090
307	CLJ01	4	88	37	7018
330	CL152	8	87	39	6830
301	CL111	4	83	38	6788
325	JAZZMAN-2	5	86	31	5604
322	BASMATI	5	81	37	5596
323	DELLA-2	5	86	37	5415

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 4. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	VARIETY	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
332	XL753	4	83	44	12795	56.7	73.9
334	GEMINI 214 CL	4	89	46	12861	56.1	72.0
333	XL760	4	89	44	12678	57.1	71.5
331	CLXL745	3	82	41	11051	56.0	73.5
326	AR 1601124	3	87	37	9190	63.6	72.2
304	CL163	2	88	39	10648	63.1	71.2
314	MERMENTAU	3	87	37	9800	62.9	71.7
321	TITAN	3	84	36	10141	64.3	72.0
311	CHENIERE	4	87	36	9299	66.0	74.7
329	CAFFEY	3	88	35	9776	65.4	72.7
303	CL153	3	90	35	9525	62.2	72.7
327	AR 1701124	4	83	35	9719	67.1	71.5
306	CL272	3	90	36	9371	63.1	73.3
318	THAD	4	90	37	10215	61.3	71.6
317	DIAMOND	4	91	38	9480	58.5	71.1
302	CL151	3	89	36	10092	64.6	74.0
315	LAKAST	3	87	40	9490	54.2	71.2
309	PVL108	3	86	38	8801	67.4	73.8
328	AR 1701184	3	93	36	9354	61.8	71.2
316	ROYJ	3	95	41	8864	58.6	71.0
320	JUPITER	5	92	36	9577	69.0	71.7
305	CL172	3	90	36	8993	63.8	72.3
313	CYPRESS	3	89	35	8241	66.6	72.6
325	JAZZMAN-2	4	3	33	8077	65.4	72.5
308	PVL01	3	95	35	8676	59.0	72.2
301	CL111	3	85	38	8700	60.3	73.1
312	COCODRIE	3	88	34	8088	62.8	72.7
335	CL261	3	87	36	9006	69.5	73.9
323	DELLA-2	4	90	36	8482	62.6	70.6
310	CATAHOULA	4	87	36	8587	57.2	74.3
307	CLJ01	2	91	35	8508	67.3	72.8
319	PRESIDIO	3	84	36	8462	58.2	71.8
330	CL152	5	95	36	8021	66.7	72.4
324	JAZZMAN	4	92	38	8090	66.0	72.2
322	BASMATI	4	85	38	8220	44.0	72.7

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 5. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, Vermilion Parish, Louisiana.

ENT	VARIETY	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
334	GEMINI 214 CL	3	88	44	11206	58.1	70.6
332	XL753	4	88	40	10865	52.5	72.8
333	XL760	5	89	44	10415	56.7	69.8
331	CLXL745	3	86	43	10261	56.2	69.7
327	AR 1701124	4	85	37	9202	66.7	70.1
321	TITAN	4	87	37	8417	67.9	71.1
317	DIAMOND	3	87	39	8038	54.8	68.9
329	CAFFEY	4	90	38	7959	66.9	70.2
315	LAKAST	4	86	39	7952	51.8	70.7
312	COCODRIE	4	86	34	7589	58.6	70.8
320	JUPITER	5	92	38	7509	65.4	67.8
302	CL151	4	88	36	7500	60.3	71.1
314	MERMENTAU	4	85	35	7249	57.6	70.0
330	CL152	6	90	39	7177	60.1	69.4
318	THAD	3	88	37	7131	58.8	69.8
301	CL111	4	84	34	6866	53.8	68.7
335	CL261	4	88	37	6866	69.7	72.8
309	PVL108	4	84	35	6845	53.6	71.7
303	CL153	3	88	34	6834	52.3	68.2
326	AR 1601124	4	87	38	6789	54.4	67.9
319	PRESIDIO	4	87	37	6715	58.6	70.9
328	AR 1701184	4	95	41	6541	59.5	68.9
311	CHENIERE	5	85	36	6501	59.9	72.0
306	CL272	4	90	39	6410	59.8	71.1
316	ROYJ	4	97	44	6274	53.3	66.9
310	CATAHOULA	4	85	37	6261	62.4	72.8
313	CYPRESS	5	87	35	6187	57.3	69.3
307	CLJ01	3	93	36	5870	57.0	69.3
308	PVL01	4	95	38	5710	46.7	66.7
322	BASMATI	4	85	37	5463	56.0	71.0
305	CL172	4	88	36	5441	57.9	69.2
323	DELLA-2	4	92	39	5359	53.0	65.1
324	JAZZMAN	4	6	38	4376	51.6	67.0
325	JAZZMAN-2	5	90	32	4231	50.1	65.5
304	CL163	3	46	18	3211	55.4	69.0

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 6. Grain and milling yields and agronomic performance of entries in the 2018 Variety Yield trial, St. Landry Parish, Louisiana.

ENT	VARIETY	HTE	LODGING	YIELD
334	GEMINI 214 CL	49	20	13658
333	XL760	45		13318
332	XL753	43		13228
331	CLXL745	42		12057
327	AR 1701124	37		10068
329	CAFFEY	37		9944
320	JUPITER	39		9900
317	DIAMOND	40		9882
321	TITAN	43		9710
318	THAD	40		9705
328	AR 1701184	41	20	9566
315	LAKAST	41		9435
314	MERMENTAU	39		9354
306	CL272	40		9297
305	CL172	38		9231
316	ROYJ	43		9205
335	CL261	39		9183
311	CHENIERE	40		9019
304	CL163	42	55	8952
303	CL153	40		8653
319	PRESIDIO	42		8642
309	PVL108	43	15	8595
312	COCODRIE	38		8591
325	JAZZMAN-2	37		8579
323	DELLA-2	40		8521
324	JAZZMAN	41		8372
326	AR 1601124	39	20	7979
301	CL111	44		7847
313	CYPRESS	38		7571
310	CATAHOULA	41	20	7423
308	PVL01	30		7404
330	CL152	41		7063
307	CLJ01	40		6849
322	BASMATI	42		6175
302	CL151	41		4914

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

REGIONAL YIELD TEST

Test locations in 2018 included the H. Rouse Caffey Rice Research Station (HRCRRS) at Crowley (early and late planting dates) and three on-farm test sites in Calcasieu, Vermilion, and Tensas parishes.

Thirty-five entries were tested in a randomized complete block design with two replications. Varieties were seeded at 90 lb/A. Planting dates were: HRCRRS, March 14; Calcasieu, March 20; Vermilion, March 13; and Tensas, May 10. Harvest dates were: HRCRRS, July 27; Calcasieu, Aug. 13; Vermilion, Aug. 1; and Tensas, Sept. 17. Results from these trials are shown in Tables 1-5.

Table 1. Grain and agronomic performance of entries in the 2018 Regional Yield test, Early planting, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
099	172M1670	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	3	90	37	10417	64.7	68.6
098	172M1669	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	3	88	40	10389	58.3	69.3
052	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	5	89	34	10213	45.4	67.6
103	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	37	10156	62.2	71.9
092	172M1623	NEPTUNE//BNGL/CL161/3/RICO	4	92	37	10137	49.3	68.4
113	171L1755	TRNS//CCDR/JEFF/3/AR 1188/CCDR//9502008/LGRU	4	81	33	10117	51.9	67.0
095	172M1647	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	90	36	10097	61.5	69.0
107	171M1627	MERMENTAU/JPTR	4	91	36	10059	63.4	69.9
040	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	88	35	10034	61.5	70.6
083	172L1541	CL162/3/TRNS//CCDR/JEFF	4	85	36	10028	58.0	69.5
078	172L1365	TRNS//TRNS/CL131	4	83	37	9988	56.4	67.0
126	171M1858	NEPTUNE/JPTR	4	91	34	9967	64.5	70.5
045	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	4	85	37	9960	56.0	67.9
053	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	4	87	35	9956	44.2	66.7
125	171M1857	CAFFEY/3/BNGL/9502065//EARL	4	87	35	9917	58.2	66.0
093	172M1639	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	90	37	9894	55.7	68.6
057	172L1217	TRNS//TRNS/CL131	4	85	35	9858	55.7	65.8
129	171M1871	9502065/3/MERC//MERC/…/4/BNGL//MERC/RICO/3/EARL	3	86	35	9837	60.0	68.5
124	171M1852	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	4	91	35	9806	61.3	68.2
096	172M1663	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	90	38	9796	47.4	67.6
110	171L1690	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	89	33	9790	55.0	66.7
049	172L1155	CCDR//CFX-29/CCDR/3/CCDR	4	89	36	9764	57.7	68.9
101	172M1685	NEPTUNE//BNGL/CL161/3/RICO	5	91	36	9756	62.5	67.4
111	171L1693	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	89	35	9756	56.6	68.3
034	172L1097	CCDR/CL131	4	88	35	9734	59.9	69.6
084	172L1556	CCDR/JEFF//CFX-26/9702128/3/CL151	4	88	35	9654	56.9	70.7
029	172L1057	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	3	90	38	9637	63.7	70.8
148	CL272	CL272	3	91	37	9626	34.5	67.1
022	172L2056	KBNT/CL111	3	90	37	9590	64.1	71.0

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
043	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	3	85	38	9583	56.2	69.9
108	171L1633	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	5	89	35	9541	44.3	69.4
044	172L1137	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	3	91	36	9501	55.3	68.5
097	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	3	87	35	9498	60.9	69.2
085	172L1566	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/9302065/…	3	85	38	9477	58.6	67.9
047	172L1143	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	4	89	39	9462	59.0	69.2
073	172L1343	TRNS//TRNS/CL131	4	87	36	9459	60.1	68.7
033	172L1085	CL131/3/TRNS//CCDR/JEFF	4	89	37	9457	37.7	69.8
127	171M1859	NEPTUNE/JPTR	4	91	36	9451	58.6	68.3
081	172L1444	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	91	35	9430	47.4	69.1
051	172L1178	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	4	83	35	9421	63.5	71.3
065	172L1311	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	5	91	36	9398	57.9	68.2
091	172M1615	BNGL/CL161/3/NEPTUNE//BNGL/CL161	3	87	34	9394	34.0	67.4
036	172L1112	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	4	90	33	9391	61.0	70.8
041	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	88	36	9387	55.5	67.6
131	173L1017	DREW/BASF 1-4	5	91	38	9377	45.7	64.5
109	171L1642	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	90	33	9375	61.9	71.0
055	172L1213	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	4	83	35	9372	59.1	69.3
094	172M1646	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	94	35	9348	67.1	69.5
038	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	3	89	37	9344	55.5	69.8
123	171M1851	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	5	91	35	9342	44.8	67.5
054	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	4	83	35	9341	58.0	67.4
021	172L2030	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	90	42	9332	57.9	69.3
149	CHNR	CHENIERE	4	88	35	9310	60.6	72.0
042	172L1135	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	88	37	9297	58.4	69.7
024	172L2065	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	90	38	9272	64.9	71.0
035	172L1098	CCDR/CL131	4	89	34	9265	54.3	69.3
058	172L1247	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CPRS/KBNT//9502008-A/3/CFX-18//,,,	4	90	36	9259	59.5	68.9

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
118	171M1810	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	92	34	9254	65.2	69.6
048	172L1151	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	85	36	9234	58.2	70.0
056	172L1216	TRNS//TRNS/CL131	4	84	34	9227	55.4	65.9
012	172L3114	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	5	90	37	9213	60.9	68.8
046	172L1141	CHENIERE/3/CCDR//CFX-29/CCDR	4	87	36	9200	55.3	68.0
100	172M1681	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	91	36	9194	61.9	68.7
037	172L1129	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	4	87	37	9172	61.5	69.8
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	4	89	33	9155	57.7	68.9
116	171L1785	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	5	90	34	9149	57.5	68.9
079	172L1410	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	90	38	9147	58.3	68.8
130	171M1872	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	88	35	9141	52.9	69.7
020	172L2028	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	90	38	9138	59.7	67.8
150	JPTR	JUPITER	4	93	36	9129	56.7	67.3
119	171M1813	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	90	33	9123	58.5	69.8
018	172L3329	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	4	87	34	9115	57.7	69.6
066	172L1319	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	91	38	9074	61.3	69.9
115	171L1783	TAGGART/3/TRNS//CCDR/JEFF	4	89	35	9056	54.7	67.6
032	172L1074	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3…	4	88	36	9047	60.4	69.3
030	172L1060	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	4	90	34	9029	53.0	69.2
014	172L3147	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	4	91	35	9012	54.7	68.5
147	CL153	CL153	3	90	33	9011	56.8	68.7
005	172L3045	PRESIDO/CL111	4	89	37	8997	60.8	69.2
106	171L1610	TAGGART/3/TRNS//CCDR/JEFF	5	93	34	8993	44.0	67.4
067	172L1326	CL131//DREW/CLR 13/4/9502008-A/TACAURI//CLR 5/3/DREW/CFX-42	5	90	35	8989	57.9	69.6
117	171L1786	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	5	91	34	8986	59.4	70.0
039	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	3	90	36	8975	58.6	69.2
071	172L1338	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF	4	90	35	8975	59.7	69.6
068	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	4	89	33	8972	50.3	68.2
015	172L3149	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	4	92	36	8946	60.3	68.5

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
102	172M1690	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	91	36	8946	57.3	70.4
008	172L3059	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	95	38	8941	56.1	67.6
050	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	4	87	34	8919	54.7	69.6
146	CL111	CL111	3	84	36	8906	60.4	69.5
072	172L1339	9502008-A/DREW//CLR 20/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	4	87	33	8899	58.8	68.4
076	172L1352	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CATAHOULA	5	85	33	8869	59.0	70.0
122	171M1849	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	5	92	33	8816	64.8	70.4
143	173L2048	CPRS/BASF 1-14	4	90	37	8756	57.1	68.3
031	172L1067	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	4	88	34	8701	60.6	70.2
112	171L1718	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	88	35	8688	51.2	68.3
062	172L1263	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	90	35	8678	58.0	67.1
128	171M1863	NEPTUNE/9302065	3	94	37	8662	64.4	68.9
028	172L1019	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	87	35	8657	55.6	65.9
088	172A1735	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	90	32	8648	60.7	68.3
120	171M1827	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	92	33	8634	52.4	72.1
142	173L2039	CHENIERE//CCDR/JEFF/3/BASF 2-22	4	89	35	8633	46.5	66.9
140	173L2019	9302065/BASF 1-6	5	81	35	8623	54.8	66.0
026	172L2078	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	3	90	35	8623	31.4	68.6
064	172L1293	WELLS//CL131/CHENIERE	6	90	33	8609	58.3	69.3
009	172L3067	CHENIERE/CL111	4	93	36	8602	57.3	67.7
002	172L3015	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	90	33	8600	57.8	68.5
105	171L1530	RU0902028/CTHL	5	89	34	8597	49.1	68.6
023	172L2059	KBNT/CL111	4	93	35	8594	64.0	70.9
069	172L1332	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	4	92	36	8567	63.3	71.1
136	173L2005	CATAHOULA/BASF 2-22	4	90	32	8538	39.4	64.0
060	172L1252	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	90	36	8531	57.5	69.8
001	172L3007	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	89	33	8520	57.9	67.8
121	171M1843	CAFFEY/3/BNGL/9502065//EARL	5	88	33	8512	46.6	69.2
141	173L2029	CATAHOULA/BASF 2-18	4	92	39	8507	38.0	62.9

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
134	PVL108	CHENIERE/BASF 1-6	4	86	39	8483	62.4	70.9
080	172L1424	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/…	4	86	36	8437	60.7	69.1
145	PVL01	PVL01	3	93	36	8430	53.4	69.1
059	172L1251	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	89	36	8425	55.4	68.4
006	172L3047	PRESIDO/CL111	4	90	35	8401	45.4	69.4
063	172L1265	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	89	34	8391	60.0	67.8
089	172A1737	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	93	37	8335	59.7	68.0
135	173L2004	CATAHOULA/BASF 2-22	5	91	34	8332	37.7	66.0
082	172L1540	9502008-A//AR 1188/CCDR/3/CFX-26/9702128/4/9502008-A//AR1188/CCDR/…	5	85	36	8332	62.4	69.7
086	172A1729	RU1002146*4//JZMN/08CLR004	4	87	37	8320	64.1	70.2
114	171L1772	CHNR/RU0901121	5	89	35	8320	54.8	68.0
011	172L3113	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/…	5	89	35	8311	60.7	69.5
003	172L3024	CPRS//CATAHOULA/CL111	4	92	37	8257	60.2	68.1
074	172L1345	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	5	90	35	8178	55.4	66.4
016	172L3182	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	90	37	8167	58.3	68.7
137	173L2016	9302065/BASF 1-6	6	84	35	8128	51.2	67.6
138	173L2017	9302065/BASF 1-6	5	84	38	8112	47.9	64.6
061	172L1262	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	89	33	8085	32.1	67.8
004	172L3038	PRESIDO/CL111	4	89	35	8084	59.9	70.9
087	172A1730	RU1002146*4//JZMN/08CLR004	4	86	34	8034	65.2	70.8
017	172L3318	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	95	39	8031	34.4	65.3
010	172L3098	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	4	92	37	8029	59.7	70.8
090	172A1739	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	4	93	34	8019	61.2	68.8
070	172L1334	DREW//CCDR/CLPY 003	4	89	35	7978	59.7	69.4
104	171L1529	RU0902028/CTHL	6	82	34	7895	53.1	68.5
025	172L2075	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	91	35	7888	63.8	69.3
007	172L3054	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	94	38	7840	62.2	69.7
077	172L1358	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/5/KATY/…	4	90	34	7446	62.9	70.8
144	173L2058	CHENIERE/BASF 2-31	4	88	38	7439	46.8	69.8

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
139	173L2018	9302065/BASF 1-6	5	90	37	7439	56.0	67.5
075	172L1350	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW//CHENIERE/LMNT	5	81	31	7370	62.4	69.9
132	173L1026	PRESIDIO/BASF 1-12	4	75	36	7116	40.3	65.8
013	172L3127	CL131/3/TRNS//CCDR/JEFF	5	91	33	6986	61.0	68.5
133	173L1029	CHENIERE/BASF 1-6	5	75	35	6743	37.8	66.3
027	172L1009	KBNT/CL111	5	89	32	6678	57.4	66.9

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 2. Grain and agronomic performance of entries in the 2018 Regional Yield test, Late planting, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
052	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	71	34	10457	64.3	71.1
146		CL111	68	36	10385	66.9	72.7
081	172L1444	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	73	38	10260	63.9	71.8
018	172L3329	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/…	69	34	10208	65.6	72.4
014	172L3147	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	71	35	10207		
083	172L1541	CL162/3/TRNS//CCDR/JEFF	69	35	10191	65.9	72.4
008	172L3059	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	76	38	10185	64.1	70.2
053	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//…	71	35	10170	64.5	71.1
078	172L1365	TRNS//TRNS/CL131	65	40	10134	64.2	70.9
103	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	78	37	10132	70.5	72.5
012	172L3114	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	70	39	10102	65.4	71.2
002	172L3015	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	71	36	10088		
039	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	73	37	10071		
035	172L1098	CCDR/CL131	71	35	10051	65.4	72.5
057	172L1217	TRNS//TRNS/CL131	69	36	10025	65.2	71.5
029	172L1057	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/CPRS/…	76	37	9992	67.3	72.0
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	75	32	9963		
072	172L1339	9502008-A/DREW//CLR 20/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	70	35	9946	66.6	71.4
073	172L1343	TRNS//TRNS/CL131	70	39	9941	66.1	71.2
066	172L1319	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	76	39	9923	65.0	71.1
084	172L1556	CCDR/JEFF//CFX-26/9702128/3/CL151	71	36	9891	66.3	73.8
021	172L2030	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	77	42	9886	65.3	72.8
050	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	71	35	9817	66.0	73.2
076	172L1352	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CATAHOULA	71	36	9816		
049	172L1155	CCDR//CFX-29/CCDR/3/CCDR	71	37	9794	65.3	71.8
054	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	69	34	9762		
074	172L1345	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	71	37	9748	62.8	69.9
147		CL153	72	36	9730	65.2	71.2
038	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	71	36	9720		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
111	171L1693	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	72	35	9710	64.4	71.7
045	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	68	37	9697	67.9	73.2
028	172L1019	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	71	37	9689		
113	171L1755	TRNS//CCDR/JEFF/3/AR 1188/CCDR//9502008/LGRU	70	36	9671	66.6	72.1
044	172L1137	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	75	34	9665	64.8	72.1
009	172L3067	CHENIERE/CL111	73	36	9660		
034	172L1097	CCDR/CL131	69	34	9647	65.9	72.3
110	171L1690	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	72	39	9646	64.6	71.8
047	172L1143	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	70	39	9624	64.8	71.4
031	172L1067	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/CPRS/…	71	35	9622	66.0	71.8
065	172L1311	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	73	37	9601		
046	172L1141	CHENIERE/3/CCDR//CFX-29/CCDR	70	35	9591		
116	171L1785	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	72	35	9586	65.2	71.7
005	172L3045	PRESIDO/CL111	76	36	9579		
022	172L2056	KBNT/CL111	75	37	9555	67.2	71.8
037	172L1129	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	71	36	9545		
030	172L1060	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	74	38	9543		
017	172L3318	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/DREW//…	74	36	9522		
024	172L2065	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	76	37	9508		
058	172L1247	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CPRS/KBNT//9502008-A/3/CFX-18//…	73	38	9498		
042	172L1135	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	70	36	9493		
041	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	70	34	9489	64.8	72.0
010	172L3098	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	74	37	9476		
062	172L1263	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	69	34	9475		
033	172L1085	CL131/3/TRNS//CCDR/JEFF	68	38	9469	66.3	72.0
095	172M1647	NEPTUNE//BNGL/CL161/3/NEPTUNE	78	37	9465	69.1	71.6
085	172L1566	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/9302065/…	71	39	9446	64.9	72.1
048	172L1151	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	69	37	9431		
032	172L1074	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/…	71	36	9402	66.3	72.2

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
060	172L1252	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	73	35	9398		
063	172L1265	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	71	35	9394		
079	172L1410	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	73	36	9387	63.3	71.7
043	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	68	37	9385	67.0	73.7
068	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	71	31	9373		
011	172L3113	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/CPRS/…	72	35	9339	66.5	71.8
129	171M1871	9502065/3/MERC//MERC/…/4/BNGL//MERC/RICO/3/EARL	71	37	9338	69.2	72.1
013	172L3127	CL131/3/TRNS//CCDR/JEFF	71	33	9328		
007	172L3054	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	73	37	9325		
112	171L1718	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	76	36	9322	66.1	72.1
015	172L3149	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	71	38	9315		
020	172L2028	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	77	38	9313		
092	172M1623	NEPTUNE//BNGL/CL161/3/RICO	78	35	9300	66.9	72.1
107	171M1627	MERMENTAU/JPTR	78	36	9285	69.1	71.5
091	172M1615	BNGL/CL161/3/NEPTUNE//BNGL/CL161	78	34	9282		
051	172L1178	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	70	35	9279	68.2	73.5
036	172L1112	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	72	33	9249		
104	171L1529	RU0902028/CTHL	70	36	9233		
114	171L1772	CHNR/RU0901121	74	36	9228		
094	172M1646	NEPTUNE/3/NEPTUNE//BNGL/CL161	81	36	9222	70.1	71.9
100	172M1681	NEPTUNE/3/NEPTUNE//BNGL/CL161	79	36	9214		
071	172L1338	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF	70	37	9212		
055	172L1213	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	68	36	9184		
006	172L3047	PRESIDO/CL111	69	37	9162		
106	171L1610	TAGGART/3/TRNS//CCDR/JEFF	77	34	9131	65.7	72.3
070	172L1334	DREW//CCDR/CLPY 003	76	36	9129		
098	172M1669	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/…	76	38	9113	68.6	71.2
004	172L3038	PRESIDO/CL111	70	36	9024		
061	172L1262	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	70	34	9002		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
069	172L1332	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	76	36	8990		
088	172A1735	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	77	34	8959	67.2	71.5
102	172M1690	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	79	36	8917		
026	172L2078	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	72	34	8917		
001	172L3007	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	70	34	8907		
056	172L1216	TRNS//TRNS/CL131	67	35	8903		
096	172M1663	NEPTUNE//BNGL/CL161/3/NEPTUNE	79	37	8883		
126	171M1858	NEPTUNE/JPTR	78	33	8875	70.9	72.6
130	171M1872	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	72	34	8872	68.6	72.7
093	172M1639	NEPTUNE//BNGL/CL161/3/NEPTUNE	79	36	8867	67.3	71.0
117	171L1786	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	75	34	8866		
087	172A1730	RU1002146*4//JZMN/08CLR004	68	35	8848	68.6	72.8
105	171L1530	RU0902028/CTHL	77	34	8842		
108	171L1633	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	76	35	8819	65.9	71.5
086	172A1729	RU1002146*4//JZMN/08CLR004	68	37	8815	69.2	73.2
149		CHENIERE	75	36	8786	67.9	73.8
059	172L1251	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	72	35	8785		
120	171M1827	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	76	34	8744		
122	171M1849	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	77	34	8739		
128	171M1863	NEPTUNE/9302065	79	34	8726		
115	171L1783	TAGGART/3/TRNS//CCDR/JEFF	71	36	8668		
131	173L1017	DREW/BASF 1-4	76	33	8662	57.3	70.2
080	172L1424	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/…	69	36	8650		
067	172L1326	CL131//DREW/CLR 13/4/9502008-A/TACAURI//CLR 5/3/DREW/CFX-42	73	36	8642		
077	172L1358	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/5/…	72	36	8639		
134	PVL108	CHENIERE/BASF 1-6	72	38	8518	65.5	72.1
097	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	76	36	8507	68.8	71.1
040	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	71	36	8505		
109	171L1642	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	76	32	8502	68.1	73.5

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
064	172L1293	WELLS//CL131/CHENIERE	75	33	8467		
003	172L3024	CPRS//CATAHOULA/CL111	76	37	8461		
125	171M1857	CAFFEY/3/BNGL/9502065//EARL	72	36	8457	66.9	71.4
118	171M1810	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	79	34	8342	70.5	72.6
148		CL272	77	34	8299	67.1	70.9
090	172A1739	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	76	34	8290		
082	172L1540	9502008-A//AR 1188/CCDR/3/CFX-26/9702128/4/9502008-A//AR1188/CCDR/3/CPRS/…	69	37	8222		
127	171M1859	NEPTUNE/JPTR	77	34	8210		
121	171M1843	CAFFEY/3/BNGL/9502065//EARL	75	34	8197		
119	171M1813	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	76	33	8163		
016	172L3182	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	71	37	8136		
089	172A1737	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	77	37	8078		
141	173L2029	CATAHOULA/BASF 2-18	75	38	7958	61.0	69.2
145		PVL01	77	35	7952	59.3	70.9
025	172L2075	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	77	36	7943		
099	172M1670	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	74	39	7894	65.1	68.6
136	173L2005	CATAHOULA/BASF 2-22	73	31	7828	57.2	68.4
075	172L1350	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW//CHENIERE/LMNT	66	35	7722		
023	172L2059	KBNT/CL111	77	33	7588		
101	172M1685	NEPTUNE//BNGL/CL161/3/RICO	77	36	7491	64.0	69.1
027	172L1009	KBNT/CL111	72	33	7422		
138	173L2017	9302065/BASF 1-6	70	39	7385	60.7	70.0
150		JUPITER	81	36	7297	68.0	70.3
143	173L2048	CPRS/BASF 1-14	72	35	7290	59.6	69.7
142	173L2039	CHENIERE//CCDR/JEFF/3/BASF 2-22	71	34	7279	64.5	70.0
139	173L2018	9302065/BASF 1-6	74	38	7276		
140	173L2019	9302065/BASF 1-6	66	36	7099	59.5	69.1
137	173L2016	9302065/BASF 1-6	69	36	6969		
135	173L2004	CATAHOULA/BASF 2-22	30	6920			

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD	WHOLE	TOTAL
123	171M1851	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	35	6728			123
124	171M1852	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	34	6612	66.9	70.4	124
144	173L2058	CHENIERE/BASF 2-31	37	6558			144
132	173L1026	PRESIDIO/BASF 1-12	36	6520			132
133	173L1029	CHENIERE/BASF 1-6	34	5263			133

Table 3. Grain and agronomic performance of entries in the 2018 Regional Yield test, Calcasieu Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
130	171M1872	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	85	38		8198
149	CHNR	CHENIERE	4	84	36		7827
129	171M1871	9502065/3/MERC//MERC/…/4/BNGL//MERC/RICO/3/EARL	4	84	39		7672
031	172L1067	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	4	84	34		7512
085	172L1566	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	4	83	39		7499
043	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	84	39		7423
150	JPTR	JUPITER	4	88	36		7349
138	173L2017	9302065/BASF 1-6	5	83	42		7273
119	171M1813	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	87	37		7256
010	172L3098	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	4	83	40		7255
029	172L1057	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	3	85	37		7202
037	172L1129	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	4	84	37		7193
042	172L1135	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	3	83	37		7166
041	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	84	36		7135
137	173L2016	9302065/BASF 1-6	6	80	37	3	7127
114	171L1772	CHNR/RU0901121	4	83	36		7069
126	171M1858	NEPTUNE/JPTR	3	89	37		7069
070	172L1334	DREW//CCDR/CLPY 003	5	84	35		7057
030	172L1060	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	4	84	37		6717
018	172L3329	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	4	84	36		6675
011	172L3113	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/…	4	83	37		6638
125	171M1857	CAFFEY/3/BNGL/9502065//EARL	4	85	38		6620
113	171L1755	TRNS//CCDR/JEFF/3/AR 1188/CCDR//9502008/LGRU	4	81	37		6599
015	172L3149	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	3	84	37		6597
140	173L2019	9302065/BASF 1-6	5	82	38		6589
135	173L2004	CATAHOULA/BASF 2-22	4	86	33		6585
136	173L2005	CATAHOULA/BASF 2-22	5	85	33	3	6505
139	173L2018	9302065/BASF 1-6	5	83	38		6390
058	172L1247	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CPRS/KBNT//9502008-A/3/CFX-18//…	4	84	38		6390

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
145	PVL001	PVL01	3	86	38		6313
040	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	3	85	39		6294
106	171L1610	TAGGART/3/TRNS//CCDR/JEFF	5	84	34		6256
127	171M1859	NEPTUNE/JPTR	3	89	40		6228
022	172L2056	KBNT/CL111	4	87	38		6202
082	172L1540	9502008-A//AR 1188/CCDR/3/CFX-26/9702128/4/9502008-A//AR1188/CCDR/3/…	5	82	37		6175
032	172L1074	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	4	84	36		6170
014	172L3147	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	4	84	37		6150
046	172L1141	CHENIERE/3/CCDR//CFX-29/CCDR	5	84	35		6109
098	172M1669	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	4	85	42		6043
021	172L2030	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	3	83	45		6029
118	171M1810	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	89	38		5970
105	171L1530	RU0902028/CTHL	4	85	36		5949
142	173L2039	CHENIERE//CCDR/JEFF/3/BASF 2-22	4	85	35		5908
020	172L2028	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	86	39		5804
047	172L1143	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	3	83	36		5786
071	172L1338	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF	4	84	35		5726
107	171M1627	MERMENTAU/JPTR	4	89	36	10	5706
005	172L3045	PRESIDO/CL111	3	84	40		5686
131	173L1017	DREW/BASF 1-4	4	85	35		5683
120	171M1827	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	3	92	35		5630
097	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	3	86	41		5620
141	173L2029	CATAHOULA/BASF 2-18	4	85	41		5609
012	172L3114	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	4	84	40		5577
066	172L1319	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	84	35		5577
045	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	4	83	37		5554
122	171M1849	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	4	91	38		5531
044	172L1137	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	86	38		5527
076	172L1352	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CATAHOULA	4	83	35		5502

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
124	171M1852	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	4	89	38		5487
111	171L1693	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	84	36		5430
128	171M1863	NEPTUNE/9302065	4	89	39		5423
081	172L1444	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	83	36		5410
072	172L1339	9502008-A/DREW//CLR 20/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	5	84	34		5407
132	173L1026	PRESIDIO/BASF 1-12	5	73	35		5358
054	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	3	84	36		5339
025	172L2075	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	86	36		5335
080	172L1424	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	5	83	38		5330
078	172L1365	TRNS//TRNS/CL131	3	81	39		5327
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	4	84	32		5313
023	172L2059	KBNT/CL111	4	88	36		5300
027	172L1009	KBNT/CL111	5	83	33		5205
003	172L3024	CPRS//CATAHOULA/CL111	3	86	38		5171
146	CL111	CL111	3	81	37		4970
075	172L1350	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW//CHENIERE/LMNT	5	82	33		4942
024	172L2065	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	84	40		4904
095	172M1647	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	87	38	15	4901
091	172M1615	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	89	37		4889
052	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	4	85	37		4872
026	172L2078	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	84	36		4852
056	172L1216	TRNS//TRNS/CL131	4	83	35		4841
093	172M1639	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	89	39	25	4813
110	171L1690	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	5	84	37		4794
050	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	4	84	36		4753
016	172L3182	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	84	38		4749
006	172L3047	PRESIDO/CL111	4	83	39		4723
092	172M1623	NEPTUNE//BNGL/CL161/3/RICO	4	93	38		4719

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
109	171L1642	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	87	34		4672
053	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/…	4	84	36		4647
099	172M1670	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	3	88	40	3	4642
116	171L1785	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	84	37		4566
096	172M1663	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	89	38	10	4482
048	172L1151	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	3	81	38		4459
068	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	4	85	31		4413
049	172L1155	CCDR//CFX-29/CCDR/3/CCDR	4	83	37		4407
055	172L1213	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	4	80	36		4339
057	172L1217	TRNS//TRNS/CL131	4	83	37		4336
033	172L1085	CL131/3/TRNS//CCDR/JEFF	4	84	37		4299
038	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	4	86	37		4228
084	172L1556	CCDR/JEFF//CFX-26/9702128/3/CL151	4	85	36		4208
123	171M1851	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	3	89	37		4161
115	171L1783	TAGGART/3/TRNS//CCDR/JEFF	4	84	35		4129
144	173L2058	CHENIERE/BASF 2-31	4	84	38		4073
103	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	89	37		4067
001	172L3007	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	84	35		4056
002	172L3015	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	3	84	37		4012
051	172L1178	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	4	82	37		3837
039	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	4	86	37		3765
143	173L2048	CPRS/BASF 1-14	4	84	34		3725
036	172L1112	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	3	85	36		3692
121	171M1843	CAFFEY/3/BNGL/9502065//EARL	3	86	37		3669
087	172A1730	RU1002146*4//JZMN/08CLR004	3	83	36		3649
094	172M1646	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	37	3	3638
134	PVL108	CHENIERE/BASF 1-6	4	83	38		3544
086	172A1729	RU1002146*4//JZMN/08CLR004	4	83	37		3454
090	172A1739	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	85	33		3429

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
148	CL272	CL272	3	90	40		3262
028	172L1019	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	5	86	36		3199
108	171L1633	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	4	84	37		3119
102	172M1690	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	3	90	37		3089
059	172L1251	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	85	38		3035
074	172L1345	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	5	84	34		3007
117	171L1786	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	85	35		3004
013	172L3127	CL131/3/TRNS//CCDR/JEFF	4	84	32		2973
017	172L3318	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	91	37		2919
077	172L1358	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/5/…	4	85	36		2898
004	172L3038	PRESIDO/CL111	4	84	38		2888
073	172L1343	TRNS//TRNS/CL131	4	82	36		2886
100	172M1681	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	94	37		2823
063	172L1265	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	84	35		2797
008	172L3059	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	88	38		2776
083	172L1541	CL162/3/TRNS//CCDR/JEFF	4	84	36		2774
062	172L1263	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	84	34		2745
079	172L1410	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	85	37		2720
101	172M1685	NEPTUNE//BNGL/CL161/3/RICO	4	90	37		2656
089	172A1737	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	87	36		2594
009	172L3067	CHENIERE/CL111	4	87	36		2428
112	171L1718	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	84	35		2355
088	172A1735	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	85	33		2303
060	172L1252	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	87	36		2206
067	172L1326	CL131//DREW/CLR 13/4/9502008-A/TACAURI//CLR 5/3/DREW/CFX-42	4	85	34		2162
133	173L1029	CHENIERE/BASF 1-6	5	77	33	25	2115
104	171L1529	RU0902028/CTHL	5	74	37	30	2074
064	172L1293	WELLS//CL131/CHENIERE	5	85	35		2015
147	CL153	CL153	3	84	36		1835

Continued.

Table 3. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	LODGING	YIELD
007	172L3054	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	89	39		1818
065	172L1311	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	4	86	36		1758
035	172L1098	CCDR/CL131	4	84	34		1375
034	172L1097	CCDR/CL131	4	83	35		1192
061	172L1262	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	84	34		1156
069	172L1332	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	89	34		899

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 4. Grain and agronomic performance of entries in the 2018 Regional Yield test, Vermilion Parish, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
052	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	4	85	34	8348
111	171L1693	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	85	36	8289
085	172L1566	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	4	85	38	8213
079	172L1410	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	89	35	8150
044	172L1137	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	91	38	8106
121	171M1843	CAFFEY/3/BNGL/9502065//EARL	4	87	36	8100
047	172L1143	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	4	85	38	8092
112	171L1718	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	85	36	8058
130	171M1872	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	86	36	8040
032	172L1074	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	5	85	36	7988
078	172L1365	TRNS//TRNS/CL131	4	81	37	7964
034	172L1097	CCDR/CL131	5	84	36	7948
131	173L1017	DREW/BASF 1-4	4	87	36	7931
093	172M1639	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	92	39	7915
108	171L1633	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	6	84	38	7911
107	171M1627	MERMENTAU/JPTR	5	88	38	7903
039	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	4	89	37	7897
046	172L1141	CHENIERE/3/CCDR//CFX-29/CCDR	5	85	33	7890
128	171M1863	NEPTUNE/9302065	5	92	38	7889
087	172A1730	RU1002146*4//JZMN/08CLR004	3	84	33	7837
043	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	86	38	7835
031	172L1067	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	5	86	35	7820
094	172M1646	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	94	39	7817
086	172A1729	RU1002146*4//JZMN/08CLR004	3	84	32	7813
104	171L1529	RU0902028/CTHL	5	80	198	7804
073	172L1343	TRNS//TRNS/CL131	3	83	35	7803
118	171M1810	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	92	38	7798
106	171L1610	TAGGART/3/TRNS//CCDR/JEFF	5	83	33	7780
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	4	90	37	7761
068	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	4	84	32	7760
033	172L1085	CL131/3/TRNS//CCDR/JEFF	4	86	37	7758
120	171M1827	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	92	37	7758

Continued.

Table 4. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
114	171L1772	CHNR/RU0901121	5	86	33	7729
103	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	89	38	7723
083	172L1541	CL162/3/TRNS//CCDR/JEFF	3	86	36	7711
001	172L3007	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	86	34	7711
072	172L1339	9502008-A/DREW//CLR 20/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	4	87	34	7688
049	172L1155	CCDR//CFX-29/CCDR/3/CCDR	3	86	36	7677
042	172L1135	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	3	85	38	7671
100	172M1681	NEPTUNE/3/NEPTUNE//BNGL/CL161	5	91	38	7660
096	172M1663	NEPTUNE//BNGL/CL161/3/NEPTUNE	5	90	40	7651
074	172L1345	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	4	85	37	7650
057	172L1217	TRNS//TRNS/CL131	3	85	35	7650
092	172M1623	NEPTUNE//BNGL/CL161/3/RICO	5	91	37	7647
002	172L3015	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	4	90	37	7629
051	172L1178	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	4	82	37	7623
008	172L3059	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	91	40	7622
054	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	4	86	35	7615
058	172L1247	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CPRS/KBNT//9502008-A/3/CFX-18//…	3	87	34	7599
138	173L2017	9302065/BASF 1-6	6	84	37	7579
036	172L1112	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	5	87	35	7579
097	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	5	88	39	7577
084	172L1556	CCDR/JEFF//CFX-26/9702128/3/CL151	4	84	36	7575
045	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	4	85	37	7572
113	171L1755	TRNS//CCDR/JEFF/3/AR 1188/CCDR//9502008/LGRU	5	78	34	7544
110	171L1690	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	5	84	36	7543
050	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	4	87	38	7521
041	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	85	35	7521
077	172L1358	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/5/KATY/…	5	87	36	7519
140	173L2019	9302065/BASF 1-6	5	82	37	7515
115	171L1783	TAGGART/3/TRNS//CCDR/JEFF	5	84	35	7493
070	172L1334	DREW//CCDR/CLPY 003	5	86	38	7487
065	172L1311	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	4	88	36	7466
081	172L1444	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	87	38	7431

Continued.

Table 4. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
116	171L1785	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	85	35	7410
117	171L1786	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	87	35	7409
122	171M1849	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	5	91	36	7403
080	172L1424	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	85	36	7400
066	172L1319	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	85	38	7392
053	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	3	85	35	7375
055	172L1213	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	83	35	7365
048	172L1151	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	83	37	7359
069	172L1332	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	4	91	38	7359
125	171M1857	CAFFEY/3/BNGL/9502065//EARL	6	85	37	7353
124	171M1852	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	5	88	36	7331
059	172L1251	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	85	33	7324
011	172L3113	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	5	86	36	7323
088	172A1735	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	91	33	7311
004	172L3038	PRESIDO/CL111	4	86	37	7271
009	172L3067	CHENIERE/CL111	4	90	36	7268
003	172L3024	CPRS//CATAHOULA/CL111	3	90	39	7257
126	171M1858	NEPTUNE/JPTR	4	91	37	7252
025	172L2075	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	89	37	7249
082	172L1540	9502008-A//AR 1188/CCDR/3/CFX-26/9702128/4/9502008-A//AR1188/CCDR/3/…	5	86	35	7239
119	171M1813	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	5	88	35	7238
137	173L2016	9302065/BASF 1-6	6	82	37	7204
006	172L3047	PRESIDO/CL111	4	87	37	7179
089	172A1737	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	4	94	37	7172
029	172L1057	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/CPRS/…	4	88	39	7166
040	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	85	36	7148
023	172L2059	KBNT/CL111	4	91	36	7145
102	172M1690	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	87	39	7120
012	172L3114	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	4	85	36	7112
022	172L2056	KBNT/CL111	5	88	36	7106
127	171M1859	NEPTUNE/JPTR	4	91	40	7105
129	171M1871	9502065/3/MERC//MERC/…/4/BNGL//MERC/RICO/3/EARL	4	84	40	7101

Continued.

Table 4. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
150	JPTR	JUPITER	6	91	37	7071
056	172L1216	TRNS//TRNS/CL131	3	84	35	7065
143	173L2048	CPRS/BASF 1-14	4	89	36	7064
035	172L1098	CCDR/CL131	4	86	36	7043
123	171M1851	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	5	90	38	7037
005	172L3045	PRESIDO/CL111	4	90	37	7036
063	172L1265	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	86	35	7027
141	173L2029	CATAHOULA/BASF 2-18	5	90	40	7021
136	173L2005	CATAHOULA/BASF 2-22	6	87	34	7020
105	171L1530	RU0902028/CTHL	5	85	35	6963
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	4	85	35	6957
028	172L1019	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	5	87	35	6938
067	172L1326	CL131//DREW/CLR 13/4/9502008-A/TACAURI//CLR 5/3/DREW/CFX-42	3	86	35	6927
101	172M1685	NEPTUNE//BNGL/CL161/3/RICO	5	89	38	6924
099	172M1670	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	4	93	37	6924
062	172L1263	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	87	42	6919
013	172L3127	CL131/3/TRNS//CCDR/JEFF	4	87	31	6894
075	172L1350	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW//CHENIERE/LMNT	5	84	31	6884
060	172L1252	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	90	37	6880
076	172L1352	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CATAHOULA	4	84	37	6874
030	172L1060	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	6	88	37	6867
147	CL153	CL153	4	87	36	6866
109	171L1642	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	86	34	6865
015	172L3149	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	3	90	37	6857
148	CL272	CL272	5	93	36	6821
018	172L3329	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…..	4	86	35	6797
149	CHNR	CHENIERE	5	86	36	6783
020	172L2028	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	86	37	6759
061	172L1262	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	85	36	6755
017	172L3318	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	94	38	6743
014	172L3147	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	4	88	35	6738
091	172M1615	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	89	35	6706

Continued.

Table 4. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD
038	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	4	89	36	6682
010	172L3098	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	4	87	38	6652
139	173L2018	9302065/BASF 1-6	6	93	38	6647
071	172L1338	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF	4	87	35	6629
037	172L1129	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	5	86	37	6578
144	173L2058	CHENIERE/BASF 2-31	6	86	37	6540
098	172M1669	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//…	4	86	40	6463
016	172L3182	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	3	87	37	6459
095	172M1647	NEPTUNE//BNGL/CL161/3/NEPTUNE	5	90	39	6329
135	173L2004	CATAHOULA/BASF 2-22	6	90	34	6315
146	CL111	CL111	4	85	37	6226
090	172A1739	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	3	94	32	6192
064	172L1293	WELLS//CL131/CHENIERE	5	86	34	6182
024	172L2065	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	89	38	6117
021	172L2030	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	3	86	45	6095
007	172L3054	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	4	93	38	6066
027	172L1009	KBNT/CL111	5	87	33	6038
133	173L1029	CHENIERE/BASF 1-6	5	79	36	6010
026	172L2078	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	3	91	35	5991
145	PVL01	PVL01	3	96	38	5970
134	PVL108	CHENIERE/BASF 1-6	5	86	40	5643
132	173L1026	PRESIDIO/BASF 1-12	5	76	36	5125

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 5. Grain and agronomic performance of entries in the 2018 Regional Yield test, Tensas Parish, Louisiana.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
021	172L2030	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	88	41	10442
104	171L1529	RU0902028/CTHL	86	40	10346
119	171M1813	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	87	33	10073
109	171L1642	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	88	37	10000
120	171M1827	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	88	34	9987
103	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	88	36	9643
106	171L1610	TAGGART/3/TRNS//CCDR/JEFF	90	36	9638
045	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	86	35	9616
015	172L3149	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	86	40	9592
122	171M1849	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	88	37	9566
053	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	87	34	9505
101	172M1685	NEPTUNE//BNGL/CL161/3/RICO	89	36	9490
083	172L1541	CL162/3/TRNS//CCDR/JEFF	86	35	9488
088	172A1735	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	89	37	9478
072	172L1339	9502008-A/DREW//CLR 20/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	89	37	9470
009	172L3067	CHENIERE/CL111	88	39	9440
130	171M1872	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	86	35	9438
135	173L2004	CATAHOULA/BASF 2-22	89	34	9424
059	172L1251	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	87	38	9417
038	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	87	36	9376
056	172L1216	TRNS//TRNS/CL131	85	34	9359
060	172L1252	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	86	38	9338
110	171L1690	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	88	37	9320
094	172M1646	NEPTUNE/3/NEPTUNE//BNGL/CL161	89	36	9320
108	171L1633	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	87	37	9289
001	172L3007	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	86	37	9287
113	171L1755	TRNS//CCDR/JEFF/3/AR 1188/CCDR//9502008/LGRU	86	36	9213
016	172L3182	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	86	41	9212
111	171L1693	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	86	40	9200
022	172L2056	KBNT/CL111	88	40	9185
017	172L3318	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	89	40	9163
014	172L3147	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	87	38	9155

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
082	172L1540	9502008-A//AR 1188/CCDR/3/CFX-26/9702128/4/9502008-A//AR1188/CCDR/3/…	86	37	9147
087	172A1730	RU1002146*4//JZMN/08CLR004	86	36	9140
081	172L1444	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	88	41	9126
079	172L1410	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	86	38	9105
061	172L1262	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	86	37	9097
118	171M1810	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	88	35	9086
048	172L1151	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	85	37	9083
107	171M1627	MERMENTAU/JPTR	87	35	9059
008	172L3059	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	88	42	9030
105	171L1530	RU0902028/CTHL	89	40	9028
097	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/…	86	36	9019
029	172L1057	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/CPRS/…	89	42	8982
125	171M1857	CAFFEY/3/BNGL/9502065//EARL	85	32	8973
057	172L1217	TRNS//TRNS/CL131	85	33	8957
133	173L1029	CHENIERE/BASF 1-6	86	35	8940
043	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	84	38	8934
004	172L3038	PRESIDO/CL111	85	38	8924
132	173L1026	PRESIDIO/BASF 1-12	85	38	8919
049	172L1155	CCDR//CFX-29/CCDR/3/CCDR	87	38	8908
117	171L1786	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	88	36	8902
005	172L3045	PRESIDO/CL111	86	39	8900
031	172L1067	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/…	88	37	8864
020	172L2028	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	90	39	8861
091	172M1615	BNGL/CL161/3/NEPTUNE//BNGL/CL161	88	36	8858
093	172M1639	NEPTUNE//BNGL/CL161/3/NEPTUNE	89	36	8840
044	172L1137	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	89	40	8808
042	172L1135	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	86	36	8808
069	172L1332	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	87	38	8712
012	172L3114	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	87	38	8655
034	172L1097	CCDR/CL131	85	35	8642
030	172L1060	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	86	38	8609
054	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	86	33	8595

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
146	CL111	CL111	84	37	8537
076	172L1352	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CATAHOULA	88	37	8533
143	173L2048	CPRS/BASF 1-14	85	37	8532
078	172L1365	TRNS//TRNS/CL131	86	34	8520
039	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	87	35	8508
028	172L1019	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	86	39	8498
050	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	87	39	8496
073	172L1343	TRNS//TRNS/CL131	86	35	8482
040	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	86	39	8428
099	172M1670	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	84	40	8417
100	172M1681	NEPTUNE/3/NEPTUNE//BNGL/CL161	90	33	8384
115	171L1783	TAGGART/3/TRNS//CCDR/JEFF	87	36	8383
090	172A1739	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	86	34	8373
018	172L3329	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	86	36	8372
032	172L1074	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	86	39	8371
019	172L2001	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	88	33	8340
051	172L1178	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	84	35	8325
068	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	86	34	8298
077	172L1358	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/…	86	36	8288
102	172M1690	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	88	34	8284
086	172A1729	RU1002146*4//JZMN/08CLR004	87	36	8245
080	172L1424	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/…	86	37	8198
127	171M1859	NEPTUNE/JPTR	87	38	8176
052	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	87	36	8176
036	172L1112	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	89	33	8148
112	171L1718	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	87	39	8137
074	172L1345	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	87	33	8103
006	172L3047	PRESIDO/CL111	86	37	8059
144	173L2058	CHENIERE/BASF 2-31	88	35	8029
114	171L1772	CHNR/RU0901121	87	38	8007
084	172L1556	CCDR/JEFF//CFX-26/9702128/3/CL151	86	37	7998
047	172L1143	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	87	37	7998

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
046	172L1141	CHENIERE/3/CCDR//CFX-29/CCDR	87	36	7994
126	171M1858	NEPTUNE/JPTR	88	33	7977
033	172L1085	CL131/3/TRNS//CCDR/JEFF	85	37	7927
058	172L1247	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CPRS/KBNT//9502008-A/3/CFX-18//…	86	35	7910
035	172L1098	CCDR/CL131	86	38	7906
013	172L3127	CL131/3/TRNS//CCDR/JEFF	86	35	7897
023	172L2059	KBNT/CL111	89	39	7858
066	172L1319	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	88	36	7834
095	172M1647	NEPTUNE//BNGL/CL161/3/NEPTUNE	88	33	7828
071	172L1338	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF	86	37	7799
124	171M1852	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	86	34	7770
147	CL153	CL153	86	37	7769
025	172L2075	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	89	39	7759
065	172L1311	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	89	33	7758
063	172L1265	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	86	32	7757
007	172L3054	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	88	38	7754
150	JPTR	JUPITER	90	38	7730
092	172M1623	NEPTUNE//BNGL/CL161/3/RICO	87	37	7725
010	172L3098	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	88	38	7696
055	172L1213	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	86	38	7675
098	172M1669	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/…	86	38	7640
141	173L2029	CATAHOULA/BASF 2-18	90	40	7609
148	CL272	CL272	87	36	7578
070	172L1334	DREW//CCDR/CLPY 003	88	37	7550
041	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	87	38	7452
149	CHNR	CHENIERE	93	37	7410
137	173L2016	9302065/BASF 1-6	85	35	7367
067	172L1326	CL131//DREW/CLR 13/4/9502008-A/TACAURI//CLR 5/3/DREW/CFX-42	-25	35	7356
075	172L1350	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW//CHENIERE/LMNT	-26	33	7347
089	172A1737	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	88	39	7332
140	173L2019	9302065/BASF 1-6	85	35	7193
128	171M1863	NEPTUNE/9302065	88	34	7151

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	HDT	HTE	YIELD
003	172L3024	CPRS//CATAHOULA/CL111	87	37	7149
002	172L3015	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	87	39	7146
062	172L1263	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	85	33	7102
139	173L2018	9302065/BASF 1-6	86	36	7071
085	172L1566	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	85	40	7037
138	173L2017	9302065/BASF 1-6	86	37	6961
121	171M1843	CAFFEY/3/BNGL/9502065//EARL	87	35	6658
123	171M1851	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	86	38	6646
037	172L1129	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	86	38	6533
134	PVL108	CHENIERE/BASF 1-6	87	40	6448
027	172L1009	KBNT/CL111	87	34	6396
142	173L2039	CHENIERE//CCDR/JEFF/3/BASF 2-22	86	36	6337
064	172L1293	WELLS//CL131/CHENIERE	88	36	6287
116	171L1785	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	87	38	6235
026	172L2078	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	88	35	6185
011	172L3113	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	89	36	5974
136	173L2005	CATAHOULA/BASF 2-22	89	33	5956
131	173L1017	DREW/BASF 1-4	88	36	5935
096	172M1663	NEPTUNE//BNGL/CL161/3/NEPTUNE	87	38	5879
129	171M1871	9502065/3/MERC//MERC/…/4/BNGL//MERC/RICO/3/EARL	86	33	5664
024	172L2065	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	88	42	5236
145	PVL01	PVL01	89	37	4927

CLEARFIELD EXPERIMENTAL TRIAL

The Clearfield Experimental trial is conducted by the Rice Breeding Project in the major rice growing regions in Louisiana and Texas. The objective of this trial is to evaluate the adaptation and stability of advanced experimental Clearfield lines for a number of important agronomic and yield characteristics. Trial locations in 2018 included two on-farm test sites in Richland Parish, Louisiana, and Wharton County, Texas.

Thirty entries were tested in Louisiana as well as in Texas in a randomized complete block design with three replications. Varieties were seeded at 90 lb/A. Planting dates were: Richland, May 1, and Wharton, March 4. Harvest dates were: Richland, Aug. 21, and Wharton, July 18. Results from these trials are shown in Tables 1-2.

Table 1. Grain and agronomic performance of entries in the 2018 Clearfield Experimental trial, Richland Parish, Louisiana.

ENT	SOURCE	PEDIGREE	HTE	YIELD
030	RICETEC	CLXL745	39	10399
023	172L1217	TRNS//TRNS/CL131	37	8389
021	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	35	8330
026	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/3/9902028	35	8053
020	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/5/…	36	7849
007	172L1047	CHENIERE/CL111	39	7707
024	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	37	7655
001	172L3008	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	35	7389
017	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	37	7350
027	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	36	7278
019	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	36	7262
028	CL153	CL153	39	7191
003	172L3173	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	35	7187
012	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	36	7118
025	172L1343	TRNS//TRNS/CL131	40	7069
004	172L3338	M-401/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	37	6978
006	172L2070	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	35	6485
029	CL172	CL172	35	6480
002	172L3109	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	36	6478
005	172L2019	9302065/CL161	37	6475
013	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	36	6466
014	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	35	6430
018	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//CCDR/JEFF	38	6377
022	172L1216	TRNS//TRNS/CL131	35	6286
016	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	37	6278
009	172L1267	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	36	6033
015	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	36	5981
010	172L1418	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	36	5961
008	172L1266	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	33	5805
011	172L1420	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	35	5277

Table 2. Grain and agronomic performance of entries in the 2018 Clearfield Experimental trial, Wharton County, Texas.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
027	172M1704	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	89	39	9999	65.2	67.5
023	172L1217	TRNS//TRNS/CL131	3	82	33	8767	63.4	69.0
030	RICETEC	CLXL745	4	85	43	8699	60.9	69.8
021	172L1204	CCDR/JEFF//CFX-26/9702128/3/CL151	4	84	34	8574	65.8	70.6
018	172L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	85	35	8536	62.6	70.4
025	172L1343	TRNS//TRNS/CL131	4	84	33	8438	65.1	69.3
028	CL153	CL153	3	86	36	8403	65.5	70.4
020	172L1192	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/9502008/..	4	84	33	7753	64.7	70.2
002	172L3109	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	4	84	34	7712	63.9	70.9
017	172L1140	CHENIERE/3/CCDR//CFX-29/CCDR	4	83	35	7655	65.5	71.6
022	172L1216	TRNS//TRNS/CL131	5	83	33	7588	64.2	69.4
001	172L3008	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	3	85	34	7564	63.8	69.7
026	172M1667	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/…	3	89	38	7268	65.9	68.0
012	172L1131	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	3	86	34	7262	65.6	70.8
024	172L1331	9302065/4/CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR	4	85	31	7214	64.3	69.8
029	CL172	CL172	4	88	37	7125	64.3	69.3
004	172L3338	M-401/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	4	85	38	7116	62.5	69.2
013	172L1132	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	3	86	35	7066	65.8	70.6
019	172L1189	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	5	85	31	6810	63.7	69.6
016	172L1136	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	84	33	6799	64.5	71.1
006	172L2070	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	3	88	38	6721	64.4	69.2
007	172L1047	CHENIERE/CL111	4	85	35	6644	64.1	69.6
015	172L1134	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	86	34	6284	64.2	70.4
014	172L1133	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	87	33	6237	65.0	70.6
003	172L3173	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/…	4	83	33	6145	62.3	70.2
005	172L2019	9302065/CL161	4	87	37	6057	63.6	68.5
008	172L1266	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20						
009	172L1267	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20						
010	172L1418	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20						
011	172L1420	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20						

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

CLEARFIELD PRELIMINARY YIELD TRIAL

The Clearfield Preliminary Yield trials consist primarily of promising breeding nursery material that is ready to be tested in replicated yield trials. The material in these trials was screened for agronomic and grain characteristics in nurseries prior to this phase of testing. Promising experimental lines were evaluated for seedling vigor, maturity, plant height, lodging resistance, grain yield of main crop, and disease resistance.

Trials were conducted using standard agronomic practices (except that no fungicides were applied) at the H. Rouse Caffey Rice Research Station at Crowley, Louisiana. A randomized complete block design was applied to arrange test entries. The plot size was 4.66 x 16 ft. Seeding rate was 90 lb/A. The Clearfield Long-Grain Yield test was drill seeded on March 5 and harvested on July 25-26. The Clearfield Medium-Grain Yield test was drill seeded on March 15 and harvested on Aug. 1-2. Data is presented for the Long-Grain Yield test in Table 1 and for the Medium-Grain Yield test in Table 2.

Table 1. Grain and milling yields and agronomic performance of entries in the 2018 Clearfield Preliminary Long-Grain Yield test, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
750	RICETEC	CLXL745	5	84	43	11237	54.3	69.1
318	182L1318	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	87	36	10888	61.3	71.6
749	RICETEC	GEMINI 214 CL	5	90	46	10789	51.1	67.5
237	182L1237	TRNS//TRNS/CL131	5	86	35	10096	65.0	70.5
426	182L1426	CHENIERE/CL111	4	86	35	9736	62.4	72.1
587	182L1587	CPRS/KBNT//WELLS CFX 18/3/MBLE/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	89	32	9664	65.4	70.9
683	182L1683	CL151/CL111	5	89	35	9648	53.6	68.7
337	182L1337	CL131/CHENIERE/4/CPRS/KBNT//9502008-A /3/CCDR/JEFF	5	90	33	9640	68.5	73.0
685	182L1685	CL151/CL111	5	89	36	9626	53.3	67.9
745	CL151	CL151	3	90	36	9615	62.7	69.8
681	182L1681	CL151/CL111	5	88	39	9567	62.2	71.1
264	182L1264	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/CLPY 003//CFX-26/9702128	5	87	35	9566	55.8	70.0
723	172L3156	CPRS/KBNT//CFX 29/CCDR/3/06CFP952/4/9502008-A/DREW//CLR 20/3/CL111	5	91	40	9522	60.1	69.6
626	182L1626	CL163/CL153	4	88	37	9514	65.9	71.3
633	182L1633	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/RICO	4	91	33	9508	64.8	70.1
478	182L1478	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/CFX-18//CCDR/…	5	87	35	9504	63.9	71.5
698	182L1698	CL151/CL272	6	88	38	9464	52.9	69.6
479	182L1479	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	5	91	38	9454	68.0	72.2
236	182L1236	TRNS//TRNS/CL131	5	87	38	9444	63.9	69.7
506	182L1506	CL151/4/CL131/3/CPRS/KBNT//9502008-A	5	91	34	9430	59.9	70.1
625	182L1625	CL163/CL153	5	87	35	9422	62.3	69.9
395	182L1395	KBNT/CL151	4	91	37	9419		
135	182L1135	CCDR/JEFF//CFX-26/9702128/3/CL151	5	88	32	9406	66.2	72.6
221	182L1221	CL131/3/TRNS//CCDR/9502008-A	5	87	33	9355	63.8	72.1
425	182L1425	CHENIERE/CL111	4	86	37	9338	60.8	69.5
699	182L1699	CL151/CL272	6	87	36	9330	46.1	68.3
620	182L1620	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	5	86	35	9327	61.6	71.7
645	182L1645	9302065/CL151	5	91	39	9326	61.6	69.3

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
699	182L1699	CL151/CL272	6	87	36	9330	46.1	68.3
620	182L1620	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	5	86	35	9327	61.6	71.7
645	182L1645	9302065/CL151	5	91	39	9326	61.6	69.3
124	182L1124	CCDR/JEFF//CFX-26/9702128/3/CL151	5	89	35	9297	59.5	65.2
240	182L1240	TRNS//TRNS/CL131	4	88	39	9295	62.8	70.4
430	182L1430	CHENIERE/CL111	5	89	35	9272	56.5	68.4
457	182L1457	CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18/6/CL111	5	90	37	9260	66.3	71.2
170	182L1170	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	4	92	34	9252	58.9	68.7
413	182L1413	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	89	35	9252	59.5	69.1
583	182L1583	CPRS/KBNT//WELLS CFX 18/3/MBLE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	5	92	36	9226	66.8	71.4
597	182L1597	TRNS//CL111/CHENIERE	4	88	36	9216	58.7	68.5
485	182L1485	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	5	90	41	9210	67.0	71.7
136	182L1136	CCDR/JEFF//CFX-26/9702128/3/CL151	5	90	35	9209	63.9	71.0
340	182L1340	WELLS/CL111	4	91	37	9197		
127	182L1127	CCDR/JEFF//CFX-26/9702128/3/CL151	4	91	38	9172	66.1	71.9
724	172L3157	CPRS/KBNT//CFX 29/CCDR/3/06CFP952/4/9502008-A/DREW//CLR 20/3/CL111	5	89	38	9166	62.6	70.5
524	182L1524	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL131/3/CPRS/KBNT//9502008-A	6	92	34	9164	61.0	69.9
292	182L1292	TRNS//TRNS/CL131	4	86	37	9164	62.0	68.9
347	182L1347	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	90	37	9163		
480	182L1480	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	5	89	41	9154	64.7	71.3
522	182L1522	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL131/3/CPRS/KBNT//9502008-A	6	92	36	9149	61.5	70.4
294	182L1294	TRNS//TRNS/CL131	5	89	34	9134	61.6	68.9
093	182L1093	CCDR/JEFF/3/CFX-18//CPRS/KBNT/4/TRNS//CCDR/JEFF	4	90	33	9131	66.1	71.2
230	182L1230	CHENIERE/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	87	35	9108	64.2	72.7
308	182L1308	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/9502008-A/…	6	87	34	9099	55.6	68.1
579	182L1579	CL111/CHENIERE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	4	90	34	9086	58.8	69.0
377	182L1377	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	89	34	9084	65.9	72.2
390	182L1390	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	4	88	35	9078	65.3	71.8
138	182L1138	CCDR/JEFF//CFX-26/9702128/3/CL151	5	95	36	9076	67.0	71.7

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
571	182L1571	CL111/CHENIERE/6/CPRS/KBNT//WELLS CFX 18/5/TACAURI/3/CPRS//82CAY21/…	5	88	35	9075	66.0	71.3
477	182L1477	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/CFX-18//CCDR/…	5	90	35	9075	67.7	72.3
420	182L1420	CL131/CHENIERE//CATAHOULA/CL111	5	90	37	9072	58.7	69.7
470	182L1470	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	5	89	34	9069	64.1	72.1
134	182L1134	CCDR/JEFF//CFX-26/9702128/3/CL151	5	95	38	9063	67.5	71.5
486	182L1486	CL131/3/CPRS/KBNT//9502008-A /4/LGRU/CLR 11/4/9302065/3/CGX-29/AR 1142/LA 2031	7	89	36	9059	64.2	70.0
601	182L1601	CPRS/KBNT//WELLS CFX 18/3/MBLE/5/CPRS/3/9502008-A//AR 1188/CCDR/4/…	4	90	35	9053	62.5	69.5
234	182L1234	CFX18/LM-1/3/9502008-A//AR 1188/CCDR/4/CCDR	4	93	33	9053	63.7	72.0
594	182L1594	FRANCIS/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	4	88	36	9045	62.1	70.2
076	182L1076	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	90	33	9044	64.9	72.4
310	182L1310	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/9502008-A/…	5	89	31	9037	65.9	72.2
278	182L1278	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/MBLE	4	89	35	9036	64.5	71.3
117	182L1117	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	4	89	34	9032	61.8	69.7
558	182L1558	CATAHOULA/4/CCDR/3/CPRS/KBNT//WELLS CFX 18	6	87	37	9029	59.8	71.1
227	182L1227	CHENIERE/4/CFX18/LM-1/3/9502008-A//AR 1188/CCDR	4	85	33	9023	66.0	72.0
627	182L1627	CL163/CL153	4	90	36	9014	60.7	69.2
125	182L1125	CCDR/JEFF//CFX-26/9702128/3/CL151	5	91	35	8997	63.8	72.0
585	182L1585	CPRS/KBNT//WELLS CFX 18/3/MBLE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	5	91	35	8985	62.1	69.0
295	182L1295	TRNS//TRNS/CL131	4	89	33	8983	59.1	67.3
359	182L1359	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	91	35	8983	63.5	70.2
605	182L1605	CPRS/KBNT//WELLS CFX 18/3/MBLE/5/CPRS/3/9502008-A//AR 1188/CCDR/4/…	5	88	36	8981	63.1	70.0
482	182L1482	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	5	90	37	8971	64.1	70.8
263	182L1263	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/CLPY 003//CFX-26/9702128	5	87	35	8969	54.8	69.0
592	182L1592	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/9502008-A/DREW//CLR 20/3/CL111	4	88	37	8968	59.6	69.3
427	182L1427	CHENIERE/CL111	4	91	35	8958	66.2	71.9
580	182L1580	CL111/CHENIERE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	4	90	34	8946	63.8	70.7
700	182L1700	CL151/CL272	5	87	34	8945	48.3	67.9
137	182L1137	CCDR/JEFF//CFX-26/9702128/3/CL151	5	90	34	8945	62.1	70.3
622	182L1622	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	89	32	8941	62.9	71.6

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
662	182L1662	CHENIERE/CL111	5	89	35	8935	60.5	69.5
032	182L1032	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	88	36	8916		
560	182L1560	CATAHOULA/4/CCDR/3/CPRS/KBNT//WELLS CFX 18	5	89	34	8909	64.9	71.4
273	182L1273	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR//CFX-29/CCDR	4	92	35	8907	66.6	72.1
635	182L1635	CHENIERE/CL111	4	90	35	8905	60.7	69.3
498	182L1498	CL161/CHENIERE	6	90	36	8900	66.9	72.5
593	182L1593	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	88	33	8896	63.6	71.1
676	182L1676	CL111/Mermentau	4	87	35	8895	62.8	71.1
661	182L1661	CHENIERE/CL111	5	88	35	8893	64.2	70.6
481	182L1481	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	6	92	38	8882	66.4	72.0
414	182L1414	CL131/CHENIERE//TRNS	4	86	37	8872	63.4	70.5
516	182L1516	CL111/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	5	88	35	8870	62.0	69.6
219	182L1219	CPRS/KBNT//WELLS CFX 18/3/TRNS//9502008-A/DREW	5	88	33	8868	58.8	70.2
734	172L3323	CL131/CHENIERE//TRNS	5	86	37	8868	60.7	69.5
520	182L1520	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	6	91	37	8848		
317	182L1317	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	88	33	8846	63.1	69.9
379	182L1379	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	4	87	33	8844	61.8	71.1
547	182L1547	CL111/4/CPRS/9502008-A//AR 1188/CCDR/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/..	5	89	36	8837		
655	182L1655	CHENIERE/CL111	5	89	37	8836	60.8	69.9
378	182L1378	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	88	32	8835	66.1	72.4
433	182L1433	CHENIERE/CL111	4	87	34	8834	59.4	69.2
159	182L1159	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/… /6/TRNS//CCDR/9502008-A	5	88	36	8829	52.8	68.2
501	182L1501	CL151//CL131/CHENIERE	5	92	36	8824	68.7	73.1
476	182L1476	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/CFX-18//CCDR/…	5	87	36	8823	65.4	71.4
674	182L1674	CL111/Mermentau	5	87	35	8822	63.3	69.8
288	182L1288	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL111	5	90	37	8821		
458	182L1458	CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18/6/CL111	5	90	37	8819		
027	182L1027	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	89	32	8816		
584	182L1584	CPRS/KBNT//WELLS CFX 18/3/MBLE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	4	92	37	8815	65.9	70.9

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
559	182L1559	CATAHOULA/4/CCDR/3/CPRS/KBNT//WELLS CFX 18	5	89	36	8815	62.1	70.4
502	182L1502	CL151//CL131/CHENIERE	5	92	39	8811	66.4	72.0
562	182L1562	CPRS/KBNT//WELLS CFX 18/5/TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/CFX18/6/…	5	87	32	8805	65.1	71.0
391	182L1391	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	5	88	33	8804	62.1	70.3
304	182L1304	TRNS//TRNS/CL131	5	88	36	8801	57.0	68.6
442	182L1442	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	4	88	34	8799	66.1	72.6
300	182L1300	TRNS//TRNS/CL131	4	87	34	8792	63.8	70.7
303	182L1303	TRNS//TRNS/CL131	5	87	35	8788	58.0	67.6
715	172L3008	CPRS/4/CL131/3/CPRS/KBNT//9502008-A	5	89	32	8786	61.2	69.3
434	182L1434	CHENIERE/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	5	89	35	8777	65.4	72.4
696	182L1696	CL151/CL272	5	90	38	8776	62.3	69.8
658	182L1658	CHENIERE/CL111	6	86	36	8773	67.7	72.8
690	182L1690	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	5	92	38	8767	63.3	72.1
375	182L1375	9302065/CL152	4	87	36	8765	66.7	72.8
663	182L1663	CHENIERE/CL111	5	90	35	8760	64.5	70.7
073	182L1073	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	90	33	8760		
239	182L1239	TRNS//TRNS/CL131	5	88	36	8759	61.6	68.6
604	182L1604	CPRS/KBNT//WELLS CFX 18/3/MBLE/5/CPRS/3/9502008-A//AR 1188/CCDR/4/CPRS/…	4	89	35	8755	63.6	70.3
029	182L1029	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	88	32	8752		
643	182L1643	FRANCIS/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	6	90	34	8747	58.2	69.2
293	182L1293	TRNS//TRNS/CL131	5	89	34	8747	63.7	69.7
126	182L1126	CCDR/JEFF//CFX-26/9702128/3/CL151	5	92	35	8743	65.3	71.8
602	182L1602	CPRS/KBNT//WELLS CFX 18/3/MBLE/5/CPRS/3/9502008-A//AR 1188/CCDR/4/CPRS/…	5	89	34	8736	64.6	70.7
611	182L1611	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/…	4	90	37	8733	65.2	71.0
621	182L1621	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	5	88	33	8731	62.1	71.7
490	182L1490	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	5	87	34	8730	59.4	69.5
408	182L1408	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	88	36	8728		
298	182L1298	TRNS//TRNS/CL131	5	87	34	8726	58.9	67.8
472	182L1472	WELLS/CFX-18/5/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/6/MBLE	5	88	35	8725	58.7	70.1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
344	182L1344	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	90	32	8723		
475	182L1475	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/CFX-18//CCDR/…	6	86	35	8720	52.6	70.4
419	182L1419	CL131/CHENIERE//TRNS	5	87	33	8717	61.3	69.2
509	182L1509	CL111//CATAHOULA/CL111	5	89	36	8713		
368	182A1368	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	5	92	36	8708	66.4	70.7
394	182L1394	KBNT/CL151	4	92	37	8708	62.6	69.9
737	172L2070	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	90	37	8707	66.3	71.4
733	172L3320	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	93	40	8707	62.9	69.5
657	182L1657	CHENIERE/CL111	5	88	34	8697	59.4	69.9
299	182L1299	TRNS//TRNS/CL131	5	86	37	8695	60.8	68.6
342	182L1342	CL111/CL152	5	90	35	8692		
026	182L1026	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	90	31	8690		
581	182L1581	CL111/CHENIERE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	4	90	35	8688	62.1	70.6
680	182L1680	CL151/CL111	5	91	39	8686	63.5	71.3
417	182L1417	CL131/CHENIERE//TRNS	5	89	32	8686	63.5	70.6
121	182L1121	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A /4/CL131	5	89	32	8684	61.4	70.6
677	182L1677	CL111/Mermentau	4	89	33	8684	63.9	70.9
244	182L1244	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	5	87	35	8682		
507	182L1507	CL111//CATAHOULA/CL111	5	88	37	8676		
119	182L1119	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	4	90	35	8676	60.8	70.1
570	182L1570	CL111/CHENIERE/6/CPRS/KBNT//WELLS CFX 18/5/TACAURI/3/CPRS//…	5	88	33	8668		
463	182L1463	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/5/9502008-A/DREW//CLR 20/4/…	5	91	39	8667	63.8	70.4
703	182L1703	CL151/CL272	5	91	37	8667	60.0	70.4
484	182L1484	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	5	90	34	8659	63.3	69.4
595	182L1595	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	86	37	8651	59.6	70.0
561	182L1561	CPRS/KBNT//WELLS CFX 18/5/TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/…	4	89	34	8650	66.9	71.6
638	182L1638	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	5	89	35	8647		
383	182L1383	FRANCIS/5/9502008-A/DREW//CFX26/WELLS/4/CPRS/3/CFX29//AR 1142/LA 2031	4	89	30	8637	64.8	70.5
743	172A3357	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	4	90	37	8635	64.7	69.8

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
118	182L1118	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	4	89	34	8626	61.8	68.9
691	182L1691	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	4	89	38	8625	67.2	71.9
656	182L1656	CHENIERE/CL111	5	87	34	8625	62.8	71.2
577	182L1577	CL111/CHENIERE//CL111/CCDR	4	89	33	8616		
517	182L1517	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/9502008-A/DREW//CLR 20/3/CPRS/…	6	89	36	8614	62.1	70.5
727	172L3227	TRNS//TCL111/CHENIERE	5	85	37	8611	56.5	68.4
598	182L1598	TRNS//CL111/CHENIERE	4	86	37	8606	55.9	66.8
010	182L1010	DREW/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	4	91	31	8602		
436	182L1436	CHENIERE/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	5	89	33	8599	65.5	72.2
747	CL172	CL172	4	89	36	8594	61.5	70.0
074	182L1074	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//C…	4	93	37	8592	61.7	70.5
746	CL153	CL153	4	89	34	8591	57.8	68.7
629	182L1629	CL163/CL153	4	89	38	8586	62.0	70.1
609	182L1609	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	5	90	37	8580	67.7	71.8
725	172L3173	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	5	85	34	8578	65.9	72.1
443	182L1443	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	4	92	34	8577	63.7	70.9
314	182L1314	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	90	36	8574	57.0	69.0
297	182L1297	TRNS//TRNS/CL131	5	90	35	8574	54.4	67.4
415	182L1415	CL131/CHENIERE//TRNS	5	87	32	8559	58.0	68.3
091	182L1091	CCDR/JEFF/3/CFX-18//CPRS/KBNT/4/TRNS//CCDR/JEFF	5	88	36	8558	60.4	70.2
128	182L1128	CCDR/JEFF//CFX-26/9702128/3/CL151	5	90	34	8558	58.2	71.1
366	182A1366	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	4	91	35	8554	65.5	71.2
446	182L1446	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	5	91	34	8550	67.8	72.4
323	182L1323	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/CFX-18//…	4	88	35	8548		
133	182L1133	CCDR/JEFF//CFX-26/9702128/3/CL151	4	92	34	8544	63.5	69.8
410	182L1410	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	92	34	8542		
404	182L1404	CPRS//CATAHOULA/CL111	4	89	34	8542	65.3	72.0
382	182L1382	FRANCIS/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/…/4/CFX-18	5	90	36	8540	65.1	71.3

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
392	182L1392	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	4	88	36	8536	65.9	72.3
660	182L1660	CHENIERE/CL111	5	86	35	8534	62.7	70.1
678	182L1678	CL111/Mermentau	4	91	33	8532	66.8	71.4
305	182L1305	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	88	35	8531	63.5	70.5
564	182L1564	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/4/CPRS/…	4	91	33	8530		
701	182L1701	CL151/CL272	5	89	39	8527	64.0	69.6
163	182L1163	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/…/6/CPRS	4	91	36	8524		
387	182L1387	FRANCIS/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	5	90	37	8521		
599	182L1599	TRNS//CL111/CHENIERE	4	85	37	8519	62.2	69.5
600	182L1600	TRNS//CL111/CHENIERE	5	88	35	8516	59.9	69.7
566	182L1566	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/4/CPRS/…	4	89	35	8515		
389	182L1389	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	5	89	34	8511	65.6	71.8
316	182L1316	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	88	33	8510	63.1	71.9
664	182L1664	CHENIERE/CL111	5	88	33	8510	62.5	71.2
563	182L1563	CPRS/KBNT//WELLS CFX 18/5/TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/CFX18/…	4	89	34	8507	65.4	72.3
679	182L1679	CL151/CL111	5	90	35	8506	63.8	70.7
267	182L1267	CFX-18//CCDR/9770532 DH2/3/9502008-A//AR 1188/CCDR/4/9502008//KATY/…	5	89	32	8493	66.7	72.0
354	182L1354	CL131/CHENIERE/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	4	90	36	8493		
129	182L1129	CCDR/JEFF//CFX-26/9702128/3/CL151	5	91	37	8483	68.5	72.6
518	182L1518	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/9502008-A/DREW//CLR 20/3/CPRS/…	6	91	37	8482	58.6	68.2
259	182L1259	CFX18/LM-1/3/9502008-A//AR 1188/CCDR/4/AR 1188/CCDR//9502008/LGRU	4	90	33	8479	61.4	69.8
087	182L1087	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/…	5	91	33	8474		
092	182L1092	CCDR/JEFF/3/CFX-18//CPRS/KBNT/4/TRNS//CCDR/JEFF	4	88	35	8467	67.5	73.5
503	182L1503	CL151/4/CL131/3/CPRS/KBNT//9502008-A	6	90	36	8466	63.2	69.9
437	182L1437	CHENIERE/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	5	88	34	8466	62.0	71.1
229	182L1229	CHENIERE/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	4	89	34	8461	65.5	72.3
628	182L1628	CL163/CL153	5	92	37	8459	66.3	72.0
209	182L1209	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	4	90	35	8458		
325	182L1325	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	35	8454		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
495	182L1495	CL161//CATAHOULA/CL111	5	92	37	8450		
624	182L1624	CL163/CL153	5	89	36	8449	55.4	67.4
358	182L1358	TRNS//CCDR/9502008-A/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//…	5	92	35	8446	65.4	71.1
428	182L1428	CHENIERE/CL111	5	89	33	8445	66.8	71.4
270	182L1270	CLPY 003 (CL 006)//CFX-26/9702128/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	89	32	8444		
279	182L1279	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/MBLE	4	88	34	8439	64.5	71.6
432	182L1432	CHENIERE/CL111	5	86	35	8439	63.2	71.5
588	182L1588	CPRS/KBNT//WELLS CFX 18/3/MBLE/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	90	34	8438	62.3	69.3
360	182L1360	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX 18/6/TACAURI/3/CPRS//…	4	88	36	8435		
539	182A1539	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	5	90	35	8434	68.2	71.3
515	182L1515	CL111/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	5	90	37	8434		
266	182L1266	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/CFX-18//CPRS/KBNT/3/CFX-29/CCDR	5	87	34	8429	67.3	72.0
487	182L1487	CL131/3/CPRS/KBNT//9502008-A /5/9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/…	5	91	35	8428	62.6	69.5
684	182L1684	CL151/CL111	5	88	34	8427	65.0	71.6
222	182L1222	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	89	33	8427		
422	182L1422	CL131/CHENIERE//CATAHOULA/CL111	4	89	35	8426		
416	182L1416	CL131/CHENIERE//TRNS	5	90	33	8425	65.7	71.3
376	182L1376	9302065/CL151	4	91	38	8423		
109	182L1109	FRANCIS/CLR 13//9502008-A/DREW/3/MERMENTAU	5	87	35	8421		
504	182L1504	CL151/4/CL131/3/CPRS/KBNT//9502008-A	5	89	34	8418	63.6	69.8
131	182L1131	CCDR/JEFF//CFX-26/9702128/3/CL151	5	90	32	8412	64.6	71.7
582	182L1582	CPRS/KBNT//WELLS CFX 18/3/MBLE/4/CPRS/KBNT//CFX 29/CCDR/3/06CFP952	5	89	34	8405	59.3	69.2
707	182L1707	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	88	35	8403		
388	182L1388	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	5	89	36	8398	63.5	71.0
618	182L1618	CL131/3/CPRS/KBNT//9502008-A /5/9502008-A/DREW//CFX 26/WELLS/4/…	4	92	35	8398	64.9	70.6
551	182L1551	CL111/4/CPRS/9502008-A//AR 1188/CCDR/5/9502008-A/DREW//CLR 20/4/CPRS/…	5	87	35	8395		
523	182L1523	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL131/3/CPRS/KBNT//9502008-A	6	92	34	8393	65.8	71.0
554	182L1554	CATAHOULA/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/5/CHENIERE	5	91	37	8391		
688	182L1688	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	4	90	36	8390	65.6	71.4

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
557	182L1557	CATAHOULA/4/CCDR/3/CPRS/KBNT//WELLS CFX 18	6	89	33	8388	65.2	71.8
065	182L1065	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	5	89	35	8388		
409	182L1409	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	90	35	8383		
384	182L1384	FRANCIS/5/9502008-A/DREW//CFX26/WELLS/4/CPRS/3/CFX29//AR 1142/LA 2031	4	86	32	8369	56.1	68.6
258	182L1258	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/AR 1188/CCDR//9502008/LGRU	5	89	33	8367	67.6	72.9
648	182L1648	KBNT/CL111	5	90	33	8363		
214	182L1214	CL131/CHENIERE/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	90	32	8355		
357	182L1357	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/6/TACAURI/3/CPRS//82CAY21/…	5	88	35	8354		
639	182L1639	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	5	85	34	8350	65.1	71.4
111	182L1111	FRANCIS/CLR 13//9502008-A/DREW/3/MERMENTAU	4	90	34	8350		
449	182L1449	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	4	89	35	8333	59.6	70.2
210	182L1210	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	5	90	34	8331		
527	182L1527	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	6	93	38	8328	65.5	71.4
736	172L2019	9302065/CL161	5	93	35	8323		
545	182L1545	CL111/4/CPRS/9502008-A//AR 1188/CCDR/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/..	4	92	36	8321		
272	182L1272	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CCDR	5	89	34	8319	58.7	69.3
254	182L1254	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/AR 1142/LA 2031	5	90	33	8318		
718	172L3066	CHENIERE/CL111	5	89	37	8317	68.1	72.2
672	182L1672	CL111/Maybelle	4	85	32	8315		
094	182L1094	CCDR/JEFF/3/CFX-18//CPRS/KBNT/4/TRNS//CCDR/JEFF	5	87	36	8313	61.3	69.1
161	182L1161	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/… /6/TRNS//CCDR/9502008-A	4	91	36	8312	66.1	71.3
448	182L1448	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	5	92	34	8308	65.4	71.9
675	182L1675	CL111/Mermentau	4	87	35	8308	59.7	69.6
168	182L1168	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	91	36	8307		
362	182L1362	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX 18/6/TACAURI/3/…	4	88	35	8302		
440	182L1440	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	4	89	34	8296	64.4	71.0
489	182L1489	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	6	88	36	8290	58.7	70.1
447	182L1447	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	5	91	34	8290	63.3	71.4
568	182L1568	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/4/…	4	90	34	8289		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
444	182L1444	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	4	93	36	8280	66.7	71.5
030	182L1030	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	91	34	8279		
550	182L1550	CL111/4/CPRS/9502008-A//AR 1188/CCDR/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	89	35	8277		
042	182L1042	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	90	33	8274		
441	182L1441	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	5	90	35	8273	59.4	68.4
277	182L1277	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/MBLE	4	91	35	8273	60.9	69.9
459	182L1459	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/5/9502008-A/DREW//CLR 20/4/…	6	90	38	8269		
686	182L1686	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	4	89	35	8268	61.4	69.4
671	182A1671	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	6	90	36	8264		
659	182L1659	CHENIERE/CL111	5	88	36	8263	68.1	72.8
630	182L1630	CL163/CL153	5	88	37	8262	64.8	71.1
586	182L1586	CPRS/KBNT//WELLS CFX 18/3/MBLE/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	5	90	32	8261	63.5	70.2
549	182L1549	CL111/4/CPRS/9502008-A//AR 1188/CCDR/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	90	34	8260		
172	182L1172	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	5	88	37	8257	55.5	68.7
653	182L1653	LAKAST/5/9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	88	35	8252		
183	182L1183	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	90	34	8249		
412	182L1412	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	92	35	8245	66.1	71.2
572	182L1572	CL111/CHENIERE//CL111/CCDR	5	90	34	8244		
083	182L1083	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	5	90	34	8243		
112	182L1112	FRANCIS/CLR 13//9502008-A/DREW/3/MERMENTAU	5	87	32	8240		
309	182L1309	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/9502008-A/…	4	88	32	8238	63.1	71.8
525	182L1525	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	6	92	37	8237	64.6	71.6
105	182L1105	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	4	92	32	8233		
330	182L1330	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	85	36	8230	61.9	70.2
531	182L1531	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	6	91	38	8229	64.7	71.5
262	182L1262	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/AR 1188/CCDR//9502008/LGRU	5	86	34	8227	67.5	72.5
232	182L1232	9502008/3/MBLE//LMNT/20001-5/4/CFX-18//…/4/TRNS//CCDR/JEFF	4	91	32	8224		
271	182L1271	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CCDR	5	88	34	8223	63.9	71.2
061	182L1061	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	89	35	8222		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
473	182L1473	WELLS/CFX-18/5/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/6/MBLE	6	89	35	8221	63.8	71.3
687	182L1687	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	5	91	35	8217	66.5	71.5
233	182L1233	LGRU/LCSN/3/CFX-18//CCDR/9770532 DH2/4/CFX-18//CPRS/KBNT/3/CFX-29/CCDR	5	87	32	8210		
338	182L1338	9502008-A/TACAURI//CLR 5/3/DREW/CFX-18/4/DREW//CHENIERE/LMNT	4	91	36	8208		
148	182L1148	TRNS//TRNS/CL131	6	89	36	8204	63.8	68.5
130	182L1130	CCDR/JEFF//CFX-26/9702128/3/CL151	4	92	34	8195	65.7	72.4
115	182L1115	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	5	90	34	8195	61.8	69.4
493	182L1493	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	6	88	35	8192	64.5	70.9
575	182L1575	CL111/CHENIERE//CL111/CCDR	5	89	34	8190		
555	182L1555	CATAHOULA/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/5/CHENIERE	5	90	35	8187		
623	182L1623	FRANCIS/5/9502008-A/DREW//CFX26/WELLS/4/CPRS/3/CFX29//AR 1142/LA 2031	5	89	33	8184	62.2	69.9
612	182L1612	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/…	4	90	36	8182	64.6	71.1
176	182L1176	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	89	32	8180		
435	182L1435	CHENIERE/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	4	87	36	8179	63.3	70.5
689	182L1689	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	5	92	36	8179	67.2	72.2
499	182L1499	CL151//CL131/CHENIERE	5	91	36	8179	62.0	69.0
492	182L1492	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	6	90	37	8177	63.6	71.0
038	182L1038	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	89	34	8173		
364	182L1364	MERMENTAU/3/JZMN/08CLR004//JZMN	5	90	33	8172		
526	182L1526	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	6	92	37	8168	65.0	71.7
152	182L1152	TRNS//TRNS/CL131	5	91	33	8167	60.7	68.6
381	182L1381	FRANCIS/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/…/4/CFX-18	5	89	32	8165	64.5	71.0
336	182L1336	CL131/CHENIERE/4/CPRS/KBNT//9502008-A /3/CCDR/JEFF	5	91	34	8152	65.3	71.6
353	182L1353	CL131/CHENIERE/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	90	35	8148		
160	182L1160	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/… /6/TRNS//CCDR/9502008-A	5	89	36	8145	63.4	71.5
512	182L1512	CL111//CATAHOULA/CL111	5	90	36	8144		
529	182L1529	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	6	93	37	8141	65.1	70.9
226	182L1226	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2032/4/CL152	5	89	33	8140		
107	182L1107	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	5	88	37	8139		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
510	182L1510	CL111//CATAHOULA/CL111	5	91	36	8132		
454	182L1454	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	6	88	36	8128		
742	172L1420	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//…	5	88	34	8128		
066	182L1066	CCDR//CFX-29/CCDR/3/CCDR	5	92	33	8120		
207	182L1207	TRNS//CCDR/9502008-A/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	93	36	8119		
589	182L1589	CPRS/KBNT//WELLS CFX 18/3/MBLE/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	91	33	8116	64.8	71.0
406	182L1406	PRESIDO/CL111	5	81	32	8116		
064	182L1064	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	6	88	34	8114		
619	182L1619	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	4	90	33	8113	58.7	70.2
590	182L1590	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	5	90	36	8113		
143	182L1143	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	88	33	8108	63.1	71.2
729	172L3308	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/RICO	5	91	38	8107	66.4	71.5
453	182L1453	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/…	6	88	37	8104	65.7	71.6
460	182L1460	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/5/9502008-A/DREW//CLR 20/4/…	6	91	37	8102		
429	182L1429	CHENIERE/CL111	5	89	35	8095	61.3	70.3
114	182L1114	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	5	90	34	8094	64.5	71.0
180	182L1180	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	90	34	8090		
260	182L1260	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	4	87	33	8086		
553	182L1553	CATAHOULA/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/5/CHENIERE	5	92	33	8085		
058	182L1058	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	90	34	8084		
636	182L1636	CHENIERE/CL111	5	93	35	8082	65.8	403.3
208	182L1208	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	5	91	32	8082		
007	182L1007	CCDR/CL131	5	88	38	8079	59.4	70.0
466	182L1466	CATAHOULA/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	6	89	38	8078		
282	182L1282	CL131/3/CPRS/KBNT//9502008-A/4/MBLE	5	91	35	8069		
536	182A1536	JZMN/08CLR004//RU0802146/3/JZMN2 /4/CL JAZZMAN	6	89	35	8067		
606	182L1606	FRANCIS/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	4	89	34	8063		
735	172L3338	M-401/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	5	90	37	8062		
744	CL111	CL111	4	86	35	8060	56.0	69.9

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
028	182L1028	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	90	35	8058		
720	172L3109	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/3/…	6	90	33	8054	62.9	71.3
345	182L1345	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	89	31	8052		
431	182L1431	CHENIERE/CL111	5	90	34	8052	66.2	71.7
178	182L1178	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	90	32	8049		
015	182L1015	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR//CFX-29/CCDR	4	91	37	8047		
085	182L1085	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	5	91	32	8047		
311	182L1311	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	90	36	8043	53.0	68.1
108	182L1108	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	5	90	35	8042		
617	182L1617	CL131/3/CPRS/KBNT//9502008-A /5/9502008-A/DREW//CFX 26/WELLS/…	5	89	34	8041		
692	182L1692	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	4	89	37	8040	68.3	72.3
682	182L1682	CL151/CL111	4	91	35	8040	64.1	70.8
403	182L1403	CPRS/4/CL131/3/CPAR/KBNT//9502008-A	4	89	35	8040		
329	182L1329	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	87	33	8035	63.7	71.1
488	182L1488	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	6	90	35	8034	60.6	68.6
576	182L1576	CL111/CHENIERE//CL111/CCDR	5	89	34	8033		
385	182L1385	FRANCIS/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	4	92	33	8029		
120	182L1120	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A /4/CL131	5	91	34	8026	63.6	71.1
284	182L1284	CL161//CATAHOULA/CL111	4	96	37	8024		
184	182L1184	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	91	35	8022		
708	182L1708	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	89	33	8020		
220	182L1220	CL131/TRNS	5	88	34	8020		
717	172L3062	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	5	93	36	8017		
022	182L1022	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	5	94	35	8017		
228	182L1228	CHENIERE/4/CFX18/LM-1/3/9502008-A//AR 1188/CCDR	5	86	33	8013	60.7	69.2
640	182L1640	CL131/3/TRNS//CCDR/JEFF	6	88	34	8009		
089	182L1089	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	4	91	33	8008		
324	182L1324	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//…	4	90	32	8007		
319	182L1319	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	89	35	8007		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
355	182L1355	CL131/CHENIERE/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	90	34	8006		
726	172L3179	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	89	38	8003		
296	182L1296	TRNS//TRNS/CL131	6	88	36	8002		
335	182L1335	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/…/6/CATAHOULA	5	90	32	7996		
405	182L1405	CPRS//CATAHOULA/CL111	4	89	36	7992		
162	182L1162	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/… /6/TRNS//CCDR/9502008-A	6	89	35	7992	59.7	70.2
500	182L1500	CL151//CL131/CHENIERE	6	91	36	7991	63.9	71.5
451	182L1451	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/CPRS/..	4	90	33	7991	64.3	72.2
613	182L1613	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/…	5	91	33	7983	60.3	69.2
313	182L1313	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	89	33	7982		
175	182L1175	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	33	7981		
339	182L1339	WELLS/CL111	5	90	35	7979		
099	182L1099	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	5	85	34	7978		
231	182L1231	9502008/3/MBLE//LMNT/20001-5/4/CFX-18//…/4/TRNS//CCDR/JEFF	4	91	31	7976		
088	182L1088	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/…	4	91	34	7975		
474	182L1474	WELLS/CFX-18/5/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/6/MBLE	6	88	33	7975	62.6	72.0
055	182L1055	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	87	37	7975		
670	182A1670	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	4	91	35	7974		
514	182L1514	CL111//CATAHOULA/CL111	6	91	35	7971		
528	182L1528	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	5	93	37	7968		
224	182L1224	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	88	33	7967		
320	182L1320	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	89	36	7963		
483	182L1483	CPRS/KBNT//WELLS CFX 18/3/MBLE/3/CL151	6	89	36	7963	61.4	69.7
315	182L1315	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	90	36	7962		
033	182L1033	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	90	33	7958		
367	182A1367	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	4	91	36	7958	67.3	71.1
113	182L1113	FRANCIS/CLR 13//9502008-A/DREW/3/MERMENTAU	4	88	31	7957		
450	182L1450	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/9502008-A/DREW//CLR 20/3/…	4	89	32	7955	61.7	70.3

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
156	182L1156	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	89	35	7952		
565	182L1565	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/4/CPRS/…	4	91	36	7950		
071	182L1071	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	4	94	33	7947		
281	182L1281	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/AR 1142/LA 2031	5	90	34	7936		
616	182L1616	KBNT/CL111	5	90	33	7929		
608	182L1608	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	92	35	7928		
607	182L1607	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	4	89	36	7926		
025	182L1025	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	87	33	7924		
530	182L1530	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL151	5	91	38	7913		
748	CLJ01	CLJ01	3	90	35	7910	64.6	70.0
393	182L1393	KBNT/CL111	4	90	38	7909		
280	182L1280	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/MBLE	4	88	33	7908	59.6	70.8
496	182L1496	CL161/CHENIERE	6	89	34	7903		
116	182L1116	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A/6/KATY/CPRS//NWBT/KATY/3/…	5	91	34	7902	65.7	70.9
123	182L1123	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A /4/CL111	5	90	35	7900		
217	182L1217	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/6/TACAURI/3/CPRS//82CAY21/…	5	88	37	7894		
082	182L1082	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/…	5	90	32	7887		
177	182L1177	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	88	34	7885		
462	182L1462	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/5/9502008-A/DREW//CLR 20/4/…	6	91	39	7884		
343	182L1343	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	90	34	7880		
556	182L1556	CATAHOULA/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/5/CHENIERE	5	87	36	7874		
283	182L1283	CL131/3/CPRS/KBNT//9502008-A/4/MBLE	5	91	30	7867		
494	182L1494	CL161//CATAHOULA/CL111	6	92	38	7866		
326	182L1326	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	89	32	7865		
380	182L1380	FRANCIS/5/LGRU/CLR 22/4/96020653CFX-29/AR 1142/LA 2031	5	86	34	7863	59.1	70.8
540	182A1540	JZMN/08CLR004//RU0802146/3/JZMN2/4/ JZMN/08CLR004//RU0802146/3/JZMN2	5	90	33	7862	66.5	71.0
439	182L1439	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	4	90	34	7858	65.2	71.1
268	182L1268	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/5/9502008/3/MBLE//LMNT/20001-5/4/CFX-18//…	4	89	32	7848		
068	182L1068	CCDR//CFX-29/CCDR/3/CCDR	4	92	33	7848		
095	182L1095	CCDR/JEFF/3/CFX-18//CPRS/KBNT/4/TRNS//CCDR/JEFF	5	90	37	7845	60.4	69.8

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
020	182L1020	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	5	95	35	7834		
615	182L1615	CL131/3/CPRS/KBNT//9502008-A/4/MBLE	5	90	32	7832		
709	182L1709	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	88	34	7831		
327	182L1327	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	90	33	7828		
386	182L1386	FRANCIS/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	5	90	33	7828		
186	182L1186	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	91	33	7826		
014	182L1014	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/DREW	5	93	32	7826		
040	182L1040	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	89	35	7820		
328	182L1328	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	32	7814		
647	182L1647	FRANCIS/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	5	90	33	7807	62.3	69.7
215	182L1215	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/6/TACAURI/3/CPRS//…	4	88	36	7806		
673	182L1673	CL111/Maybelle	4	91	32	7806		
241	182L1241	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	84	33	7803		
402	182L1402	CPRS/4/CL131/3/CPAR/KBNT//9502008-A	4	91	35	7803		
024	182L1024	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	5	93	33	7802		
019	182L1019	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	4	95	34	7802		
185	182L1185	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	90	33	7802		
541	182L1541	DREW/5/CPRS/3/9502008-A//AR 1188/CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	4	92	34	7799		
363	182L1363	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/JZMN/08CLR004//JZMN	5	90	34	7797		
155	182L1155	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	86	35	7794		
464	182L1464	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/4/CATAHOULA/CL111	6	90	37	7792		
242	182L1242	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	89	33	7791		
468	182L1468	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	6	90	32	7784		
174	182L1174	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	87	33	7782		
122	182L1122	9502008-A/DREW//CLR 20/3/CPRS/KBNT//9502008-A /4/CL111	5	90	34	7782		
053	182L1053	CHENIERE/3/CCDR//CFX-29/CCDR	4	94	35	7776		
147	182L1147	TRNS//TRNS/CL131	5	86	36	7774		
667	182A1667	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	90	38	7773		
461	182L1461	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/5/9502008-A/DREW//CLR 20/4/…	6	91	38	7773		
469	182L1469	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/9502008/4/…	6	91	34	7769		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
144	182L1144	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	6	89	36	7768	59.4	69.5
642	182L1642	CL131/3/CCDR//CFX-29/CCDR	5	89	31	7761		
652	182L1652	LAKAST/5/9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	88	35	7760		
182	182L1182	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	90	33	7760		
056	182L1056	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	90	32	7754		
704	182L1704	CL151/CL272	6	92	36	7753		
031	182L1031	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	89	36	7752		
097	182L1097	CATAHOULA/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/9502008-A/TACAURI//CLR5	5	91	36	7752		
641	182L1641	CL131/3/TRNS//CCDR/JEFF	5	89	32	7749		
351	182L1351	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	5	88	34	7744		
223	182L1223	CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	92	32	7741		
181	182L1181	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	90	32	7735		
552	182L1552	CL111/4/CPRS/9502008-A//AR 1188/CCDR/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//…	4	88	35	7735		
290	182L1290	MBLE/4/DREW/CFX-18/3/CFX-18//CCDR/9770532 DH2	5	88	32	7728		
253	182L1253	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/CFX-18//CCDR/…	5	91	32	7727	58.5	69.9
467	182L1467	CATAHOULA/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	7	88	37	7726		
371	182L1371	MBLE/4/95025008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	5	84	30	7721		
702	182L1702	CL151/CL272	4	92	37	7721	66.1	71.4
603	182L1603	CPRS/KBNT//WELLS CFX 18/3/MBLE/5/CPRS/3/9502008-A//AR 1188/CCDR/4/CPRS/…	4	91	33	7712		
346	182L1346	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	89	32	7709		
060	182L1060	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	5	88	34	7704		
739	172L1266	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	35	7704		
471	182L1471	WELLS/CFX-18/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/6/LGRU/CLR 11/4/…	5	88	36	7702		
740	172L1267	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	34	7695		
465	182L1465	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/4/CATAHOULA/CL111	6	90	36	7689		
269	182L1269	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/5/9502008/3/MBLE//LMNT/20001-5/4/CFX-18//..	4	87	34	7686		
312	182L1312	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	90	34	7686		
548	182L1548	CL111/4/CPRS/9502008-A//AR 1188/CCDR/5/9502008-A/DREW//CLR 20/4/CPRS/…	4	91	32	7681		
614	182L1614	CL131/3/CPRS/KBNT//9502008-A/4/MBLE	5	91	32	7677		
211	182L1211	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	5	88	33	7676		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
216	182L1216	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/6/TACAURI/3/CPRS//..	5	89	36	7675		
307	182L1307	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/9502008-A/…	5	89	32	7673		
632	182L1632	PRESIDO/CL111	6	88	35	7672		
173	182L1173	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	4	89	34	7670		
713	182L1713	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	5	91	35	7669		
191	182L1191	CL131/CHENIERE/4/CPRS/KBNT//9502008-A /3/CCDR/JEFF	4	91	34	7664	58.8	70.0
705	182L1705	CL131/CHENIERE//CATAHOULA/CL111	5	90	34	7661		
396	182L1396	KBNT/CL151	5	88	37	7661		
334	182L1334	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/…/6/CATAHOULA	4	90	33	7658		
694	182L1694	CL111/CL272	4	87	37	7657		
261	182L1261	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/TRNS//CCDR/JEFF	5	88	32	7655		
250	182L1250	9502008-A/DREW//CLR 20/4/9502008/LGRU/3/CPRS//82CAY21/TBNT/5/MBLE	4	88	33	7654		
331	182L1331	CL131/3/CPRS/KBNT//9502008-A /6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/…	4	90	34	7639		
011	182L1011	DREW/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	4	91	34	7637		
649	182L1649	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	5	93	35	7636	64.3	70.3
350	182L1350	TRNS//CCDR/9502008-A/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	88	35	7633		
062	182L1062	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	90	35	7631		
445	182L1445	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…/6/CL152	5	89	33	7630	60.9	69.3
695	182L1695	CL111/CL272	5	86	37	7628		
257	182L1257	CPRS/9502008-A//CFX 26/WELLS/4/CPRS//82CAY21/TBNT/3/CFX 29//AR 1142/LA 2031	4	90	32	7628		
048	182L1048	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	91	34	7626		
256	182L1256	CL111/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	5	89	35	7626		
361	182L1361	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX 18/6/TACAURI/3/CPRS//…	4	88	36	7625		
693	182L1693	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	4	91	37	7622		
070	182L1070	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	89	34	7615		
455	182L1455	CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18/6/CL111	5	88	37	7606		
738	172L1047	CHENIERE/CL111	4	90	35	7601		
505	182L1505	CL151/4/CL131/3/CPRS/KBNT//9502008-A	7	86	33	7600	60.2	69.8
401	182L1401	CPRS/4/CL131/3/CPAR/KBNT//9502008-A	3	92	36	7591		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
110	182L1110	FRANCIS/CLR 13//9502008-A/DREW/3/MERMENTAU	4	91	36	7591		
008	182L1008	CCDR/CL131	5	90	36	7590	63.5	70.5
596	182L1596	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	3	87	37	7589		
546	182L1546	CL111/4/CPRS/9502008-A//AR 1188/CCDR/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/…	4	92	35	7588		
235	182L1235	MBLE/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	91	37	7588		
301	182L1301	TRNS//TRNS/CL131	4	85	33	7587		
179	182L1179	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	90	34	7580		
348	182L1348	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	90	34	7574		
711	182L1711	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	87	34	7573		
452	182L1452	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	6	94	35	7568		
072	182L1072	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	89	31	7566		
171	182L1171	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/3/…	4	92	34	7554		
034	182L1034	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	91	32	7552		
574	182L1574	CL111/CHENIERE//CL111/CCDR	5	90	34	7545		
637	182L1637	CHENIERE/CL111	5	92	34	7540	63.2	70.2
151	182L1151	TRNS//TRNS/CL131	6	89	37	7537		
164	182L1164	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/…/6/CPRS	4	92	33	7536		
192	182L1192	9502008-A/TACAURI//CLR 5/3/DREW/CFX-18/4/DREW//CHENIERE/LMNT	5	90	31	7535		
573	182L1573	CL111/CHENIERE//CL111/CCDR	4	90	31	7534		
285	182L1285	CL161//CATAHOULA/CL111	5	93	34	7532		
322	182L1322	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/CFX-18//…	4	90	34	7521		
166	182L1166	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	92	36	7514		
421	182L1421	CL131/CHENIERE//CATAHOULA/CL111	4	92	35	7509		
187	182L1187	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	91	34	7506		
411	182L1411	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	93	35	7502		
251	182L1251	9502008-A/DREW//CLR 20/4/9502008/LGRU/3/CPRS//82CAY21/TBNT/5/MBLE	4	88	34	7500		
198	182L1198	WELLS//CL131/CHENIERE	4	91	30	7489		
276	182L1276	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/CPRS//…	4	93	34	7484		
508	182L1508	CL111//CATAHOULA/CL111	5	91	35	7467		
544	182L1544	CL111/4/CPRS/9502008-A//AR 1188/CCDR/6/TACAURI/3/CPRS//82CAY21/TBNT/4/CFX 18/…	5	92	36	7463		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
206	182L1206	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	95	34	7462		
102	182L1102	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	5	94	34	7462		
578	182L1578	CL111/CHENIERE//CL111/CCDR	4	91	34	7461		
106	182L1106	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	4	94	34	7458		
491	182L1491	CL131/3/CPRS/KBNT//9502008-A /4/CATAHOULA/CL111	6	92	36	7447		
399	182L1399	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	92	35	7444		
521	182L1521	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CL111	6	90	36	7442		
356	182L1356	9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18/6/TACAURI/3/CPRS//82CAY21/…	5	88	35	7438		
332	182L1332	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/…/6/CATAHOULA	4	87	32	7422		
067	182L1067	CCDR//CFX-29/CCDR/3/CCDR	5	94	33	7420		
238	182L1238	TRNS//TRNS/CL131	4	89	31	7418		
243	182L1243	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	5	86	35	7415		
069	182L1069	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	91	33	7414		
372	182L1372	MBLE/4/95025008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS/CFX-18	5	85	29	7410		
075	182L1075	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	87	28	7392		
289	182L1289	MBLE/4/DREW/CFX-18/3/CFX-18//CCDR/9770532 DH2	5	83	32	7391		
697	182L1697	CL151/CL272	5	91	35	7386		
149	182L1149	TRNS//TRNS/CL131	5	87	37	7385		
059	182L1059	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	93	35	7378		
165	182L1165	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/…/3/…/6/CPRS	4	92	36	7362		
018	182L1018	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	5	92	35	7361		
400	182L1400	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	4	90	35	7358		
063	182L1063	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	6	93	36	7357		
321	182L1321	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	89	34	7355		
306	182L1306	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	88	32	7351		
086	182L1086	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/…	4	91	33	7345		
090	182L1090	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/…	4	93	33	7345		
644	182L1644	9302065/CL161	5	88	32	7344		
132	182L1132	CCDR/JEFF//CFX-26/9702128/3/CL151	5	91	32	7341		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
247	182L1247	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR20	4	91	34	7339		
218	182L1218	9502008-A/DREW//CLR 20/4/9502008/LGRU/3/CPRS//82CAY21/TBNT	5	89	35	7337		
732	172L3314	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	92	37	7309		
666	182A1666	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	94	34	7297		
349	182L1349	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	87	35	7294		
225	182L1225	PRESIDO/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	85	31	7283		
398	182L1398	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	94	36	7273		
423	182L1423	CL131/CHENIERE//CATAHOULA/CL111	4	90	32	7273		
050	182L1050	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	92	35	7271		
286	182L1286	CL161//CATAHOULA/CL111	5	93	35	7266		
714	182L1714	CPRS/5/9502008-A/DREW/3/NWBT/KATY//9902207x2/4/CFX-18//CCDR/…	6	91	36	7261		
248	182L1248	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	89	34	7260		
535	182A1535	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	6	92	36	7260		
287	182L1287	CL161//CATAHOULA/CL111	5	90	33	7259		
719	172L3068	CHENIERE/CL111	5	94	34	7258	65.0	71.0
103	182L1103	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	6	92	34	7252		
513	182L1513	CL111//CATAHOULA/CL111	6	91	35	7252		
039	182L1039	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	87	33	7245		
567	182L1567	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/…	4	91	35	7244		
255	182L1255	CL111/6/CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18	5	91	36	7242		
084	182L1084	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/…	5	92	33	7242		
245	182L1245	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	4	92	35	7241		
519	182L1519	CFX-18(CL161)/RSMT/3/MARS/NWRX//TBNT/4/CPRS/KBNT//WELLS/CFX 18/3/MBLE	6	91	38	7236		
543	182L1543	DREW/5/CPRS/3/9502008-A//AR 1188/CCDR/4/CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	5	93	32	7235		
407	182L1407	PRESIDO/CL111	4	79	37	7232		
665	182A1665	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	91	33	7227		
374	182L1374	9302065//CL131/CHENIERE	4	91	32	7222		
041	182L1041	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	94	33	7220		
098	182L1098	9502008-A//AR 1188/CCDR/3/CFX-26/9702128 /4/TRNS	5	87	33	7219		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
078	182L1078	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/MBLE	5	83	28	7217		
197	182L1197	WELLS//CL131/CHENIERE	5	91	31	7208		
341	182L1341	WELLS//CL131/CHENIERE	5	91	32	7206		
710	182L1710	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	89	35	7205		
023	182L1023	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	5	94	36	7205		
054	182L1054	CHENIERE/3/CCDR//CFX-29/CCDR	5	94	34	7201		
150	182L1150	TRNS//TRNS/CL131	5	87	36	7199		
021	182L1021	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR/JEFF//CFX-26/9702128	5	95	35	7183		
741	172L1418	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	88	33	7180		
035	182L1035	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	92	33	7175		
511	182L1511	CL111//CATAHOULA/CL111	5	90	34	7173		
188	182L1188	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR 20	5	90	32	7172		
634	182L1634	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/RICO	5	94	36	7169	62.1	69.2
079	182L1079	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/MBLE	5	87	30	7157		
193	182L1193	WELLS/CL111	5	90	32	7151		
534	182A1534	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	6	93	37	7151		
195	182L1195	WELLS//CL131/CHENIERE	5	92	35	7150		
728	172L3292	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	6	93	37	7148		
275	182L1275	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/CPRS//NWBT/…	4	92	33	7146		
167	182L1167	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	92	36	7134		
057	182L1057	CHENIERE/4/'CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031	6	90	33	7129		
706	182L1706	CL131/CHENIERE//CATAHOULA/CL111	5	90	35	7118		
205	182L1205	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	94	36	7110		
373	182L1373	9302065//CL131/CHENIERE	5	87	31	7104		
721	172L3123	CL131/3/TRNS//CCDR/JEFF	5	90	31	7101		
203	182L1203	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	87	35	7099		
077	182L1077	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/ 6/CHENIERE//…	5	90	31	7096		
051	182L1051	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	91	32	7091		
101	182L1101	CCDR//CLPY 003/3/CCDR/JEFF//CPRS	5	89	31	7079		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
212	182L1212	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	4	91	32	7065		
004	182L1004	CCDR/CL131	5	92	34	7056	62.4	69.7
265	182L1265	CCDR/JEFF/3/CFX-18//CCDR/9770532 DH2/4/CLPY 003//CFX-26/9702128	5	87	31	7055		
731	172L3311	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	91	38	7054		
302	182L1302	TRNS//TRNS/CL131	4	88	31	7048		
190	182L1190	CL131/CHENIERE//WELLS	4	91	32	7044		
096	182L1096	CATAHOULA/6/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/9502008-A/TACAURI//CLR5	5	90	37	7035		
104	182L1104	WELLS/CFX-18//DREW/CFX-18/3/CHENIERE//CCDR/JEFF	4	96	37	7029		
654	182L1654	CHENIERE/CL111	5	90	36	7024		
274	182L1274	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	93	37	7023		
668	182A1668	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	91	36	7010		
037	182L1037	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	88	37	6992		
369	182L1369	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	4	79	34	6984		
045	182L1045	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	90	36	6979		
141	182L1141	CHENIERE//CCDR/JEFF/4/CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2	4	91	32	6975		
044	182L1044	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	89	35	6945		
081	182L1081	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/MBLE	5	86	31	6929		
669	182A1669	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	92	35	6918		
204	182L1204	DREW//CHENIERE/LMNT/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	93	34	6913		
153	182L1153	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	88	31	6906		
252	182L1252	CATAHOULA/4/CFX-18/RSMT/3/MARS/NWRX//TBNT	5	88	36	6879		
246	182L1246	CL131/3/CPRS/KBNT//9502008-A /4/9502008-A/DREW//CLR 20/3/9502008-A/DREW//CLR20	4	90	32	6876		
196	182L1196	WELLS//CL131/CHENIERE	5	92	33	6869		
249	182L1249	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	4	86	33	6861		
424	182L1424	CL131/CHENIERE//CATAHOULA/CL111	5	91	34	6825		
213	182L1213	CL131/CHENIERE/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	92	32	6814		
140	182L1140	CHENIERE//CCDR/JEFF/4/CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2	5	88	33	6799		
722	172L3126	CL131/3/TRNS//CCDR/JEFF	5	88	31	6785		
036	182L1036	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	93	35	6780		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
591	182L1591	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A/5/CL111/CHENIERE	4	91	31	6780		
009	182L1009	DREW/4/CCDR/JEFF/3/CFX-18//CPRS/KBNT	5	90	32	6728		
712	182L1712	CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A/4/PRESIDIO	5	87	34	6676		
043	182L1043	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	94	33	6667		
189	182L1189	CL131/CHENIERE//WELLS	5	91	33	6666		
169	182L1169	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/9502008-A/…	5	90	35	6662		
651	182L1651	CL131/CHENIERE//TRNS	5	86	34	6659	60.8	69.0
049	182L1049	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	93	34	6644		
202	182L1202	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	94	30	6640		
052	182L1052	CHENIERE/3/CCDR//CFX-29/CCDR	5	90	31	6619		
533	182A1533	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	5	91	33	6615		
157	182L1157	TRNS/4/9502008-A/DREW//CLR 20/3/CPRS/KBNT//WELLS CFX 18	6	88	33	6607		
631	182L1631	PRESIDO/CL111	6	87	34	6567		
199	182L1199	CL111/CL152	5	91	33	6552		
154	182L1154	TRNS/9/9602097/...//JAF4/…/6/CCDR/…/7/JAF4/8/FRANCIS/CLR 13	5	89	28	6548		
012	182L1012	DREW/4/9502008-A//AR 1188/CCDR/3/CFX-26/9702128	5	88	33	6538		
532	182A1532	CL JAZZMAN/4/JZMN/08CLR004//RU0802146/3/JZMN2	6	90	34	6522		
333	182L1333	KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/…/6/CATAHOULA	4	88	33	6484		
418	182L1418	CL131/CHENIERE//TRNS	4	86	34	6465	64.7	70.9
291	182L1291	MBLE/4/DREW/CFX-18/3/CFX-18//CCDR/9770532 DH2	5	85	31	6447		
352	182L1352	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//…/5/CL131/CHENIERE	4	91	34	6439		
397	182L1397	CPRS/5/9502008-A/DREW//CFX-26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031	5	92	34	6402		
158	182L1158	DREW/CFX-18/3/CPRS/KBNT//CFX 18/4/DREW/CFX-18/3/CFX-18//CCDR/9770532 DH2	6	88	34	6374		
200	182L1200	CL111/CL152	4	90	35	6368		
537	182A1537	JZMN/08CLR004//RU0802146/3/JZMN2 /4/CL JAZZMAN	6	95	33	6365		
456	182L1456	CFX-18//CCDR/9770532 DH2/5/9502008/3/CPRS//82CAY21/TBNT/4/CFX-18/6/CL111	6	89	36	6288		
730	172L3310	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	89	39	6286		
046	182L1046	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	5	92	33	6254		
080	182L1080	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/MBLE	5	86	31	6242		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
569	182L1569	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//KATY/6/CL111/4/CPRS/…	5	90	32	6232		
017	182L1017	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CPRS	5	94	34	6204		
006	182L1006	CCDR/CL131	5	92	35	6154	65.0	71.5
538	182A1538	JZMN/08CLR004//RU0802146/3/JZMN2 /4/CL JAZZMAN	6	95	34	6138		
016	182L1016	CPRS/9502008-A/3/CFX 29//AR 1142/LA 2031/4/CCDR//CFX-29/CCDR	5	90	34	6120		
139	182L1139	CHENIERE//CCDR/JEFF/4/CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2	5	91	33	6098		
370	182L1370	MBLE/4/CFX-18//CCDR/9770532 DH2/3/CPRS/KBNT//9502008-A	5	83	30	6056		
146	182L1146	MBLE/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	6	93	34	5926		
002	182L1002	CCDR/CL131	5	94	35	5922	60.7	68.9
013	182L1013	CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2/4/DREW	4	92	32	5918		
365	182L1365	MERMENTAU/3/JZMN/08CLR004//JZMN	6	97	33	5896		
047	182L1047	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	6	91	34	5846		
142	182L1142	CHENIERE//CCDR/JEFF/4/CPRS/KBNT//9502008-A/3/CFX-18//CCDR/9770532 DH2	5	92	33	5837		
650	182L1650	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	4	94	38	5816		
145	182L1145	MBLE/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	6	85	32	5696		
005	182L1005	CCDR/CL131	5	94	36	5687	56.1	66.1
646	182L1646	9302065/CL151	5	99	40	5616		
201	182L1201	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	91	31	5614		
100	182L1100	CCDR//CLPY 003/3/CCDR/JEFF//CPRS	5	89	32	5398		
001	182L1001	CCDR/CL131	5	93	36	5277	65.9	71.0
610	182L1610	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/9502008-A/…	5	93	45	5141		
194	182L1194	WELLS/CL111	5	95	29	4629		
003	182L1003	CCDR/CL131	8	98	32	440		

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 2. Grain and milling yields and agronomic performance of entries in the 2018 Clearfield Preliminary Medium-Grain Yield test, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
949	RICETEC	GEMINI 214 CL	4	92	48	12274	57.0	68.1
924	182M1924	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	85	40	11078	60.1	70.7
780	182M1780	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	89	39	11072	62.0	69.1
792	182M1792	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	90	39	11015	64.4	68.5
929	182M1929	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	41	10840	60.1	69.8
790	182M1790	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	89	39	10782	60.7	68.4
868	182M1868	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	42	10764	57.4	66.9
865	182M1865	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	87	38	10759	55.3	69.7
810	182M1810	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	88	38	10759	59.7	69.3
881	182M1881	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	87	42	10758	61.3	68.2
884	182M1884	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	40	10742	62.4	69.7
942	172M3403	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	87	40	10739	60.6	69.5
758	182M1758	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	90	36	10696		
928	182M1928	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	87	39	10685	63.5	70.6
806	182M1806	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	91	42	10654	59.0	68.7
933	182M1933	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	88	39	10647	59.3	69.4
808	182M1808	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	85	39	10618	59.5	69.8
886	182M1886	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	86	37	10616		
883	182M1883	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	38	10613	62.0	69.1
866	182M1866	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	86	40	10561	56.7	69.2
820	182M1820	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	89	38	10554	63.4	68.9
809	182M1809	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	86	38	10549	65.5	71.7
922	182M1922	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	92	43	10535		
879	182M1879	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	40	10529		
950	RICETEC	CLXL745	4	85	43	10514	57.8	70.8
776	182M1776	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	92	40	10476	66.0	69.9
874	182M1874	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	42	10426		
931	182M1931	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	93	40	10418	62.5	69.9
779	182M1779	NEPTUNE/3/NEPTUNE//BNGL/CL161	3	93	40	10416		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
938	182M1938	CL271/CL272	4	92	42	10347	64.5	70.0
867	182M1867	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	90	42	10315	60.2	68.6
923	182M1923	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	86	36	10310	60.5	70.5
876	182M1876	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	41	10301		
920	182M1920	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	40	10294		
872	182M1872	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	41	10283		
948	CL272	CL272	3	90	39	10256	62.3	69.4
905	182M1905	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	86	36	10253	59.9	71.1
939	182M1939	NEPTUNE//BNGL/CL161/3/CL272	3	91	42	10250	63.0	70.0
772	182M1772	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	93	38	10247		
918	182M1918	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	90	40	10237		
751	182M1751	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/BNGL/CFX18 (XC 065)	4	91	40	10233	54.1	68.9
930	182M1930	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	92	40	10206	64.5	69.5
768	182M1768	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	38	10192	62.1	68.7
755	182M1755	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	90	38	10165	62.8	69.4
932	182M1932	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	94	40	10159	67.8	70.7
761	182M1761	BNGL/CL161/3/NEPTUNE//BNGL/CL161	3	88	38	10159		
926	182M1926	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	3	90	38	10136	63.2	69.2
875	182M1875	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	42	10131		
880	182M1880	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	85	41	10127	58.8	67.8
756	182M1756	NEPTUNE//BNGL/CL161/3/BNGL/CL161	3	89	37	10099	57.2	69.5
885	182M1885	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	89	39	10097	61.6	70.1
778	182M1778	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	40	10088		
777	182M1777	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	39	10088		
763	182M1763	NEPTUNE//BNGL/CL161/3/JPTR	4	90	37	10065	60.7	69.8
856	182M1856	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	39	10065	60.5	69.4
762	182M1762	BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	89	38	10062	61.6	69.8
882	182M1882	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	90	40	10029	65.4	69.2
822	182M1822	NEPTUNE//BNGL/CL161/3/RICO	6	84	39	10025		
869	182M1869	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	92	40	10008	60.3	67.9

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
783	182M1783	RICO/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	4	92	36	10001		
848	182M1848	NEPTUNE//BNGL/CL161/3/RICO	4	83	43	9980		
805	182M1805	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	90	37	9973	60.1	69.4
803	182M1803	NEPTUNE//BNGL/CL161/3/RICO	5	85	37	9962	60.0	67.0
781	182M1781	9302065/3/RICO//PY 678/CL161	5	92	36	9957		
818	182M1818	NEPTUNE/3/NEPTUNE//BNGL/CL161	5	89	38	9938	62.0	69.4
927	182M1927	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	89	39	9935	56.5	70.2
813	182M1813	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	91	39	9914	57.6	68.6
794	182M1794	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	4	88	35	9896	59.7	70.1
850	182M1850	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	92	41	9875	64.3	71.4
921	182M1921	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	94	38	9872		
795	182M1795	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/…	4	90	36	9863	60.7	68.9
861	182M1861	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	84	41	9858		
858	182M1858	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	90	38	9829	61.8	70.5
857	182M1857	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	39	9827		
825	182M1825	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	93	41	9818	54.9	65.4
870	182M1870	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	41	9817		
878	182M1878	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	93	40	9816		
784	182M1784	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	35	9815	63.8	67.8
945	CL151	CL151	4	91	38	9815	63.9	70.6
828	182M1828	NEPTUNE//BNGL/CL161/3/RICO	5	91	40	9813	63.3	67.1
855	182M1855	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	87	39	9793	57.6	68.7
934	182M1934	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	89	40	9786	62.1	70.2
871	182M1871	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	92	40	9779		
915	182M1915	NEPTUNE//BNGL/CL161/3/RICO	4	91	39	9772		
851	182M1851	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	93	39	9766	54.6	67.8
791	182M1791	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	91	36	9755	63.1	68.7
877	182M1877	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	92	40	9740		
788	182M1788	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	37	9739		
909	182M1909	NEPTUNE//BNGL/CL161/3/RICO	3	87	39	9733		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
892	182M1892	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	88	39	9719		
796	182M1796	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	4	88	37	9706	57.1	70.7
765	182M1765	NEPTUNE//BNGL/CL161/3/BNGL/CL161	3	89	36	9703	58.0	69.0
807	182M1807	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	87	36	9701		
793	182M1793	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	3	90	35	9693	55.5	68.8
771	182M1771	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	92	38	9679		
925	182M1925	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	3	91	42	9673	68.0	70.2
757	182M1757	RICO/3/NEPTUNE//BNGL/CL161	5	89	35	9641	65.2	70.1
787	182M1787	NEPTUNE/3/NEPTUNE//BNGL/CL161	5	92	37	9640	61.6	67.8
860	182M1860	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	88	42	9634		
902	182M1902	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	38	9629		
773	182M1773	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	94	37	9618	59.6	69.8
804	182M1804	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	86	40	9617	45.5	69.7
917	182M1917	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	92	40	9613		
767	182M1767	RICO/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	93	38	9611		
887	182M1887	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	86	37	9603		
910	182M1910	NEPTUNE//BNGL/CL161/3/RICO	4	89	40	9596	64.1	69.2
864	182M1864	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	87	36	9581	54.1	70.4
904	182M1904	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	86	37	9573	50.5	69.3
836	182M1836	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	89	37	9567	64.1	69.7
873	182M1873	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	93	38	9553		
897	182M1897	CL271/3/NEPTUNE//BNGL/CL161	4	92	38	9547		
764	182M1764	NEPTUNE//BNGL/CL161/3/JPTR	4	88	34	9537	56.3	69.3
898	182M1898	CL271/3/NEPTUNE//BNGL/CL161	4	91	38	9526	61.0	69.0
799	182M1799	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	88	32	9523	60.5	69.2
843	182M1843	NEPTUNE//BNGL/CL161/3/RICO	5	88	40	9519		
895	182M1895	CL271/3/NEPTUNE//BNGL/CL161	4	93	40	9507		
760	182M1760	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	89	37	9506		
775	182M1775	NEPTUNE//BNGL/CL161/3/NEPTUNE	3	86	37	9502		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
894	182M1894	CL271/3/NEPTUNE//BNGL/CL161	4	90	40	9495		
940	172M3200	NEPTUNE//BNGL/CL161 /3/BNGL/CL161//CAFFEY	3	90	37	9494	66.8	73.4
786	182M1786	9302065/3/RICO//PY 678/CL161	4	95	38	9491		
853	182M1853	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	5	87	39	9489	50.3	69.5
829	182M1829	NEPTUNE//BNGL/CL161/3/RICO	5	92	38	9477		
903	182M1903	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	89	36	9474	63.5	70.2
823	182M1823	NEPTUNE//BNGL/CL161/3/RICO	4	89	36	9470		
785	182M1785	9302065/3/RICO//PY 678/CL161	4	94	38	9469		
896	182M1896	CL271/3/NEPTUNE//BNGL/CL161	4	93	41	9466		
914	182M1914	NEPTUNE//BNGL/CL161/3/RICO	4	87	41	9465		
859	182M1859	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	88	37	9463	58.1	71.3
826	182M1826	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	93	43	9457	55.1	64.5
845	182M1845	NEPTUNE//BNGL/CL161/3/NEPTURN//BNGL/CL161	4	89	41	9456		
774	182M1774	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	84	38	9451		
801	182M1801	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	89	35	9434		
919	182M1919	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	3	94	40	9420		
911	182M1911	NEPTUNE//BNGL/CL161/3/RICO	4	91	41	9407		
821	182M1821	NEPTUNE/3/NEPTUNE//BNGL/CL161	5	88	37	9400	59.2	68.6
916	182M1916	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	5	91	39	9398		
912	182M1912	NEPTUNE//BNGL/CL161/3/RICO	4	92	42	9374		
854	182M1854	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	87	38	9345		
863	182M1863	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	89	39	9344		
759	182M1759	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	91	35	9344		
862	182M1862	BNGL/CL161//CAFFEY/3/NEPTUNE//BNGL/CL161	4	91	38	9314		
944	CL111	CL111	4	85	36	9313	62.7	70.5
782	182M1782	9302065/3/RICO//PY 678/CL161	4	91	38	9310		
888	182M1888	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	91	39	9309		
819	182M1819	NEPTUNE/3/NEPTUNE//BNGL/CL161	5	91	38	9307		
907	182M1907	RICO/3/NEPTUNE//BNGL/CL161	4	88	39	9299		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
833	182M1833	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	87	38	9295		
798	182M1798	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	93	37	9289		
852	182M1852	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	92	39	9288		
769	182M1769	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	95	34	9288		
947	CL172	CL172	3	90	37	9285	61.6	68.4
831	182M1831	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	89	38	9279		
834	182M1834	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	91	37	9272		
766	182M1766	NEPTUNE//BNGL/CL161/3/BNGL/CL161	4	91	38	9268		
800	182M1800	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	4	89	36	9243		
849	182M1849	NEPTUNE//BNGL/CL161/3/RICO	4	85	42	9232		
815	182M1815	RICO/3/NEPTUNE//BNGL/CL161	5	86	37	9221		
811	182M1811	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	3	90	39	9208		
817	182M1817	NEPTUNE/NEPTUNE//BNGL/CL161	5	90	38	9201		
844	182M1844	NEPTUNE//BNGL/CL161/3/NEPTUNE//BNGL/CL161	4	91	40	9190		
754	182M1754	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	4	91	34	9183		
893	182M1893	NEPTUNE/3/BNGL/CL161//CAFFEY	4	90	38	9167		
935	182M1935	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO/BNGL/4/BNGL/CFX18	5	88	40	9135		
827	182M1827	NEPTUNE//BNGL/CL161/3/RICO	6	90	45	9128		
941	172M3380	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO/BNGL/4/BNGL/CFX18	5	88	38	9124		
946	CL153	CL153	4	92	33	9117	62.7	69.5
789	182M1789	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	92	36	9113		
943	172M1677	RICO/3/NEPTUNE//BNGL/CL161	6	92	41	9112		
889	182M1889	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	91	38	9101		
937	182M1937	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/CL272	5	87	38	9045		
936	182M1936	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/CL272	4	89	38	9021		
824	182M1824	NEPTUNE//BNGL/CL161/3/NEPTUNE	4	90	38	9002		
835	182M1835	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	89	38	8986		
753	182M1753	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18	3	92	34	8975		
847	182M1847	NEPTUNE//BNGL/CL161/3/RICO	4	91	39	8953		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
901	182M1901	NEPTUNE//BNGL/CL161/3/RICO	5	88	43	8942		
900	182M1900	NEPTUNE//BNGL/CL161/3/RICO	4	90	42	8928		
838	182M1838	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	88	39	8882		
837	182M1837	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	87	36	8868		
908	182M1908	CL271/5/BNGL//MERC/RICO/3/MERC/RICO/BNGL/4/BNGL/CFX18	4	90	42	8817		
816	182M1816	RICO/3/NEPTUNE//BNGL/CL161	6	90	40	8815		
770	182M1770	NEPTUNE/3/NEPTUNE//BNGL/CL161	4	93	37	8793		
832	182M1832	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	6	87	38	8745		
913	182M1913	NEPTUNE//BNGL/CL161/3/RICO	4	86	40	8741		
839	182M1839	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	89	38	8734		
890	182M1890	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	90	37	8722		
830	182M1830	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	5	90	39	8714		
841	182M1841	NEPTUNE//BNGL/CL161/3/RICO	5	88	36	8688		
891	182M1891	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	90	39	8667		
797	182M1797	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028/5/NEPTUNE	4	91	38	8657		
842	182M1842	NEPTUNE//BNGL/CL161/3/RICO	5	94	43	8614		
814	182M1814	RICO/3/NEPTUNE//BNGL/CL161	6	89	38	8533		
899	182M1899	NEPTUNE//BNGL/CL161/3/RICO	5	91	40	8448		
812	182M1812	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL/CFX18 /5/NEPTUNE//BNGL/CL161	4	92	38	8339		
840	182M1840	NEPTUNE//BNGL/CL161/3/BNGL/CL161//CAFFEY	6	90	37	8109		
802	182M1802	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO/BNGL/4/BNGL/CFX18	5	85	37	8031		
906	182M1906	RICO/3/NEPTUNE//BNGL/CL161	6	93	32	8016		
846	182M1846	NEPTUNE//BNGL/CL161/3/RICO	3	85	43	8001		
752	182M1752	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/BNGL/CFX18 (XC 065)	3	93	37	7505		

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

PRELIMINARY YIELD TRIAL

Preliminary Yield trials consist primarily of promising breeding nursery material that is ready to be tested in replicated yield trials. The material in these trials was screened for agronomic and grain characteristics in nurseries prior to this phase of testing. Promising experimental lines were evaluated for seedling vigor, maturity, plant height, lodging resistance, grain yield of main crop, and disease resistance.

Trials were conducted using standard agronomic practices (except that no fungicides were applied) at the H. Rouse Caffey Rice Research Station at Crowley, Louisiana. A randomized complete block design was applied to arrange test entries. The plot size was 4.66 x 16 ft. Seeding rate was 90 lb/A. The Preliminary Long-Grain Yield trial was drill seeded on March 14 and harvested on July 26. The Preliminary Medium-Grain Yield trial was drill seeded on March14 and harvested on Aug. 1. Data is presented for the Long-Grain Yield trial is in Table 1 and for the Medium-Grain Yield trial in Table 2.

Table 1. Grain and milling yields and agronomic performance of entries in the 2018 Preliminary Long-Grain Yield trial, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
715	RICETEC	XP760	4	87	47	13270	49.6	66.8
714	RICETEC	CLXL745	3	79	45	12359	52.8	68.9
713	RICETEC	XP753	4	81	45	11738	51.4	69.0
694	181L1694	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	83	36	11527	57.1	70.3
702	DMND	DIAMOND	3	88	39	11416	50.0	66.8
710	CL151	CL151	4	85	39	11002	59.7	69.7
600	181L1600	FRANCIS/LAKAST	3	81	42	10857	49.1	68.0
544	181L1544	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	5	83	37	10844	58.9	70.1
577	181L1577	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	3	85	38	10787	60.0	69.1
638	181L1638	FRANCIS/CPRS	4	86	40	10765	51.9	67.7
705	ROYJ	ROYJ	3	90	43	10705	54.7	68.7
637	181L1637	FRANCIS/CPRS	3	86	41	10652	53.0	67.6
640	181L1640	FRANCIS/CPRS	5	87	42	10620	53.8	67.6
543	181L1543	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	86	34	10609	54.4	68.6
578	181L1578	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	84	38	10589	56.8	67.8
602	181L1602	FRANCIS/KBNT	5	88	41	10586	56.9	68.4
704	MRMT	MERMENTAU	3	84	37	10581	59.9	68.7
603	181L1603	FRANCIS/KBNT	5	87	39	10543	54.1	67.9
608	181L1608	FRANCIS/KBNT	5	88	40	10508	56.4	68.3
601	181L1601	FRANCIS/LAKAST	4	82	42	10489	48.8	67.1
598	181L1598	FRANCIS/LAKAST	3	78	44	10479	52.6	68.0
588	181L1588	CCDR/3/TRNS//CCDR/JEFF	4	86	36	10465	62.9	70.6
635	181L1635	FRANCIS/CPRS	4	87	39	10463	54.1	67.5
604	181L1604	FRANCIS/KBNT	4	86	40	10443	54.0	67.2
696	171L1647	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	85	37	10431	58.9	69.9
715	RICETEC	XP760	4	87	47	13270	49.6	66.8
714	RICETEC	CLXL745	3	79	45	12359	52.8	68.9
713	RICETEC	XP753	4	81	45	11738	51.4	69.0
694	181L1694	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	83	36	11527	57.1	70.3

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
702	DMND	DIAMOND	3	88	39	11416	50.0	66.8
710	CL151	CL151	4	85	39	11002	59.7	69.7
600	181L1600	FRANCIS/LAKAST	3	81	42	10857	49.1	68.0
544	181L1544	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	5	83	37	10844	58.9	70.1
577	181L1577	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	3	85	38	10787	60.0	69.1
638	181L1638	FRANCIS/CPRS	4	86	40	10765	51.9	67.7
705	ROYJ	ROYJ	3	90	43	10705	54.7	68.7
637	181L1637	FRANCIS/CPRS	3	86	41	10652	53.0	67.6
640	181L1640	FRANCIS/CPRS	5	87	42	10620	53.8	67.6
543	181L1543	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	4	86	34	10609	54.4	68.6
578	181L1578	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	84	38	10589	56.8	67.8
602	181L1602	FRANCIS/KBNT	5	88	41	10586	56.9	68.4
704	MRMT	MERMENTAU	3	84	37	10581	59.9	68.7
603	181L1603	FRANCIS/KBNT	5	87	39	10543	54.1	67.9
608	181L1608	FRANCIS/KBNT	5	88	40	10508	56.4	68.3
601	181L1601	FRANCIS/LAKAST	4	82	42	10489	48.8	67.1
598	181L1598	FRANCIS/LAKAST	3	78	44	10479	52.6	68.0
588	181L1588	CCDR/3/TRNS//CCDR/JEFF	4	86	36	10465	62.9	70.6
635	181L1635	FRANCIS/CPRS	4	87	39	10463	54.1	67.5
604	181L1604	FRANCIS/KBNT	4	86	40	10443	54.0	67.2
696	171L1647	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	85	37	10431	58.9	69.9
657	181L1657	CATAHOULA/Mermentau	4	83	37	10424	59.4	69.5
606	181L1606	FRANCIS/KBNT	4	87	40	10404	53.9	68.2
599	181L1599	FRANCIS/LAKAST	3	84	39	10380	55.9	68.9
634	181L1634	FRANCIS/CPRS	5	86	41	10373	53.8	68.5
537	181L1537	TAGGART/3/TRNS//CCDR/JEFF	4	87	37	10347	57.0	69.7
660	181L1660	CATAHOULA/Mermentau	4	83	35	10319	55.6	69.8
576	181L1576	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	85	36	10310	59.1	68.0
703	LKST	LAKAST	3	85	39	10309	43.6	66.9

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
597	181L1597	FRANCIS/LAKAST	3	79	40	10297	48.0	66.4
586	181L1586	CHNR/RU0902137	4	89	37	10292	58.9	69.8
580	181L1580	9502008-A/DREW/3/NWBT/KATY//9902207x2/4/NWBT/KATY//9902207x2/3/9502008-A/…	4	85	37	10291	58.9	69.9
701	CHNR	CHENIERE	5	86	36	10267	61.1	72.2
612	181L1612	FRANCIS/TACAURI	4	89	40	10253	57.4	69.4
553	181L1553	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	86	34	10241	62.6	69.9
538	181L1538	TAGGART/3/TRNS//CCDR/JEFF	4	86	36	10236	55.6	69.3
652	181L1652	CATAHOULA/Mermentau	4	83	36	10231	50.4	68.1
592	181L1592	CATAHOULA/3/AR 1188/CCDR//9502008/LGRU	4	87	36	10183	57.9	68.7
552	181L1552	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	86	34	10097	60.6	70.1
550	181L1550	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	86	37	10058	57.2	69.9
639	181L1639	FRANCIS/CPRS	4	87	40	10045	50.9	66.9
691	181L1691	MS4077/Catahoula	4	82	40	10004	52.3	68.9
587	181L1587	RU0902125/10AY027	4	86	36	10001	59.1	69.0
559	181L1559	TRNS//CCDR/JEFF/3/MERMENTAU	4	86	34	10001	61.8	70.4
642	181L1642	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	5	89	33	9999		
545	181L1545	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	5	89	36	9998	62.2	70.2
711	CL153	CL153	4	85	37	9980	55.2	70.0
591	181L1591	CHENIERE/4/9502008-A//AR1188/CCDR/3/CPRS/KBNT//9502008-A	4	84	36	9980	58.2	69.8
593	181L1593	TRNS//CCDR/JEFF/4/9502008-A//AR 1188/CCDR/3/CCDR/JEFF	4	86	35	9979	57.1	68.9
654	181L1654	CATAHOULA/Mermentau	4	85	38	9974	57.9	69.3
700	CTHL	CATAHOULA	3	86	38	9969	57.0	69.8
605	181L1605	FRANCIS/KBNT	4	86	42	9961	56.6	68.8
568	181L1568	CATAHOULA/TAGGART	5	91	36	9944	58.0	70.1
596	181L1596	FRANCIS/LAKAST	4	82	39	9929	49.1	67.4
649	181L1649	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	83	37	9927	49.8	68.6
513	181L1513	RU1102031/MRMT	4	87	38	9908	58.9	68.4
631	181L1631	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	84	39	9898		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
632	181L1632	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	86	37	9895		
641	181L1641	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	86	36	9877		
644	181L1644	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	85	38	9873	55.2	68.4
633	181L1633	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	86	39	9851		
709	CL111	CL111	3	81	39	9840	54.5	69.9
628	181L1628	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	88	37	9832		
547	181L1547	CHNR/3/NWBT/KATY//9902207X2/4/9502008-A//AR1188/CCDR/3/CFX29//AR 1142/LA 2031	4	86	35	9818		
614	181L1614	FRANCIS/TACAURI	5	83	42	9817	60.0	69.2
712	CL172	CL172	4	85	36	9808	61.1	69.9
664	181A1664	Jazzman-2/Catahoula	4	84	38	9808	51.8	68.5
551	181L1551	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4	87	36	9807		
558	181L1558	CHENIERE//CCDR/JEFF/3/9302065	4	88	36	9754	59.9	71.2
622	181L1622	CHENIERE/CATAHOULA	4	84	39	9741		
594	181L1594	9502008-A//AR 1188/CCDR/3/CCDR/JEFF/4/9502008-A//AR1188/CCDR/3/CPRS/…	3	85	35	9726	58.7	68.8
579	181L1579	CPRS/KBNT//9502008-A /3/CCDR/JEFF/4/MERMENTAU	4	82	38	9725	60.9	70.0
506	181L1506	RU0902028/CCDR	5	90	39	9722	62.3	70.2
562	181L1562	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	86	37	9704	62.0	71.4
548	181L1548	CHNR/3/NWBT/KATY//9902207X2/4/9502008-A//AR1188/CCDR/3/CFX29//AR 1142/LA 2031	4	87	37	9695	60.4	71.0
673	181A1673	Jazzman-2/Catahoula	4	83	35	9688	48.3	68.6
512	181L1512	RU1102031/MRMT	4	87	34	9669	61.2	69.8
643	181L1643	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	85	37	9643		
514	181L1514	RU1102031/MRMT	4	82	37	9635	61.9	70.3
620	181L1620	CHENIERE/CATAHOULA	4	88	36	9635	61.7	70.8
524	181L1524	TRNS/3/CHENIERE//CCDR/JEFF	4	86	37	9633	43.2	65.5
573	181L1573	CCDR/JEFF/3/CPRS/KBNT//9502008-A /4/CATAHOULA	4	87	36	9630	57.9	69.9
690	181L1690	MS4077/Catahoula	4	81	37	9619	60.4	69.7
656	181L1656	CATAHOULA/Mermentau	4	86	35	9618	59.0	69.1
663	181A1663	Jazzman-2/Catahoula	5	81	37	9612	63.5	70.4
613	181L1613	FRANCIS/TACAURI	4	84	39	9607		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
708	CLJ01	CLJ01	3	89	37	9601	64.6	70.0
609	181L1609	FRANCIS/KBNT	4	86	41	9601	61.5	69.7
647	181L1647	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	84	36	9600		
666	181A1666	Jazzman-2/Catahoula	4	83	35	9595	53.2	69.8
645	181L1645	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	85	35	9593		
549	181L1549	CHNR/3/NWBT/KATY//9902207X2/4/9502008-A//AR1188/CCDR/3/CFX29//AR 1142/LA 2031	4	86	36	9592	63.4	69.7
646	181L1646	CHENIERE/6/KATY/CPRS//NWBT/…/3/9502008/4/CLR 9/5/KATY/CPRS//…	4	88	36	9578		
650	181L1650	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	84	37	9575	53.7	69.6
589	181L1589	CCDR/CPRS	3	88	40	9570	55.1	68.5
621	181L1621	CHENIERE/CATAHOULA	5	85	36	9565		
615	181L1615	CPRS/4/9502008-A//AR 1188/CCDR/3/RU0602128	5	87	35	9552		
695	171L1640	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	89	35	9534		
659	181L1659	CATAHOULA/Mermentau	4	89	35	9534	61.0	70.0
697	171L1768	CHNR/CTHL	5	89	36	9524	58.3	70.5
610	181L1610	FRANCIS/KBNT	6	89	40	9519	57.4	68.7
698	171L1769	CHNR/CTHL	6	89	36	9492	60.1	71.1
567	181L1567	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	82	35	9487		
574	181L1574	CCDR/JEFF/3/CPRS/KBNT//9502008-A /4/CATAHOULA	4	87	37	9486	59.0	70.2
546	181L1546	CHNR/3/NWBT/KATY//9902207X2/4/9502008-A//AR1188/CCDR/3/CFX29//AR 1142/LA 2031	5	87	34	9485		
560	181L1560	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	80	36	9482	61.5	71.1
570	181L1570	CCDR/JEFF/3/CPRS/KBNT//9502008-A /4/FRANCIS	3	81	39	9464	55.2	68.4
630	181L1630	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	85	38	9463		
693	181L1693	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	84	36	9462	58.8	70.1
582	181L1582	RU0602025/RU0902155	4	88	37	9444		
627	181L1627	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	86	37	9437		
595	181L1595	CHNR/RU0803147	3	89	32	9435	58.3	69.9
607	181L1607	FRANCIS/KBNT	4	88	40	9428	60.1	69.5
585	181L1585	FRNS/RU0902137	4	88	35	9423	57.2	69.0
699	171L1788	TRNS//CCDR/JEFF/3/CCDR/JEFF//CPRS	5	88	36	9407	59.7	69.5

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
540	181L1540	MERMENTAU/CPRS	3	86	35	9404	62.7	69.9
653	181L1653	CATAHOULA/Mermentau	5	80	37	9402	55.7	38.5
623	181L1623	CHENIERE/CATAHOULA	4	84	37	9395		
504	181L1504	CTHL/RU1102134	4	84	35	9378	57.8	69.4
572	181L1572	CCDR/JEFF/3/CPRS/KBNT//9502008-A /4/FRANCIS	4	86	31	9354	52.9	68.3
671	181A1671	Jazzman-2/Catahoula	4	85	38	9354	56.9	69.2
629	181L1629	M-401/4/9502008-4-A//AR 1188/CCDR/3/RU0602128	4	86	37	9334		
683	181L1683	TRNS/CATAHOULA	4	80	39	9330	49.4	67.5
611	181L1611	FRANCIS/TACAURI	5	85	45	9317	58.4	67.8
617	181L1617	CPRS/LAKAST	4	84	37	9316		
624	181L1624	CHENIERE/CATAHOULA	4	86	37	9309	61.6	70.4
619	181L1619	CHENIERE/CATAHOULA	4	85	37	9298		
518	181L1518	RU1102137/MRMT	4	89	38	9288	58.9	69.8
668	181A1668	Jazzman-2/Catahoula	4	84	39	9270	54.9	69.8
584	181L1584	MRMT/RU1002189	4	85	37	9267		
583	181L1583	CHNR/RU0802031	3	87	37	9265		
569	181L1569	CATAHOULA/TAGGART	4	87	38	9262	55.6	70.4
508	181L1508	RU0902131/MRMT	5	88	35	9261	62.6	70.2
571	181L1571	CCDR/JEFF/3/CPRS/KBNT//9502008-A /4/FRANCIS	4	88	41	9248	49.4	66.5
679	181L1679	CATAHOULA/Maybelle	4	84	35	9241	49.9	68.7
706	PVL01	PVL01	4	92	38	9221	49.0	68.4
669	181A1669	Jazzman-2/Catahoula	5	84	35	9208	61.2	69.9
520	181L1520	11AY023/MRMT	4	81	37	9193	55.0	68.6
507	181L1507	RU0902028/CTHL	5	88	35	9193	60.6	69.4
556	181L1556	CHENIERE//CCDR/JEFF/3/TRNS//CCDR/JEFF	4	88	35	9185	60.4	69.3
651	181L1651	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	83	36	9178	45.1	68.7
692	181L1692	MS4077/Catahoula	4	88	37	9156	60.5	69.7
527	181L1527	9302065/3/CHENIERE//CCDR/JEFF	5	89	31	9131	59.1	69.3
661	181A1661	Jazzman-2/Catahoula	4	82	35	9128	61.8	70.4

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
564	181L1564	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	83	36	9114		
516	181L1516	RU1102034/MRMT	4	85	35	9089	57.6	68.8
670	181A1670	Jazzman-2/Catahoula	5	82	38	9084	50.9	67.6
565	181L1565	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	82	36	9080		
557	181L1557	CHENIERE//CCDR/JEFF/3/9302065	3	87	34	9070	62.2	70.4
561	181L1561	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	81	36	9067	54.7	69.6
563	181L1563	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	4	82	37	9063		
648	181L1648	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	86	35	9048	51.6	69.5
509	181L1509	RU0902137/MRMT	4	83	37	9041		
510	181L1510	RU0902137/MRMT	4	82	36	9033	64.3	71.3
689	181L1689	MS4077/Catahoula	4	85	35	9027	55.8	68.5
658	181L1658	CATAHOULA/Mermentau	4	85	35	9002	58.1	69.6
626	181L1626	MERMENTAU/MBLE	3	86	41	8980	62.9	69.5
517	181L1517	RU1102137/MRMT	4	82	37	8976	54.6	69.3
678	181L1678	Maybelle/Catahoula	4	82	36	8970	52.6	69.5
616	181L1616	CPRS/4/9502008-A//AR 1188/CCDR/3/RU0602128	5	87	35	8942		
523	181L1523	CCDR x JEFF (STOUT LATE)	4	88	33	8931	61.7	70.4
677	181L1677	Maybelle/Catahoula	5	82	32	8925	52.7	68.9
515	181L1515	RU1102034/MRMT	4	85	37	8924	59.4	67.9
618	181L1618	PRESIDO/MBLE	3	84	41	8904	57.7	68.9
566	181L1566	CATAHOULA/4/CPRS/KBNT//9502008-A/3/CCDR	5	85	35	8892		
707	PVL108	PVL108	3	84	42	8818	64.5	70.8
541	181L1541	9502008-A//AR1188/CCDR/3/CFFX29//AR 1142/LA 2031/4/CPRS	4	90	35	8816	62.6	68.6
685	181L1685	TRNS/CATAHOULA	4	84	35	8797	47.0	67.9
502	181L1502	MRMT/RU1102128	5	81	36	8789	60.6	68.5
667	181A1667	Jazzman-2/Catahoula	4	87	36	8717	61.0	69.3
688	181L1688	MS4077/Catahoula	4	84	39	8649		
519	181L1519	11AY022/CTHL	5	87	36	8644	53.0	69.7
542	181L1542	9502008-A//AR1188/CCDR/3/CFFX29//AR 1142/LA 2031/4/CPRS	4	92	34	8591		

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
581	181L1581	MRMT/RU0602025	5	83	34	8557	60.0	70.1
534	181L1534	DREW/CATAHOULA	5	86	37	8523	50.1	69.3
625	181L1625	MERMENTAU/MBLE	4	87	34	8517		
662	181A1662	Jazzman-2/Catahoula	4	87	36	8492	62.6	69.5
575	181L1575	DREW//CHENIERE/LMNT/3/TAGGART	4	92	34	8456	55.8	68.2
535	181L1535	DREW/CATAHOULA	5	92	35	8454	60.9	70.2
665	181A1665	Jazzman-2/Catahoula	4	87	36	8435	61.4	69.0
505	181L1505	RU0902028/CCDR	5	87	33	8399	60.6	69.9
525	181L1525	9302065/GFMT	5	88	33	8394	55.6	69.1
531	181L1531	9302065/DREW	4	88	34	8360	53.0	69.4
503	181L1503	CTHL/RU0802031	3	81	35	8359	61.9	69.7
672	181A1672	Jazzman-2/Catahoula	5	82	34	8325	56.2	69.5
528	181L1528	9302065/3/CHENIERE//CCDR/JEFF	3	89	32	8325	56.6	70.5
687	181L1687	TRNS/CATAHOULA	4	79	39	8293	40.6	66.1
511	181L1511	RU0902137/WLLS	5	88	34	8292		
501	181L1501	MRMT/RU0902137	5	88	33	8290	60.9	69.4
532	181L1532	9302065/DREW	4	92	38	8266	56.0	69.3
529	181L1529	9302065/MERMENTAU	3	91	33	8262	58.4	68.9
590	181L1590	LMNT/TAGGERT	4	90	35	8238	55.8	69.1
655	181L1655	CATAHOULA/Mermentau	4	87	38	8177	61.5	70.0
533	181L1533	9302065/DREW	4	92	32	8058	57.9	69.6
684	181L1684	TRNS/CATAHOULA	4	83	34	7990	46.0	67.5
530	181L1530	9302065/DREW	4	92	34	7932	56.4	69.4
682	181L1682	TRNS/CATAHOULA	5	87	31	7894	53.4	67.7
536	181L1536	DREW/CATAHOULA	4	87	35	7816	47.8	68.4
681	181L1681	TRNS/CATAHOULA	5	83	32	7806	40.8	66.8
675	181L1675	Maybelle/Catahoula	4	81	31	7684	45.9	69.2
522	181L1522	11AY033/WLLS	4	88	33	7673	53.0	69.1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
526	181L1526	9302065/GFMT	4	91	30	7666	56.8	69.2
521	181L1521	RU0801093/MRMT	3	90	32	7636		
686	181L1686	TRNS/CATAHOULA	5	81	38	7549	53.9	68.1
674	181L1674	Maybelle/Catahoula	4	82	38	7405	55.1	68.6
555	181L1555	CHENIERE//CCDR/JEFF/3/MBLE	4	92	29	7396	64.7	70.6
676	181L1676	Maybelle/Catahoula	4	78	37	7210	51.0	68.0
554	181L1554	CHENIERE//CCDR/JEFF/3/MBLE	5	94	30	7086	61.8	70.0
680	181L1680	CATAHOULA/Maybelle	4	78	31	6983	43.4	67.8
636	181L1636	FRANCIS/CPRS	3	87	41	6766	52.5	67.0
539	181L1539	TAGGART/4/9502008-A//AR1188/CCDR/3/CFX29//AR 1142/LA 2031	5	91	43	4452	49.2	68.3

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 2. Grain and milling yields and agronomic performance of entries in the 2018 Preliminary Medium-Grain Yield trial, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
741	181M1736	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL	4	90	38	12180	67.1	70.3
752	181M1747	CAFFEY/3/BNGL/9502065//EARL	3	90	37	11936	69.3	72.3
750	181M1745	BNGL/9502065//EARL/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	3	92	39	11547	67.4	70.0
753	181M1748	CAFFEY/3/BNGL/9502065//EARL	3	90	36	11509	68.0	71.8
798	TITAN	TITAN	3	87	38	11487	66.8	70.0
730	181M1725	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	5	93	36	11219	69.6	71.2
734	181M1729	BNGL//MERC/RICO/3/MERC/RICO//BNGL /4/BNGL/9502065//EARL	4	90	34	11159	67.5	72.0
751	181M1746	BNGL/9502065//EARL/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	3	92	37	11150	68.7	71.3
768	181M1763	NEPTUNE/JPTR	4	91	37	11147	67.6	70.2
773	181M1768	JPTR/RICO	5	88	44	11110		
793	171M1807	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	88	36	11091		
771	181M1766	NEPTUNE/JPTR	4	91	39	11083		
745	181M1740	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	88	39	11015	61.8	71.7
722	181M1717	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	90	37	11001		
756	181M1751	9502065/3/MERC//MERC/49902028/4/BNGL/9502065//EARL	4	91	38	10961	67.5	72.0
720	181M1715	NEPTUNE/4/ORIN/3/MERC/CAM9/MARS/4/BNGL	4	90	36	10919	68.4	72.1
732	181M1727	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MERC	3	91	38	10882	67.7	71.3
796	171M1867	LFTE/BNGL//CAFFEY	4	90	36	10881	67.5	72.9
721	181M1716	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	90	34	10863	68.7	72.2
742	181M1737	BNGL//MERC/RICO/3/MERC/RICO//BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	5	94	35	10830	67.0	70.9
735	181M1730	CAFFEY/3/BNGL/9502065//EARL	3	93	38	10793	68.4	70.6
717	181M1712	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	4	87	36	10765	68.4	72.0
739	181M1734	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL	4	93	35	10688	68.7	72.2
754	181M1749	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	4	88	37	10679	69.4	72.3
770	181M1765	NEPTUNE/JPTR	4	91	37	10675	65.6	68.2
738	181M1733	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	94	35	10548	70.4	71.9
724	181M1719	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	5	93	34	10534	69.0	72.1
740	181M1735	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL	4	94	35	10527	68.6	72.2

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
758	181M1753	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	90	40	10524		
744	181M1739	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	4	88	37	10519	62.4	71.7
777	181M1772	JPTR/RICO	5	91	43	10516		
749	181M1744	BNGL/9502065//EARL/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	3	90	37	10471	69.8	72.8
772	181M1767	NEPTUNE/JPTR	4	93	38	10459	67.1	68.6
782	181M1777	NEPTUNE/RICO	3	93	34	10448	70.7	72.6
728	181M1723	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	5	93	37	10402	69.9	72.9
743	181M1738	LFTE/BNGL/3/BNGL/9502065//EARL	5	88	38	10393	67.5	72.8
733	181M1728	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/BNGL//MERC/RICO/3/MERC/RICO//LBNGL	4	93	36	10362		
781	181M1776	NEPTUNE/RICO	3	93	38	10334	70.2	71.8
760	181M1755	NEPTUNE/JPTR	6	91	36	10315	67.3	69.0
802	CL153	CL153	4	90	37	10291	65.8	72.4
725	181M1720	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	94	37	10268	69.0	70.7
785	181M1780	NEPTUNE/RICO	4	95	38	10240	66.4	69.3
775	181M1770	JPTR/RICO	4	88	44	10215		
757	181M1752	9502065/3/MERC//MERC/4/9902028/4/BNGL//MERC/RICO/3/EARL	4	86	35	10191	67.7	73.8
779	181M1774	BNGL/RICO	3	93	38	10174	68.1	71.0
726	181M1721	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	94	35	10163	69.6	71.6
759	181M1754	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/CAFFEY	3	88	37	10151		
780	181M1775	BNGL/RICO	4	92	37	10134	69.5	71.9
769	181M1764	NEPTUNE/JPTR	5	90	34	10114	66.0	68.7
731	181M1726	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	5	94	35	10112	68.9	71.3
736	181M1731	MEDARK/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	4	91	37	10097	63.9	66.7
783	181M1778	NEPTUNE/RICO	4	93	38	10074	70.6	72.2
723	181M1718	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	93	36	10072	70.8	72.0
803	CL272	CL272	3	92	40	10054	65.7	71.4
755	181M1750	9502065/3/MERC//MERC//4/9902028/4/BNGL//MERC/RICO/3/EARL	5	95	39	10048	69.8	72.4
727	181M1722	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	5	94	36	10045		
766	181M1761	NEPTUNE/JPTR	5	91	40	10003		
774	181M1769	JPTR/RICO	5	89	40	9968		

Continued.

Table 2. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
761	181M1756	NEPTUNE/JPTR	5	91	35	9963		
762	181M1757	JPTR/9302065	4	84	36	9963		
794	171M1815	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	4	93	35	9953		
718	181M1713	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/9502065/3/MERC//MERC/4/9902028	5	88	36	9925	69.5	71.6
776	181M1771	JPTR/RICO	4	91	42	9887		
789	181M1784	JPTR/RICO	4	89	43	9883		
778	181M1773	JPTR/RICO	4	93	37	9861		
797	JPTR	JUPITER	5	94	39	9840	67.2	69.0
801	CL111	CL111	4	86	38	9806	63.5	73.7
719	181M1714	JPTR/4/9502065/3/MERC//MERC/4/9902028	3	90	36	9792		
716	181M1711	9502065/3/MERC//MERC//MERC/4/9902028/5/ORIN/3/MERC/CAM9/MARS/4/BNGL	4	89	37	9776		
767	181M1762	NEPTUNE/JPTR	5	93	41	9740		
786	181M1781	NEPTUNE/RICO	3	93	37	9713		
795	171M1835	LFTE/BNGL/5/EARL/4/BNGL/3/SMARS/MARS//MARS	5	90	39	9698		
784	181M1779	NEPTUNE/RICO	4	92	36	9696		
729	181M1724	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL	4	95	34	9658		
748	181M1743	BNGL/9502065//EARL/4/9502065/3/MERC//MERC/4/9902028	4	88	39	9613		
765	181M1760	NEPTUNE/9302065	4	93	35	9606		
764	181M1759	NEPTUNE/9302065	4	80	39	9475		
788	181M1783	JPTR/RICO	5	89	42	9459		
763	181M1758	JPTR/9302065	4	84	38	9410		
790	181M1785	JPTR/RICO	4	91	40	9372		
791	181M1786	JPTR/RICO	5	89	40	9343		
787	181M1782	JPTR/RICO	5	92	42	9236		
792	181M1787	JPTR/RICO	5	91	36	9224		
747	181M1742	BNGL/9502065//EARL/6/MARS//M201/MARS/5/STRN//MERC/RICO/4/M201	5	91	40	9123		
746	181M1741	LFTE/BNGL//MARS	4	91	37	8958		
737	181M1732	MARS/6/MARS//M201/MARS/5/STRN//MERC/RICO/4/M201	4	90	33	8905		
799	PVL01	PVL01	4	96	39	8317	58.8	70.4
800	PVL108	PVL108	3	88	41	8250	63.2	71.2

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

COOPERATIVE UNIFORM REGIONAL RICE NURSERY

The Uniform Regional Rice Nursery (URN) is a multi-state yield nursery conducted by public rice breeders at research locations in Arkansas, Louisiana, Mississippi, Texas, California, and Missouri to evaluate experimental lines and commercial varieties. Entries are exposed to different environments over a wide, diverse growing region and allow researchers to evaluate their adaptation in a single row.

The 2018 URN test included 240 experimental lines and varieties planted in six states. The randomized complete block design was applied with three replications for groups 1-4 and two replications for groups 5-8. Seeding rates were 90 lb for varieties.

The 2018 URN results from the H. Rouse Caffey Rice Research Station (HRCRRS) will be reported. All plots were drill seeded on March 14. The test was harvested on July 30. The test was conducted using standard agronomic practices (except that no fungicides were applied). Tables 1-8 show grain and milling yield and agronomic performance (seedling vigor, days to 50% heading, and plant height) of entries in the 2018 URN at the HRCRRS.

Table 1. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 1, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
006	1602097	CL131/TRNS	5	91	37	10251	60.9	68.6
013	1601133	RU1102192/4/WLLS/CFX-18/3/CFX-18//CCDR/9770532 DH2	3	91	37	9857	55.1	67.8
002	1702103	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	5	88	38	9518	61.0	70.7
010	1702140	CHNR/MRMT	4	92	34	9444	58.1	69.0
003	1504083	CL131/PSCL	5	89	34	9418	51.6	66.8
009	1701087	19991516/19951166/7/LBNT/9902/3/DAWN/9695//STBN/4/LGRU/5/WLLS/6/RU9201179	4	91	38	9096	41.4	65.4
011	1604197	CL151//COLUMBIA2/BENGAL	4	95	38	9085	42.0	61.9
007	1504197	RSMT/3/MARS/NWRX//TBNT/4/CL151	4	93	34	9075	56.1	68.5
017	1601010	91642//KATY/NWBT/5/RU9201176/4/KATY/NWBT/3/LBNT/STBN//NWBT/6/CYBT/7/FRNS	4	89	37	9060	48.2	66.3
018	CL153	CL153	4	91	34	9021	60.9	69.8
019	PSDO	PRESIDIO	4	89	36	9008	58.8	68.9
004	PVL108	PVL108	3	90	36	8897	60.1	70.1
015	1704055	CL151/JSMN85//CL161	4	96	38	8809	35.8	63.6
020	CL111	CL111	3	89	34	8798	57.4	70.4
014	1702162	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	5	90	36	8704	64.0	69.1
001	1701081	IRGA409/RXMT/5/NWBT/3/LBNT/9902//LBLE/4/MILL/6/LBNT/9902/3/DAWN/9695//STBN/…	4	98	41	8075	44.8	65.1
005	1701084	RU0801076/5/KATY/NWBT//L201/7402003/3/WLLS/4/L201/7402003//KATY/NWBT/3/LGRU	4	96	37	7508	43.1	63.6
016	0803153	CPRS/CCDR	9	85	36	4652	55.2	67.3
012	1003098	CPRS/NWBT//KATY/3/CCDR	9	84	35	3747	62.2	71.2
008	1503175	L202/LQ39a//SABR	9	86	36	3289	58.1	70.4

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 2. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 2, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
031	1704196	BOWMAN/CL131	5	90	37	10619	53.3	66.9
024	1303153	IR64/IR 1321-12	6	87	39	9842	56.0	66.5
033	1601030	RU1202168/JPTR	4	92	39	9741	60.9	66.0
022	1702165	CAFFEY/CL261	4	91	37	9735	61.4	67.6
035	1704198	BOWMAN/CL131	3	93	35	9578	55.6	67.1
029	1701124	JPTR/TITN	4	85	35	9559	56.4	64.1
040	DMND	DIAMOND	4	92	39	9316	42.1	60.0
027	1704154	Rex/CL151	3	92	37	9309	49.9	65.0
023	1704122	CL151/JSMN85//CL161	4	94	37	9221	34.3	63.9
025	1601099	RU0502068/RU1202088	4	95	38	9197	62.9	70.4
032	1303138	IR64/IR 1321-12	8	89	38	9141	57.0	67.3
039	LKST	LAKAST	3	91	39	9108	42.0	65.4
021	1601111	RU1302048/RU1302045	4	90	34	9068	55.5	66.4
030	1602195	9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	91	36	9012	60.9	69.2
037	1802037	CCDR/CL131	4	91	36	8955	60.2	69.7
034	1802034	CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031	4	92	37	8765	57.9	67.8
026	1702168	CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/4/9602065/3/CFX-29/AR 1142/LA 2031	5	89	34	8388	56.9	67.6
038	WLLS	WELLS	3	96	41	7646	48.9	66.9
028	1603138	WAB 450-11-1-1-P31-HB (NERICA 5)/RSMT	8	90	37	7346	57.1	67.8
036	1403141	AC110DH2/AC108DH2//CHEN	8	88	36	6750	57.9	68.0

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 3. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 3, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
053	1701136	EARL/9902028//RU1202068	4	94	39	10290	59.1	69.4
050	1802050	CCDR/JEFF//CFX-26/9702128/3/CL151	5	91	35	9988	54.4	66.7
051	1704077	Texmont/TeQing(BF7-46)/Tranesse	5	89	40	9893	49.3	64.2
054	1802054	CCDR/JEFF//CFX-26/9702128/3/CL151	5	93	37	9558	62.3	69.8
046	1802046	CCDR/JEFF//CFX-26/9702128/3/CL151	5	91	36	9551	61.9	70.3
055	1704114	Bowman//RSMT/KATY	4	88	36	9485	47.6	66.7
058	CHNR	CHENIERE	5	90	35	9147	58.2	71.9
047	1604193	Cheniere/Banks	4	94	41	9095	61.4	71.2
057	1704157	Cheniere/Banks	3	94	38	8999	58.6	69.9
060	CL272	CL272	3	91	37	8988	48.9	68.6
042	1802042	MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	4	91	35	8964	58.9	69.5
041	1701090	WLLS/CL161//TGRT/3/DREW/CL161//CL142-AR	3	95	39	8549	49.3	67.7
059	CCDR	COCODRIE	4	90	34	8399	59.4	70.0
045	1601124	MRMT/RU0502068	4	92	35	8323	64.3	71.3
052	1303181	043752/0047277/CHEN	8	90	37	8093	57.9	69.5
043	1804043	CL151/JSMN85//CL161	4	96	37	7954	44.0	62.9
049	1701139	STG05-IMI-02-055/CL142-AR/7/IRGA409/RXMT/5/NWBT/3/LBNT/9902//LBLE/4/…	4	98	37	7714	44.1	64.9
048	1603144	WAB 450-11-1-1-P31-HB (NERICA 5)/RSMT	8	87	38	7328	56.0	69.4
056	1603178	SABR/CCDR//PRESIDIO	8	90	36	3645	57.1	67.0
044	1403089	CPRS/9901081	9	84	36	3605	53.6	67.2

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 4. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 4, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
061	1701096	CL172/RU1102192	4	88	39	10528	55.7	68.6
080	TITN	TITAN	4	86	36	9899	57.5	65.9
063	1804063	RSMT/KATY//Bowman	4	86	34	9870	45.3	64.7
067	1804067	RSMT/KATY//Bowman	3	92	39	9596	50.1	64.5
078	JUPITER	JUPITER	5	92	37	9434	58.8	63.5
074	1602082	LAH169	4	82	39	9419	47.1	67.9
069	1601139	CL142-AR//KBNT/Q36194/3/WLLS/CL161//TGRT	3	95	40	9354	50.9	66.9
066	1802066	NEPTUNE/4/9502065/3/MERC//MERC/49902028	5	94	34	8970	58.4	67.6
062	1802062	CL152/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	92	39	8884	58.5	68.3
070	1802070	NEPTUNE/5/BNGL/SHORT RICO/4/9502065/3/MERC//MERC/4/9902028	4	94	34	8806	61.1	67.2
076	1703129	IR64/IR 1321-12	8	88	38	8699	60.6	67.5
079	ROYJ	ROY J	3	99	40	8580	45.8	65.0
065	AR17	JZMN/PI597046	3	96	40	8273	63.1	70.2
075	1804075	JODON/3/KATY//GFMT/PCOS/Templeton	4	90	38	8256	51.5	68.2
071	1804071	JODON/3/KATY//GFMT/PCOS/Templeton	4	95	38	7954	27.9	61.5
073	1601070	BRAZ/T489//MARS/3/M201/KATY/4/LMNT/RA73//KATY/5/TGRT	4	96	38	7750	35.3	64.0
064	1603113	043752/0047277/CHEN	7	90	38	7368	56.8	68.9
077	1403138	043752/0047277/CHEN	8	90	37	7100	47.7	67.7
068	1603086	CL161/CPRS	8	93	37	5506	56.9	67.1
072	1403153	L202/LQ39a//SABR	9	84	34	2133	50.3	67.5

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 5. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 5, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
118	1805118	Mo0327005/CL161	5	91	39	10544	57.3	68.1
101	1801101	CL172/RU1102034	4	90	38	10274	54.2	69.0
087	1804087	Rex/CL151	4	90	39	10121	44.3	63.8
083	1804083	CL151/JSMN85//CL151	4	95	41	9983	57.4	69.3
120	CL163	CL163	4	91	37	9899	50.7	67.1
103	1804103	CL151/JSMN85//CL161	4	94	39	9727	49.5	65.0
098	1802098	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	5	83	35	9628	35.5	64.9
117	1805117	Bolivar/Drew	4	86	37	9377	54.8	69.5
099	1804099	CL151/JSMN85//CL161	4	92	38	9252	41.4	64.1
109	1801109	JZMN/PI560239//JES	5	87	36	9252	46.4	63.5
106	1802106	CHENIERE//CCDR/JEFF/3/BASF 2-26	5	84	39	9238	50.0	66.9
097	1801097	RU1102034/RU1302045	5	90	36	9214	55.8	68.5
095	1804095	CL151/JSMN85//CL161	4	96	38	9110	53.1	67.8
110	1802110	CPRS/BASF 1-14	5	91	35	9059	48.4	65.4
113	1701111	RU1002128/RU1202097	4	91	39	9015	56.4	69.6
107	1804107	GFMT/KDM105//CL151/JSMN85	4	96	36	8996	53.1	67.3
094	1802094	CHENIERE/BASF 1-6	3	86	39	8795	62.8	71.6
102	1802102	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	6	83	36	8769	30.5	63.8
082	1802082	TRNS/BASF 1-10	3	86	34	8643	50.9	66.2
089	1801089	LGRU//KATY/STBN/3/FRNS//WLLS/CLI6I/4/RU0801081	4	91	39	8413	51.0	67.9
086	1802086	CHENIERE/BASF 1-2	5	95	36	8410	38.8	67.2
111	1804111	GFMT/KDM105//CL151/JSMN85	4	98	38	8404	49.8	65.5
085	1801085	LGRU//LMNT/RA73/3/LGRU/4/WLLS/5/CYBT/6/ROYJ	3	94	39	8302	36.8	64.0
091	1804091	CL151/JSMN85//CL161	3	93	35	8142	58.9	68.6
114	1802114	PVL01Sub	3	91	37	8118	19.8	65.8
093	1801093	LMNT//82CAY21/CICA8/3/DLMT/4/BASMATI-(120)/BOND//BSMT122/7//RNS3/5/…	3	93	37	8020	40.6	63.2
081	1801081	91642//KATY/NWBT/5/RU9201176/4/KATY/NWBT/3/LBNT/STBN//NWBT/6/LGRU//…	3	97	41	7850	42.5	64.5
105	1801105	JZMN/RU0701124//PI632283	3	95	39	7750	63.2	71.1

Continued.

Table 5. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
119	CL172	CL172	4	92	35	7734	59.2	68.9
115	1804115	Rex/CL181-AR	4	98	38	7499	38.3	61.3
112	1803112	CarolinaGoldSelect/Presidio	4	92	46	7080	55.6	69.4
090	1802090	CHENIERE/BASF 1-2	3	94	38	6748	49.8	66.8
108	1703126	CarolinaGoldSelect/Presidio	4	99	43	6609	30.9	62.9
084	1703098	CPRS/3/CPRS/NWBT/KATY	8	88	39	5281	46.8	66.7
104	1703175	CPRS/CCDR	8	83	34	5111	54.9	68.7
096	1603166	CPRS/3/CPRS/NWBT/KATY	8	90	34	4219	52.6	66.6
088	1703147	CPRS/NWBT//KATY/3/CCDR	9	84	35	3768	38.3	66.2
100	1503169	Hayakogane/BALDO	9	83	35	2873	54.9	67.8
092	1703163	Hayakogane/BALDO	9	83	35	2461	59.6	70.5
116	1703138	CL161/CPRS	9	86	34	2351	54.1	67.4

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 6. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 6, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
158	1805158	Mo0204044/Kataki	4	85	41	10704	57.2	65.1
123	1804123	Rex/CL151	4	91	40	10431	47.7	63.7
121	1701121	EARL/9902028//JPTR	4	96	39	10278	58.1	66.3
137	1801137	14SIT818/RU1501096	4	91	35	10107	51.9	62.9
160	Thad	Thad	5	91	38	9956	47.9	66.9
154	1702143	CAFFEY/3/BNGL/9502065//EARL	4	87	37	9787	46.9	64.3
151	1804151	Trenasse/Bowman	5	84	35	9744	52.4	67.3
145	1801145	ROYJ/CL142-AR	4	94	41	9706	51.2	64.9
147	1804147	Rex/CL151	4	93	43	9696	52.0	65.1
155	1804155	Trenasse/Bowman	5	85	36	9545	57.6	68.3
133	1801133	CL172/4/9502008-A//AR1188/CCDR/3/CFX-26/9702128	4	88	35	9471	56.8	68.5
126	1802126	CCDR/JEFF//CFX-26/9702128/3/CL151	5	92	38	9456	52.7	66.8
153	1701151	FRNS//WLLS/CL161/7/FRNS/6/LBNT/9902/3/DAWN/9695//STBN/4/LGRU/5/DREW	4	92	36	9349	56.0	68.0
129	1701127	JPTR/J062	4	93	38	9185	61.4	65.9
150	1802150	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/4/CFX-18//CCDR/9770532 DH2/…	5	88	39	9105	56.7	67.7
134	1802134	TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	5	91	36	9099	57.2	68.2
130	1802130	CCDR/JEFF//CFX-26/9702128/3/CL151	5	93	37	9095	45.3	61.8
135	1804135	Taggart/CL111	4	94	36	9088	46.5	66.1
142	1802142	9502008-A/DREW//CFX 26/WELLS/4/CPRS/3/CFX 29//AR 1142/LA 2031/5/CL161	5	93	39	8858	58.0	68.3
131	1804131	Rex/CL151	5	91	37	8796	48.3	67.5
143	1804143	CL161/Priscilla//CL151/JSMN85	5	85	39	8787	56.3	68.2
146	1802146	LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	5	89	35	8774	58.2	69.8
141	1801141	LGRU//KATY/STBN/5/LGRU//LMNT/RA73/3/LGRU/4/LGRU/6/NWBT/KATY//RA73/…	4	93	40	8728	51.1	66.0
139	1804139	CL161/Priscilla//CL151/JSMN85	5	92	36	8716	54.0	69.9
149	1701148	CYBT/TMPT/7/DREW/CL161/6/LGRU//KATY/STBN/5/NWBT/KATY//RA73/LMNT/4/..	4	93	41	8666	56.5	69.5
138	1802138	PRESIDO/CL111	5	135	37	8619	61.0	69.7
157	1805157	NIL219_2-9/Mo0212002	4	84	49	8590	51.6	67.0
125	1801125	RU1302045/CL111	4	85	38	8560	44.3	62.4

Continued.

Table 6. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
156	1803156	CCDR/MILL	4	86	37	8453	56.4	68.1
140	1803140	4579	5	98	42	8418	56.2	64.8
122	1802122	CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9/6/…	4	91	33	8407	57.6	68.2
148	1803148	CPRS/3/CPRS/NWBT/KATY	5	90	35	8365	55.6	66.5
127	1804127	Rex/CL181-AR	3	97	38	8324	49.2	65.2
152	1803152	AC110DH2/AC108DH2//CYBT	5	82	37	8263	52.1	67.7
159	0703144	CPRS/CCDR (ANTONIO)	5	88	34	8164	55.3	69.7
144	1803144	9302065/LMNT	5	92	36	7339	60.5	70.8
136	1603187	CPRS/3/CPRS/NWBT/KATY	8	91	34	6140	52.1	66.7
132	1703132	CPRS/3/CPRS/NWBT/KATY	8	86	35	5948	54.8	67.3
124	1703178	Hayakogane/BALDO	8	84	35	4796	52.1	68.7
128	1703181	AC110DH2/AC108DH2//CYBT	8	84	36	4678	58.5	69.5

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 7. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 7, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
187	1804187	DXBL//NWBT/KATY/3/Bowman	5	88	37	10335	39.5	65.8
200	CL151	CL151	4	89	37	10136	56.2	69.3
174	1802174	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	4	90	36	10125	54.5	67.8
195	1804195	Bowman/L201//TBNT/BLMT/3/RXMT/IR36	3	90	37	10068	39.0	65.4
179	1804179	RSMT/KATY//Bowman	4	88	41	10022	35.1	65.4
185	1701185	CHNR/CTHL	4	90	38	9998	57.6	70.5
162	1802162	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//9902207X2	5	90	36	9636	52.1	68.0
170	1802170	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	5	90	34	9633	51.8	68.5
199	0603075	RHONDO	4	99	41	9615	36.1	64.5
184	1803184	CPRS/SABR//MADISON	5	94	37	9601	51.5	67.9
169	1801169	ROYJ/RU1501024	5	91	38	9526	48.9	66.5
197	1805197	Soberana Q241-1/Francis	3	93	44	9487	40.4	65.1
171	1804171	RSMT/KATY//Bowman	4	85	35	9432	28.4	65.5
175	1804175	RSMT/KATY//Bowman	4	86	19	9420	31.1	63.0
163	1804163	CPRS//NWBT/KATY/3/Bowman	4	90	36	9408	50.6	65.4
191	1804191	Bowman/L201//TBNT/BLMT/3/RXMT/IR36	4	91	35	9340	31.6	67.5
186	1802186	NEPTUNE//BNGL/CL161/3/JPTR	4	90	35	9337	55.4	69.8
190	1802190	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/…	3	91	34	9225	58.6	70.1
178	1802178	NEPTUNE//BNGL/CL161/3/BNGL/CL161	4	90	35	9223	44.4	68.2
183	1804183	DXBL//NWBT/KATY/3/Bowman	3	92	37	9195	45.1	64.9
192	1803192	Jangseongbyeo/IR 1321-12	4	94	40	9189	50.8	66.0
194	1802194	CL272 sub A	3	90	36	9172	33.6	63.4
166	1802166	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	5	88	36	9063	52.7	68.7
173	1801173	ROYJ/RU1102192	4	92	38	9055	42.2	65.5
198	1805198	Mo0204074/Nil16_2-1	3	88	40	9041	56.8	69.5
182	1802182	BNGL/CL161/3/NEPTUNE//BNGL/CL161	3	92	37	8969	55.1	68.4
164	803164	CPRS/3/CPRS/NWBT/KATY	7	91	36	8888	47.0	67.7
161	1801161	LGRU//KATY/STBN/5/LGRU//LMNT/RA73/3/LGRU/4/LGRU/6/NWBT/KATY//RA73/LMNT/..	4	92	40	8886	49.3	66.8

Continued.

Table 7. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
193	1801193	TGRT/3/DREW/CL161//CL142-AR	4	91	43	8777	40.9	66.2
196	1803196	CCDR/L202//TRENASSE	5	93	40	8743	42.1	66.3
188	1803188	Jangseongbyeo/IR 1321-12	5	96	42	8633	49.1	65.0
167	1804167	RSMT/KATY//Bowman	4	92	38	8591	46.2	62.9
181	1801181	WLLS/CL161//TGRT	4	93	38	8565	37.8	68.9
165	1801165	RU1102034/RU1302045	3	87	36	8565	51.3	67.0
172	1703172	AC110DH2/AC108DH2//CHEN	7	89	38	8456	55.1	68.6
176	1803176	CPRS/CCDR//WELLS	5	92	39	8366	60.6	70.4
180	1803180	CPRS/CCDR//CCDR	6	88	39	8277	53.0	68.1
168	1803168	CPRS/NWBT//KATY/3/CCDR	6	92	33	7975	54.0	69.5
189	1801189	JZMN/RU0701124//PI632283	4	96	42	7491	48.5	67.1
177	1801177	KATY/NWBT//L201/7402003/3/WLLS/4/FRNS/5/DREW/CL161/8/FRNS//WLLS/CL161/…	4	96	41	7215	50.1	66.1

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

Table 8. Grain and milling yields and agronomic performance of entries in the 2018 Uniform Regional Rice Nursery, Group 8, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
211	1801211	9865216DH2/EARL//JPTR	3	85	37	10207	50.7	67.9
238	1801238	EARL/9902028//RU1202068	4	90	36	9971	43.6	69.4
207	1702183	TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	4	86	38	9749	54.2	69.4
214	1804214	REX/Templeton	4	90	37	9712	59.6	71.1
208	1805208	Mo0239718/CL161	4	89	41	9583	55.3	70.9
203	1805203	Soberana Q241-2/Wells	3	89	37	9532	26.4	63.2
204	1804204	Bowman/L201//TBNT/BLMT/3/RXMT/IR36	4	85	37	9521	50.7	68.8
227	1802227	CHENIERE/6/CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY/3/9502008/4/CLR9	4	87	36	9361	59.4	70.8
209	1804209	JODON/3/KATY//GFMT/PCOS/Templeton	3	89	37	9296	43.5	69.1
213	1805213	NIL219_2-9/RU0001108	4	88	39	9244	38.1	68.5
216	1801216	CL142-AR//KBNT/Q36194/7/DREW/CL161/6/LGRU//KATY/STBN/5/NWBT/KATY//…	4	92	41	9211	54.2	70.5
217	1402174	9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/5/TAGGART	5	91	36	9208	56.3	69.6
224	1804224	REX/Templeton	4	91	37	9203	52.0	67.5
240	Rex	Rex	4	93	41	9195	48.6	68.3
202	1802202	CL272 sub B	3	92	35	9187	53.8	68.7
212	1402091	CL131/3/CPRS/KBNT//9502008-A	5	87	33	9165	56.5	70.6
226	1801226	CL142-AR//KBNT/Q36194/3/DREW/CL161//TMPT	4	92	40	9073	46.5	69.0
229	1804229	REX/Templeton	4	94	36	9025	45.7	64.9
232	1802232	KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS//NWBT/KATY/5/…	5	89	38	8951	58.8	71.7
234	1804234	REX/Templeton	4	92	36	8867	58.0	70.3
205	PVL108	PVL108	4	86	40	8833	66.3	73.4
221	1801221	CTHL/CL172	4	91	35	8831	63.8	72.9
228	1805228	RU0403166/Spring	3	88	35	8769	27.5	67.0
218	1805218	NIL43_2-1/Mo0205014	4	84	35	8735	45.4	67.9
239	DLLA 2	DELLA 2	4	92	38	8721	60.4	69.9
237	1801237	JPTR/EARL	5	93	34	8576	63.9	69.0
222	1702195	CPRS/KBNT//9502008-A/3/CCDR/4/CL131	5	91	34	8570	64.0	72.4
236	1805236	NIL219_1-5/Mo0205014	4	81	43	8322	57.7	70.0

Continued.

Table 8. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL
210	PVL108	PVL108	4	85	40	8280	63.3	72.7
233	1805233	STGL01L-49-173/RU0001108	4	83	36	8126	50.8	66.8
223	1805223	Mo0215035 / CIRAD141Q244-3	4	81	40	8108	45.9	68.5
201	1801201	LGRU//KATY/STBN/5/LGRU//LMNT/RA73/3/LGRU/4/LGRU/6/NWBT/KATY//RA73/…	3	97	41	7768	38.0	62.8
215	1803218	CPRS/SABR//Gulfmont	5	92	44	7431	58.9	70.9
219	1804219	REX/Templeton	4	90	34	7170	48.2	67.2
231	1801231	JZMN/RU0701124//RU0401145	3	97	42	7092	46.1	67.7
225	1803233	CPRS/SABR//MADISON	5	101	35	6456	14.3	52.2
220	1803232	CPRS/SABR//MADISON	5	98	35	6165	30.8	60.7
235	1803236	CPRS/SABR//MADISON	7	99	40	6115	17.6	55.6
230	1803234	FRAN/WELLS//BANKS	8	96	43	5627	42.4	63.2
206	1501102	JZMN//DREW/UA99-167	4	95	37	3462	47.9	67.7

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

PROVISIA EXPERIMENTAL LINES

Two yield trials were conducted to evaluated new Provisia experimental lines. The tests included the PV and PVS tests, which were planted in the same field.

These yield trials consist primarily of promising breeding nursery material that is ready to be tested in replicated yield trials. The material in these trials was screened for agronomic and grain characteristics in nurseries prior to this phase of testing. The experimental lines were evaluated for seedling vigor, maturity, plant height, lodging resistance, grain yield of main crop, and disease resistance.

Tests were conducted using standard agronomic practices (except that no fungicides were applied) at the H. Rouse Caffey Rice Research Station at Crowley, Louisiana. Provisia herbicide was applied at 31 oz (2x rate) on May 4, 2018. A randomized complete block design was applied to arrange test entries. The plot size was 4.66 x 16 ft. Seeding rate was 90 lb/A. These tests were drill seeded on March 14 and harvested on July 30. Data is presented in Table 1.

Table 1. Grain and milling yields and agronomic performance of entries in the 2018 Provisia Yield trial, H. Rouse Caffey Rice Research Station, Crowley, Loiusiana.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
191	183L1191	TRNS/MRMT BCR 048 (5)	5	84	35	9458	32.6	64.5	1
180	183L1180	CHENIERE/BASF 1-12	5	90	34	9420	53.4	68.3	2
253	183L1253	PRESIDIO/BASF 1-12	4	84	40	9272	39.1	66.5	1
227	183L1227	MRMT BCR 048-7 GLAB NICE	4	80	35	9229	57.3	69.1	1
054	183L1054	PRESIDO/MRMT BCR 048(5)	3	88	36	8915	40.5	67.2	2
091	183L1091	CATAHOULA/CPRS BCR 045-5	4	87	40	8860	43.8	67.7	2
143	183L1143	MRMT BCR 048 (5)/MERMENTAU	5	90	40	8846	53.3	68.8	2
041	183L1041	CCDR/MRMT BCR 048 (5)	4	87	39	8651	45.3	67.9	2
048	183L1048	PRESIDO/MRMT BCR 048 (5)	4	90	36	8626	44.3	67.4	2
166	183L1166	CHENIERE/BASF 1-2	5	89	37	8603	54.8	68.9	2
045	183L1045	PRESIDO/MRMT BCR 048 (5)	5	84	37	8598	38.2	66.1	2
185	PVL108	PVL108	3	92	41	8592	54.1	69.7	2
241	183L1241	PRESIDIO/BASF 1-12	4	87	45	8586	31.1	64.3	1
058	183L1058	PRESIDO/MRMT/MRMT BCR 048(5)	4	85	33	8578	27.9	65.4	2
050	183L1050	PRESIDO/MRMT BCR 048(5)	3	84	36	8568	36.8	65.6	2
231	183L1231	CATAHOULA//CPRS/BASF 1-13	4	87	41	8524	46.3	65.4	1
071	183L1071	CHENIERE/MRMT BCR 048 (5)	4	93	38	8521	55.6	70.3	2
240	183L1240	CPRS/BASF 2-26	5	83	35	8504	30.7	63.7	1
206	183L1206	PRESIDO/MRMT BCR 048 (5)	3	85	42	8486	48.8	68.6	1
142	183L1142	LGRU//CHENIERE/BASF 1-7	4	86	38	8467	45.7	67.6	2
229	183L1229	9302065/MRMT BCR 048-7	4	96	45	8431	37.9	64.0	1
053	183L1053	PRESIDO/MRMT BCR 048(5)	3	87	38	8415	40.0	66.1	2
156	183L1156	CCDR/JEFF//CPRS/3/BASF 1-6	6	87	39	8390			2
158	183L1158	TRNS/BASF 1-14	5	91	35	8389	50.2	67.6	2
052	183L1052	PRESIDO/MRMT BCR 048(5)	3	88	37	8376	39.3	66.6	2
026	183L1026	9302065/MRMT BCR 048-7	5	91	42	8365	55.3	68.0	2

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
086	183L1086	MERMENTAU/CPRS BCR 045-5	5	92	39	8351	42.5	67.5	2
089	183L1089	MERMENTAU/CPRS BCR 045-5	4	83	34	8332	34.4	65.7	2
009	183L1009	MBLE/MRMT BCR 048-7	5	83	38	8330	33.4	65.9	2
155	183L1155	CCDR/JEFF//CPRS/3/BASF 1-6	6	88	40	8309			2
131	183L1131	MRMT BCR 048-7/TRNS	5	88	36	8253	43.5	64.8	2
133	183L1133	MRMT BCR 048-7/TRNS	5	83	33	8247	44.9	66.8	2
149	183L1149	DREW/BASF 1-4	3	95	35	8212	56.9	67.6	2
027	183L1027	9302065/MRMT BCR 048-7	4	97	41	8208	52.2	65.3	2
170	183L1170	CHENIERE//CCDR/JEFF/3/BASF 2-22	4	94	37	8203	54.5	68.1	2
242	183L1242	CATAHOULA/BASF 2-22	4	95	36	8184	20.6	64.0	1
057	183L1057	PRESIDO/MRMT/MRMT BCR 048(5)	4	87	34	8134	22.7	65.1	2
042	183L1042	PRESIDO/MRMT BCR 048 (5)	4	91	40	8134	39.2	65.7	2
018	183L1018	9302065/MRMT BCR 048-6	4	89	39	8113	37.1	65.9	2
145	183L1145	CATAHOULA/MRMT BCR 048 (5)	5	88	37	8091	29.4	65.1	2
073	183L1073	CHENIERE/MRMT BCR 048 (5)	4	91	36	8081	60.0	70.6	2
257	183L1257	CATAHOULA/BASF 2-18	4	93	37	8080	32.9	66.0	1
215	183L1215	CHENIERE/CPRS BCR 045-5	3	90	38	8067	35.5	67.4	1
059	183L1059	PRESIDO/MRMT/MRMT BCR 048(5)	4	85	35	8058	39.8	67.0	2
093	183L1093	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	89	41	8056	59.3	69.9	2
126	183L1126	MRMT BCR 048-7 GLAB NICE	4	82	33	8043	42.0	66.7	2
022	183L1022	9302065/MRMT BCR 048-6	4	91	35	8043	39.1	64.1	2
017	183L1017	9302065/MRMT BCR 048-6	4	89	37	8041	40.1	66.6	2
244	183L1244	CATAHOULA/BASF 2-22	4	91	37	8035	21.4	64.1	1
049	183L1049	PRESIDO/MRMT BCR 048 (5)	4	91	36	8028	46.8	69.3	2
210	183L1210	PRESIDO/MRMT BCR 048-7	4	85	36	8027			1
029	183L1029	9302065/MRMT BCR 048 (5)	4	92	36	8009	54.0	67.4	2

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
067	183L1067	CHENIERE/MRMT BCR 048-7	5	88	40	7968	51.9	68.7	2
189	183L1189	MBLE/MRMT BCR 048-7	5	87	35	7956			1
160	183L1160	GFMT/BASF 1-1	4	94	38	7956	45.8	65.1	2
179	183L1179	CHENIERE/BASF 1-12	4	85	35	7954	47.1	64.5	2
167	183L1167	CATAHOULA/BASF 2-18	5	98	42	7952	49.5	65.5	2
114	183L1114	MRMT BCR 048-6 F2/LAKAST	4	91	38	7947	51.5	67.9	2
092	183L1092	CATAHOULA/MRMT BCR 048 (5)	4	89	37	7931	38.4	68.0	2
209	183L1209	PRESIDO/MRMT BCR 048 (5)	5	85	39	7888	35.9	64.1	1
208	183L1208	PRESIDO/MRMT BCR 048 (5)	3	82	34	7882	27.8	64.2	1
028	183L1028	9302065/MRMT BCR 048 (5)	4	92	37	7882	57.9	69.2	2
183	183L1183	CHENIERE/BASF 2-31	6	89	35	7874	35.9	66.9	2
150	183L1150	CCDR/JEFF//CPRS/3/BASF 1-6	4	93	42	7873			2
064	183L1064	PRESIDO/MRMT BCR 048 (5)	4	92	37	7870	48.7	68.1	2
254	183L1254	PRESIDIO/BASF 1-12	4	77	40	7856			1
109	183L1109	MRMT BCR 048/CHENIERE	5	87	43	7829	48.1	68.4	2
095	183L1095	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	89	37	7819	55.6	70.1	2
248	183L1248	CPRS/BASF 1-1	4	88	41	7800			1
115	183L1115	MRMT BCR 048-6 F2/LAKAST	4	84	36	7797	53.1	68.1	2
110	183L1110	MRMT BCR 048/CHENIERE	4	87	37	7792	35.8	64.6	2
186	183L1186	MBLE/CPRS BCR 045-5	5	89	35	7788			1
193	183L1193	9302065/MRMT BCR 048-6	4	88	36	7783	47.5	65.5	1
030	183L1030	9302065/MRMT BCR 048 (5)	5	90	35	7783	50.7	67.8	2
070	183L1070	CHENIERE/MRMT BCR 048-7	5	91	38	7761	51.7	69.1	2
199	183L1199	9302065/MRMT BCR 048 (5)	4	95	40	7756			1
134	183L1134	MRMT BCR 048-7/TRNS	5	83	33	7748	42.3	64.9	2
256	183L1256	CHENIERE/BASF 1-2	5	88	40	7746			1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
164	183L1164	CHENIERE/BASF 1-7	5	91	37	7746	30.7	67.5	2
163	183L1163	PRESIDIO/BASF 1-12	5	91	39	7736	54.1	66.6	2
080	183L1080	CHENIERE/CPRS BCR 045-5	5	93	39	7728	27.9	60.2	2
203	183L1203	CCDR/MRMT BCR 048 (5)	5	89	39	7723			1
061	183L1061	PRESIDO/MRMT/MRMT BCR 048(5)	5	92	36	7722	34.2	66.0	2
181	183L1181	CHENIERE/BASF 2-31	4	87	37	7722	44.3	67.0	2
135	183L1135	CATAHOULA//CPRS/BASF 1-13	4	88	38	7708	44.4	67.5	2
011	183L1011	TRNS/MRMT BCR 048 (5)	4	88	35	7707	50.5	68.6	2
051	183L1051	PRESIDO/MRMT BCR 048(5)	4	82	38	7705	35.2	64.2	2
087	183L1087	MERMENTAU/CPRS BCR 045-5	5	88	36	7697			2
190	183L1190	MBLE/MRMT BCR 048-7	5	77	38	7694	30.6	66.2	1
153	183L1153	CPRS/BASF 1-4	4	97	41	7686			2
176	183L1176	TAGGART/BASF 1-15	4	79	37	7667	31.9	62.6	2
252	183L1252	GFMT/BASF 1-1	4	90	37	7659			1
082	183L1082	CHENIERE/CPRS BCR 045-5	5	90	34	7637			2
198	183L1198	9302065/MRMT BCR 048-6	4	89	38	7610	32.5	66.9	1
196	183L1196	9302065/MRMT BCR 048-6	54	83	32	7609	36.9	65.7	1
107	183L1107	MRMT BCR 048/CHENIERE	4	90	38	7600	48.4	67.2	2
188	183L1188	MBLE/MRMT BCR 048 (5)	3	91	33	7600			1
228	183L1228	MRMT BCR 048-7/TRNS	5	82	35	7579	49.9	67.4	1
224	183L1224	MRMT BCR 048-6 F2/LAKAST	4	82	41	7577	47.8	67.0	1
123	183L1123	MRMT BCR 048-7/CCDR	5	86	39	7572			2
200	183L1200	9302065/MRMT BCR 048-7	3	95	40	7535	64.2	66.0	1
060	183L1060	PRESIDO/MRMT/MRMT BCR 048(5)	5	90	34	7529	32.0	65.3	2
001	183L1001	MBLE/CPRS BCR 045-5	5	85	33	7518	40.2	50.5	2
213	183L1213	CHENIERE/CPRS BCR 045-5	4	87	37	7503			1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
144	183L1144	MRMT BCR 048-7 F2/PRESIDIO	3	84	40	7495	38.9	60.9	2
226	183L1226	MRMT BCR 048-7 GLAB NICE	5	82	36	7477	44.2	65.6	1
044	183L1044	PRESIDO/MRMT BCR 048 (5)	4	94	37	7469	42.3	64.5	2
099	183L1099	MRMT BCR 048 (5)/MBLE	4	86	36	7467	38.7	66.7	2
136	183L1136	CATAHOULA//CPRS/BASF 1-13	5	86	35	7465	45.7	64.9	2
220	183L1220	MRMT BCR 048/CHENIERE	4	79	40	7449	21.0	62.6	1
151	183L1151	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	5	87	37	7424			2
139	183L1139	CHENIERE/BASF 1-6//PRESIDIO/BASF 1-12	4	85	40	7421			2
217	183L1217	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	87	33	7418			1
002	183L1002	MBLE/CPRS BCR 045-5	4	82	41	7418	29.4	66.1	2
141	183L1141	CPRS BCR 045-5/CHENIERE/CHENIERE	5	92	43	7415			2
105	183L1105	MRMT BCR 048/CHENIERE	5	86	35	7374			2
222	183L1222	CPRS BCR 045-5/CHENIERE	5	84	36	7360			1
040	183L1040	CCDR/MRMT BCR 048-7	5	85	36	7351			2
201	183L1201	9302065/MRMT BCR 048-7	4	94	38	7337			1
119	183L1119	MRMT BCR 048-7/CHENIERE	5	92	37	7333			2
216	183L1216	MERMENTAU/CPRS BCR 045-5	3	85	35	7310			1
267	183L1267	CCDR//MRMT/BCR 048-7	4	90	34	7306			1
147	183L1147	CATAHOULA/MRMT BCR 048 (5)	4	92	36	7300			2
233	183L1233	CATAHOULA//CPRS/BASF 1-13	4	90	39	7300	38.4	68.3	1
184	PVL01	PVL01	3	99	36	7297	52.5	68.7	2
078	183L1078	CHENIERE/CPRS BCR 045-5	4	89	36	7285			2
006	183L1006	MBLE/MRMT BCR 048 (5)	5	89	38	7280			2
182	183L1182	CHENIERE/BASF 2-31	5	88	35	7277			2
062	183L1062	PRESIDO/MRMT/MRMT BCR 048(5)	5	90	35	7261	32.2	65.6	2
120	183L1120	MRMT BCR 048-7/CHENIERE	5	90	40	7256			2

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
138	183L1138	CHENIERE/BASF 1-6//PRESIDIO/BASF 1-12	4	91	40	7249			2
266	183L1266	CCDR//MRMT/BCR 048-7	3	88	33	7248			1
121	183L1121	MRMT BCR 048-7/CHENIERE	5	89	37	7245			2
031	183L1031	9302065/MRMT BCR 048 (5)	4	96	37	7236			2
008	183L1008	MBLE/MRMT BCR 048 (5)	4	91	35	7236			2
234	183L1234	CATAHOULA//CPRS/BASF 1-13	6	83	37	7232	43.9	68.5	1
236	183L1236	CATAHOULA//TRNS/BASF 1-10	5	92	33	7219			1
047	183L1047	PRESIDO/MRMT BCR 048 (5)	4	88	34	7205	32.1	65.3	2
068	183L1068	CHENIERE/MRMT BCR 048-7	5	87	38	7205			2
197	183L1197	9302065/MRMT BCR 048-6	3	82	37	7188	29.6	64.3	1
007	183L1007	MBLE/MRMT BCR 048 (5)	5	91	33	7186			2
129	183L1129	MRMT BCR 048-7/TRNS	4	83	36	7183			2
214	183L1214	CHENIERE/CPRS BCR 045-5	4	88	41	7153			1
021	183L1021	9302065/MRMT BCR 048-6	5	83	36	7124	24.6	63.2	2
239	183L1239	MRMT BCR 048-6 F2/LAKAST	5	85	40	7122			1
072	183L1072	CHENIERE/MRMT BCR 048 (5)	5	94	38	7118			2
264	183L1264	CCDR//MRMT/BCR 048-7	3	91	35	7113			1
159	183L1159	9302065/BASF 1-6	5	94	37	7109	43.7	67.5	2
034	183L1034	9302065/CPRS BCR 045-5	4	86	36	7102			2
085	183L1085	MERMENTAU/MRMT BCR 048 (5)	5	91	36	7100			2
207	183L1207	PRESIDO/MRMT BCR 048 (5)	3	86	37	7098	45.3	67.5	1
066	183L1066	CHENIERE/MRMT BCR 048-7	5	88	37	7083			2
169	183L1169	CHENIERE//CCDR/JEFF/3/BASF 2-26	6	89	41	7066			2
116	183L1116	MRMT BCR 048-6 F2/LAKAST	4	95	38	7063			2
038	183L1038	CCDR/MRMT BCR 048-7	4	82	36	7052	50.7	71.1	2
235	183L1235	CHENIERE/BASF 1-6//PRESIDIO/BASF 1-12	6	86	38	7050			1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
251	183L1251	TRNS/BASF 1-10	4	90	39	7037			1
077	183L1077	CHENIERE/MRMT BCR 048-7	4	91	39	7034			2
084	183L1084	MERMENTAU/MRMT BCR 048 (5)	4	87	34	7019			2
056	183L1056	PRESIDO/MRMT/MRMT BCR 048(5)	4	88	32	6996	23.3	64.2	2
055	183L1055	PRESIDO/MRMT/MRMT BCR 048(5)	4	87	33	6985	26.2	64.8	2
097	183L1097	MRMT BCR 048 (5)/MBLE	5	86	34	6960			2
063	183L1063	PRESIDO/MRMT BCR 048 (5)	4	88	36	6954	35.6	65.4	2
221	183L1221	MRMT BCR 048 (5)/PRESIDIO	4	73	40	6952			1
075	183L1075	CHENIERE/MRMT BCR 048-7	5	92	37	6952			2
211	183L1211	PRESIDO/MRMT BCR 048(5)	3	83	32	6940	23.9	64.3	1
237	183L1237	MRMT BCR 048-7 F2/PRESIDIO	3	79	38	6918			1
020	183L1020	9302065/MRMT BCR 048-6	5	86	40	6915			2
013	183L1013	9302065/MRMT BCR 048-6	6	90	38	6912	20.1	58.6	2
088	183L1088	MERMENTAU/CPRS BCR 045-5	5	97	37	6899			2
103	183L1103	MRMT BCR 048 (5)/MERMENTAU	5	83	33	6897			2
165	183L1165	CHENIERE/BASF 1-7	5	89	39	6884			2
262	183L1262	CPRS/BASF 1-14	4	89	42	6870			1
205	183L1205	KBNT/CPRS BCR 045-5	4	93	38	6866			1
101	183L1101	MRMT BCR 048 (5)/MERMENTAU	5	94	37	6851			2
106	183L1106	MRMT BCR 048/CHENIERE	5	97	37	6851			2
033	183L1033	9302065/CPRS BCR 045-5	5	91	37	6817			2
261	183L1261	CPRS/BASF 1-14	4	83	33	6807			1
046	183L1046	PRESIDO/MRMT BCR 048 (5)	4	89	37	6798	42.0	66.1	2
258	183L1258	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	4	90	39	6795			1
124	183L1124	MRMT BCR 048-7 GLAB NICE	5	126	33	6794			2
177	183L1177	CPRS/BASF 1-14	4	92	35	6792			2

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
223	183L1223	MRMT BCR 048-6 F2/LAKAST	5	89	40	6788			1
140	183L1140	CPRS BCR 045-5 F2/MBLE /MBLE	5	91	36	6785			2
171	183L1171	CHENIERE//CCDR/JEFF/3/BASF 2-22	4	94	34	6784			2
238	183L1238	CATAHOULA/MRMT BCR 048 (5)	6	92	40	6783			1
036	183L1036	CCDR/MRMT BCR 048-7	4	89	36	6783			2
090	183L1090	MERMENTAU/CPRS BCR 045-5	4	85	33	6781			2
104	183L1104	MRMT BCR 048 (5)/MERMENTAU	4	83	37	6779			2
039	183L1039	CCDR/MRMT BCR 048-7	5	86	38	6767			2
108	183L1108	MRMT BCR 048/CHENIERE	5	89	42	6766			2
037	183L1037	CCDR/MRMT BCR 048-7	4	82	35	6766			2
168	183L1168	CATAHOULA/BASF 2-18	6	94	36	6689			2
152	183L1152	CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	4	87	35	6664			2
032	183L1032	9302065/MRMT BCR 048 (5)	4	96	39	6659			2
003	183L1003	MBLE/CPRS BCR 045-5	4	84	40	6654			2
069	183L1069	CHENIERE/MRMT BCR 048-7	5	88	37	6653			2
255	183L1255	PRESIDIO/BASF 1-12	5	90	38	6649	52.3	68.4	1
016	183L1016	9302065/MRMT BCR 048-7	4	85	32	6637			2
102	183L1102	MRMT BCR 048 (5)/MERMENTAU	5	80	33	6635			2
024	183L1024	9302065/MRMT BCR 048 (5)	4	95	40	6626			2
265	183L1265	CCDR//MRMT/BCR 048-7	3	91	37	6615			1
074	183L1074	CHENIERE/CPRS BCR 045-5	4	89	36	6587			2
137	183L1137	CATAHOULA//CPRS/BASF 1-13	4	88	38	6579			2
094	183L1094	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	87	34	6546			2
225	183L1225	MRMT BCR 048-7	4	76	33	6543			1
015	183L1015	9302065/MRMT BCR 048-7	4	84	32	6534			2
130	183L1130	MRMT BCR 048-7/TRNS	5	85	37	6507			2

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
192	183L1192	9302065/MRMT BCR 048-6	4	84	36	6494	34.4	61.5	1
232	183L1232	CATAHOULA//CPRS/BASF 1-13	5	99	45	6491			1
014	183L1014	9302065/MRMT BCR 048-6	5	86	35	6484			2
132	183L1132	MRMT BCR 048-7/TRNS	5	86	35	6481			2
112	183L1112	MRMT BCR 048-6 F2/LAKAST	4	93	43	6481			2
174	183L1174	CHENIERE/BASF 1-8	5	93	36	6478			2
079	183L1079	CHENIERE/CPRS BCR 045-5	5	91	33	6474			2
249	183L1249	CCDR/JEFF//CPRS/3/BASF 1-6	4	90	39	6472			1
025	183L1025	9302065/MRMT BCR 048 (5)	4	102	44	6450			2
148	183L1148	MRMT BCR 048-6 F2/LAKAST	4	83	38	6450			2
245	183L1245	CPRS/BASF 1-4	4	105	40	6449			1
010	183L1010	MBLE/MRMT BCR 048-7	4	79	35	6424			2
157	183L1157	CCDR/JEFF//CPRS/3/BASF 1-3	4	95	38	6406			2
076	183L1076	CHENIERE/MRMT BCR 048-7	4	93	37	6397			2
230	183L1230	9302065/MRMT BCR 048-7	4	96	48	6389			1
035	183L1035	CCDR/MRMT BCR 048-7	6	83	36	6367			2
113	183L1113	MRMT BCR 048-6 F2/LAKAST	4	103	38	6355			2
083	183L1083	CHENIERE/CPRS BCR 045-5	4	88	35	6323			2
065	183L1065	PRESIDO/MRMT BCR 048 (5)	4	89	34	6315			2
098	183L1098	MRMT BCR 048 (5)/MBLE	5	82	35	6309			2
173	183L1173	CHENIERE/BASF 1-8	5	91	35	6306			2
204	183L1204	KBNT/CPRS BCR 045-5	4	97	34	6287			1
100	183L1100	MRMT BCR 048 (5)/MBLE	5	82	38	6281	40.0	66.0	2
194	183L1194	9302065/MRMT BCR 048-6	4	84	36	6275	36.3	64.0	1
005	183L1005	MBLE/CPRS BCR 045-5	5	90	36	6244			2
219	183L1219	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	84	34	6228			1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
187	183L1187	MBLE/MRMT BCR 048 (5)	3	89	38	6204			1
081	183L1081	CHENIERE/CPRS BCR 045-5	5	90	37	6191			2
111	183L1111	MRMT BCR 048 (5)/PRESIDIO	4	80	38	6191			2
250	183L1250	TRNS/BASF 1-14	4	96	38	6133			1
043	183L1043	PRESIDO/MRMT BCR 048 (5)	4	89	37	6107			2
218	183L1218	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	5	87	30	6040			1
125	183L1125	MRMT BCR 048-7 GLAB NICE	6	83	35	6029			2
212	183L1212	CHENIERE/MRMT BCR 048 (5)	4	86	31	6023	44.0		1
161	183L1161	CPRS/BASF 2-26	5	97	35	5998			2
178	183L1178	CPRS/BASF 1-14	4	94	36	5989			2
162	183L1162	CPRS/BASF 1-13	4	89	38	5965			2
247	183L1247	9302065/BASF 1-5	4	95	42	5944			1
096	183L1096	9502008-A//AR1188/CCDR/3/RU0602128/4/MRMT BCR 048 (5)	4	92	33	5917			2
127	183L1127	MRMT BCR 048-7 GLAB NICE	4	83	33	5904			2
243	183L1243	CATAHOULA/BASF 2-22	5	94	33	5878			1
128	183L1128	MRMT BCR 048-7 GLAB NICE	4	81	35	5861			2
019	183L1019	9302065/MRMT BCR 048-6	5	88	30	5764			2
260	183L1260	JODN/BASF 1-14	4	84	34	5759			1
004	183L1004	MBLE/CPRS BCR 045-5	4	90	32	5727			2
012	183L1012	9302065/MRMT BCR 048-6	5	93	41	5685			2
154	183L1154	CPRS/BASF 1-4	3	98	44	5670			2
202	183L1202	CCDR/MRMT BCR 048 (5)	5	83	35	5537			1
117	183L1117	MRMT BCR 048-6 F2/LAKAST	5	97	39	5528			2
122	183L1122	MRMT BCR 048-7/CHENIERE	6	93	41	5431			2
175	183L1175	JODN/BASF 1-14	4	90	35	5402			2
259	183L1259	CHENIERE/BASF 1-14	3	95	36	5383			1

Continued.

Table 1. Continued.

ENT	SOURCE	PEDIGREE	VIG[1]	HDT	HTE	YIELD	WHOLE	TOTAL	REPS
146	183L1146	CATAHOULA/MRMT BCR 048 (5)	6	86	37	5168			2
172	183L1172	CPRS/BASF 1-12	5	92	34	5165			2
195	183L1195	9302065/MRMT BCR 048-6	4	83	35	5004			1
246	183L1246	9302065/BASF 1-5	4	95	41	4951			1
118	183L1118	MRMT BCR 048-6 F2/LAKAST	5	97	36	4900			2
263	183L1263	CHENIERE/BASF 1-12	4	76	35	4844			1
023	183L1023	9302065/MRMT BCR 048-6	5	89	34	3805			2

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.

HIGH-THROUGHPUT DNA MARKER LAB FOR APPLIED BREEDING

A.N. Famoso, B. Angira, J.D. Dartez, and R.E. Zaunbrecher

The single nucleotide polymorphism (SNP) marker-assisted lab was established in February 2016 through the support of the Louisiana Rice Research Board and the LSU AgCenter at the H. Rouse Caffey Rice Research Station as part of the Variety Development Program. The lab facilitates the integration of molecular breeding as a core element to an applied breeding program and offers tangible benefits to our variety development efforts in terms of speed, accuracy, throughput, and uniformity. The lab is fulfilling the objective of research to develop, optimize, and implement a comprehensive molecular breeding strategy as an integrated component of rice variety development efforts. The SNP lab also facilitates the necessary scale and inexpensive modern breeding approaches that are incorporated into the variety development efforts.

The molecular breeding lab has SNP markers associated with major rice traits, including blast resistance genes (PITA2, PIZ, Pi2, Pi9, and Pib), Cercospora resistance, aroma (BADH2), amylose, gel temperature, pubescence, grain size (GS3 and GL7), heading date, and plant height (*sd1*). In addition to these markers, the lab also has SNP markers for Clearfield and Provisia herbicide resistance genes. These markers were deployed at different stages of the breeding program to improve the accuracy and speed of the program in 2018. A new SNP marker was developed for semidwarfism in medium-grain varieties. This SNP is associated with the mutation in the *sd1* gene, which was first reported in Calrose76, a California semidwarf variety. To enable gene discovery and validation, a breeding germplasm panel of 400 lines was developed in 2016 and was phenotyped for heading date, plant height, pubescence, amylose, gel temperature, and grain size traits in 2017 and 2018. This panel is constituted with the modern and historical U.S. rice germplasm. The panel is updated as improved modern and elite breeding lines are developed in the U.S. rice breeding programs.

Two recombinant inbred line (RIL) populations were also genotyped and phenotyped to determine the SNP performance in family structured populations in 2017 and 2018. The RIL population developed from a cross between Trenasse by Jupiter was genotyped to develop a genetic linkage map covering 3,119 cM of total rice genome with an average distance of 14 cM between markers. Quantitative trait loci (QTL) for plant height, heading date, and grain length and width were mapped on the rice genome. The analysis resulted in the identification of a major QTL for days to heading on Chromosome 3 and two major QTLs on Chromosomes 3 and 7 for grain length trait.

Marker-assisted selection (MAS) was performed on a total of 72 rice breeding populations that included 29,184 individual plants (Table 1). DNA was extracted from these plants, and the appropriate trait SNP markers were run to select the desired 100 or 50 plants from each population. The selected plants were then transplanted into a greenhouse. During the following season (2019), the harvested panicles will be grown as panicle rows in the field. The MAS approach was integrated with our extensive and successful core breeding program, and it improved the speed, accuracy, and uniformity of the Variety Development Program.

A set of markers was developed to identify the segregation and purity of the yield plots from all of the different breeding tests to improve the efficiency and accuracy of the program. From the test plots, 19,972 leaf samples (eight samplers per entry) were collected. One leaf sample from each entry was utilized to extract DNA and to run the set of trait markers to test for the desired traits (Table 2). The remaining leaf samples will be utilized for genomic predictions in the future. All entries included in yield plot tests were genotyped and analyzed, except for the RiceTec hybrid entries, which included four in the Variety Trial and one in the Commercial Advanced (CA) test.

In previous years, a set of genome-wide (GW) markers were identified, which along with the trait markers has the ability to purify Louisiana rice varieties. This set has been successful in purifying foundation seed head rows of important Louisiana varieties in the Foundation Seed Program of the LSU AgCenter. In 2018, head rows of PVL01 and PVL108 varieties were purified using the defined molecular SNP markers set in the Foundation Seed Program. Furthermore, efforts are in the pipeline to identify more GW markers, which would be utilized in trait mapping, germplasm characterization, and germplasm purity screening. A set of markers has also been deployed to test F_1 breeding crosses of 2018 to identify and eliminate self-crosses. A total of 297 breeding populations were tested for true crosses in 2018.

Table 1. Breeding populations utilized for marker-assisted selection for target traits.

Population ID	Leaf Source	Round	No. of Plants	Selected Plants	Target Traits*
17T062	Seedlings	Round1	384	100	Pita-Blast, CL
17TA020	Seedlings	Round1	384	100	Pita-Blast, Conv
17TA023	Seedlings	Round1	384	100	Pita-Blast
17TA024	Seedlings	Round1	384	100	Pita-Blast
17TA031	Seedlings	Round1	384	100	Conv
17TA004a	Seedlings	Round1	384	100	CL
17T022	Seedlings	Round1	384	100	Piz-Blast, CL
17T023	Seedlings	Round1	384	100	Piz-Blast, CL
17TA090	Seedlings	Round1	192	60	Pita-Blast
17TA094	Seedlings	Round1	192	60	Pita-Blast
17TA095	Seedlings	Round1	192	60	Pita-Blast
17TA098	Seedlings	Round1	192	60	Pita-Blast
17TA102	Seedlings	Round1	192	60	Pita-Blast, CL
17TA111	Seedlings	Round1	192	60	Pita-Blast, CL
17T125	Seedlings	Round1	192	60	Pita-Blast, CL
17TA113	Seedlings	Round1	192	60	Amy4
17TA169	Seedlings	Round1	192	60	Amy4, CL
17TA123	Seedlings	Round1	192	60	Piz-Blast
17TA175	Seedlings	Round1	192	60	Piz-Blast, CL
17TA10a	Seedlings	Round1	384	100	Piz-Blast, Conv
17TA162	Seedlings	Round1	384	100	Pita-Blast
17TA136	Seedlings	Round1	384	100	Pita-Blast, PV, Non-CL
17TA184	Seedlings	Round1	384	100	Pita-Blast, PV, Non-CL
17TA185	Seedlings	Round1	384	100	Pita-Blast, PV, Non-CL
17TA172	Seedlings	Round1	384	100	Pita-Blast, Piz-Blast, Conv
17TA115	Seedlings	Round1	384	100	Pita-Blast, CL, Semidwarf
17TA168	Seedlings	Round1	384	100	Piz-Blast, Conv
17TA137	Seedlings	Round1	384	100	Piz-Blast, CL
17TA183	Seedlings	Round1	384	100	PV, Non-CL
17T078	Seedlings	Round1	384	100	High amylose, Conv
17T070	Seedlings	Round1	384	60	Pita-Blast, Conv
17TA112	Seedlings	Round1	384	60	Pita-Blast, Conv
17TA104	Seedlings	Round1	384	60	Pita-Blast, Conv
17TA109	Seedlings	Round1	384	60	Pita-Blast, Conv
17TA107	Seedlings	Round1	384	60	Pita-Blast, CL, Semidwarf
17TA110	Seedlings	Round1	384	60	Pita-Blast, Amy4, CL
17TA083	Seedlings	Round1	384	60	High amylose, ALK, Non-Aro

Continued.

Table 1. Continued.

Population ID	Leaf Source	Round	No. of Plants	Selected Plants	Target Traits*
17TA145	Seedlings	Round1	384	60	High amylose, ALK, Non-Aro
17TA179	Seedlings	Round1	384	60	Piz-Blast, Amy4, CL
17TA176	Seedlings	Round1	384	60	Piz-Blast, Conv
17TA151	Seedlings	Round1	384	60	CL, Pita-Blast, High amylose, ALK, Non-Aro
17TA135	Seedlings	Round1	768	100	Pita-Blast, Alk, PV, Non-CL
17TA132	Seedlings	Round1	768	100	Pita-Blast, High amylose, ALK, PV, Non-CL
17TA129	Seedlings	Round1	768	100	Pita-Blast, High amylose, PV, Non-CL
17TA084	Seedlings	Round1	768	60	High amylose, ALK, Conv, Non-Aro
17TA150	Seedlings	Round1	768	60	High amylose, ALK, CL, Non-Aro, Semidwarf
17T10	Panicle	Round1	192	100	PV, Pita-Blast
17TA1	Panicle	Round1	192	100	Pita-Blast
17TA32	Panicle	Round1	192	100	Pita-Blast
17TA6	Panicle	Round1	192	100	Pita-Blast
17T24	Panicle	Round1	192	100	CL, Pita-Blast
17T44	Panicle	Round1	192	100	CL, Pita-Blast
17T48	Panicle	Round1	192	100	CL, Pita-Blast
17T61	Panicle	Round1	192	100	CL, Pita-Blast
17TA5	Panicle	Round1	192	100	CL, Conv, Pita-Blast
17TA65	Panicle	Round1	192	100	CL, Conv, Pita-Blast
17TA20	Panicle	Round1	192	100	CL, Pita-Blast
17TA37	Panicle	Round1	192	100	CL, Conv, Pita-Blast
17TA40	Panicle	Round1	192	100	Conv, Pita-Blast
17T63	Panicle	Round1	192	100	CL, Piz-Blast
17TA15b	Panicle	Round1	192	100	CL, Conv, Pita-Blast
17T119	Panicle	Round1	192	100	Piz-Blast
17TA41a	Panicle	Round2	192	100	CL, Pita-Blast, Piz-Blast
18T237a	Seedlings	Round2	1536	100	Amy4, Non-Aro, LowGT
18T238	Seedlings	Round2	1536	100	Amy4, Non-Aro, LowGT
18T299	Seedlings	Round2	768	100	Non-CL, PV
18T300	Seedlings	Round2	768	100	Non-CL, PV
18T302	Seedlings	Round2	768	100	Non-CL, PV
18T297	Seedlings	Round2	768	100	Non-CL, PV, Pita-Blast, Glab
18T294	Seedlings	Round2	768	100	Non-CL, PV, Pita-Blast
18T298	Seedlings	Round2	768	100	Non-CL, PV, Glab
18T295	Seedlings	Round2	768	100	Non-CL, PV, Pita-Blast, Piz-Blast, Amy4
Total			**29,184**	**6,240**	

*PITA and PIZ are rice blast resistance genes, Conv = Conventional, CL = Clearfield, Amy1 = lowest amylose class, High amylose = any amylose class other than Amy1, Amy4 = highest amylose class, PV = Provisia, Aro = Aromatic, LowGT = low gel temperature, Glab = glabrous, and ALK = gel temperature.

Table 2. Yield plots of breeding tests were screened with molecular markers to validate the desired traits of the test entries.

Test*	Entries	Samples/Entries	Total Samples Collected
CA	59	8	472
URN	240	8	1920
RYT	150	8	1200
VT	31	8	248
PY-Long	215	8	1720
MY2	158	2	316
Provisia	200	8	1600
CLPY-Long	88	8	704
CLPY-Med	33	8	264
PY-Med	750	8	6000
Kaima	211	8	1688
CLPR	200	8	1600
RYT-Late	150	8	1200
PYPR	120	8	960
Yuline study-Blast	80	1	80
Total	**2,685**		**19,972**

*CA = Commercial Advance test, URN = Uniform Regional Rice Nursery, RYT = Regional Yield test, VT = Varietal trial, PY-Long = Preliminary Yield Long-grain test, MY2 = RIL population test, CLPY-Long = Clearfield Preliminary Yield Long-grain test, CLPY-Med = Clearfield Preliminary Yield Medium-grain test, PY-Med = Conventional Preliminary Yield Medium-grain test, CLPR = Clearfield Puerto Rico test, RYT-Late = late Regional Yield test, and PYPR = Conventional Puerto Rico test.

DEVELOPMENT OF HYBRID RICE AND SHEATH BLIGHT-RESISTANT GERMPLASM FOR LOUISIANA

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INTRODUCTION

Hybrid rice, produced from the first generation (F_1) of seeds between a cross of two genetically dissimilar pure line (inbred) parents, represents a relatively new option for Louisiana farmers. The improved yield of commercial hybrids, typically 10 to 20% more than the best inbreds grown under similar conditions, is believed to be the result of hybrid vigor or heterosis from crossing the two parents. Research goals of the Hybrid Rice program at the H. Rouse Caffey Rice Research Station (HRCRRS) include: (1) development of male-sterile (cytoplasmic A or environmental sensitive S), restorer (R), and maintainer (B) lines adapted to the southern U.S. environmental conditions; (2) identifying elite cross combinations through extensive test-crossing; (3) exploring the feasibility of economical hybrid seed production; and (4) development of elite breeding lines with high levels of resistance to sheath blight disease.

LAH169 is a conventional long-grain hybrid released by the LSU AgCenter in 2018. Features of the hybrid include good grain and milling yields, early maturity, and low percentage of endosperm chalk. Height of LAH169 is typical for a hybrid that is 4 to 5 inches taller than conventional varieties. LAH169 has a good disease package with moderate to high levels of resistance against sheath blight, blast, and bacterial panicle blight diseases.

Five new early to mid-maturing, long-grain Clearfield and Provisia hybrids produced high yields in the 2018 Observational Yield Trial at the HRCRRS. Grain production of the experimentals was similar or greater than yields of three commercial hybrids. Mean yield advantage of the four Clearfield experimentals was 34% higher vs. CL111 and CL153. Similarly, yield of the Provisia hybrid was 43% higher than PVL01. Height, maturity, and lodging of the experimentals were similar to those of the commercial hybrids. Head rice yields of the new experimentals were similar or better than three commercial hybrids. A new three-line hybrid showed good yield potential, excellent grain quality, and early maturity in the 2018 Hybrid Advanced Yield Trial at the HRCRRS.

To complement the existing conventional and Clearfield herbicide technologies, the HRCRRS is currently developing inbred and hybrid varieties that are resistant to the quizalofop-p-butyl (Provisia™) herbicide for control of grassy weeds. Several new male-sterile, restorer, and maintainer lines in 2018 field trials showed high levels of resistance to Provisia along with improved agronomic characteristics. A new candidate Provisia hybrid showed high yield potential in the 2018 Observational Yield Trial at the HRCRRS.

Sheath blight disease caused by the fungus *Rhizoctonia solani* is a major constraint for high grain and milling yields. Our goal is to develop sheath blight-resistant germplasm by traditional crossing and selection in conjunction with DNA marker technology. A total of 283 crosses for sheath blight resistance were made in 2018. In addition, 560 F_1 plants, 100 backcross populations, and 28 space-planted F_2 populations were evaluated. A total of 520 early and advanced lines were tested in inoculated field plots at the HRCRRS. DNA technology was used to identify and advance five elite lines with moderate to high levels of resistance to sheath blight.

Hybrid LAH169

The hybrid LAH169 was developed using the two-line breeding method at the HRCRRS in Crowley, Louisiana and released in March 2018 by the LSU AgCenter. LAH169 is an early maturing, non-aromatic conventional hybrid with good grain yield and quality developed from the cross 69S/RU0802189 at the HRCRRS in 2011. 69S is an environmentally sensitive male-sterile with the pedigree of K06S/R669. During summer field conditions at the HRCRRS, 69S was pollen-sterile but produced 30 to 50% seed set when grown in the winter nursery in Puerto Rico and in the HRCRRS winter greenhouse. The fertile pollen parent RU0802189 (LM-1//CPRS/KBNT) is a conventional, long-grain, elite inbred line developed at the HRCRRS.

LAH169 was first evaluated during 2015 in multi-location yield tests, including the Commercial Advanced, Hybrid Advanced, and subsequently in 2016 in the Cooperative Uniform Regional Rice Nurseries (URN) with the designation RU1602082. Yield performance of LAH169 is good, producing an average 8,802 lb/A across 25 trials at multiple locations from 2015 to 2017. LAH169 produced a combined first and second crop yield of 14,998 lb/A in

2015 at the HRCRRS. LAH169 averaged 42 inches in height in yield tests across Louisiana and 78 days to 50% heading. The leaves, lemma, and palea of LAH169 are pubescent. The spikelet and apiculus are straw-colored, and the grain is non-aromatic. LAH169 has an average percent amylose content of 19.0 with an intermediate gelatinization temperature. Low percent chalk of 6.0 in milled rice was observed for LAH169 that is also moderately resistant to rice blast, sheath blight, and bacterial panicle blight.

Hybrid Advanced Yield Trials 1, 2, and 3 and Uniform Regional Rice Nursery

During the Hybrid Advanced Yield Trial 1, LAH169 produced 8,976 lb/A for the main crop at the HRCRRS (Table 1). This value was nearly identical to the overall mean yield across 25 trials in Louisiana from 2015 to 2017. LAH169 produced an 11% grain yield advantage in 2018 over mean yield of CL111 and CL153. At 76 days to 50% heading, LAH169 was identical in maturity to two hybrid checks and 5 to 18 days earlier than the remaining varieties. Plant height for LAH169 was identical or shorter than the five commercial hybrids. Lodging scores for all varieties were low except for the hybrids CLXL745 and RT7311CL.

Table 1. 2018 Hybrid Advanced Yield Trial 1. Height, days to 50% heading, main crop grain yield, and lodging score for LAH169, six commercial hybrids, two Clearfield varieties, and one Provisia variety, H. Rouse Caffey Rice Research Station.

Hybrid/ Variety	Height (in)	Days to 50% Heading	Yield Main Crop (lb/A)	Lodge (0-4)	Notes
LAH169	46	76	8,976	1.0	Conv. Hybrid
CLXL745	46	76	6,761	4.0	CL Hybrid
CL111	42	79	8,602	0.0	CL Variety
CL153	42	88	7,307	0.0	CL Variety
XP753	44	81	9,628	0.5	Conv. Hybrid
RT7311CL	46	76	11,316	3.0	CL Hybrid
Gemini 214 CL	51	92	10,894	0.0	CL Hybrid
XP760	52	94	10,089	0.5	Conv. Hybrid
CLXL729	48	82	10,549	0.5	CL Hybrid
PVL01	42	93	7,672	0.0	PV Variety

For the Hybrid Advanced Yield Trial 2 at the HRCRRS, LAH169 produced nearly 10,000 lb/A that was 21% higher than CL111 and 7% higher than the mean of the four commercial varieties evaluated in this trial (Table 2). Plant height of LAH169 was 3 inches taller than CL111 and 2 to 5 inches shorter than the four commercial hybrids. Similarly, LAH169 at 78 days to heading was identical to CL111 and 3 to 8 days earlier than the commercial hybrids. The whole gain milling yield of LAH169 at 60% was the highest of all six lines evaluated in this test.

Table 2. 2018 Hybrid Advanced Yield Trial 2. Height, days to 50% heading, main crop grain yield, and % Whole/Total milling yield for LAH169, four commercial hybrids, and one Clearfield variety, H. Rouse Caffey Rice Research Station.

Hybrid/Variety	Height (in)	Days to 50% Heading	Yield Main Crop (lb/A)	% Whole/Total	Notes
XL753	46	85	10,394	48/69	Conv. Hybrid
LAH169	41	78	9,982	60/68	Conv. Hybrid
CLXL745	43	81	9,818	56/68	CL Hybrid
Gemini 214 CL	45	85	9,800	53/67	CL Hybrid
CL111	38	78	7,892	58/69	CL Variety
XL760	43	86	7,192	54/67	Conv. Hybrid

Table 3 shows that that the 3-line hybrid LAH124 exhibited high yield potential with 11,563 lb/A and excellent grain quality with 60/66% whole/total milling yield. Two additional 3-line hybrids (LAH546 and LAH608) showed good main crop yields that ranged from 9,970 to 9,856 lb/A. The three candidate hybrids will undergo extensive testing during the 2019 field season.

Table 3. 2018 Hybrid Advanced Yield Trial 3. Height, days to 50% heading, main crop grain yield, and % Whole/Total milling yield for three conventional candidate and one commerical hyrid, H. Rouse Caffey Rice Research Station.

Hybrid/Variety	Height (in)	Days to 50% Heading	Yield Main Crop (lb/A)	% Whole/Total	Notes
LAH124	41	82	11,563	60/66	Conv. Hybrid
LAH546	40	72	9,970	56/69	Conv. Hybrid
LAH608	39	72	9,856	54/68	Conv. Hybrid
XL723	43	78	9,256	56/65	Conv. Hybrid

LAH169 produced 9,419 lb/A for the main crop in the 2018 URN test at the HRCRRS and 11,204 lb/A for the main crop in Stuttgart, Arkansas (Table 4.). The hybrid produced a 4% grain yield advantage over the mean yield of the four check varieties at the HRCRRS. The yield advantage of LAH169 vs. the mean of the four check varieties was 17% at the Arkansas location. The 82 days to 50% heading for LAH169 at the HRCRRS was 7 to 10 days earlier than the four check varieties. Plant height for the hybrid at the HRCRRS was identical to Diamond and LaKast and 5 inches shorter than the two Clearfield varieties. Grain dimensions of LAH169 were similar to those of the check varieties. Percent chalk was low for all five varieties tested at the HRCRRS.

Table 4. 2018 URN Yield Trials. Height, days to 50% heading, main crop grain yield, grain dimensions, and % chalk for LAH169, two Clearfield, and two conventional varieties, H. Rouse Caffey Rice Research Station and Rice Research and Extension Center, Stuttgart, AR.

Hybrid/Variety	Height (in)	Days to 50% Heading	Yield Main Crop (lb/A)	Milled Grain Length (mm)	Milled Grain Width (mm)	% Chalk	Notes
LAH169*	53	74	11,024	nd	nd	nd	Conv. Hybrid
LAH169†	39	82	9,419	6.7	2.3	4.4	Conv. Hybrid
Diamond†	39	92	9,316	6.6	2.3	4.4	Conv. Variety
CL153†	34	91	9,021	6.8	2.3	2.8	CL Variety
CL111†	34	89	8,798	6.9	2.3	7.1	CL Variety
LaKast†	39	91	9,107	7.0	2.3	6.2	Conv. Variety

* Rice Research and Extension Center, Stuttgart, AR, nd=no data available.

† H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

Observational (Testcross) Trial

The objective of the Observational Trial is to identify new hybrid combinations with high grain yield, good milling yields, height, maturity, lodging percentage, and other agronomic characteristics. Planting date for the Observation Trial was March 15, 2018, at the HRCRRS. Five experimental long-grain Clearfield and Provisia hybrids (18M23, 18TC535, 18M161, 18M55, and 18TC396) were identified with high yield potential, early to intermediate maturity, and comparable plant height vs. three commercial hybrids (Table 5). The five experimental hybrids produced an average 37% yield advantage vs. CL153, CL111, and PVL01 and 95% yield advantage of the three commercial hybrids. Average heading dates of all material were similar and ranged from 84 for the RiceTec hybrids to 87 for the three varieties. Milling yields of the five experimentals were comparable to check varieties and hybrids. Percent chalk of experimental 18M23 and RiceTec CLXL745 was identical at 9.1 and the lowest of all eight hybrids tested. Lodging of the experimentals was similar to two of the hybrid checks and less than RiceTec CLXL745.

Table 5. 2018 Observational (Testcross) Trial. Days to 50% heading, height, main crop grain yield, % head rice/total, % chalk, and lodging for five candidate hybrids, three hybrid, and three varietal checks, H. Rouse Caffey Rice Research Station.

Hybrid/Variety	Days to 50% Heading	Height (in)	Yield Main Crop (lb/A)	% Head/Total	% Chalk	Lodge (0-4)	Notes
CLXL745	79	45	11,629	60/71	9.1	3.5	CL Hybrid
18M23	88	48	11,559	59/68	9.1	1.5	CL Hybrid
XP760	90	50	11,190	54/66	12.8	0.0	Conv. Hybrid
18TC535	85	45	9,894	58/70	17.9	1.5	PV Hybrid
18M161	88	47	9,549	59/68	9.5	1.5	CL Hybrid
18M55	88	44	9,370	57/68	13.8	1.0	CL Hybrid
18TC396	80	43	9,283	60/70	13.9	1.0	CL Hybrid
Gemini 214 CL	83	50	8,657	57/67	13.6	1.0	CL Hybrid
CL153	85	40	6,563	61/69	4.2	0.5	CL Variety
CL111	83	39	6,552	61/71	7.4	0.5	CL Variety
PVL01	92	40	5,601	44/65	4.9	0.0	PV Variety

As shown in Table 6, LAH169 produced high levels of resistance to leaf blast across the 2018 URN and Elite Variety Trials. Resistance to rotten neck blast at 3.5 was higher than three of the nine lines tested. Similarly, sheath blight resistance for LAH169 at 4.0 was the highest for all lines tested. Finally, the level of resistance to bacterial panicle blight was high for LAH169 with a rating of 2.0 that was more resistant than eight of the nine lines evaluated in these trials.

Table 6. Mean disease ratings of 2018 URN and Elite Variety Trials for leaf blast, rotten neck blast, sheath blight, and bacterial panicle blight, H. Rouse Caffey Rice Research Station.

	Leaf Blast	Rotten Neck Blast	Sheath Blight	Bacterial Panicle Blight
Hybrid/Variety	0-9 Disease Rating*			
LAH169	0.2	3.5	4.0	2.0
XP753	2.5	1.3	4.8	2.4
CL151	5.4	3.8	6.2	3.6
PVL01	5.2	4.6	6.0	5.0
PVL108	3.3	2.5	5.4	5.8
Cheniere	4.7	3.1	4.7	2.0
Diamond	5.0	4.6	4.2	2.7
CL111	0.2	1.3	7.9	3.0
CL153	0.0	1.3	6.8	4.0

*Disease ratings: where 0 = most resistant, 9 = most susceptible.

Development of Clearfield and Provisia Parents and Experimental Hybrids

During the summer of 2018, a total of 32 F_5 and F_6 male-sterile lines derived from single crosses of Clearfield and indica germplasm were selected for further evaluation and advancement. During this season, six Clearfield and conventional male-sterile lines were crossed with elite pollen parents in different combinations. A total of 10 experimental hybrids were produced and will be evaluated during the summer of 2019.

During the summer and fall of 2018, a total of 16 elite Provisia male-sterile lines were selected and crossed with 26 elite pollen parents in different combinations. Some 122 Provisia experimental hybrids were produced and will be evaluated during the summer of 2019. In addition, four potential restorer and four maintainer lines were selected based on their phenotypic acceptability to facilitate the development of Provisia three-line hybrids.

Development of Sheath Blight-Resistant Lines

Rice sheath blight disease is a major constraint to high grain yields and good milling quality with no commercial inbred varieties showing high levels of resistance. The objective of our research is to develop sheath blight-resistant rice with desirable height and maturity from multiple sources by leveraging DNA marker technology with inoculated field trials at the HRCRRS. A total of 2,000 early generation and advanced lines were planted on April 29, 2018, and inoculated with the sheath blight fungus, *Rhizoctonia solani.* Five long-grain selected lines were identified with moderately resistant sheath blight ratings of 4.0 vs. 6.0 to 9.0 for susceptible Catahoula, CL151, CL111, and CL153 (Table 7). The selected lines were 10 to 18 days later and 3 to 7 inches taller than the four susceptible commercial varieties. Grain yield of the five selected lines under inoculated conditions ranged from 6,811 to 7,602 lb/A that on average was 24% higher than the mean yield of the four susceptible varieties. Additional trials in 2019 will evaluate the selected lines and checks under inoculated and disease-free conditions.

Table 7. Days to 50% heading, height, sheath blight rating, and grain yield of five selected lines, three Clearfield varieties, and one conventional variety inoculated with *R. solani*, H. Rouse Caffey Rice Research Station, 2018.

Line/Variety	Days to 50% Heading	Height (in)	Sheath Blight (0-9)	Yield (lb/A) Inoculated
18SB 332	87	40	4	7,602
18SB 75	85	39	4	7,457
18SB 106	92	40	4	7,384
18SB 374	91	40	4	7,173
18SB 265	89	39	4	6,811
CL151	85	36	6	7,230
Catahoula	87	36	6	5,965
CL153	85	33	7	5,198
CL111	84	33	9	3,603

MARKER-ASSISTED BREEDING AND GENETIC IMPROVEMENT OF SOUTHERN U.S. RICE

H.S. Utomo, I. Wenefrida, G.M. Zaunbrecher, and D.E. Groth

1. Multi-Location Trials.

Advanced lines developed from marker-assisted selection were evaluated under different environments following typical management practices in Louisiana rice farming conditions. Multi-Location trials were conducted in three locations located in rice growing areas in Jefferson Davis and Vermilion parishes and the H. Rouse Caffey Rice Research Station near Crowley, Louisiana. The important traits evaluated were yield potential, plant vigor, plant height, heading date, and milling quality (Tables 1-3). Blast disease characteristics were co-determined using marker data.

Table 1. Agronomic performance of advanced marker-assisted breeding lines in the 2018 Multi-Location Commercial Advanced trials, Lake Arthur, Louisiana.

Entry	Line ID	VIG[1]	HDT[2]	HTE[2]	Yield[2]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
18HUV 001	11MB081	5	85	98	9,793.5	High Amylose	High/Intermediate GT
18HUV 002	11MB376	5	86	101	9,343.1	High Amylose	High/Intermediate GT
18HUV 003	10MB248	5	81	95	8,935.7	High Amylose	High/Intermediate GT
18HUV 004	10MB188	5	80	99	8,379.5	High Amylose	High/Intermediate GT
18HUV 005	11MB211	5	80	96	8,636.7	High Amylose	High/Intermediate GT
18HUV 006	12MB071	4.4	76	96	8,474.8	High Amylose	High/Intermediate GT
18HUV 007	12MB098	4.6	81	93	8,598.1	High Amylose	High/Intermediate GT
18HUV 008	12MB106	5	83	93	8,382.5	High Amylose	High/Intermediate GT
18HUV 009	12MB118	4	80	94	8,479.4	High Amylose	High/Intermediate GT
	CCDR	5	85	94	8,179.1	High Amylose	High/Intermediate GT

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.
[2] HDT (Heading date, 50% heading); HTE (Height, cm); Yield (lb/A).

Table 2. Agronomic performance of advanced marker-assisted breeding lines in the 2018 Multi-Location Commercial Advanced trials, Evangeline, Louisiana.

Entry	Line ID	VIG[1]	HDT[2]	HTE[2]	Yield[2]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
18HUV 001	11MB081	4.5	87	95	9592.7	High Amylose	High/Intermediate GT
18HUV 002	11MB376	5	86	102	9446.0	High Amylose	High/Intermediate GT
18HUV 003	10MB248	5	83	94	8835.7	High Amylose	High/Intermediate GT
18HUV 004	10MB188	4.4	81	100	8149.5	High Amylose	High/Intermediate GT
18HUV 005	11MB211	5	86	95	8757.8	High Amylose	High/Intermediate GT
18HUV 006	12MB071	5	79	99	8344.8	High Amylose	High/Intermediate GT
18HUV 007	12MB098	5	81	94	8568.4	High Amylose	High/Intermediate GT
18HUV 008	12MB106	5	82	95	8462.2	High Amylose	High/Intermediate GT
18HUV 009	12MB118	4	81	93	8270.9	High Amylose	High/Intermediate GT
	CCDR	5	84	95	8378.8	High Amylose	High/Intermediate GT

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.
[2] HDT (Heading date, 50% heading); HTE (Height, cm); Yield (lb/A).

Table 3. Agronomic performance of advanced marker-assisted breeding lines in the 2018 Multi-Location Commercial Advanced trials, H. Rouse Caffey Rice Research Station, Louisiana.

Entry	Line ID	VIG[1]	HDT[2]	HTE[2]	Yield[2]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
18HUV 001	11MB081	5	84	97	9,621.0	High Amylose	High/Intermediate GT
18HUV 002	11MB376	4.5	84	99	9,518.2	High Amylose	High/Intermediate GT
18HUV 003	10MB248	4	82	99	8,875.4	High Amylose	High/Intermediate GT
18HUV 004	10MB188	4.5	87	102	8,696.5	High Amylose	High/Intermediate GT
18HUV 005	11MB211	5	82	97	8,863.9	High Amylose	High/Intermediate GT
18HUV 006	12MB071	4	75	96	8,463.0	High Amylose	High/Intermediate GT
18HUV 007	12MB098	4	80	96	9,302.0	High Amylose	High/Intermediate GT
18HUV 008	12MB106	5	82	92	8,271.4	High Amylose	High/Intermediate GT
18HUV 009	12MB118	5	83	95	8,177.2	High Amylose	High/Intermediate GT
	CCDR	5	84	93	8,269.2	High Amylose	High/Intermediate GT

[1] Subjective rating 0 to 9, where 0 = excellent, 9 = poor.
[2] HDT (Heading date, 50% heading); HTE (Height, cm); Yield (lb/A).

2. Preliminary Yield Trials.

Advanced lines from marker-assisted breeding were evaluated in the Preliminary Yield (PY) trials in replicated plots at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. Main evaluation criteria were yield potential, vigor, plant height, heading date, and other agronomic traits in addition to marker-based selection for disease-resistant traits and grain quality components (Table 4).

Table 4. Performance of advanced marker-assisted breeding lines in the 2018 Preliminary Yield trials at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

Entry	Line ID	VIG[1]	HDT[2]	HTE[2]	Yield[2]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
18HUP 001	15MB012	4.2	80.3	99.7	9,198.3	High Amylose	High/Intermediate GT
18HUP 002	15MB014	4.4	91.7	96.0	8,813.6	High Amylose	High/Intermediate GT
18HUP 003	15MB078	5.0	86.0	89.9	7,190.9	High Amylose	High/Intermediate GT
18HUP 004	15MB097	5.0	80.0	98.7	9,396.3	High Amylose	High/Intermediate GT
18HUP 005	15MB105	4.6	80.6	93.7	9,460.1	High Amylose	High/Intermediate GT
18HUP 006	15MB109	4.2	82.2	102.0	10,041.2	High Amylose	High/Intermediate GT
18HUP 007	15MB127	4.6	84.9	90.7	9,089.0	High Amylose	High/Intermediate GT
18HUP 008	14MB034	4.4	79.1	87.5	8,525.6	High Amylose	High/Intermediate GT
18HUP 009	14MB037	4.2	88.0	93.8	7,907.6	High Amylose	High/Intermediate GT
18HUP 010	14MB056	4.1	83.9	103.6	9,873.1	High Amylose	High/Intermediate GT
18HUP 011	14MB065	5.0	76.1	99.7	8,579.1	High Amylose	High/Intermediate GT
18HUP 012	14MB075	5.0	80.4	88.4	8,347.2	High Amylose	High/Intermediate GT
18HUP 013	14MB089	4.8	86.0	85.9	9,360.0	High Amylose	High/Intermediate GT
18HUP 014	14MB099	4.8	90.2	86.5	8,359.0	High Amylose	High/Intermediate GT
18HUP 015	14MB152	4.8	82.9	96.1	8,822.9	High Amylose	High/Intermediate GT
18HUV 016	14MB199	5.0	90.2	91.6	7,972.9	High Amylose	High/Intermediate GT
18HUP 017	14MB224	3.8	80.1	95.5	7,928.3	High Amylose	High/Intermediate GT
18HUP 018	14MB264	4.4	84.9	102.3	8,826.3	High Amylose	High/Intermediate GT
18HUP 019	14MB293	4.0	87.0	90.6	8,483.8	High Amylose	High/Intermediate GT
18HUP 020	13MB091	4.6	91.4	92.8	7,999.5	High Amylose	High/Intermediate GT
18HUP 021	13MB098	5.0	80.2	91.6	8,381.7	High Amylose	High/Intermediate GT

Continued.

Table 4. Continued.

Entry	Line ID	VIG[1]	HDT[2]	HTE[2]	Yield[2]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
18HUP 022	13MB337	4.4	82.2	100.8	8,512.7	High Amylose	High/Intermediate GT
18HUP 023	13MB384	4.2	80.8	98.6	8,911.0	High Amylose	High/Intermediate GT
18HUP 024	13MB392	4.0	90.0	99.0	8,890.4	High Amylose	High/Intermediate GT

[1] Subjective rating of seedling vigor 1 to 5, where 1 = poor, 5 = excellent.
[2] HDT (Heading date, 50% heading); HTE (Height, cm); Yield (lb/A).

3. Head-Row Evaluations.

New entries were evaluated in head-row trials to select for lines with high yielding potential, excellent growth characteristics, and good disease resistance. Performance of some selected lines is presented in Table 5. In addition, marker-assisted breeding efforts will continue, including introgression of important genes, such as drought-tolerant, cold-tolerant (at seedling stage), salt-tolerant, aroma (Jasmine), grain weight, and panicle blight-resistant genes from outside the U.S. genetic pool, into adapted Louisiana cultivars and breeding lines. The resulting progeny lines were advanced through the breeding process.

Table 5. Agronomic performance of new selected lines from marker-assisted breeding in the 2018 field trials, H. Rouse Caffey Rice Research Station, Crowley, Louisiana.

No.	Plant ID	Blast Genes	Grain Type[§]	Vigor[¶]	Plant Height (cm)	Heading Date	Row Yield (g)	Amylose Content	Gel Temp
1	16F026	Pi-ta^2,Pi-b	L	4.8	94.2	99.2	898	Int Am	Int Gel
2	16F036	Pi-ta^2,Pi-b	L	4.2	84.0	87.4	768	Int Am	Int Gel
3	16F051	Pi-ta^2,Pi-b	L	4.2	97.5	100.0	780	Int Am	Int Gel
4	16F074	Pi-ta^2,Pi-b	L	4.2	87.3	87.0	916	Int Am	Int Gel
5	16F091	Pi-ta^2,Pi-b	L	4.2	93.2	89.1	970	Int Am	Int Gel
6	16F093	Pi-ta^2,Pi-b	L	4.6	879	88.8	887	Int Am	Int Gel
7	16F099	Pi-ta^2,Pi-b	L	4.0	100.7	87.0	888	Int Am	Int Gel
8	16F108	Pi-ta^2,Pi-b	L	4.0	78.5	99.8	886	Int Am	Int Gel
9	16F109	Pi-ta^2,Pi-b	L	5.0	98.0	97.8	890	Int Am	Int Gel
10	16F110	Pi-ta^2,Pi-b	L	5.0	94.0	93.3	907	Int Am	Int Gel
11	16F123	Pi-ta^2,Pi-b	L	3.6	93.6	87.1	972	Int Am	Int Gel
12	16F131	Pi-ta^2,Pi-b	L	4.4	80.0	87.6	944	Int Am	Int Gel
13	16F148	Pi-ta^2,Pi-b	L	4.8	92.9	88.8	900	Int Am	Int Gel
14	16F149	Pi-ta^2,Pi-b	L	4.2	90.3	90.4	787	Int Am	Int Gel
15	16F154	Pi-ta^2,Pi-b	L	4.2	79.5	87.4	759	Int Am	Int Gel
16	15F011	Pi-ta^2,Pi-b	L	5.0	87.3	98.1	890	Int Am	Int Gel
17	15F028	Pi-ta^2,Pi-b	L	5.0	87.4	80.0	887	Int Am	Int Gel
18	15F032	Pi-ta^2,Pi-b	L	4.2	90.4	89.9	799	Int Am	Int Gel
19	15F041	Pi-ta^2,Pi-b	L	4.4	91.4	79.8	778	Int Am	Int Gel
20	15F058	Pi-ta^2,Pi-b	L	4.4	90.2	90.7	790	Int Am	Int Gel
21	15F059	Pi-ta^2,Pi-b	L	5.8	80.2	89.6	791	Int Am	Int Gel
22	15F067	Pi-ta^2,Pi-b	L	4.9	87.9	100.8	789	Int Am	Int Gel
23	15F081	Pi-ta^2,Pi-b	L	4.0	90.6	78.1	952	Int Am	Int Gel
24	15F089	Pi-ta^2,Pi-b	L	4.0	80.6	88.8	789	Int Am	Int Gel
25	15F092	Pi-ta^2,Pi-b	L	4.4	87.4	88.4	765	Int Am	Int Gel
26	15F096	Pi-ta^2,Pi-b	L	5.0	86.5	99.3	952	Int Am	Int Gel
27	15F101	Pi-ta^2,Pi-b	L	4.6	90.8	97.7	962	Int Am	Int Gel
28	15F109	Pi-ta^2,Pi-b	L	4.8	84.8	86.4	879	Int Am	Int Gel
29	15F117	Pi-ta^2,Pi-b	L	4.0	94.1	86.3	799	Int Am	Int Gel
30	15R119	Pi-ta^2,Pi-b	L	4.0	97.6	98.9	698	Int Am	Int Gel
31	15F130	Pi-ta^2,Pi-b	L	3.8	89.3	90.0	796	Int Am	Int Gel

Continued.

Table 5. Continued.

No.	Plant ID	Blast Genes	Grain Type[§]	Vigor[¶]	Plant Height (cm)	Heading Date	Row Yield (g)	Amylose Content	Gel Temp
32	15F143	Pi-ta^2,Pi-b	L	5.0	90.0	87.4	809	Int Am	Int Gel
33	15F149	Pi-ta^2,Pi-b	L	4.8	91.4	79.0	699	Int Am	Int Gel
34	15F154	Pi-ta^2,Pi-b	L	4.4	98.6	89.1	689	Int Am	Int Gel
35	15F161	Pi-ta^2,Pi-b	L	4.0	99.2	98.9	789	Int Am	Int Gel
36	15F168	Pi-ta^2,Pi-b	L	4.2	99.4	95.1	805	Int Am	Int Gel
37	15F186	Pi-ta^2,Pi-b	L	5.0	88.0	89.1	706	Int Am	Int Gel
38	14F089	Pi-ta^2,Pi-b	L	4.0	90.2	92.6	952	Int Am	Int Gel
39	14F099	Pi-ta^2,Pi-b	L	4.0	79.1	87.9	720	Int Am	Int Gel
40	14F150	Pi-ta^2,Pi-b	L	4.0	78.0	93.2	701	Int Am	Int Gel
41	14F154	Pi-ta^2,Pi-b	L	3.6	88.0	89.6	758	Int Am	Int Gel
42	14F178	Pi-ta^2,Pi-b	L	5.0	90.6	89.6	800	Int Am	Int Gel
43	14F219	Pi-ta^2,Pi-b	L	3.8	90.4	101.9	805	Int Am	Int Gel
44	14F264	Pi-ta^2,Pi-b	L	4.6	85.6	87.0	845	Int Am	Int Gel
45	14F290	Pi-ta^2,Pi-b	L	4.0	79.3	89.1	696	Int Am	Int Gel
46	14F311	Pi-ta^2,Pi-b	L	5.0	90.0	89.3	845	Int Am	Int Gel
47	14F379	Pi-ta^2,Pi-b	L	5.0	90.8	88.3	843	Int Am	Int Gel
48	14F601	Pi-ta^2,Pi-b	L	4.8	89.4	98.2	659	Int Am	Int Gel
49	14F759	Pi-ta^2,Pi-b	L	5.0	90.6	94.7	791	Int Am	Int Gel
50	14F788	Pi-ta^2,Pi-b	L	4.2	89.1	78.0	805	Int Am	Int Gel

[§] L = Long grain.
[¶] Subjective rating of seedling vigor 1 to 5, where 1 = poor, 5 = excellent.

4. Improving Grain Quality.

Consistency and homogeneity of grain size and appearance were emphasized during the 2018 genetic selections together with reducing the percentage of grain chalk among progeny lines. Selected lines (Table 6) will be advanced in the next growing season.

Table 6. Agronomic performance of lines selected for yield, grain homogeneity, and percent chalk, H. Rouse Caffey Rice Research Station, Crowley, Louisiana, 2018.

Lines	Grain Type[§]	Row Yield (g)	Grain Homogeneity[¶]	% Chalk	Amylose Content	Gel Temp	Blast
14R-093	L	861	8.9	9.0	High	Intermediate	Pita, Pib
14R-109	L	752	9.3	2.8	High	Intermediate	Pib
14R-122	L	819	8.4	2.9	High	Intermediate	Pib
14R-137	L	740	8.2	4.1	High	Intermediate	Pita, Pib
14R-138	L	909	9.4	8.9	High	Intermediate	Pib
14R-153	L	970	9.1	9.8	High	Intermediate	Pita, Pib
14R-154	L	860	8.5	2.1	High	Intermediate	Pita, Pib
14R-155	L	616	8.2	3.1	High	Intermediate	Pita, Pi-z
14R-176	L	697	9.2	6.7	High	Intermediate	Pita, Pib
14R-185	L	584	8.3	11.4	High	Intermediate	Pita, Pib
14R-198	L	850	9.3	10.3	High	Intermediate	Pita, Pi-z
14R-201	L	790	9.7	5.9	Intermediate	Low	Pib, Piz
14R-203	L	864	9.6	3.8	High	Intermediate	Pita, Pib
14R-224	L	860	9.7	1.9	High	Intermediate	Pita, Pib
14R-229	L	889	8.8	1.6	High	Intermediate	Pita
14R-344	L	738	8.7	2.7	High	Intermediate	Pita
14R-371	L	650	8.7	2.5	High	Intermediate	Pita, Pib

Continued.

Table 6. Continued.

Lines	Grain Type[§]	Yield (row)	Grain Homogeneity[¶]	% Chalk	Amylose Content	Gel Temp	Blast
14R-402	L	658	8.0	8.7	High	Intermediate	Pita, Pib
14R-464	L	520	9.2	10.3	High	Intermediate	Pita, Pib
14R-612	L	943	9.2	11.9	High	Intermediate	Pib, Piz
14R-628	L	462	8.3	8.9	High	Intermediate	Pita, Pib
14R-634	L	825	9.2	5.0	High	Intermediate	Pib, Piz
14R-651	L	834	8.8	7.0	High	Intermediate	Pita
14R-655	L	832	8.8	7.0	High	Intermediate	Pita, Pib
14R-662	L	747	8.6	11.1	High	Intermediate	Pita, Pi-z
14R-668	L	760	9.6	6.7	High	Intermediate	Pib, Piz
13R-669	L	820	9.8	2.7	High	Intermediate	Pita, Pib
13R-701	L	732	9.7	9.8	High	Intermediate	Pib, Piz
13R-721	L	763	8.1	3.9	High	Intermediate	Pita, Pib
13R-738	L	635	8.6	3.3	High	Intermediate	Pita
13R-794	L	584	9.5	2.4	High	Intermediate	Pita
13R-798	L	680	9.9	9.6	High	Intermediate	Pib, Piz
13R-797	L	753	9.9	1.2	High	Intermediate	Pita, Pib
13R-842	L	783	8.5	1.4	High	Intermediate	Pib, Piz
13R-864	L	692	8.6	1.4	Intermediate	Low	Pita, Pib
13R-897	L	683	8.5	1.7	High	Intermediate	Pita
13R-935	L	657	8.3	12.9	High	Intermediate	Pita
13R-949	L	850	9.3	7.8	High	Intermediate	Pib, Piz
13R-951	L	895	9.8	8.3	High	Intermediate	Pita, Pib
12R-967	L	785	8.6	10.6	High	Intermediate	Pita
12R-975	L	631	8.9	10.7	High	Intermediate	Pita
12R-979	L	732	8.0	1.0	High	Intermediate	Pita, Pib
12R-981	L	674	7.5	4.6	High	Intermediate	Pita
12R-997	L	843	8.5	4.3	Intermediate	Low	Pita, Pib

[§] L = Long grain.

[¶] Subjective rating 0 to 10, where 0 = poor, 10 = excellent.

5. Improved New High-Protein Lines and DNA Analyses.

As a continuation of molecular characterization of high-protein lines, our new and improved high-protein lines were subjected to the same DNA analyses involving sequencing of the two critical genes that code for dihydrodipicolinate syntase (DHDPS) and the amino acid transporter OsAAP6. The DHDPS enzyme catalyzes the first committed step in the lysine biosynthetic pathway, which involves the condensation reaction between (S)-aspartate β-semialdehyde ((S)-ASA) and its feedback inhibited by lysine. Similar to the activity reported last year, the new lines were also subjected to the tests associated with the gene coding for amino acid transporters (AATs), specifically the OsAAP6 that has a probable role in the accumulation of protein in the rice grain. Literature shows that the OsAAP6 gene functions as an important regulator of grain protein content (GPC) and nutritional quality in rice. The sequence analyses showed similar results as previously reported. The regulatory region of the OsAAP6 gene among the new and improved high-protein rice lines closely resembled Nanyangzhan (*Oryza sativa* L. ssp japonica) than Zhenshan 97 (*Oryza sativa* L. ssp indica). However, the lines are uniquely different from both Nanyangzhan and Zhenshan 97 due to a nucleotide substitution at positions -1,645, -1,565, -1,436, -1,435, -1,395, -1,394, -1,389, -1,388, -1,324, -870, and -822 and a deletion at position -1,327. Within the U.S. high-protein rice lines and their conventional control, the sequence of the regulatory region of the OsAAP6 gene is identical, except at position -565. The control line has adenine, while the four high-protein rice lines all have guanine. This single nucleotide difference separates the four high-protein lines from their control.

RICE QUALITY AND MUTATIONAL BREEDING PROJECT:
DEVELOPMENT OF HIGH-PROTEIN AND HERBICIDE-RESISTANT RICE LINES

I. Wenefrida and H.S. Utomo

1. Preliminary Yield (PY) Trials.

The advanced and most promising new high-protein lines were evaluated for their yield and agronomic traits in the Preliminary Yield (PY) trials conducted in the field at the H. Rouse Caffey Rice Research Station, near Crowley, Louisiana. The phenotypic traits evaluated include grain yield (main crop), plant vigor (VIG), heading date (HDT), and height (HTE). The summary of the mean performance of the new advanced high-protein rice lines together with three conventional cultivar checks is presented below (Table 1). The protein content of each line tested was measured using the N Combustion Analyzer with the sample digestion temperature of 850 to 1,200 °C.

Table 1. Field performance of high protein rice lines and their cultivar controls in the 2018 Preliminary Yield trial at the H. Rouse Caffey Rice Research Station, near Crowley, Louisiana.

Entry	Pedigree	VIG[1]	HDT	HTE (inch)	Yield (lb/A)	Protein Content (%, w/w)
18IDE 001	13P200011	5.0	88.6	39.8	7,398.3	12.45
18IDE 002	13P200045	4.2	81.3	36.8	8,139.0	12.20
18IDE 003	12P200034	5.0	84.3	38.5	7,999.1	12.40
18IDE 004	12P211044	4.3	86.8	41.4	8,263.8	12.30
18IDE 005	12P510037	4.5	83.5	39.0	8,073.9	13.02
18IDE 006	11P400345	3.4	84.3	38.4	8,081.4	12.90
18IDE 007	11P200452	4.2	88.5	37.3	7,779.3	11.20
18IDE 008	11P200561	4.2	86.4	41.0	8,066.0	11.32
18IDE 009	11P400756	4.6	84.3	38.8	7,996.6	12.39
18IDE 010	10P200234	5.0	87.0	39.1	8,086.4	12.50
18IDE 011	CPRS	4.6	87.0	40.8	8,355.9	7.00
18IDE 012	CCDR	4.3	84.5	40.0	8,628.1	7.10
18IDE 013	FRNS	4.4	83.1	38.3	8,884.1	7.43

[1] Subjective rating of seedling vigor 1 to 5, where 1 = poor, 5 = excellent.

2. Grain Quality of High-Protein Rice Lines.

Besides high yielding, our breeding goal for the new high-protein rice lines is to have their grain quality characteristics be better than or at least comparable to that of the cultivar Frontiere, our first commercial high-protein rice currently being marketed as Cahokia. Milling quality, percent chalk, grain appearance, grain shape, and homogeneity of the grain size and dimension are important components of rice grain quality. Because of the importance of the grain quality components in the market, advanced promising high-protein rice lines were evaluated for their grain quality as well as their cooking quality (Tables 2 and 3).

Table 2. Grain quality index among advanced promising high-protein rice lines.

Entry	Pedigree	Whole	Total	Grain Shape Homogeneity	% Chalk	Gel Temp†	Amylose Content (%)
18IDV 001	13P200011	64.8	72.1	9.0	8	Intermediate-high	24.30
18IDV 002	12P200034	64.0	71.5	8.4	11	Intermediate-high	24.09
18IDV 003	12P211044	63.6	72.4	9.4	8	Intermediate	20.00
18IDV 004	12P510037	60.8	74.5	8.3	8	Intermediate-high	23.75
18IDV 005	14P200034	67.0	70.4	9.0	13	Intermediate-high	24.12
18IDV 006	14P200056	63.4	73.2	9.1	2	Intermediate-high	23.89
18IDV 007	14P200089	61.1	70.3	9.3	4	Intermediate-high	24.25
18IDV 008	14P500070	60.3	70.2	8.2	12	Intermediate	20.13
18IDV 009	14P500075	65.8	72.6	9.1	8	Intermediate	20.09
18IDV 010	14P500097	62.8	70.8	8.0	5	Intermediate-high	23.20
18IDV 011	CPRS	64.3	71.2	8.3	10	Intermediate-high	21.42
18IDV 012	CCDR	61.2	70.0	7.2	9	Intermediate-high	24.40

† The gelatinization temperature of starch was estimated based on spreading value and determined as Low (6-7), Intermediate (4-5), Intermediate-high (3), and High (1-2).

Table 3. Alkali rating to estimate the gelling temperature of high-protein rice lines compared with the medium-grain Bengal and long grains Chenier, Cypress, HDLG, and Dixiebelle.

Cell	Sample #	Seed # (Alkali Ratings)*						Average	Gel Temp†
		1	2	3	4	5	6		
A1	BNGL	6	6	5	6	6	6	5.0	Low
A2	CHNR	4	3	3	3	4	3	3.3	Intermediate-high
A3	HDLG	2	2	2	3	2	2	2.2	High
A4	DXBL	3	3	3	3	3	3	3.0	Intermediate-high
A5	CPRS	4	4	4	4	3	3	3.7	Intermediate-high
B1	17-ID-33	4	3	3	3	2	3	3.0	Intermediate-high
B2	17-ID-38	5	5	6	7	6	7	6.0	Low
B3	17-ID-63	6	6	6	6	7	5	6.0	Low
B4	16-IL-HP-01	7	6	6	5	7	5	6.0	Low
B5	16-IL-HP-02	6	2	6	7	4	7	5.2	Low
B6	17-ID-77	4	3	2	3	3	3	3.0	Intermediate-high
B7	17-ID-86	3	3	3	3	3	3	3.0	Intermediate-high

* The degree of spreading was determined by incubating six grains of milled rice in 10 ml of 1.7% KOH for 24 hours at 30 °C using a 7-point score (7 = completely spread, and 1 = no reaction).

† The gelatinization temperature of starch was estimated based on spreading value and determined as Low (6-7), Intermediate (4-5), Intermediate-high (3), and High (1-2).

3. Replicated Head-Row Trials to Determine the Performance of Selected High-Protein Rice Lines, H. Caffey Rice Research Station, Crowley, Louisiana.

Prior to PY tests, promising high-protein lines were tested in replicated head-row trials to determine their yield potential and other important traits. Data collected from these tests were used to select lines that will be advanced to PY trials in a bigger plot size to determine their yield potential. The data listed below in Table 4 shows the results of the second year replicated head-row trials of the most promising lines.

Table 4. Performance of 100 high-protein lines in the multi-year replicated head-row trials at the H. Rouse Caffey Rice Research Station, near Crowley, Louisiana.

No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)	No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)
1	14R -1008pan1	0.09	2.44	15.25	**40**	14R -2196pan5	0.1	1.79	11.19
2	14R -1021pan3	0.1	2.00	12.50	**41**	14R -2197pan4	0.15	1.67	10.44
3	14R -1024pan9	0.09	2.24	14.00	**42**	14R -2202pan6	0.11	1.90	11.88
4	14R -1026pan5	0.13	1.66	10.38	**43**	14R -2204pan12	0.09	1.90	11.88
5	14R -1043pan7	0.14	1.89	11.81	**44**	14R -2210pan10	0.13	1.89	11.81
6	14R -1066pan1	0.12	1.96	12.25	**45**	14R -2210pan6	0.13	1.87	11.69
7	14R -1067pan1	0.1	2.19	13.69	**46**	14R -2212pan1	0.12	1.97	12.31
8	14R -1069pan4	0.12	2.26	14.13	**47**	14R -2213pan2	0.13	1.80	11.25
9	14R -1078pan5	0.1	2.02	12.63	**48**	14R -2218pan13	0.11	1.77	11.06
10	14R -1079pan4	0.09	2.14	13.38	**49**	14R -2218pan6	0.13	1.99	12.44
11	14R -1081pan10	0.12	1.74	10.88	**50**	14R -1008pan1	0.09	2.44	15.25
12	14R -1082pan2	0.1	2.16	13.50	**51**	14R -2223pan9	0.1	1.99	12.44
13	14R -2071pan3	0.13	1.97	12.31	**52**	14R -2229pan15	0.09	2.19	13.69
14	14R -2073pan4	0.09	1.56	9.75	**53**	14R -2231pan12	0.11	2.40	15.00
15	14R -2075pan5	0.09	2.32	14.50	**54**	14R -2231pan2	0.09	2.42	15.13
16	14R -2081pan5	0.12	2.17	13.56	**55**	14R -2231pan5	0.1	2.09	13.06
17	14R -2082pan6	0.11	1.76	11.00	**56**	14R -2232pan11	0.07	2.15	13.44
18	14R -2087pan2	0.12	1.42	8.88	**57**	14R -2232pan5	0.09	2.04	12.75
19	14R -2088pan3	0.13	1.97	12.31	**58**	14R -2232pan9	0.09	2.37	14.81
20	14R -2091pan3	0.12	1.52	9.50	**59**	14R -2242pan5	0.12	2.30	14.38
21	14R -2093pan7	0.09	2.20	13.75	**60**	14R -2242pan9	0.13	1.67	10.44
22	14R -2094pan3	0.1	2.16	13.50	**61**	14R -2243pan16	0.11	1.63	10.19
23	14R -2094pan7	0.11	2.39	14.94	**62**	14R -2249pan5	0.12	1.77	11.06
24	14R -2098pan10	0.1	2.43	15.19	**63**	14R -2296pan10	0.13	1.96	12.25
25	14R -2098pan9	0.09	2.10	13.13	**64**	14R -2296pan6	0.12	1.91	11.94
26	14R -2109pan2	0.13	1.89	11.81	**65**	14R -2296pan7	0.13	1.57	9.81
27	14R -2113pan1	0.13	1.88	11.75	**66**	14R -2298pan1	0.12	2.08	13.00
28	14R -2130pan2	0.09	2.32	14.50	**67**	14R -2298pan2	0.12	1.85	11.56
29	14R -2135pan3	0.13	1.99	12.44	**68**	14R -2298pan3	0.12	1.56	9.75
30	14R -2151pan7	0.13	1.80	11.25	**69**	14R -2326pan3	0.14	1.57	9.81
31	14R -2161-PAN1	0.13	1.80	11.25	**70**	14R -2403pan2	0.12	1.49	9.31
32	14R -2162pan7	0.1	2.16	13.50	**71**	14R -2408pan4	0.09	2.49	15.56
33	14R -2172	0.09	2.34	14.63	**72**	14R -2417pan2	0.09	2.17	13.56
34	14R -2177pan10	0.13	1.76	11.00	**73**	14R -2427pan3	0.11	1.49	9.31
35	14R -2182pan8	0.12	1.80	11.25	**74**	14R -2434pan2	0.13	1.37	8.56
36	14R -2182pan9	0.09	2.35	14.69	**75**	14R -2436pan3	0.09	2.21	13.81
37	14R -2183pan7	0.12	1.97	12.31	**76**	14R -2442pan3	0.1	1.98	12.38
38	14R -2183pan8	0.1	2.19	13.69	**77**	14R -2506pan7	0.12	2.01	12.56
39	14R -2193pan3	0.1	2.38	14.88	**78**	14R -2514pan12	0.09	2.03	12.69

Continued.

Table 4. Continued.

No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)	No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)
79	14R -2536pan1	0.09	2.02	12.63	**90**	14R -2613pan10	0.12	2.03	12.69
80	14R -2548pan2	0.09	2.40	15.00	**91**	14R -2614pan2	0.14	1.98	12.38
81	14R -2551pan13	0.09	1.44	9.00	**92**	14R -2616pan3	0.11	1.71	10.69
82	14R -2554pan2	0.12	1.37	8.56	**93**	14R -2619PAN3	0.12	1.72	10.75
83	14R -2558pan1	0.12	1.28	8.00	**94**	14R -2623PAN1	0.12	1.81	11.31
84	14R -2566pan7	0.11	1.89	11.81	**95**	14R -2637PAN1	0.12	1.79	11.19
85	14R -2568pan1	0.13	1.74	10.88	**96**	14R -2641pan7	0.09	2.44	15.25
86	14R -2571pan2	0.12	2.35	14.69	**97**	14R -2641pan7	0.13	1.89	11.81
87	14R -2574pan2	0.12	2.30	14.38	**98**	14R -2641pan7	0.13	1.93	12.06
88	14R -2577pan1	0.12	1.98	12.38	**99**	14R -2885pan1	0.1	2.08	13.00
89	14R -2577pan3	0.09	2.40	15.00	**100**	14R -2896pan4	0.11	2.08	13.00

4. New High-Protein Rice Lines.

Newer high-protein rice lines were developed every year through a series of mutational experiments. In the 2018 planting season, field tests were carried out for the 120 promising lines previously selected from 1,400 newly developed high-protein lines (Table 5). In addition to high-protein content, selections also emphasized grain quality aspects. The ten most promising lines that have stable protein content will be advanced to the replicated head-row and PY trials in the next growing season.

Table 5. Grain crude protein content (GCPC) of newly developed rice lines. The GCPC was determined using the N Combustion Analyzer through high temperature digestion of samples at 850 to 1,200 °C.

No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)	No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)
1	15R -0010pan2	0.11	1.72	10.8	**19**	15R -0167pan11	0.1	2.06	12.9
2	15R -0011pan11	0.1	1.82	11.4	**20**	15R -0211pan9	0.11		0.0
3	15R -0045pan3	0.1	1.92	12.0	**21**	15R -0233pan5	0.1	1.97	12.3
4	15R -0049pan4	0.09	1.78	11.1	**22**	15R -0234pan6	0.11	1.99	12.4
5	15R -0055pan2	0.12	1.9	11.9	**23**	15R -0255pan4	0.1	1.88	11.8
6	15R -0057pan6	0.11	1.64	10.3	**24**	15R -0356pan6	0.11	1.76	11.0
7	15R -0067pan3	0.1	1.93	12.1	**25**	15R -0378pan8	0.098	1.76	11.0
8	15R -0078pan1	0.11	2.03	12.7	**26**	15R -0379pan3	0.09	2.4	15.0
9	15R -0088pan1	0.097	2.1	13.1	**27**	15R -0398pan2	0.12	1.99	12.4
10	15R -0096pan2	0.096	1.88	11.8	**27**	15R -0402pan1	0.11	1.65	10.3
11	15R -0098pan7	0.12	1.76	11.0	**29**	15R -0409pan9	0.1	1.97	12.3
12	15R -0122pan3	0.11	2.44	15.3	**30**	15R -0419pan5	0.11	1.66	10.4
13	15R -0125pan5	0.1	1.77	11.1	**31**	15R -0423pan5	0.1	1.88	11.8
14	15R -0135pan3	0.12	1.65	10.3	**32**	15R -0430pan7	0.1	1.76	11.0
15	15R -0143pan5	0.19	1.73	10.8	**33**	15R -0439pan2	0.124	1.76	11.0
16	15R -0144pan4	0.1	2.05	12.8	**34**	15R -0456pan2	0.11	1.83	11.4
17	15R -0157pan5	0.1	2.3	14.4	**35**	15R -0567pan3	0.11	1.99	12.4
18	15R -0159pan1	0.09	1.78	11.1	**36**	15R -0576pan2	0.095	1.65	10.3

Continued.

Table 5. Continued.

No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)	No.	Genotype	Mass (g)	N-Cont. (%)	Crude Protein Content (%)
37	15R -0579pan1	0.11	2.06	12.9	**79**	15R -1478pan2	0.097	1.8	11.3
38	15R -0588pan2	0.12	1.8	11.3	**81**	15R -1496pan9	0.12	2.03	12.7
39	15R -0593pan6	0.12	1.97	12.3	**82**	15R -1506pan2	0.11	2.2	13.8
40	15R -0597pan6	0.09	2.03	12.7	**83**	15R -1511pan7	0.093	1.97	12.3
41	15R -0598pan7	0.11	2.2	13.8	**84**	15R -1532pan11	0.1	2.03	12.7
42	15R -0603pan9	0.1	1.97	12.3	**85**	15R -1557pan3	0.13	2.2	13.8
43	15R -0622pan12	0.12	1.99	12.4	**86**	15R -0601pan10	0.11	1.92	12.0
44	15R -0672pan4	0.108	1.68	10.5	**87**	15R -0215pan1	0.1	2.21	13.8
45	15R -0689pan7	0.096	1.76	11.0	**88**	15R -0256pan1	0.095	1.89	11.8
46	15R -0734pan5	0.1	1.76	11.0	**89**	15R -0411pan7	0.096	2	12.5
47	15R -0745pan2	0.12	1.93	12.1	**90**	15R -1127pan3	0.12	1.98	12.4
48	15R -0756pan3	0.1	1.97	12.3	**91**	15R -1175pan12	0.125	1.77	11.1
49	15R -0787pan6	0.12	1.59	9.9	**92**	15R -1189pan9	0.12	2.01	12.6
50	15R -0792pan5	0.1	1.88	11.8	**93**	15R -1181pan6	0.11	1.97	12.3
51	15R -0802pan2	0.11	1.76	11.0	**94**	15R -3277pan1	0.097	1.99	12.4
52	15R -0807pan1	0.1	1.76	11.0	**95**	15R -3287pan1	0.11	1.88	11.8
53	15R -0809pan7	0.12	1.83	11.4	**96**	15R -3440pan1	0.13	1.76	11.0
54	15R -0814pan13	0.12	1.99	12.4	**97**	15R -3588pan12	0.11	1.76	11.0
55	15R -0823pan2	0.1	1.75	10.9	**98**	15R -3589pan1	0.09	1.83	11.4
56	15R -0827pan4	0.13	2.06	12.9	**99**	15R -3598pan14	0.11	1.99	12.4
57	15R -0832pan6	0.11	1.97	12.3	**100**	15R -3599pan9	0.1	1.75	10.9
58	15R -0843pan3	0.095	1.59	9.9	**101**	15R -4026pan8	0.122	2.06	12.9
59	15R -0848pan4	0.1	1.88	11.8	**102**	15R -4184pan7	0.109	1.8	11.3
60	15R -0875pan3	0.12	1.76	11.0	**103**	15R -4275pan10	0.095	1.97	12.3
61	15R -0879pan6	0.122	1.86	11.6	**104**	13R -4279pan9	0.09	2.03	12.7
62	15R -0892pan5	0.12	1.93	12.1	**105**	15R -4287pan1	0.11	2.2	13.8
63	15R -0899pan3	0.1	1.99	12.4	**106**	15R -4298pan9	0.11	1.92	12.0
64	15R -0914pan2	0.12	1.75	10.9	**107**	15R -5102pan5	0.1	1.92	12.0
65	15R -0943pan3	0.1	1.97	12.3	**108**	15R -5174pan1	0.1	1.92	12.0
66	15R -0949pan2	0.12	1.99	12.4	**109**	15R -5199pan5	0.12	1.78	11.1
67	15R -0954pan4	0.093	1.88	11.8	**110**	15R -5201pan7	0.12	1.93	12.1
68	15R -0977pan5	0.11	1.66	10.4	**111**	15R -5209pan9	0.11	1.64	10.3
69	15R -0983pan6	0.12	1.76	11.0	**112**	15R -5215pan9	0.11	1.9	11.9
70	15R -0987pan4	0.122	1.83	11.4	**113**	15R -5219pan5	0.12	2.02	12.6
71	15R -0996pan4	0.1	1.99	12.4	**114**	15R -5232pan5	0.1	2.1	13.1
72	15R -1224pan2	0.097	1.75	10.9	**115**	15R -6554pan3	0.1	1.78	11.1
73	15R -1356pan1	0.11	2.06	12.9	**116**	15R -6076pan10	0.12	2.03	12.7
74	15R -1376pan5	0.13	1.8	11.3	**117**	15R -6087pan1	0.12	1.87	11.7
75	15R -1403pan2	0.11	1.97	12.3	**118**	15R -6114pan2	0.1	1.97	12.3
76	15R -1436pan5	0.09	2.03	12.7	**119**	15R -6589pan9	0.097	1.98	12.4
77	15R -1439pan4	0.11	2.2	13.8	**120**	15R -6678pan3	0.1	1.65	10.3
78	15R -1467pan3	0.11	2.06	12.9					

5. Development of Glyphosate (Roundup) Herbicide-Resistant Rice.

Our research efforts also involve the development of rice lines resistant to two herbicides, glyphosate and S-metolachlor. Glyphosate [N-(phosphonomethyl) glycine)] is an organophosphorus compound that has a broad-spectrum systemic activity capable of eradicating many weeds, including annual broadleaf weeds and grasses that compete with crops. In last year's planting season, herbicide screening was conducted using seedlings of M_2 rice mutants sprayed with glyphosate at the rate of 0.75X of the recommended levels. The plants surviving from the treatment were grown to maturity. Approximately 100 lb of seed was harvested to be grown in the field and subjected to higher herbicide rates in the coming season.

6. Development of Dual Magnum (S-metolachlor) Herbicide-Resistant Rice.

S-metolachlor is another class of herbicide. It is an organic compound, a derivative of aniline, and is a member of the chloroacetanilide family of herbicides. It controls most annual grasses and small-seeded broadleaf weeds. It has flexible application timing with early preplant, pre-emergence, and post-applied options. In the last season, we screened the M_2 rice mutants using a different approach. Instead of using high rates, we applied a lower rate. The herbicide screening in the field used 0.75X of the recommended level. The plants surviving from the treatment were grown to maturity. Approximately 600 lb of seed was harvested to be planted in the field in the coming season and subjected to higher herbicide rates.

RICE AGRONOMY

D.L. Harrell, M. Kongchum, N. Adotey, J.P. Leonards, J.S. Fluitt, and J.R. Hartman

INTRODUCTION

The following report documents research conducted in rice plant nutrition, cultural management, and rice rotational crops. Rice plant nutrition studies were conducted at the LSU AgCenter H. Rouse Caffey Rice Research Station (HRCRRS) and at multiple off-station locations in an effort to generate agronomic production information representative of all Louisiana rice production areas. Rice nutrition studies were conducted in Acadia at the HRCRRS, Vermilion, St. Landry, Tensas, Richland, Madison, and Calcasieu parishes. Cultural management studies were conducted at the HRCRRS north and south units.

We would like to express our sincere appreciation to the following off-station cooperators for their assistance in conducting this research. Our efforts would not be successful without their support:

Lounsberry Farm – Vermilion Parish
Charlie Fontenot – St. Landry Parish
Northeast Research Station – Tensas Parish
Woodsland Plantation and Ashley Dixon – Richland Parish
Robert and Ty Warren – Madison Parish
Johnny Hensgens – Calcasieu Parish

Throughout this section, multiple abbreviations are used to represent common units of measure and agricultural chemicals; these abbreviations are explained below in Tables 1 and 2, respectively.

Table 1. Common abbreviations used in agronomic research at the H. Rouse Caffey Rice Research Station (HRCRRS).

Abbreviation	Explanation
A	Acre
ANOVA	Analysis of variance
bu/A	Bushels per acre
Ca	Calcium
COC	Crop oil concentrate
DAT	Days after treatment
DPF	Days preflood
DPP	Days prior to planting
Fe	Iron
ft	Feet
ft^2	Square feet
gal/A	Gallons product per acre
Head Rice	Percent unbroken kernels left after milling
in	Inches
lb	Pounds
lb/A	Pounds product per acre
lb ai/A	Pounds active ingredient per acre
Ldg-Rate	Lodging rate in percent
Ldg-Type	Lodging type on a scale from 0 to 5; where 0 = no lodging, 1 = slightly lodged (approximately 1 - 23^o angle) and 5 = lodged to ground (90^o angle)
K	Potassium
Main	First rice crop; crop growth stage prior to first harvest
Mg	Magnesium
Mn	Manganese
Mo	Molybdenum
N	Nitrogen
Na	Sodium
NA	Information not available/applicable
NUE	Nitrogen use efficiency
oz/A	Ounces product per acre
P	Phosphorus
PD	Panicle differentiation
PI	Panicle initiation
pl/m^2	Plant densities measured 14 days after seeding emergence by counting the main-stem numbers in a randomly selected area of 1 m^2 in each plot
Postharvest	Application applied immediately following main crop harvest
ppm	Parts per million
PRE	Application prior to crop emergence
Preflood	Preflood application applied 1 to 2 days prior to permanent flood establishment
Preplant	Preplanting application prior to flooding and seeding
pt/A	Pints product per acre
Ratoon	Second rice crop; crop growth after harvest of first (main) crop
HRCRRS	H. Rouse Caffey Rice Research Station, Crowley, LA
RGY	Relative grain yield
S	Sulfur
SB Severity	Sheath blight infestation on a scale from 1 to 9; where 1 = no sheath blight and 9 = severe sheath blight infestation
Total Mill	Percent of rice kernels left after milling
Zn	Zinc
10% Heading(HD)	Crop growth stage where 10% of plants within a plot have visible panicles
50% Heading(HD)	Number of days from effective seeding date to 50% panicle exertion

Table 2. Common crop protection chemicals and formulations used in agronomic research at the H. Rouse Caffey Rice Research Station (HRCRRS).

Trade Name	Common Name	Formulation	Company
Herbicides			
Aim	carfentrazone	EC2	FMC Corp.
Arrosolo	propanil + molinate	3 lb + 3 lb	RiceCo, LLC
Basagran	bentazon	4 lb	BASF
Clincher	cyhalofop	2.38 lb	Dow AgroSciences, LLC
Command	clomazone	3ME	FMC Corp.
Duet	propanil + bensulfuron	4 lb + 0.48 oz	RiceCo LLC
Grandstand R	triclopyr	3 lb	Dow AgroSciences, LLC
Grasp	penoxsulam	SC2	Dow AgroSciences, LLC
Gambit	halosulfuron-methyl + prosulfuron	50% + 29%	Gowan
Honcho Plus	glyphosate	4 lb	Monsanto
Liberty	glufosinate ammonium	18.19%	Bayer CropSciences
Londax	bensulfuron	60% DF	DuPont
Newpath	imazethapyr	2 lb	BASF
Permit	halosulfuron	75% WSG	Monsanto
Prowl	pendimethalin	EL 3.3	BASF
Regiment	bispyribac-sodium	80% DF	Valent USA
RiceBeaux	propanil + thiobencarb	3 lb + 3 lb	RiceCo, LLC
Ricestar HT	fenoxaprop-P-ethyl	0.58 lb	Bayer Crop Sciences
Roundup Weatherman	glyphosate	4 lb	Monsanto
Sharpen	saflufenacil	2.85 lb	BASF
Stam M4	propanil	4 lb	Dow AgroSciences, LLC
Weedar 64	2,4-D	3.8 lb	Aventis
Insecticides			
Dermacor X-100	rynaxypyr		DuPont
Karate Z	cyhalothrin	2.08 lb	Syngenta
Mustang Maxx	zeta-cypermethrin	0.8 lb	FMC Corp.
Methyl Parathion	methyl Parathion	4 lb	Cheminova
Fungicides			
Amistar Top	azoxystrobin + difenoconazole	1.67 lb + 1.05 lb	Dow AgroSciences, LLC
Diathane DF	mancozeb	75% DF	Dow AgroSciences, LLC
Stratego	propiconazole + trifloxystrobin	1.04 lb + 1.04 lb	Bayer Crop Science, LLC
Quadris	azoxystrobin	2.08 lb	Syngenta
Quilt	azoxystrobin + propiconazole	1.04 lb + 0.62 lb	Syngenta

RICE FERTILITY AND CULTURAL PRACTICE RESEARCH

D.L. Harrell, M. Kongchum, N. Adotey, J.P. Leonards, J.S. Fluitt, and J.R. Hartman

INTRODUCTION

The following research focuses on rice production. Research topics include variety by nitrogen response, hybrid by nitrogen response, fertilizer application timing, fertilizer application rate, fertilizer source, water management, and ratoon rice research.

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen Fertilizer
Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-02

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 1. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/1/2018		8/1/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	103.3	de	92.3	de	31.5	c	0.0	d	0.0	d	4009	g	2472	a	6481	g
2	UREA	30	4-5 leaf	102.8	de	91.8	de	33.3	c	0.0	d	0.0	d	6059	f	2339	a	8399	f
3	UREA	60	4-5 leaf	103.0	de	92.0	de	36.3	b	0.0	d	0.0	d	7709	e	2467	a	10176	e
4	UREA	90	4-5 leaf	103.3	de	92.3	de	37.0	b	0.0	d	0.0	d	9241	cd	2549	a	11790	cd
5	UREA	120	4-5 leaf	104.5	ab	93.5	ab	39.3	a	0.0	d	0.0	d	9336	cd	2947	a	12283	bc
6	UREA	150	4-5 leaf	104.8	ab	93.8	ab	40.0	a	22.5	c	1.8	b	10110	ab	2804	a	12913	ab
7	UREA	180	4-5 leaf	105.3	a	94.3	a	39.3	a	62.5	b	3.3	a	10592	a	2640	a	13233	a
8	UREA	210	4-5 leaf	105.3	a	94.3	a	40.8	a	90.0	a	4.0	a	10080	ab	2762	a	12842	ab
9	UREA	45	4-5 leaf	102.5	e	91.5	e	35.5	b	0.0	d	0.0	d	7773	e	2343	a	10116	e
	UREA	45	PD																
10	UREA	75	4-5 leaf	103.3	de	92.3	de	36.3	b	0.0	d	0.0	d	8829	d	2559	a	11388	d
	UREA	45	PD																
11	UREA	105	4-5 leaf	103.5	cd	92.5	cd	39.0	a	5.0	d	0.5	cd	9543	bc	2466	a	12009	cd
	UREA	45	PD																
12	UREA	135	4-5 leaf	104.3	bc	93.3	bc	39.8	a	7.5	cd	1.0	bc	9911	abc	2552	a	12463	bc
	UREA	45	PD																
LSD P=.05				0.94		0.94		1.88		15.91		0.94		685.4		502.7		717.7	
Standard Deviation				0.65		0.65		1.31		11.06		0.65		476.4		349.4		498.9	
CV				0.63		0.7		3.51		70.77		74.66		5.54		13.57		4.46	
Treatment F				8.716		8.716		19.377		28.738		18.479		65.794		1.117		67.064	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.3793		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL108 (PVL02) to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-03

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 2. Agronomic response of drill-seeded PVL108 (PVL02) to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle									
Rating Date								7/26/2018		8/1/2018		8/1/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	98.0	c	87.0	c	31.3	b	0.0	c	0.0	b	3823	b	2230	e	6053	b
2	UREA	90	4-5 leaf	100.0	b	89.0	b	41.8	a	12.5	c	1.0	b	9025	a	2246	de	11271	a
3	UREA	120	4-5 leaf	100.3	ab	89.3	ab	43.3	a	62.5	b	4.3	a	9059	a	2425	cd	11484	a
4	UREA	150	4-5 leaf	101.0	a	90.0	a	44.5	a	77.5	ab	4.8	a	9125	a	2492	bc	11616	a
5	UREA	180	4-5 leaf	101.0	a	90.0	a	44.5	a	92.5	a	5.0	a	8760	a	2722	a	11482	a
6	UREA	210	4-5 leaf	101.0	a	90.0	a	41.5	a	92.5	a	5.0	a	9164	a	2627	ab	11791	a
LSD P=.05				0.84		0.84		3.52		25.31		1.41		1755.8		183.4		1669.3	
Standard Deviation				0.56		0.56		2.34		16.79		0.94		1165.0		121.7		1107.6	
CV				0.55		0.62		5.68		29.85		28.11		14.28		4.95		10.43	
Treatment F				17.649		17.649		18.390		23.258		22.747		13.359		10.675		16.392	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0002		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL01 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-04

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 3. Agronomic response of drill-seeded PVL01 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Trt Name	Rate (lb N/A)	Growth Stage												
1	UREA	0	4-5 leaf	106.0	c	95.0	c	30.8	f	3956	f	1423	f	5379	f
2	UREA	30	4-5 leaf	105.3	d	94.3	d	32.5	f	6276	e	1538	ef	7814	e
3	UREA	60	4-5 leaf	105.8	cd	94.8	cd	35.5	de	7536	d	1704	d	9240	d
4	UREA	90	4-5 leaf	107.0	ab	96.0	ab	36.3	de	8943	abc	1875	bc	10818	b
5	UREA	120	4-5 leaf	107.3	ab	96.3	ab	38.8	bc	9179	ab	1914	abc	11093	ab
6	UREA	150	4-5 leaf	107.5	a	96.5	a	40.3	ab	8686	bc	2017	ab	10702	bc
7	UREA	180	4-5 leaf	107.5	a	96.5	a	39.8	ab	9052	ab	2047	a	11099	ab
8	UREA	210	4-5 leaf	107.5	a	96.5	a	40.8	a	9280	ab	1949	ab	11230	ab
9	UREA	45	4-5 leaf	105.5	cd	94.5	cd	34.5	e	7353	d	1650	de	9004	d
	UREA	45	PD												
10	UREA	75	4-5 leaf	106.8	b	95.8	b	37.0	cd	8375	c	1766	cd	10141	c
	UREA	45	PD												
11	UREA	105	4-5 leaf	107.0	ab	96.0	ab	38.5	bc	9298	a	1955	ab	11254	ab
	UREA	45	PD												
12	UREA	135	4-5 leaf	107.3	ab	96.3	ab	39.3	ab	9527	a	1927	ab	11454	a
	UREA	45	PD												
LSD P=.05				0.70		0.70		1.88		606.2		151.1		618.2	
Standard Deviation				0.49		0.49		1.30		421.4		105.0		429.7	
CV				0.46		0.51		3.53		5.19		5.79		4.32	
Treatment F				11.674		11.674		23.692		60.279		14.180		71.756	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Diamond to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-05

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 4. Agronomic response of drill-seeded Diamond to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/1/2018		8/1/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	98.5	g	87.5	g	31.5	f	0.0	e	0.0	d	2999	e	1950	a	4950	e
2	UREA	30	4-5 leaf	99.3	g	88.3	g	34.5	ef	0.0	e	0.0	d	6494	d	1748	a	8242	d
3	UREA	60	4-5 leaf	101.5	ef	90.5	ef	38.5	cde	0.0	e	0.0	d	7425	d	1615	a	9040	d
4	UREA	90	4-5 leaf	102.8	cd	91.8	cd	38.5	cde	0.0	e	0.0	d	9103	c	1496	a	10599	c
5	UREA	120	4-5 leaf	103.5	abc	92.5	abc	41.5	a-d	5.0	cde	0.8	cd	9755	bc	1428	a	11184	bc
6	UREA	150	4-5 leaf	103.0	bcd	92.0	bcd	42.3	abc	20.0	c	1.5	c	10783	ab	1404	a	12187	ab
7	UREA	180	4-5 leaf	103.8	ab	92.8	ab	43.3	ab	47.5	b	3.0	ab	11282	a	1590	a	12872	a
8	UREA	210	4-5 leaf	104.0	a	93.0	a	43.5	a	87.5	a	3.3	a	11125	a	1509	a	12634	a
9	UREA	45	4-5 leaf	100.8	f	89.8	f	39.0	bcd	0.0	e	0.0	d	7322	d	1633	a	8955	d
	UREA	45	PD																
10	UREA	75	4-5 leaf	102.3	de	91.3	de	38.5	cde	2.5	de	0.8	cd	8742	c	1393	a	10135	c
	UREA	45	PD																
11	UREA	105	4-5 leaf	103.0	bcd	92.0	bcd	40.0	a-d	17.5	cd	1.8	bc	9225	c	1462	a	10687	c
	UREA	45	PD																
12	UREA	135	4-5 leaf	103.5	abc	92.5	abc	37.3	de	12.5	cde	1.8	bc	9773	bc	1307	a	11080	c
	UREA	45	PD																
LSD P=.05				0.79		0.79		4.43		16.33		1.47		1111.5		382.1		1084.1	
Standard Deviation				0.55		0.55		3.08		11.35		1.03		772.6		265.6		753.6	
CV				0.53		0.6		7.89		70.76		96.49		8.91		17.2		7.38	
Treatment F				43.300		43.300		5.233		21.782		5.368		36.834		1.773		34.221	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.1001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-06

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 5. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
1	UREA	0	4-5 leaf	102.3	f	91.3	f	28.0	f	3789	e	1677	bc	5466	d
2	UREA	30	4-5 leaf	102.5	ef	91.5	ef	30.3	e	6326	d	1491	cde	7818	c
3	UREA	60	4-5 leaf	102.3	f	91.3	f	30.8	de	8186	c	1330	de	9516	b
4	UREA	90	4-5 leaf	102.5	ef	91.5	ef	34.0	b	8983	c	1558	cd	10541	b
5	UREA	120	4-5 leaf	103.0	de	92.0	de	36.5	a	10154	a	1591	cd	11745	a
6	UREA	150	4-5 leaf	103.8	bc	92.8	bc	37.3	a	10043	ab	1875	ab	11918	a
7	UREA	180	4-5 leaf	104.5	a	93.5	a	36.3	a	10019	ab	1878	ab	11898	a
8	UREA	210	4-5 leaf	104.3	ab	93.3	ab	37.3	a	10653	a	1949	a	12602	a
9	UREA	45	4-5 leaf	102.3	f	91.3	f	32.0	cd	8225	c	1442	cde	9667	b
	UREA	45	PD												
10	UREA	75	4-5 leaf	102.5	ef	91.5	ef	33.5	bc	9152	bc	1274	e	10426	b
	UREA	45	PD												
11	UREA	105	4-5 leaf	103.5	cd	92.5	cd	34.5	b	10350	a	1606	c	11956	a
	UREA	45	PD												
12	UREA	135	4-5 leaf	104.0	abc	93.0	abc	36.5	a	10147	a	1571	cd	11718	a
	UREA	45	PD												
LSD P=.05				0.59		0.59		1.64		976.7		261.9		1040.5	
Standard Deviation				0.41		0.41		1.14		678.9		182.0		723.2	
CV				0.4		0.44		3.37		7.68		11.35		6.93	
Treatment F				17.242		17.242		28.921		35.182		5.484		33.158	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-07

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 6. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/1/2018		8/1/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	98.8	g	87.8	g	33.5	e	0.0	e	0.0	f	4195	e	1244	a	5439	g
2	UREA	30	4-5 leaf	99.3	g	88.3	g	34.3	e	25.0	cde	0.8	ef	6505	d	953	a	7457	f
3	UREA	60	4-5 leaf	101.5	f	90.5	f	37.8	cd	22.5	de	1.5	def	7978	c	939	a	8917	de
4	UREA	90	4-5 leaf	103.0	cd	92.0	cd	38.5	bcd	37.5	cd	3.0	bcd	9324	ab	1165	a	10489	abc
5	UREA	120	4-5 leaf	103.5	bc	92.5	bc	40.0	abc	57.5	bc	3.8	abc	9391	ab	971	a	10363	abc
6	UREA	150	4-5 leaf	104.0	ab	93.0	ab	41.5	a	82.5	ab	4.8	a	9726	ab	1339	a	11065	ab
7	UREA	180	4-5 leaf	104.0	ab	93.0	ab	40.5	abc	87.5	ab	5.0	a	8942	b	1042	a	9984	bcd
8	UREA	210	4-5 leaf	104.5	a	93.5	a	41.5	a	92.5	a	4.8	a	8897	b	1007	a	9904	cde
9	UREA	45	4-5 leaf	101.8	ef	90.8	ef	36.0	de	1.3	e	0.8	ef	7721	c	1039	a	8761	e
	UREA	45	PD																
10	UREA	75	4-5 leaf	102.5	de	91.5	de	38.5	bcd	37.5	cd	3.0	bcd	9467	ab	1090	a	10557	abc
	UREA	45	PD																
11	UREA	105	4-5 leaf	103.8	abc	92.8	abc	40.0	abc	30.0	cde	2.3	cde	9340	ab	1425	a	10764	abc
	UREA	45	PD																
12	UREA	135	4-5 leaf	103.8	abc	92.8	abc	40.8	ab	72.5	ab	4.0	ab	10133	a	1192	a	11325	a
	UREA	45	PD																
LSD P=.05				0.75		0.75		2.92		33.39		1.64		872.5		434.6		1156.5	
Standard Deviation				0.52		0.52		2.03		23.21		1.14		606.5		302.1		803.9	
CV				0.51		0.57		5.26		50.99		40.93		7.16		27.04		8.39	
Treatment F				51.956		51.956		7.180		7.803		9.221		30.665		1.085		18.055	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.4020		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-07

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 7. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/1/2018		8/1/2018		8/1/2018		11/5/2018		11/5/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	104.8	a	93.8	a	33.5	g	0.0	d	0.0	c	4354	e	1741	abc	6095	e
2	UREA	30	4-5 leaf	104.5	a	93.5	a	34.3	g	0.0	d	0.0	c	6547	d	1720	abc	8266	d
3	UREA	60	4-5 leaf	105.0	a	94.0	a	37.0	f	0.0	d	0.0	c	8072	c	1586	bc	9659	c
4	UREA	90	4-5 leaf	105.0	a	94.0	a	39.5	de	0.0	d	0.0	c	9419	b	1970	ab	11389	b
5	UREA	120	4-5 leaf	105.0	a	94.0	a	41.3	cd	27.5	c	2.3	b	10541	a	1771	abc	12312	ab
6	UREA	150	4-5 leaf	105.0	a	94.0	a	42.0	bc	62.5	b	3.0	ab	10812	a	2036	a	12848	a
7	UREA	180	4-5 leaf	105.0	a	94.0	a	42.8	bc	92.5	a	4.0	a	10905	a	1397	cd	12302	ab
8	UREA	210	4-5 leaf	105.0	a	94.0	a	45.3	a	95.0	a	4.0	a	10338	ab	1121	d	11459	b
9	UREA	45	4-5 leaf	104.8	a	93.8	a	37.3	f	0.0	d	0.0	c	8114	c	1741	abc	9855	c
	UREA	45	PD																
10	UREA	75	4-5 leaf	104.8	a	93.8	a	38.5	ef	0.0	d	0.0	c	9481	b	1886	ab	11367	b
	UREA	45	PD																
11	UREA	105	4-5 leaf	105.0	a	94.0	a	43.0	bc	20.0	cd	1.0	c	10186	ab	1844	ab	12030	ab
	UREA	45	PD																
12	UREA	135	4-5 leaf	105.0	a	94.0	a	43.5	ab	75.0	ab	3.8	a	10573	a	1707	abc	12280	ab
	UREA	45	PD																
LSD P=.05				0.54		0.54		2.23		21.52		1.08		1019.6		409.2		1119.5	
Standard Deviation				0.38		0.38		1.55		14.96		0.75		708.8		284.4		778.2	
CV				0.36		0.4		3.9		48.19		50.14		7.78		16.63		7.19	
Treatment F				0.787		0.787		23.524		27.144		21.938		32.187		3.097		26.589	
Treatment Prob(F)				0.6512		0.6512		0.0001		0.0001		0.0001		0.0001		0.0058		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XP113 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-01

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 8. Agronomic response of drill-seeded XP113 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		11/6/2018		11/6/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	102.3	def	91.3	def	33.5	d	0.0	d	0.0	c	4457	c	1910	a	6367	c
2	UREA	60	4-5 leaf	101.5	g	90.5	g	40.0	c	0.0	d	0.0	c	7487	b	1286	bc	8772	b
3	UREA	90	4-5 leaf	101.8	fg	90.8	fg	41.5	abc	10.0	d	0.5	c	10666	a	532	e	11198	a
4	UREA	120	4-5 leaf	103.0	bc	92.0	bc	42.8	ab	27.5	cd	1.0	bc	11063	a	595	de	11657	a
5	UREA	150	4-5 leaf	103.5	b	92.5	b	43.8	a	75.0	ab	1.8	b	10458	a	1286	bc	11745	a
6	UREA	180	4-5 leaf	104.3	a	93.3	a	43.3	ab	95.0	a	3.5	a	10641	a	1146	cd	11788	a
7	UREA	75	4-5 leaf	102.0	efg	91.0	efg	40.8	bc	12.5	d	0.3	c	9951	a	1682	abc	11633	a
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	102.5	cde	91.5	cde	42.0	abc	20.0	d	0.3	c	9757	a	1773	ab	11530	a
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	102.8	cd	91.8	cd	43.5	a	57.5	bc	1.8	b	10483	a	2017	a	12500	a
	UREA	45	50% HD																
LSD P=.05				0.70		0.70		2.56		35.91		1.06		1445.4		574.6		1667.5	
Standard Deviation				0.48		0.48		1.75		24.60		0.72		990.4		393.7		1142.6	
CV				0.46		0.52		4.25		74.43		72.33		10.49		28.98		10.58	
Treatment F				13.531		13.531		13.021		7.876		10.274		18.712		7.535		11.735	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XL760 to Nitrogen Fertilizer
Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-09

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 9. Agronomic response of drill-seeded XL760 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		11/6/2018		11/6/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	98.0	g	87.0	g	37.3	f	0.0	c	0.0	d	5021	e	2215	ab	7236	e
2	UREA	60	4-5 leaf	101.3	ef	90.3	ef	44.0	e	0.0	c	0.0	d	9992	d	1742	bcd	11734	d
3	UREA	90	4-5 leaf	101.5	de	90.5	de	47.8	cd	0.0	c	0.0	d	11024	cd	1552	cd	12576	cd
4	UREA	120	4-5 leaf	102.8	bc	91.8	bc	48.5	bc	12.5	c	0.5	cd	11186	bc	1447	d	12633	cd
5	UREA	150	4-5 leaf	103.0	abc	92.0	abc	51.0	a	90.0	a	2.0	b	12221	ab	1937	a-d	14159	ab
6	UREA	180	4-5 leaf	103.8	a	92.8	a	51.0	a	90.0	a	3.0	a	11711	abc	1518	cd	13229	bc
7	UREA	75	4-5 leaf	100.5	f	89.5	f	45.8	de	0.0	c	0.0	d	11026	cd	2074	abc	13100	bcd
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	102.3	cd	91.3	cd	47.0	cd	12.5	c	0.3	d	11822	abc	2230	ab	14052	ab
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	103.5	ab	92.5	ab	50.0	ab	50.0	b	1.3	bc	12436	a	2394	a	14830	a
	UREA	45	50% HD																
LSD P=.05				0.87		0.87		2.25		23.00		0.83		1135.1		619.1		1368.1	
Standard Deviation				0.60		0.60		1.54		15.76		0.57		777.8		424.2		937.4	
CV				0.59		0.66		3.28		55.62		73.45		7.26		22.31		7.43	
Treatment F				36.117		36.117		31.478		23.729		14.447		33.729		2.727		22.578	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0272		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Gemini 214 CL to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-10

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 10. Agronomic response of drill-seeded Gemini 214 CL to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		11/6/2018		11/6/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	98.0	e	87.0	e	36.5	e	0.0	b	0.0	c	5821	c	2329	ab	8150	e
2	UREA	60	4-5 leaf	101.0	d	90.0	d	42.0	d	0.0	b	0.0	c	9487	b	1776	b	11263	d
3	UREA	90	4-5 leaf	101.5	cd	90.5	cd	47.0	b	0.0	b	0.0	c	10989	a	1766	b	12755	c
4	UREA	120	4-5 leaf	102.3	b	91.3	b	47.5	b	0.0	b	0.0	c	11665	a	1665	b	13330	bc
5	UREA	150	4-5 leaf	103.3	a	92.3	a	48.8	ab	77.5	a	1.3	b	11448	a	2660	a	14109	abc
6	UREA	180	4-5 leaf	103.3	a	92.3	a	49.8	a	80.0	a	2.3	a	12126	a	1840	b	13967	abc
7	UREA	75	4-5 leaf	101.0	d	90.0	d	44.3	c	0.0	b	0.0	c	11527	a	2378	ab	13904	abc
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	102.0	bc	91.0	bc	47.3	b	0.0	b	0.0	c	11768	a	2792	a	14560	ab
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	103.0	a	92.0	a	48.3	ab	17.5	b	0.3	c	12067	a	2892	a	14958	a
	UREA	45	50% HD																
LSD P=.05				0.68		0.68		1.91		22.26		0.42		1352.9		717.1		1453.3	
Standard Deviation				0.46		0.46		1.31		15.25		0.28		927.0		491.4		995.8	
CV				0.46		0.51		2.86		78.44		68.31		8.61		22.0		7.66	
Treatment F				50.161		50.161		40.967		20.009		31.629		18.933		3.858		18.132	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0048		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7321 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-11

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 11. Agronomic response of drill-seeded FullPage RT7321 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		11/6/2018		11/6/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	92.0	d	81.0	d	38.3	e	0.0	e	0.0	f	4860	d	2058	a	6918	d
2	UREA	60	4-5 leaf	94.0	c	83.0	c	44.8	d	67.5	abc	1.5	bcd	9991	c	1604	a	11594	c
3	UREA	90	4-5 leaf	94.5	c	83.5	c	47.0	abc	72.5	abc	2.3	ab	11017	abc	1516	a	12532	bc
4	UREA	120	4-5 leaf	96.0	b	85.0	b	48.0	ab	52.5	cd	2.0	abc	11875	ab	1605	a	13481	ab
5	UREA	150	4-5 leaf	98.3	a	87.3	a	49.0	a	95.0	ab	2.0	abc	11765	ab	1559	a	13325	ab
6	UREA	180	4-5 leaf	97.8	a	86.8	a	49.0	a	100.0	a	2.8	a	11824	ab	1649	a	13473	ab
7	UREA	75	4-5 leaf	94.5	c	83.5	c	45.0	cd	20.0	de	0.3	ef	10580	bc	1926	a	12506	bc
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	96.5	b	85.5	b	46.8	bcd	57.5	bcd	1.0	de	11616	ab	1942	a	13558	ab
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	97.8	a	86.8	a	48.0	ab	47.5	cd	1.3	cd	12222	a	2001	a	14224	a
	UREA	45	50% HD																
LSD P=.05				1.08		1.08		2.17		40.82		0.83		1339.7		615.8		1481.5	
Standard Deviation				0.74		0.74		1.49		27.97		0.57		918.0		422.0		1015.1	
CV				0.77		0.87		3.23		49.12		39.41		8.63		23.94		8.19	
Treatment F				31.987		31.987		20.237		5.350		10.371		24.695		1.035		18.714	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0006		0.0001		0.0001		0.4384		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7323 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-12

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : Nov. 5

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 12. Agronomic response of drill-seeded FullPage RT7323 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		11/6/2018		11/6/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	97.0	f	86.0	f	38.3	f	0.0	c	0.0	c	5010	d	2563	bc	7573	d
2	UREA	60	4-5 leaf	99.3	e	88.3	e	44.5	e	0.0	c	0.0	c	9546	bc	2013	c	11558	bc
3	UREA	90	4-5 leaf	100.5	d	89.5	d	46.5	cd	0.0	c	0.0	c	9184	c	2290	c	11474	c
4	UREA	120	4-5 leaf	101.8	c	90.8	c	48.0	abc	0.0	c	0.0	c	10957	ab	1985	c	12943	abc
5	UREA	150	4-5 leaf	103.0	ab	92.0	ab	49.5	a	57.5	ab	1.0	b	10554	bc	2597	bc	13151	ab
6	UREA	180	4-5 leaf	103.5	a	92.5	a	49.5	a	87.5	a	3.0	a	12321	a	2031	c	14352	a
7	UREA	75	4-5 leaf	99.8	e	88.8	e	45.8	de	0.0	c	0.0	c	10599	bc	3382	a	13981	a
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	102.0	c	91.0	c	47.5	bcd	0.0	c	0.0	c	10758	b	3150	ab	13907	a
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	102.8	b	91.8	b	49.0	ab	45.0	b	0.8	bc	10982	ab	3180	ab	14162	a
	UREA	45	50% HD																
LSD P=.05				0.66		0.66		1.96		33.42		0.77		1454.4		770.7		1619.4	
Standard Deviation				0.45		0.45		1.34		22.90		0.53		996.6		528.1		1109.7	
CV				0.45		0.5		2.89		108.46		99.86		9.98		20.49		8.83	
Treatment F				87.682		87.682		27.763		8.560		14.500		17.257		4.283		15.092	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0026		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-02

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 13. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	96.5	e	89.5	e	29.3	g	0.0	b	953	d
2	UREA	30	4-5 leaf	96.5	e	89.5	e	31.5	ef	9.3	a	1419	cd
3	UREA	60	4-5 leaf	96.8	e	89.8	e	31.8	ef	12.9	a	1948	bcd
4	UREA	90	4-5 leaf	98.0	bc	91.0	bc	33.3	def	8.3	ab	1977	bcd
5	UREA	120	4-5 leaf	97.8	cd	90.8	cd	34.0	bcd	16.5	a	3250	ab
6	UREA	150	4-5 leaf	98.8	ab	91.8	ab	35.0	a-d	16.4	a	3202	abc
7	UREA	180	4-5 leaf	99.0	a	92.0	a	35.5	abc	16.0	a	3792	a
8	UREA	210	4-5 leaf	99.0	a	92.0	a	36.8	a	16.0	a	3638	ab
9	UREA	45	4-5 leaf	96.8	e	89.8	e	31.3	fg	8.7	ab	1993	bcd
	UREA	45	PD										
10	UREA	75	4-5 leaf	97.0	de	90.0	de	33.0	def	8.1	ab	2856	abc
	UREA	45	PD										
11	UREA	105	4-5 leaf	97.8	cd	90.8	cd	33.5	cde	13.1	a	2891	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	98.3	abc	91.3	abc	35.8	ab	16.1	a	4372	a
	UREA	45	PD										
LSD P=.05				0.85		0.85		2.18		9.14		1788.8	
Standard Deviation				0.59		0.59		1.52		6.35		1243.4	
CV				0.6		0.65		4.54		54.05		46.21	
Treatment F				10.478		10.478		8.307		2.520		2.767	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0198		0.0117	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL108 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-03

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 14. Agronomic response of drill-seeded PVL108 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	89.0	c	82.0	c	34.0	d	17.0	a	2907	b
2	UREA	90	4-5 leaf	91.8	b	84.8	b	37.3	c	16.4	a	4135	a
3	UREA	120	4-5 leaf	92.3	b	85.3	b	38.5	bc	16.2	ab	4477	a
4	UREA	150	4-5 leaf	93.3	a	86.3	a	40.8	a	16.8	a	4007	a
5	UREA	180	4-5 leaf	93.5	a	86.5	a	40.0	ab	16.7	a	4278	a
6	UREA	210	4-5 leaf	94.0	a	87.0	a	40.0	ab	15.4	b	3999	a
LSD P=.05				0.85		0.85		1.97		0.98		861.5	
Standard Deviation				0.57		0.57		1.31		0.65		571.6	
CV				0.61		0.66		3.41		3.96		14.41	
Treatment F				41.139		41.139		14.649		3.301		3.700	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0330		0.0221	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL01 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-04

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 15. Agronomic response of drill-seeded PVL01 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	97.5	e	90.5	e	32.8	f	15.8	a	4075	c
2	UREA	30	4-5 leaf	97.3	e	90.3	e	33.3	f	15.3	ab	5109	b
3	UREA	60	4-5 leaf	97.5	e	90.5	e	35.3	e	14.9	bc	6459	a
4	UREA	90	4-5 leaf	98.8	bcd	91.8	bcd	36.8	cde	14.6	cd	6243	a
5	UREA	120	4-5 leaf	99.0	bc	92.0	bc	36.8	cde	14.6	cd	6204	a
6	UREA	150	4-5 leaf	99.5	ab	92.5	ab	39.0	ab	14.4	cd	6814	a
7	UREA	180	4-5 leaf	99.5	ab	92.5	ab	38.3	abc	14.1	d	6635	a
8	UREA	210	4-5 leaf	100.0	a	93.0	a	39.8	a	14.2	d	6533	a
9	UREA	45	4-5 leaf	97.3	e	90.3	e	35.5	de	14.7	bcd	6135	a
	UREA	45	PD										
10	UREA	75	4-5 leaf	98.0	de	91.0	de	35.8	de	14.7	bcd	6327	a
	UREA	45	PD										
11	UREA	105	4-5 leaf	98.5	cd	91.5	cd	37.3	bcd	14.3	cd	6903	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	99.0	bc	92.0	bc	38.0	abc	14.2	d	6701	a
	UREA	45	PD										
LSD P=.05				0.85		0.85		1.83		0.66		979.2	
Standard Deviation				0.59		0.59		1.28		0.46		680.6	
CV				0.6		0.65		3.49		3.11		11.02	
Treatment F				10.606		10.606		11.300		4.849		5.661	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0002		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Diamond to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-05

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 16. Agronomic response of drill-seeded Diamond to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	89.0	h	82.0	h	34.3	f	14.6	a	5883	f
2	UREA	30	4-5 leaf	90.0	g	83.0	g	37.8	e	14.7	a	6625	e
3	UREA	60	4-5 leaf	92.3	e	85.3	e	37.5	e	14.7	a	7568	cd
4	UREA	90	4-5 leaf	93.3	cd	86.3	cd	39.3	de	14.9	a	8035	bc
5	UREA	120	4-5 leaf	93.8	bc	86.8	bc	41.3	bcd	14.9	a	8242	ab
6	UREA	150	4-5 leaf	94.8	a	87.8	a	41.8	bc	14.8	a	8468	ab
7	UREA	180	4-5 leaf	95.0	a	88.0	a	42.5	bc	14.8	a	8738	a
8	UREA	210	4-5 leaf	95.0	a	88.0	a	44.8	a	15.1	a	8439	ab
9	UREA	45	4-5 leaf	91.3	f	84.3	f	37.3	e	14.5	a	7080	de
	UREA	45	PD										
10	UREA	75	4-5 leaf	92.3	e	85.3	e	41.5	bc	14.9	a	7926	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	93.0	d	86.0	d	40.5	cd	14.9	a	8267	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	94.0	b	87.0	b	42.8	ab	14.9	a	8528	ab
	UREA	45	PD										
LSD P=.05				0.62		0.62		2.20		0.33		671.8	
Standard Deviation				0.43		0.43		1.53		0.23		467.0	
CV				0.46		0.5		3.82		1.55		5.97	
Treatment F				81.575		81.575		14.852		2.055		13.970	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0543		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-06

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 17. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	90.0	f	83.0	f	30.5	f	11.2	a	4380	c
2	UREA	30	4-5 leaf	91.8	e	84.8	e	31.8	ef	15.2	a	6247	ab
3	UREA	60	4-5 leaf	92.5	d	85.5	d	32.5	de	15.1	a	6633	ab
4	UREA	90	4-5 leaf	93.8	c	86.8	c	34.0	cd	15.2	a	7535	a
5	UREA	120	4-5 leaf	96.0	a	89.0	a	34.3	bcd	14.9	a	6553	ab
6	UREA	150	4-5 leaf	96.0	a	89.0	a	36.0	ab	14.7	a	7213	a
7	UREA	180	4-5 leaf	96.0	a	89.0	a	36.0	ab	14.8	a	6970	a
8	UREA	210	4-5 leaf	96.0	a	89.0	a	36.3	a	14.4	a	7063	a
9	UREA	45	4-5 leaf	92.8	d	85.8	d	32.5	de	15.2	a	5484	bc
	UREA	45	PD										
10	UREA	75	4-5 leaf	93.8	c	86.8	c	33.3	de	15.0	a	7364	a
	UREA	45	PD										
11	UREA	105	4-5 leaf	95.0	b	88.0	b	35.5	abc	15.0	a	7064	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	96.0	a	89.0	a	36.8	a	14.7	a	7584	a
	UREA	45	PD										
LSD P=.05				0.57		0.57		1.91		3.22		1427.1	
Standard Deviation				0.40		0.40		1.33		2.24		992.0	
CV				0.42		0.46		3.9		15.34		14.86	
Treatment F				104.714		104.714		9.291		0.956		3.550	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.5028		0.0023	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-07

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 18. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	92.3	e	85.3	e	33.5	g	10.8	a	5012	a
2	UREA	30	4-5 leaf	93.3	d	86.3	d	35.5	efg	14.5	a	5995	a
3	UREA	60	4-5 leaf	95.0	bc	88.0	bc	35.3	fg	13.8	a	6492	a
4	UREA	90	4-5 leaf	95.5	abc	88.5	abc	37.3	c-f	14.0	a	6844	a
5	UREA	120	4-5 leaf	96.0	a	89.0	a	38.5	a-d	13.8	a	5794	a
6	UREA	150	4-5 leaf	96.0	a	89.0	a	40.0	ab	13.2	a	5869	a
7	UREA	180	4-5 leaf	95.8	ab	88.8	ab	38.5	a-d	13.6	a	6646	a
8	UREA	210	4-5 leaf	96.0	a	89.0	a	39.3	abc	13.2	a	5381	a
9	UREA	45	4-5 leaf	94.8	c	87.8	c	36.5	def	13.8	a	6057	a
	UREA	45	PD										
10	UREA	75	4-5 leaf	95.8	ab	88.8	ab	37.3	c-f	13.8	a	6925	a
	UREA	45	PD										
11	UREA	105	4-5 leaf	95.5	abc	88.5	abc	37.8	b-e	14.0	a	6684	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	96.0	a	89.0	a	40.3	a	13.9	a	6371	a
	UREA	45	PD										
LSD P=.05				0.87		0.87		2.35		3.21		1589.6	
Standard Deviation				0.61		0.61		1.63		2.23		1105.0	
CV				0.64		0.69		4.35		16.49		17.9	
Treatment F				15.810		15.810		6.168		0.717		1.161	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.7138		0.3498	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-08

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 19. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	102.8	d	95.8	d	36.5	d	12.6	a	5364	a
2	UREA	30	4-5 leaf	102.8	d	95.8	d	37.5	cd	16.7	a	6139	a
3	UREA	60	4-5 leaf	102.8	d	95.8	d	39.8	bc	16.4	a	6693	a
4	UREA	90	4-5 leaf	103.0	cd	96.0	cd	42.8	a	16.4	a	7403	a
5	UREA	120	4-5 leaf	103.0	cd	96.0	cd	42.3	ab	15.9	a	6415	a
6	UREA	150	4-5 leaf	103.3	bc	96.3	bc	44.0	a	15.5	a	6912	a
7	UREA	180	4-5 leaf	103.5	b	96.5	b	44.0	a	15.8	a	6927	a
8	UREA	210	4-5 leaf	104.0	a	97.0	a	44.0	a	15.9	a	6559	a
9	UREA	45	4-5 leaf	103.0	cd	96.0	cd	39.8	bc	16.7	a	6187	a
	UREA	45	PD										
10	UREA	75	4-5 leaf	103.0	cd	96.0	cd	41.5	ab	15.6	a	6193	a
	UREA	45	PD										
11	UREA	105	4-5 leaf	103.0	cd	96.0	cd	43.5	a	16.5	a	7933	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	103.0	cd	96.0	cd	44.3	a	15.8	a	7189	a
	UREA	45	PD										
LSD P=.05				0.42		0.42		2.77		3.83		1586.0	
Standard Deviation				0.29		0.29		1.92		2.67		1102.4	
CV				0.28		0.3		4.62		16.86		16.55	
Treatment F				6.000		6.000		7.789		0.688		1.511	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.7398		0.1744	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XP113 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-01

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 20. Agronomic response of drill-seeded XP113 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	95.8	e	88.8	e	37.5	c	15.1	c	8321	b
2	UREA	60	4-5 leaf	95.8	e	88.8	e	40.5	b	15.6	abc	10259	a
3	UREA	90	4-5 leaf	97.3	d	90.3	d	42.3	ab	15.9	ab	10047	a
4	UREA	120	4-5 leaf	98.5	c	91.5	c	42.3	ab	15.4	bc	10484	a
5	UREA	150	4-5 leaf	99.5	ab	92.5	ab	43.8	a	16.0	a	10625	a
6	UREA	180	4-5 leaf	100.0	a	93.0	a	43.3	ab	15.9	ab	10174	a
7	UREA	75	4-5 leaf	96.3	e	89.3	e	41.8	ab	15.4	bc	10287	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	97.3	d	90.3	d	42.5	ab	15.3	c	10041	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	99.0	bc	92.0	bc	44.0	a	15.9	ab	10096	a
	UREA	45	50% HD										
LSD P=.05				0.79		0.79		2.93		0.55		800.1	
Standard Deviation				0.54		0.54		2.01		0.37		548.3	
CV				0.55		0.6		4.78		2.4		5.46	
Treatment F				35.952		35.952		3.917		2.929		6.030	
Treatment Prob(F)				0.0001		0.0001		0.0044		0.0197		0.0003	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XP760 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-09

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 21. Agronomic response of drill-seeded XP760 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	91.3	e	84.3	e	38.8	c	13.8	a	8885	b
2	UREA	60	4-5 leaf	93.0	d	86.0	d	43.5	b	14.2	a	11438	a
3	UREA	90	4-5 leaf	95.0	c	88.0	c	46.5	a	13.8	a	10616	a
4	UREA	120	4-5 leaf	96.3	b	89.3	b	45.3	ab	13.8	a	11184	a
5	UREA	150	4-5 leaf	96.8	ab	89.8	ab	46.3	a	14.1	a	11366	a
6	UREA	180	4-5 leaf	97.5	a	90.5	a	46.8	a	13.9	a	11270	a
7	UREA	75	4-5 leaf	93.8	d	86.8	d	46.8	a	13.7	a	10937	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	95.8	bc	88.8	bc	45.3	ab	13.9	a	10542	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	96.8	ab	89.8	ab	44.3	ab	14.1	a	10589	a
	UREA	45	50% HD										
LSD P=.05				1.17		1.17		2.69		0.36		1334.5	
Standard Deviation				0.80		0.80		1.84		0.25		914.4	
CV				0.84		0.91		4.12		1.78		8.5	
Treatment F				26.333		26.333		7.587		1.623		2.936	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.1705		0.0194	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Gemini 214 CL to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-10

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 22. Agronomic response of drill-seeded Gemini 214 CL to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	88.0	d	81.0	d	40.8	c	13.8	a	9038	a
2	UREA	60	4-5 leaf	92.3	c	85.3	c	42.8	bc	13.7	a	10904	a
3	UREA	90	4-5 leaf	93.3	c	86.3	c	44.3	ab	13.5	a	11778	a
4	UREA	120	4-5 leaf	94.5	b	87.5	b	43.3	bc	14.0	a	10715	a
5	UREA	150	4-5 leaf	96.0	a	89.0	a	45.0	ab	13.7	a	10836	a
6	UREA	180	4-5 leaf	96.0	a	89.0	a	46.8	a	13.9	a	10759	a
7	UREA	75	4-5 leaf	92.3	c	85.3	c	45.3	ab	13.6	a	11441	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	93.3	c	86.3	c	44.3	ab	13.8	a	11355	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	95.5	ab	88.5	ab	46.5	a	13.6	a	10069	a
	UREA	45	50% HD										
LSD P=.05				1.06		1.06		2.88		0.32		1970.4	
Standard Deviation				0.72		0.72		1.97		0.22		1350.2	
CV				0.77		0.84		4.45		1.61		12.54	
Treatment F				48.717		48.717		3.638		1.824		1.460	
Treatment Prob(F)				0.0001		0.0001		0.0066		0.1217		0.2235	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7321 to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-11

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 23. Agronomic response of drill-seeded FullPage RT7321 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	87.0	e	80.0	e	40.5	b	10.9	a	5679	b
2	UREA	60	4-5 leaf	88.0	d	81.0	d	45.3	a	14.5	a	10107	a
3	UREA	90	4-5 leaf	89.0	c	82.0	c	45.8	a	14.2	a	10211	a
4	UREA	120	4-5 leaf	90.0	b	83.0	b	46.3	a	10.8	a	8271	ab
5	UREA	150	4-5 leaf	92.0	a	85.0	a	46.5	a	14.3	a	10836	a
6	UREA	180	4-5 leaf	92.0	a	85.0	a	46.3	a	14.5	a	11191	a
7	UREA	75	4-5 leaf	88.0	d	81.0	d	45.8	a	13.9	a	9204	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	89.0	c	82.0	c	46.3	a	14.3	a	9423	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	92.0	a	85.0	a	45.0	a	14.7	a	10653	a
	UREA	45	50% HD										
LSD P=.05				.		.		2.00		4.75		3183.1	
Standard Deviation				0.00		0.00		1.37		3.26		2181.1	
CV				0.0		0.0		3.03		24.02		22.94	
Treatment F				0.000		0.000		7.336		0.912		2.423	
Treatment Prob(F)				1.0000		1.0000		0.0001		0.5230		0.0447	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7323 to Nitrogen Fertilizer Rate and Time of Application – Calcasieu Parish

Experiment number ..... : 18-CP-12

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 24. Agronomic response of drill-seeded FullPage RT7323 to N fertilizer rate and time of application. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/9/2018		8/13/2018		8/13/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	89.0	d	82.0	d	41.0	c	15.0	a	8209	c
2	UREA	60	4-5 leaf	92.0	c	85.0	c	43.3	bc	15.0	a	10249	ab
3	UREA	90	4-5 leaf	94.0	b	87.0	b	47.5	a	15.2	a	11018	ab
4	UREA	120	4-5 leaf	95.8	a	88.8	a	46.0	ab	15.0	a	10487	ab
5	UREA	150	4-5 leaf	96.0	a	89.0	a	47.3	a	15.0	a	11365	a
6	UREA	180	4-5 leaf	96.0	a	89.0	a	46.5	a	15.1	a	10284	ab
7	UREA	75	4-5 leaf	92.0	c	85.0	c	47.8	a	15.0	a	10767	ab
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	94.8	ab	87.8	ab	45.3	ab	14.8	a	10217	b
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	95.3	ab	88.3	ab	46.5	a	14.9	a	10564	ab
	UREA	45	50% HD										
LSD P=.05				1.26		1.26		3.13		0.26		1144.0	
Standard Deviation				0.86		0.86		2.14		0.18		783.9	
CV				0.92		1.0		4.69		1.2		7.57	
Treatment F				30.771		30.771		4.300		1.546		5.151	
Treatment Prob(F)				0.0001		0.0001		0.0025		0.1938		0.0008	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen
Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-02

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 25. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/21/2018		8/21/2018		8/21/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	78.5	bc	70.5	bc	32.5	d	19.6	cd	5844	f
2	UREA	30	4-5 leaf	78.3	c	70.3	c	32.8	cd	19.3	d	6228	ef
3	UREA	60	4-5 leaf	78.3	c	70.3	c	33.3	bcd	19.2	d	6514	def
4	UREA	90	4-5 leaf	78.5	bc	70.5	bc	34.0	a-d	19.6	d	5923	f
5	UREA	120	4-5 leaf	80.5	abc	72.5	abc	34.5	a-d	20.2	bcd	6731	cde
6	UREA	150	4-5 leaf	80.3	abc	72.3	abc	35.5	ab	20.6	a-d	7157	bcd
7	UREA	180	4-5 leaf	82.5	a	74.5	a	36.3	a	21.8	a	7929	ab
8	UREA	210	4-5 leaf	82.3	a	74.3	a	35.8	a	21.0	abc	7710	ab
9	UREA	45	4-5 leaf	80.3	abc	72.3	abc	34.5	a-d	20.3	bcd	7447	abc
	UREA	45	PD										
10	UREA	75	4-5 leaf	79.0	bc	71.0	bc	34.8	a-d	19.7	cd	7148	bcd
	UREA	45	PD										
11	UREA	105	4-5 leaf	80.8	ab	72.8	ab	35.0	abc	20.0	bcd	8028	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	80.8	ab	72.8	ab	36.3	a	21.2	ab	7947	ab
	UREA	45	PD										
LSD P=.05				2.49		2.49		2.47		1.39		803.9	
Standard Deviation				1.73		1.73		1.72		0.96		558.8	
CV				2.17		2.41		4.97		4.78		7.93	
Treatment F				2.956		2.956		2.193		2.788		8.081	
Treatment Prob(F)				0.0078		0.0078		0.0402		0.0112		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-06

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 26. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/21/2018		8/21/2018		8/21/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	75.5	g	67.5	g	31.0	e	18.9	e	6073	e
2	UREA	30	4-5 leaf	75.3	g	67.3	g	32.5	cde	19.2	de	7111	d
3	UREA	60	4-5 leaf	76.5	fg	68.5	fg	32.3	de	19.0	de	8021	cd
4	UREA	90	4-5 leaf	75.8	g	67.8	g	35.3	ab	19.5	cde	8419	bc
5	UREA	120	4-5 leaf	78.5	bcd	70.5	bcd	35.3	ab	20.1	bc	9003	ab
6	UREA	150	4-5 leaf	78.3	cde	70.3	cde	37.0	a	19.8	cd	9085	ab
7	UREA	180	4-5 leaf	80.0	ab	72.0	ab	37.0	a	20.7	ab	8943	abc
8	UREA	210	4-5 leaf	81.0	a	73.0	a	37.3	a	21.3	a	9220	ab
9	UREA	45	4-5 leaf	75.8	g	67.8	g	33.0	b-e	19.2	de	8832	abc
	UREA	45	PD										
10	UREA	75	4-5 leaf	76.8	efg	68.8	efg	35.5	ab	19.3	cde	9232	ab
	UREA	45	PD										
11	UREA	105	4-5 leaf	77.5	def	69.5	def	34.8	a-d	19.7	cde	9379	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	79.3	bc	71.3	bc	35.0	abc	19.7	cd	9255	ab
	UREA	45	PD										
LSD P=.05				1.63		1.63		2.67		0.80		925.4	
Standard Deviation				1.13		1.13		1.86		0.56		643.3	
CV				1.46		1.63		5.37		2.83		7.53	
Treatment F				11.303		11.303		4.821		6.553		9.954	
Treatment Prob(F)				0.0001		0.0001		0.0002		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-07

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 27. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/21/2018		8/21/2018		8/21/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	81.3	f	73.3	f	33.3	e	21.0	c-f	6554	f
2	UREA	30	4-5 leaf	81.8	ef	73.8	ef	36.3	d	20.1	f	7806	e
3	UREA	60	4-5 leaf	82.5	de	74.5	de	36.5	cd	20.9	def	8323	de
4	UREA	90	4-5 leaf	82.5	de	74.5	de	39.3	ab	20.8	ef	9059	a-d
5	UREA	120	4-5 leaf	83.0	cd	75.0	cd	38.8	abc	21.4	b-e	9001	a-d
6	UREA	150	4-5 leaf	83.8	bc	75.8	bc	40.5	a	22.0	ab	9363	a
7	UREA	180	4-5 leaf	84.3	ab	76.3	ab	40.5	a	22.4	ab	8478	b-e
8	UREA	210	4-5 leaf	84.8	a	76.8	a	41.0	a	22.5	a	8354	cde
9	UREA	45	4-5 leaf	82.3	de	74.3	de	37.5	bcd	20.9	def	9280	ab
	UREA	45	PD										
10	UREA	75	4-5 leaf	82.5	de	74.5	de	37.3	bcd	20.6	ef	8590	a-e
	UREA	45	PD										
11	UREA	105	4-5 leaf	83.0	cd	75.0	cd	37.5	bcd	22.0	abc	9255	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	84.3	ab	76.3	ab	40.0	a	21.9	a-d	9210	abc
	UREA	45	PD										
LSD P=.05				0.88		0.88		2.27		1.00		868.2	
Standard Deviation				0.61		0.61		1.57		0.70		603.5	
CV				0.74		0.82		4.12		3.26		7.01	
Treatment F				12.319		12.319		8.230		4.975		7.174	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0002		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-08

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 28. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	89.0	a	81.0	a	34.0	e	26.1	cde	4256	e
2	UREA	30	4-5 leaf	88.0	c	80.0	c	39.8	d	24.3	f	6905	d
3	UREA	60	4-5 leaf	88.0	c	80.0	c	43.3	bcd	25.4	ef	7922	bc
4	UREA	90	4-5 leaf	88.0	c	80.0	c	45.3	abc	26.2	b-e	8218	abc
5	UREA	120	4-5 leaf	88.3	b	80.3	b	43.3	bcd	25.5	e	8730	a
6	UREA	150	4-5 leaf	88.0	c	80.0	c	45.8	abc	27.2	abc	8634	ab
7	UREA	180	4-5 leaf	87.0	d	79.0	d	47.3	ab	26.8	a-d	8581	ab
8	UREA	210	4-5 leaf	87.0	d	79.0	d	48.3	a	27.6	a	8505	ab
9	UREA	45	4-5 leaf	87.0	d	79.0	d	42.8	cd	25.3	ef	7420	cd
	UREA	45	PD										
10	UREA	75	4-5 leaf	88.0	c	80.0	c	43.3	bcd	25.8	de	8405	ab
	UREA	45	PD										
11	UREA	105	4-5 leaf	88.0	c	80.0	c	44.3	abc	26.3	b-e	8283	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	89.0	a	81.0	a	45.5	abc	27.4	ab	8506	ab
	UREA	45	PD										
LSD P=.05				0.21		0.21		4.26		1.19		799.5	
Standard Deviation				0.14		0.14		2.96		0.83		555.7	
CV				0.16		0.18		6.81		3.16		7.07	
Treatment F				87.545		87.545		6.393		5.580		20.502	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Gemini 214 CL to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-10

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 29. Agronomic response of drill-seeded Gemini 214 CL to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/21/2018		8/21/2018		8/21/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	80.8	a	72.8	a	39.5	a	17.5	de	6215	c
2	UREA	60	4-5 leaf	80.8	a	72.8	a	42.3	a	17.3	e	8774	b
3	UREA	90	4-5 leaf	79.8	a	71.8	a	42.0	a	18.2	cd	8685	b
4	UREA	120	4-5 leaf	81.5	a	73.5	a	44.3	a	18.1	cde	9747	ab
5	UREA	150	4-5 leaf	81.8	a	73.8	a	43.8	a	18.8	bc	10092	a
6	UREA	180	4-5 leaf	83.0	a	75.0	a	45.3	a	19.7	a	10124	a
7	UREA	75	4-5 leaf	80.8	a	72.8	a	41.8	a	18.3	cd	9601	ab
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	81.8	a	73.8	a	41.3	a	18.3	cd	9786	ab
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	82.8	a	74.8	a	45.3	a	19.2	ab	10421	a
	UREA	45	50% HD										
LSD P=.05				2.32		2.32		3.80		0.85		1142.4	
Standard Deviation				1.59		1.59		2.60		0.58		782.8	
CV				1.96		2.17		6.09		3.16		8.44	
Treatment F				1.701		1.701		2.236		6.713		10.817	
Treatment Prob(F)				0.1495		0.1495		0.0609		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7321 to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-11

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 30. Agronomic response of drill-seeded FullPage RT7321 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Tip of Panicle									
Rating Date				8/21/2018		8/21/2018		8/21/2018		8/21/2018		8/21/2018	
Rating Type				Height		Yield		Moisture		Test Wt.		Yield	
Rating Unit				in		lb/plot		%		lb/bu		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	36.8	e	10.8	e	14.8	a	42.5	a	6114	d
2	UREA	60	4-5 leaf	42.3	cd	16.1	d	14.0	a	42.2	a	9169	c
3	UREA	90	4-5 leaf	44.0	bcd	17.2	cd	14.9	a	42.4	a	9683	bc
4	UREA	120	4-5 leaf	46.8	a	18.4	abc	15.0	a	42.5	a	10394	ab
5	UREA	150	4-5 leaf	44.5	a-d	18.7	ab	15.1	a	42.1	a	10506	ab
6	UREA	180	4-5 leaf	45.0	ab	19.6	a	15.5	a	42.5	a	10990	a
7	UREA	75	4-5 leaf	42.0	d	17.5	bcd	14.6	a	41.9	a	9898	bc
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	44.3	a-d	18.3	abc	14.7	a	42.3	a	10337	ab
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	44.8	abc	18.0	bc	14.9	a	42.4	a	10188	ab
	UREA	45	50% HD										
LSD P=.05				2.66		1.49		1.07		0.67		826.0	
Standard Deviation				1.82		1.02		0.74		0.46		566.0	
CV				4.2		5.95		4.97		1.08		5.84	
Treatment F				9.836		25.662		1.168		0.908		25.945	
Treatment Prob(F)				0.0001		0.0001		0.3576		0.5261		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7323 to Nitrogen Fertilizer Rate and Time of Application – Richland Parish

Experiment number ..... : 18-RP-12

Site and design ..... :
- **Location/Cooperator** ..... : Richland Parish / Ashley Dixon
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Hebert silty clay
- **% organic matter** ..... : 2.08
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-3065; Cu-2.9; Mg-637; P-20; K-178; Na-163; S-36; Zn-1.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 1
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 9
- **Harvest date** ..... : Aug. 21

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 25
- **Drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 1
  4 qt/A Propanil + 0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 6 oz/A Newpath, May 23
  20 oz/A Ricestar, June 20
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 31. Agronomic response of drill-seeded FullPage RT7323 to N fertilizer rate and time of application. Richland Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/21/2018		8/21/2018		8/21/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	80.8	a	72.8	a	36.8	e	17.7	a	6315	b
2	UREA	60	4-5 leaf	81.5	a	73.5	a	41.8	d	19.9	a	9288	a
3	UREA	90	4-5 leaf	80.3	a	72.3	a	42.8	cd	19.9	a	9683	a
4	UREA	120	4-5 leaf	82.0	a	74.0	a	43.5	bcd	17.1	a	9966	a
5	UREA	150	4-5 leaf	82.5	a	74.5	a	45.8	a	20.8	a	10412	a
6	UREA	180	4-5 leaf	82.3	a	74.3	a	45.5	ab	21.3	a	9874	a
7	UREA	75	4-5 leaf	80.0	a	72.0	a	43.0	cd	21.0	a	9849	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	81.3	a	73.3	a	42.8	cd	18.6	a	10086	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	82.5	a	74.5	a	44.0	abc	21.2	a	10184	a
	UREA	45	50% HD										
LSD P=.05				2.14		2.14		2.08		3.80		1131.7	
Standard Deviation				1.47		1.47		1.42		2.61		775.4	
CV				1.8		2.0		3.32		13.21		8.15	
Treatment F				1.674		1.674		13.751		1.457		10.265	
Treatment Prob(F)				0.1566		0.1566		0.0001		0.2247		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-02

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 32. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	78.3	a	70.3	a	30.3	e	17.5	a	2805	f
2	UREA	30	4-5 leaf	76.0	a	68.0	a	34.8	d	15.6	a	3488	ef
3	UREA	60	4-5 leaf	76.0	a	68.0	a	35.3	bcd	15.3	a	3999	de
4	UREA	90	4-5 leaf	76.8	a	68.8	a	35.0	cd	15.9	a	4652	cd
5	UREA	120	4-5 leaf	76.8	a	68.8	a	36.8	a-d	15.9	a	4941	bcd
6	UREA	150	4-5 leaf	75.8	a	67.8	a	36.3	a-d	15.0	a	5347	bc
7	UREA	180	4-5 leaf	78.0	a	70.0	a	38.3	ab	16.4	a	5695	ab
8	UREA	210	4-5 leaf	77.8	a	69.8	a	38.8	a	16.3	a	6385	a
9	UREA	45	4-5 leaf	76.0	a	68.0	a	36.8	a-d	15.6	a	4970	bcd
	UREA	45	PD										
10	UREA	75	4-5 leaf	75.8	a	67.8	a	38.0	abc	15.8	a	5370	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	76.5	a	68.5	a	37.5	a-d	15.2	a	5689	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	76.3	a	68.3	a	37.0	a-d	15.6	a	5539	abc
	UREA	45	PD										
LSD P=.05				2.21		2.21		3.00		1.34		992.3	
Standard Deviation				1.53		1.53		2.09		0.93		689.8	
CV				2.0		2.24		5.76		5.88		14.06	
Treatment F				1.341		1.341		4.741		2.053		8.829	
Treatment Prob(F)				0.2467		0.2467		0.0002		0.0546		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL108 to
Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-03

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 33. Agronomic response of drill-seeded PVL108 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	78.0	a	70.0	a	41.8	a	18.7	a	6367	a
2	UREA	90	4-5 leaf	76.3	a	68.3	a	40.3	a	17.5	a	6340	a
3	UREA	120	4-5 leaf	76.0	a	68.0	a	37.8	a	17.8	a	4756	a
4	UREA	150	4-5 leaf	76.0	a	68.0	a	42.3	a	17.8	a	6228	a
5	UREA	180	4-5 leaf	77.5	a	69.5	a	42.0	a	18.6	a	7485	a
6	UREA	210	4-5 leaf	76.8	a	68.8	a	41.3	a	18.1	a	6898	a
LSD P=.05				1.89		1.89		5.16		1.79		2619.2	
Standard Deviation				1.26		1.26		3.42		1.19		1737.8	
CV				1.64		1.83		8.37		6.56		27.39	
Treatment F				1.775		1.775		0.972		0.664		1.098	
Treatment Prob(F)				0.1787		0.1787		0.4661		0.6563		0.4017	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL01 to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-04

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 34. Agronomic response of drill-seeded PVL01 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	80.3	a	72.3	a	31.5	g	16.4	fg	3452	f
2	UREA	30	4-5 leaf	80.5	a	72.5	a	35.0	f	15.8	g	4899	e
3	UREA	60	4-5 leaf	81.0	a	73.0	a	38.5	cde	16.6	efg	5817	d
4	UREA	90	4-5 leaf	81.8	a	73.8	a	39.5	bcd	18.3	cd	6932	ab
5	UREA	120	4-5 leaf	35.3	a	27.3	a	36.0	ef	18.3	cd	6344	cd
6	UREA	150	4-5 leaf	82.3	a	74.3	a	40.5	a-d	19.5	b	7326	a
7	UREA	180	4-5 leaf	83.3	a	75.3	a	42.0	ab	20.1	ab	7078	ab
8	UREA	210	4-5 leaf	83.8	a	75.8	a	43.3	a	20.7	a	6894	abc
9	UREA	45	4-5 leaf	80.8	a	72.8	a	37.8	def	17.0	ef	6057	d
	UREA	45	PD										
10	UREA	75	4-5 leaf	82.3	a	74.3	a	39.5	bcd	17.7	de	6646	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	81.8	a	73.8	a	41.5	ab	19.1	bc	7232	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	82.8	a	74.8	a	41.0	abc	19.5	b	7176	ab
	UREA	45	PD										
LSD P=.05				38.39		38.39		2.78		1.09		582.0	
Standard Deviation				26.68		26.68		1.93		0.76		404.5	
CV				34.23		38.14		4.98		4.16		6.4	
Treatment F				1.023		1.023		11.931		17.295		32.283	
Treatment Prob(F)				0.4490		0.4490		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Diamond to
Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-05

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 35. Agronomic response of drill-seeded Diamond to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	77.3	e	69.3	e	30.0	g	17.9	f	4205	e
2	UREA	30	4-5 leaf	77.5	e	69.5	e	39.5	f	17.9	f	7491	d
3	UREA	60	4-5 leaf	78.0	de	70.0	de	41.3	ef	18.8	f	8059	cd
4	UREA	90	4-5 leaf	77.8	de	69.8	de	41.8	def	20.4	de	9442	ab
5	UREA	120	4-5 leaf	78.3	cde	70.3	cde	43.5	b-e	20.3	de	8972	bc
6	UREA	150	4-5 leaf	79.5	a-d	71.5	a-d	44.0	a-d	21.6	bc	9673	ab
7	UREA	180	4-5 leaf	81.3	a	73.3	a	46.3	a	22.4	ab	9441	ab
8	UREA	210	4-5 leaf	80.3	ab	72.3	ab	45.0	ab	22.7	a	9019	bc
9	UREA	45	4-5 leaf	79.0	b-e	71.0	b-e	42.0	de	20.2	e	9531	ab
	UREA	45	PD										
10	UREA	75	4-5 leaf	78.3	cde	70.3	cde	42.3	cde	20.0	e	8994	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	81.0	a	73.0	a	44.0	a-d	20.9	cde	10398	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	80.0	abc	72.0	abc	44.5	abc	21.2	cd	8554	bcd
	UREA	45	PD										
LSD P=.05				1.95		1.95		2.31		1.02		1223.6	
Standard Deviation				1.35		1.35		1.60		0.71		850.5	
CV				1.71		1.9		3.82		3.5		9.83	
Treatment F				4.152		4.152		27.513		19.207		14.049	
Treatment Prob(F)				0.0007		0.0007		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-06

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 36. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	76.3	d	68.3	d	34.5	cd	15.1	ef	4392	e
2	UREA	30	4-5 leaf	76.3	d	68.3	d	33.8	d	14.3	f	6301	d
3	UREA	60	4-5 leaf	77.0	cd	69.0	cd	36.8	bcd	14.6	ef	8385	c
4	UREA	90	4-5 leaf	77.0	cd	69.0	cd	38.8	abc	16.3	de	9180	bc
5	UREA	120	4-5 leaf	78.5	abc	70.5	abc	39.8	ab	17.3	cd	10174	ab
6	UREA	150	4-5 leaf	78.3	abc	70.3	abc	41.5	a	19.6	ab	10923	a
7	UREA	180	4-5 leaf	79.5	a	71.5	a	41.5	a	18.9	abc	10772	a
8	UREA	210	4-5 leaf	78.8	ab	70.8	ab	42.0	a	20.8	a	10857	a
9	UREA	45	4-5 leaf	77.3	bcd	69.3	bcd	38.8	abc	15.9	def	9264	bc
	UREA	45	PD										
10	UREA	75	4-5 leaf	77.5	bcd	69.5	bcd	38.3	abc	15.3	ef	9247	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	78.5	abc	70.5	abc	40.3	ab	18.5	bc	10798	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	78.8	ab	70.8	ab	41.5	a	19.2	abc	10181	ab
	UREA	45	PD										
LSD P=.05				1.51		1.51		4.27		1.98		1036.9	
Standard Deviation				1.05		1.05		2.97		1.38		720.7	
CV				1.35		1.51		7.62		8.02		7.83	
Treatment F				4.071		4.071		3.444		10.343		31.390	
Treatment Prob(F)				0.0008		0.0008		0.0029		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-07

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 37. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	80.5	d	72.5	d	35.8	f	18.9	bc	5564	c
2	UREA	30	4-5 leaf	80.5	d	72.5	d	40.5	e	18.6	bc	8292	b
3	UREA	60	4-5 leaf	82.0	bc	74.0	bc	42.3	de	18.4	c	8715	ab
4	UREA	90	4-5 leaf	81.5	cd	73.5	cd	42.3	de	23.1	abc	8280	b
5	UREA	120	4-5 leaf	82.0	bc	74.0	bc	44.3	bc	21.9	abc	9673	a
6	UREA	150	4-5 leaf	83.0	ab	75.0	ab	45.0	ab	25.3	a	10004	a
7	UREA	180	4-5 leaf	83.0	ab	75.0	ab	43.0	cd	21.7	abc	9993	a
8	UREA	210	4-5 leaf	82.8	ab	74.8	ab	45.0	ab	25.9	a	9436	ab
9	UREA	45	4-5 leaf	80.5	d	72.5	d	43.3	bcd	22.0	abc	8958	ab
	UREA	45	PD										
10	UREA	75	4-5 leaf	82.0	bc	74.0	bc	43.0	cd	18.4	c	9421	ab
	UREA	45	PD										
11	UREA	105	4-5 leaf	82.8	ab	74.8	ab	44.8	bc	24.1	a	9558	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	83.8	a	75.8	a	46.8	a	23.4	ab	9820	a
	UREA	45	PD										
LSD P=.05				1.07		1.07		1.90		4.80		1339.0	
Standard Deviation				0.74		0.74		1.32		3.34		930.8	
CV				0.91		1.0		3.08		15.3		10.37	
Treatment F				8.698		8.698		18.031		2.603		7.009	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0166		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen Fertilizer Rate and Time of Application – Tensas Parish

Experiment number ..... : 18-SJ-08

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 22

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 38. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/22/2018		8/22/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	89.0	a	81.0	a	34.0	e	26.1	cde	4256	e
2	UREA	30	4-5 leaf	88.0	c	80.0	c	39.8	d	24.3	f	6905	d
3	UREA	60	4-5 leaf	88.0	c	80.0	c	43.3	bcd	25.4	ef	7922	bc
4	UREA	90	4-5 leaf	88.0	c	80.0	c	45.3	abc	26.2	b-e	8218	abc
5	UREA	120	4-5 leaf	88.3	b	80.3	b	43.3	bcd	25.5	e	8730	a
6	UREA	150	4-5 leaf	88.0	c	80.0	c	45.8	abc	27.2	abc	8634	ab
7	UREA	180	4-5 leaf	87.0	d	79.0	d	47.3	ab	26.8	a-d	8581	ab
8	UREA	210	4-5 leaf	87.0	d	79.0	d	48.3	a	27.6	a	8505	ab
9	UREA	45	4-5 leaf	87.0	d	79.0	d	42.8	cd	25.3	ef	7420	cd
	UREA	45	PD										
10	UREA	75	4-5 leaf	88.0	c	80.0	c	43.3	bcd	25.8	de	8405	ab
	UREA	45	PD										
11	UREA	105	4-5 leaf	88.0	c	80.0	c	44.3	abc	26.3	b-e	8283	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	89.0	a	81.0	a	45.5	abc	27.4	ab	8506	ab
	UREA	45	PD										
LSD P=.05				0.21		0.21		4.26		1.19		799.5	
Standard Deviation				0.14		0.14		2.96		0.83		555.7	
CV				0.16		0.18		6.81		3.16		7.07	
Treatment F				87.545		87.545		6.393		5.580		20.502	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-02

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 39. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	97.8	h	85.8	h	35.0	d	15.9	c-f	4783	f
2	UREA	30	4-5 leaf	98.3	gh	86.3	gh	35.5	d	15.6	ef	5809	e
3	UREA	60	4-5 leaf	99.3	fg	87.3	fg	36.5	cd	15.5	ef	7007	cd
4	UREA	90	4-5 leaf	100.0	ef	88.0	ef	38.5	bc	15.8	def	7202	bcd
5	UREA	120	4-5 leaf	101.8	cd	89.8	cd	39.3	ab	16.4	a-d	7433	a-d
6	UREA	150	4-5 leaf	103.0	bc	91.0	bc	40.3	ab	16.8	ab	7636	ab
7	UREA	180	4-5 leaf	104.5	a	92.5	a	41.3	a	17.0	a	7772	ab
8	UREA	210	4-5 leaf	104.3	ab	92.3	ab	41.3	a	16.7	abc	7877	a
9	UREA	45	4-5 leaf	98.5	gh	86.5	gh	36.5	cd	15.3	f	6933	d
	UREA	45	PD										
10	UREA	75	4-5 leaf	100.3	ef	88.3	ef	39.0	abc	15.6	ef	6894	d
	UREA	45	PD										
11	UREA	105	4-5 leaf	100.8	de	88.8	de	39.0	abc	15.6	ef	7470	a-d
	UREA	45	PD										
12	UREA	135	4-5 leaf	102.5	c	90.5	c	40.0	ab	16.2	b-e	7577	abc
	UREA	45	PD										
LSD P=.05				1.42		1.42		2.65		0.78		617.7	
Standard Deviation				0.99		0.99		1.84		0.55		429.3	
CV				0.98		1.11		4.79		3.41		6.1	
Treatment F				21.831		21.831		5.429		4.399		17.540	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0004		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL01 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-04

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 40. Agronomic response of drill-seeded PVL01 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	98.8	h	86.8	h	34.3	a	13.8	e	4510	e
2	UREA	30	4-5 leaf	99.5	gh	87.5	gh	35.0	a	13.9	e	6096	d
3	UREA	60	4-5 leaf	101.3	ef	89.3	ef	36.0	a	14.1	de	6762	c
4	UREA	90	4-5 leaf	102.0	ef	90.0	ef	36.8	a	14.4	cd	6830	bc
5	UREA	120	4-5 leaf	104.0	c	92.0	c	37.8	a	14.9	b	7246	abc
6	UREA	150	4-5 leaf	105.0	bc	93.0	bc	38.5	a	15.1	b	7190	abc
7	UREA	180	4-5 leaf	106.5	a	94.5	a	37.8	a	16.2	a	7280	ab
8	UREA	210	4-5 leaf	106.0	ab	94.0	ab	38.5	a	16.2	a	7402	a
9	UREA	45	4-5 leaf	100.8	fg	88.8	fg	35.3	a	13.9	e	6954	abc
	UREA	45	PD										
10	UREA	75	4-5 leaf	102.5	de	90.5	de	36.5	a	14.1	de	6744	c
	UREA	45	PD										
11	UREA	105	4-5 leaf	103.8	cd	91.8	cd	37.3	a	14.7	bc	7219	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	105.0	bc	93.0	bc	37.3	a	15.2	b	7317	ab
	UREA	45	PD										
LSD P=.05				1.37		1.37		2.99		0.47		509.1	
Standard Deviation				0.95		0.95		2.08		0.33		353.9	
CV				0.92		1.05		5.65		2.22		5.21	
Treatment F				28.324		28.324		1.754		27.059		20.775	
Treatment Prob(F)				0.0001		0.0001		0.1042		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Diamond to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-05

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 41. Agronomic response of drill-seeded Diamond to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	96.3	g	84.3	g	32.0	f	15.0	f	5546	e
2	UREA	30	4-5 leaf	97.5	f	85.5	f	35.3	e	15.4	f	6933	d
3	UREA	60	4-5 leaf	99.5	e	87.5	e	40.3	bcd	16.1	e	8137	c
4	UREA	90	4-5 leaf	101.0	bcd	89.0	bcd	39.8	cd	17.4	d	8758	bc
5	UREA	120	4-5 leaf	100.5	cde	88.5	cde	39.0	cd	17.5	d	9217	ab
6	UREA	150	4-5 leaf	102.0	ab	90.0	ab	42.8	ab	18.5	bc	8801	bc
7	UREA	180	4-5 leaf	102.5	a	90.5	a	42.8	ab	19.0	ab	9644	ab
8	UREA	210	4-5 leaf	102.5	a	90.5	a	44.3	a	19.2	a	9881	a
9	UREA	45	4-5 leaf	99.8	e	87.8	e	37.8	de	16.2	e	8131	c
	UREA	45	PD										
10	UREA	75	4-5 leaf	100.0	de	88.0	de	40.0	bcd	16.2	e	8037	c
	UREA	45	PD										
11	UREA	105	4-5 leaf	101.3	bc	89.3	bc	41.0	bc	18.1	cd	9465	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	101.8	ab	89.8	ab	42.8	ab	18.1	cd	8802	bc
	UREA	45	PD										
LSD P=.05				1.19		1.19		2.96		0.69		1037.0	
Standard Deviation				0.83		0.83		2.06		0.48		720.9	
CV				0.82		0.94		5.17		2.78		8.54	
Treatment F				21.952		21.952		11.491		33.423		11.575	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-06

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 42. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	95.3	f	83.3	f	31.5	f	14.0	c	5928	d
2	UREA	30	4-5 leaf	97.3	e	85.3	e	32.8	ef	14.4	bc	8037	c
3	UREA	60	4-5 leaf	98.3	cde	86.3	cde	35.8	cd	14.1	bc	8545	bc
4	UREA	90	4-5 leaf	99.3	bcd	87.3	bcd	35.3	d	14.4	bc	8643	ab
5	UREA	120	4-5 leaf	99.5	bc	87.5	bc	38.0	bc	15.3	a	8999	ab
6	UREA	150	4-5 leaf	100.3	ab	88.3	ab	39.0	b	15.2	a	9144	a
7	UREA	180	4-5 leaf	101.3	a	89.3	a	38.8	b	15.3	a	9038	ab
8	UREA	210	4-5 leaf	101.5	a	89.5	a	41.8	a	15.2	a	8805	ab
9	UREA	45	4-5 leaf	98.0	de	86.0	de	34.8	de	14.1	bc	8755	ab
	UREA	45	PD										
10	UREA	75	4-5 leaf	99.0	bcd	87.0	bcd	37.0	bcd	14.7	abc	8795	ab
	UREA	45	PD										
11	UREA	105	4-5 leaf	99.8	b	87.8	b	38.0	bc	14.2	bc	9030	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	100.3	ab	88.3	ab	38.5	b	14.7	ab	8638	ab
	UREA	45	PD										
LSD P=.05				1.35		1.35		2.43		0.65		524.3	
Standard Deviation				0.94		0.94		1.69		0.45		364.5	
CV				0.94		1.07		4.6		3.1		4.27	
Treatment F				14.032		14.032		11.592		4.848		22.827	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0002		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-07

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 43. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	99.3	f	87.3	f	34.5	e	15.4	bc	5611	e
2	UREA	30	4-5 leaf	99.8	ef	87.8	ef	38.3	d	14.9	c	7194	d
3	UREA	60	4-5 leaf	101.0	def	89.0	def	41.3	bc	14.6	c	7741	a-d
4	UREA	90	4-5 leaf	100.8	def	88.8	def	41.8	abc	15.6	bc	7755	a-d
5	UREA	120	4-5 leaf	103.0	a-d	91.0	a-d	42.3	abc	15.6	bc	8126	abc
6	UREA	150	4-5 leaf	103.5	abc	91.5	abc	42.0	abc	15.5	bc	8239	ab
7	UREA	180	4-5 leaf	105.0	a	93.0	a	44.0	a	16.7	a	7563	a-d
8	UREA	210	4-5 leaf	103.8	ab	91.8	ab	43.0	ab	16.3	ab	7254	cd
9	UREA	45	4-5 leaf	99.8	ef	87.8	ef	40.5	cd	14.6	c	7361	bcd
	UREA	45	PD										
10	UREA	75	4-5 leaf	101.3	c-f	89.3	c-f	41.3	bc	15.0	c	8005	a-d
	UREA	45	PD										
11	UREA	105	4-5 leaf	101.8	b-e	89.8	b-e	40.3	cd	15.1	c	8128	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	103.8	ab	91.8	ab	42.3	abc	15.5	bc	8315	a
	UREA	45	PD										
LSD P=.05				2.42		2.42		2.31		1.10		894.5	
Standard Deviation				1.68		1.68		1.60		0.76		621.8	
CV				1.65		1.87		3.92		4.96		8.17	
Treatment F				5.018		5.018		9.672		2.670		5.624	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0144		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-08

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 44. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	100.3	a	88.3	a	37.0	e	16.6	g	8582	bc
2	UREA	30	4-5 leaf	100.3	a	88.3	a	38.3	de	18.0	d-g	8901	ab
3	UREA	60	4-5 leaf	99.8	a	87.8	a	41.0	bc	17.6	efg	9990	a
4	UREA	90	4-5 leaf	101.0	a	89.0	a	42.8	ab	18.3	c-f	9088	ab
5	UREA	120	4-5 leaf	100.5	a	88.5	a	43.3	ab	19.3	a-d	8727	b
6	UREA	150	4-5 leaf	101.3	a	89.3	a	45.0	a	19.8	abc	8434	bc
7	UREA	180	4-5 leaf	101.3	a	89.3	a	43.5	a	20.0	ab	6744	d
8	UREA	210	4-5 leaf	101.3	a	89.3	a	43.8	a	20.4	a	7531	cd
9	UREA	45	4-5 leaf	100.5	a	88.5	a	40.0	cd	17.2	fg	8983	ab
	UREA	45	PD										
10	UREA	75	4-5 leaf	100.8	a	88.8	a	42.8	ab	18.4	c-f	8847	b
	UREA	45	PD										
11	UREA	105	4-5 leaf	100.8	a	88.8	a	43.5	a	18.8	b-e	8481	bc
	UREA	45	PD										
12	UREA	135	4-5 leaf	101.8	a	89.8	a	43.0	ab	19.8	abc	8183	bc
	UREA	45	PD										
LSD P=.05				2.13		2.13		2.44		1.52		1112.1	
Standard Deviation				1.48		1.48		1.70		1.06		773.1	
CV				1.47		1.67		4.04		5.66		9.05	
Treatment F				0.571		0.571		8.121		5.184		4.409	
Treatment Prob(F)				0.8384		0.8384		0.0001		0.0001		0.0004	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XL760 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-09

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : 0.137 lb ai/cwt Dermacor X-100 seed treatment
- **Fungicides** ..... : None

Table 45. Agronomic response of drill-seeded XL760 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	99.8	a	87.8	a	39.0	d	11.4	e	6380	c
2	UREA	60	4-5 leaf	100.8	a	88.8	a	46.8	c	12.2	d	10189	b
3	UREA	90	4-5 leaf	100.5	a	88.5	a	50.8	ab	12.3	d	10347	b
4	UREA	120	4-5 leaf	101.8	a	89.8	a	50.5	ab	13.2	bc	10365	b
5	UREA	150	4-5 leaf	102.0	a	90.0	a	51.5	ab	13.8	ab	11254	ab
6	UREA	180	4-5 leaf	102.3	a	90.3	a	52.0	a	14.4	a	11692	a
7	UREA	75	4-5 leaf	102.0	a	90.0	a	48.3	bc	12.6	cd	10962	ab
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	101.3	a	89.3	a	49.8	abc	12.8	cd	10939	ab
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	101.8	a	89.8	a	50.8	ab	14.1	a	10916	ab
	UREA	45	50% HD										
LSD P=.05				2.56		2.56		3.65		0.64		1190.4	
Standard Deviation				1.76		1.76		2.50		0.44		815.7	
CV				1.73		1.96		5.12		3.38		7.89	
Treatment F				0.913		0.913		10.350		19.646		14.616	
Treatment Prob(F)				0.5226		0.5226		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Gemini 214 CL to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-10

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : 0.137 lb ai/cwt Dermacor X-100 seed treatment
- **Fungicides** ..... : None

Table 46. Agronomic response of drill-seeded Gemini 214 CL to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	96.5	a	84.5	a	39.3	d	11.7	d	6972	d
2	UREA	60	4-5 leaf	97.8	a	85.8	a	47.0	c	12.0	cd	10598	c
3	UREA	90	4-5 leaf	100.3	a	88.3	a	51.5	ab	12.1	cd	10628	c
4	UREA	120	4-5 leaf	58.0	a	46.0	a	52.5	a	12.1	cd	11379	abc
5	UREA	150	4-5 leaf	101.8	a	89.8	a	53.0	a	13.3	ab	11995	ab
6	UREA	180	4-5 leaf	102.5	a	90.5	a	52.3	a	13.6	a	12385	a
7	UREA	75	4-5 leaf	99.5	a	87.5	a	49.0	bc	12.0	cd	10948	bc
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	100.0	a	88.0	a	51.5	ab	12.0	cd	11481	abc
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	100.3	a	88.3	a	50.5	ab	12.6	bc	11797	ab
	UREA	45	50% HD										
LSD P=.05				40.95		40.95		3.01		0.79		1156.1	
Standard Deviation				28.06		28.06		2.06		0.54		792.2	
CV				29.48		33.74		4.16		4.38		7.26	
Treatment F				1.004		1.004		17.551		5.895		16.236	
Treatment Prob(F)				0.4586		0.4586		0.0001		0.0003		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7321 to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-11

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : 0.137 lb ai/cwt Dermacor X-100 seed treatment
- **Fungicides** ..... : None

Table 47. Agronomic response of drill-seeded FullPage RT7321 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	95.0	d	83.0	d	39.8	b	12.9	a	6869	d
2	UREA	60	4-5 leaf	95.8	cd	83.8	cd	50.0	a	12.5	a	10160	c
3	UREA	90	4-5 leaf	96.5	bc	84.5	bc	49.8	a	12.1	a	10183	c
4	UREA	120	4-5 leaf	97.0	bc	85.0	bc	50.3	a	12.7	a	10670	bc
5	UREA	150	4-5 leaf	98.8	a	86.8	a	49.5	a	12.5	a	10862	abc
6	UREA	180	4-5 leaf	98.5	a	86.5	a	51.0	a	13.3	a	11579	a
7	UREA	75	4-5 leaf	96.3	cd	84.3	cd	48.5	a	12.2	a	10130	c
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	97.0	bc	85.0	bc	49.3	a	12.4	a	10769	bc
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	97.8	ab	85.8	ab	50.3	a	12.5	a	10991	ab
	UREA	45	50% HD										
LSD P=.05				1.32		1.32		2.78		1.30		742.6	
Standard Deviation				0.91		0.91		1.90		0.89		508.8	
CV				0.94		1.07		3.9		7.07		4.97	
Treatment F				7.416		7.416		12.995		0.607		28.185	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.7626		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded FullPage RT7323 to Nitrogen Fertilizer Rate and Time of Application – St. Landry Parish

Experiment number ..... : 18-SLP-12

Site and design ..... :
- **Location/Cooperator** ..... : St. Landry Parish / Charlie Fontenot
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Tensas-Sharkey complex
- **% organic matter** ..... : 1.95
- **pH** ..... : 7.65
- **Extractable nutrients** ppm ..... : Ca-4435; Cu-2.6; Mg-692; P-89; K-265; Na-50; S-8.1; Zn-1.8

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 27
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : April 8
- **Harvest date** ..... : Aug. 15

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : No blanket applications

Water management ..... : Underground irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 18
- **Drain** ..... : July 30

Pest management ..... :
- **Herbicides** ..... : 24 oz/A Roundup + 10 oz/A Command + 2 oz/A Sharpen, March 27
- **Insecticides** ..... : 0.137 lb ai/cwt Dermacor X-100 seed treatment
- **Fungicides** ..... : None

Table 48. Agronomic response of drill-seeded FullPage RT7323 to N fertilizer rate and time of application. St. Landry Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/15/2018		8/15/2018		8/15/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	100.3	e	88.3	e	40.3	e	13.3	a	7582	b
2	UREA	60	4-5 leaf	101.3	de	89.3	de	47.3	d	13.8	a	10696	a
3	UREA	90	4-5 leaf	103.0	bcd	91.0	bcd	48.8	cd	14.3	a	10522	a
4	UREA	120	4-5 leaf	103.5	abc	91.5	abc	50.0	abc	13.4	a	10535	a
5	UREA	150	4-5 leaf	104.3	ab	92.3	ab	51.3	ab	14.3	a	11436	a
6	UREA	180	4-5 leaf	105.3	a	93.3	a	51.8	a	15.0	a	11379	a
7	UREA	75	4-5 leaf	101.8	cde	89.8	cde	47.0	d	13.6	a	11048	a
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	102.5	bcd	90.5	bcd	49.3	bcd	13.7	a	10852	a
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	102.5	bcd	90.5	bcd	50.5	abc	14.0	a	11041	a
	UREA	45	50% HD										
LSD P=.05				1.93		1.93		2.31		1.05		1034.7	
Standard Deviation				1.32		1.32		1.58		0.72		709.0	
CV				1.29		1.46		3.27		5.18		6.71	
Treatment F				5.349		5.349		19.316		2.247		10.824	
Treatment Prob(F)				0.0006		0.0006		0.0001		0.0598		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLJ01 to Nitrogen
Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-02

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 49. Agronomic response of drill-seeded CLJ01 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/6/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	105.5	e	96.5	e	29.0	g	14.7	h	4241	h
2	UREA	30	4-5 leaf	105.5	e	96.5	e	31.3	fg	15.0	gh	5332	g
3	UREA	60	4-5 leaf	106.5	e	97.5	e	32.8	ef	15.7	ef	5793	f
4	UREA	90	4-5 leaf	109.3	c	100.3	c	34.8	b-e	16.1	cde	6177	de
5	UREA	120	4-5 leaf	110.0	bc	101.0	bc	36.0	abc	17.0	ab	6602	bc
6	UREA	150	4-5 leaf	110.8	ab	101.8	ab	36.8	ab	16.9	ab	7048	a
7	UREA	180	4-5 leaf	111.5	a	102.5	a	36.5	abc	17.1	a	6917	ab
8	UREA	210	4-5 leaf	111.8	a	102.8	a	37.5	a	17.0	a	6861	ab
9	UREA	45	4-5 leaf	106.5	e	97.5	e	33.5	def	15.5	fg	5877	ef
	UREA	45	PD										
10	UREA	75	4-5 leaf	107.8	d	98.8	d	34.3	cde	15.8	def	6308	cd
	UREA	45	PD										
11	UREA	105	4-5 leaf	109.8	bc	100.8	bc	35.5	a-d	16.4	bcd	6547	bcd
	UREA	45	PD										
12	UREA	135	4-5 leaf	110.8	ab	101.8	ab	37.3	a	16.6	abc	6689	ab
	UREA	45	PD										
LSD P=.05				1.21		1.21		2.34		0.61		374.6	
Standard Deviation				0.84		0.84		1.62		0.42		260.4	
CV				0.77		0.84		4.7		2.62		4.2	
Treatment F				30.763		30.763		10.178		15.006		37.897	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded PVL01 to Nitrogen
Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-04

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 50. Agronomic response of drill-seeded PVL01 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/6/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	109.5	ef	100.5	ef	14.5	e	14.5	e	4208	f
2	UREA	30	4-5 leaf	109.0	f	100.0	f	14.5	e	14.5	e	5921	e
3	UREA	60	4-5 leaf	110.3	de	101.3	de	14.6	e	14.6	e	6288	cde
4	UREA	90	4-5 leaf	111.8	bc	102.8	bc	15.9	bcd	15.9	bcd	6136	de
5	UREA	120	4-5 leaf	112.3	ab	103.3	ab	17.0	ab	17.0	ab	6730	abc
6	UREA	150	4-5 leaf	112.5	ab	103.5	ab	17.4	a	17.4	a	7141	a
7	UREA	180	4-5 leaf	113.0	a	104.0	a	17.3	a	17.3	a	7054	a
8	UREA	210	4-5 leaf	113.0	a	104.0	a	17.3	a	17.3	a	6842	ab
9	UREA	45	4-5 leaf	110.0	def	101.0	def	14.8	de	14.8	de	6405	b-e
	UREA	45	PD										
10	UREA	75	4-5 leaf	110.8	cd	101.8	cd	15.6	cde	15.6	cde	6501	bcd
	UREA	45	PD										
11	UREA	105	4-5 leaf	111.5	bc	102.5	bc	15.6	cde	15.6	cde	6634	a-d
	UREA	45	PD										
12	UREA	135	4-5 leaf	112.5	ab	103.5	ab	16.6	abc	16.6	abc	6666	abc
	UREA	45	PD										
LSD P=.05				1.02		1.02		1.20		1.20		508.0	
Standard Deviation				0.71		0.71		0.83		0.83		353.1	
CV				0.64		0.69		5.23		5.23		5.54	
Treatment F				15.576		15.576		7.868		7.868		19.041	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Diamond to Nitrogen
Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-05

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 51. Agronomic response of drill-seeded Diamond to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/1/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	99.0	e	90.0	e	32.5	f	42.7	a-d	5260	e
2	UREA	30	4-5 leaf	100.0	e	91.0	e	36.5	e	42.5	cde	5389	e
3	UREA	60	4-5 leaf	103.3	d	94.3	d	39.0	cd	42.9	abc	5479	de
4	UREA	90	4-5 leaf	105.3	bc	96.3	bc	41.0	abc	43.3	ab	6073	abc
5	UREA	120	4-5 leaf	105.8	abc	96.8	abc	41.8	ab	42.7	a-d	6269	ab
6	UREA	150	4-5 leaf	106.0	abc	97.0	abc	42.8	a	41.7	ef	6398	a
7	UREA	180	4-5 leaf	107.3	a	98.3	a	42.5	a	42.0	de	6378	a
8	UREA	210	4-5 leaf	106.8	ab	97.8	ab	43.0	a	41.1	f	6304	ab
9	UREA	45	4-5 leaf	103.0	d	94.0	d	38.3	de	42.9	abc	5464	de
	UREA	45	PD										
10	UREA	75	4-5 leaf	104.5	cd	95.5	cd	39.5	bcd	43.5	a	5845	cd
	UREA	45	PD										
11	UREA	105	4-5 leaf	105.3	bc	96.3	bc	39.3	cd	42.6	bcd	5953	bc
	UREA	45	PD										
12	UREA	135	4-5 leaf	106.0	abc	97.0	abc	41.3	abc	42.8	abc	6250	ab
	UREA	45	PD										
LSD P=.05				1.72		1.72		2.40		0.80		400.3	
Standard Deviation				1.20		1.20		1.67		0.56		278.3	
CV				1.15		1.26		4.2		1.31		4.7	
Treatment F				18.708		18.708		13.195		5.714		9.238	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1111 to Nitrogen Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-06

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 52. Agronomic response of drill-seeded CLX6-1111 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/1/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	104.0	f	95.0	f	28.3	g	13.8	g	5223	f
2	UREA	30	4-5 leaf	104.3	ef	95.3	ef	30.5	fg	13.8	g	6485	e
3	UREA	60	4-5 leaf	105.0	de	96.0	de	32.5	def	14.1	fg	6879	de
4	UREA	90	4-5 leaf	106.5	c	97.5	c	33.3	cde	15.2	cd	7326	a-d
5	UREA	120	4-5 leaf	107.3	abc	98.3	abc	33.5	cde	15.4	cd	7529	abc
6	UREA	150	4-5 leaf	107.5	ab	98.5	ab	35.3	bc	15.7	bc	7840	a
7	UREA	180	4-5 leaf	108.0	a	99.0	a	36.3	ab	16.1	ab	7782	ab
8	UREA	210	4-5 leaf	108.0	a	99.0	a	38.0	a	16.3	a	7247	bcd
9	UREA	45	4-5 leaf	105.3	d	96.3	d	32.0	ef	14.1	fg	7107	cd
	UREA	45	PD										
10	UREA	75	4-5 leaf	105.5	d	96.5	d	33.3	cde	14.5	ef	7375	a-d
	UREA	45	PD										
11	UREA	105	4-5 leaf	106.5	c	97.5	c	34.5	bcd	14.9	de	7556	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	107.0	bc	98.0	bc	34.8	bcd	15.5	c	7613	abc
	UREA	45	PD										
LSD P=.05				0.87		0.87		2.33		0.53		543.8	
Standard Deviation				0.60		0.60		1.62		0.37		378.0	
CV				0.57		0.62		4.84		2.47		5.28	
Treatment F				21.520		21.520		10.140		22.306		14.552	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1133 to Nitrogen Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-07

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 53. Agronomic response of drill-seeded CLX6-1133 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/1/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	103.0	g	94.0	g	33.3	d	13.9	e	5159	d
2	UREA	30	4-5 leaf	104.5	f	95.5	f	36.0	cd	13.9	e	6342	c
3	UREA	60	4-5 leaf	106.3	de	97.3	de	38.8	abc	14.6	de	6783	abc
4	UREA	90	4-5 leaf	109.0	ab	100.0	ab	39.5	ab	17.0	abc	6889	abc
5	UREA	120	4-5 leaf	109.0	ab	100.0	ab	40.0	ab	17.1	abc	6911	abc
6	UREA	150	4-5 leaf	109.3	ab	100.3	ab	39.8	ab	18.2	ab	7390	abc
7	UREA	180	4-5 leaf	109.8	a	100.8	a	40.8	ab	18.3	ab	7600	ab
8	UREA	210	4-5 leaf	109.3	ab	100.3	ab	41.5	a	19.2	a	7753	a
9	UREA	45	4-5 leaf	105.8	ef	96.8	ef	38.3	bc	15.2	cde	7428	abc
	UREA	45	PD										
10	UREA	75	4-5 leaf	107.3	cd	98.3	cd	38.8	abc	16.3	bcd	7418	abc
	UREA	45	PD										
11	UREA	105	4-5 leaf	108.0	bc	99.0	bc	39.5	ab	17.9	ab	6582	bc
	UREA	45	PD										
12	UREA	135	4-5 leaf	108.3	bc	99.3	bc	41.0	ab	18.3	ab	6373	c
	UREA	45	PD										
LSD P=.05				1.36		1.36		3.22		2.34		1102.4	
Standard Deviation				0.95		0.95		2.24		1.63		766.3	
CV				0.88		0.96		5.75		9.78		11.13	
Treatment F				20.483		20.483		4.213		5.117		3.554	
Treatment Prob(F)				0.0001		0.0001		0.0006		0.0001		0.0023	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CLX6-1030 to Nitrogen Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-08

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 54. Agronomic response of drill-seeded CLX6-1030 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/1/2018		8/8/2018		8/8/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	107.0	g	98.0	g	34.5	d	17.1	g	4180	d
2	UREA	30	4-5 leaf	109.0	f	100.0	f	36.8	d	17.2	g	4914	cd
3	UREA	60	4-5 leaf	110.0	ef	101.0	ef	40.0	c	17.9	fg	5953	abc
4	UREA	90	4-5 leaf	111.3	cd	102.3	cd	43.0	ab	19.4	cde	6228	ab
5	UREA	120	4-5 leaf	111.3	cd	102.3	cd	43.5	ab	19.7	bcd	5933	abc
6	UREA	150	4-5 leaf	112.3	abc	103.3	abc	44.8	a	20.4	abc	6093	abc
7	UREA	180	4-5 leaf	112.8	ab	103.8	ab	45.0	a	20.7	ab	6448	ab
8	UREA	210	4-5 leaf	113.0	a	104.0	a	44.5	a	21.5	a	5708	abc
9	UREA	45	4-5 leaf	109.5	f	100.5	f	40.5	c	17.5	fg	5726	abc
	UREA	45	PD										
10	UREA	75	4-5 leaf	110.8	de	101.8	de	41.8	bc	18.4	ef	5673	bc
	UREA	45	PD										
11	UREA	105	4-5 leaf	111.3	cd	102.3	cd	43.5	ab	19.0	de	6115	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	111.8	bcd	102.8	bcd	44.3	a	20.0	bcd	6875	a
	UREA	45	PD										
LSD P=.05				1.17		1.17		2.38		1.12		1183.7	
Standard Deviation				0.81		0.81		1.65		0.78		822.8	
CV				0.73		0.8		3.95		4.1		14.14	
Treatment F				17.853		17.853		16.362		13.722		2.910	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0086	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded XP760 to Nitrogen
Fertilizer Rate and Time of Application – Vermilion Parish

Experiment number ..... : 18-VP-09

Site and design ..... :
- **Location/Cooperator** ..... : Vermilion Parish/Kent Lounsberry
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.66 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Kaplan silt loam
- **% organic matter** ..... : 1.11
- **pH** ..... : 5.17
- **Extractable nutrients** ppm ..... : Ca-661; Cu-1.1; Mg-154; P-10; K-75; Na-49; S-11.1; Zn-2.6

Crop/Variety ..... : Rice / XP760
- **Planting method/date** ..... : Drill seeded / March 13
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 22
- **Harvest date** ..... : Aug. 6
- **Ratoon harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn & 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellant) – 18.3 oz

Fertilization ..... : 250 lb/A 0-18-36, March 22

Water management ..... :
- **Flush** ..... : March 23 and May 5
- **Flood** ..... : May 10
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 1 qt/A Glyphosate + 1 pt/A 2,4-D + 1 pt/A Command + 2 oz/A Leadoff, Nov. 15, 2017 (Fall Burndown)
  6 oz/A Command, March 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 55. Agronomic response of drill-seeded XP760 to N fertilizer rate and time of application. Vermilion Parish.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/1/2018		8/6/2018		8/6/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	104.0	d	95.0	d	38.8	d	15.5	d	7307	c
2	UREA	60	4-5 leaf	108.5	bc	99.5	bc	45.8	c	17.8	bc	10719	ab
3	UREA	90	4-5 leaf	109.3	b	100.3	b	50.0	ab	18.3	bc	10438	b
4	UREA	120	4-5 leaf	110.3	ab	101.3	ab	46.5	c	18.9	b	10357	b
5	UREA	150	4-5 leaf	110.0	ab	101.0	ab	51.3	a	18.9	b	11671	a
6	UREA	180	4-5 leaf	111.8	a	102.8	a	49.8	ab	20.2	a	11030	ab
7	UREA	75	4-5 leaf	107.0	c	98.0	c	47.0	bc	17.5	c	10929	ab
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	109.0	b	100.0	b	48.3	abc	17.8	bc	10602	ab
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	108.8	bc	99.8	bc	47.3	bc	18.6	bc	10800	ab
	UREA	45	50% HD										
LSD P=.05				1.85		1.85		3.25		1.32		1091.8	
Standard Deviation				1.27		1.27		2.22		0.91		748.1	
CV				1.17		1.27		4.72		4.99		7.17	
Treatment F				12.078		12.078		10.701		8.008		10.859	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CL153 to Nitrogen Fertilizer
Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-23

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 56. Agronomic response of drill-seeded CL153 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		10/31/2018		10/31/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	97.8	f	86.8	f	30.5	e	0.0	b	0.0	b	3574	f	1993	cd	5568	g
2	UREA	30	4-5 leaf	99.0	e	88.0	e	32.0	e	0.0	b	0.0	b	5109	e	1966	d	7074	f
3	UREA	60	4-5 leaf	101.0	d	90.0	d	35.0	d	0.0	b	0.0	b	7021	d	2021	cd	9041	e
4	UREA	90	4-5 leaf	102.0	c	91.0	c	37.0	bc	0.0	b	0.0	b	6966	d	2265	ab	9231	de
5	UREA	120	4-5 leaf	102.0	c	91.0	c	38.3	ab	0.0	b	0.0	b	7567	bcd	2143	bc	9710	cde
6	UREA	150	4-5 leaf	103.0	ab	92.0	ab	38.0	ab	0.0	b	0.0	b	7645	bcd	2254	ab	9898	b-e
7	UREA	180	4-5 leaf	103.5	ab	92.5	ab	38.5	ab	5.0	b	1.0	a	8291	abc	2304	ab	10595	abc
8	UREA	210	4-5 leaf	103.8	a	92.8	a	39.0	a	17.5	a	1.5	a	8782	a	2344	a	11126	a
9	UREA	96	4-5 leaf	102.8	bc	91.8	bc	37.0	bc	0.0	b	0.0	b	6907	d	2203	ab	9110	de
	SBNR-UREA	0	PD																
10	UREA	75	4-5 leaf	102.0	c	91.0	c	36.0	cd	0.0	b	0.0	b	7436	cd	2028	cd	9464	de
	UREA	45	PD																
11	UREA	105	4-5 leaf	103.0	ab	92.0	ab	37.8	abc	0.0	b	0.0	b	7749	bcd	2354	a	10103	a-d
	UREA	45	PD																
12	UREA	135	4-5 leaf	103.3	ab	92.3	ab	38.3	ab	0.0	b	0.0	b	8549	ab	2320	a	10869	ab
	UREA	45	PD																
LSD P=.05				0.95		0.95		1.75		5.79		0.65		1015.4		162.7		1026.4	
Standard Deviation				0.66		0.66		1.22		4.03		0.45		705.8		113.1		713.4	
CV				0.65		0.72		3.34		214.83		217.09		9.9		5.18		7.66	
Treatment F				31.326		31.326		19.434		6.479		4.852		17.402		6.711		19.762	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0002		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded CL172 to Nitrogen Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-27

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / CL172
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 57. Agronomic response of drill-seeded CL172 to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		8/2/2018		10/31/2018		10/31/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
1	UREA	0	4-5 leaf	97.0	h	86.0	h	29.3	d	4785	e	1681	g	6467	f
2	UREA	30	4-5 leaf	98.0	g	87.0	g	32.5	c	5485	e	1808	fg	7293	e
3	UREA	60	4-5 leaf	98.5	fg	87.5	fg	33.0	c	7259	d	2016	ef	9276	d
4	UREA	90	4-5 leaf	99.8	cd	88.8	cd	35.5	a	7290	cd	2175	de	9465	d
5	UREA	120	4-5 leaf	100.3	abc	89.3	abc	35.5	a	7640	bcd	2334	cd	9974	bcd
6	UREA	150	4-5 leaf	100.8	a	89.8	a	36.8	a	8070	abc	2387	bcd	10456	b
7	UREA	180	4-5 leaf	100.8	a	89.8	a	36.3	a	7689	bcd	2611	ab	10300	bc
8	UREA	210	4-5 leaf	100.8	a	89.8	a	36.5	a	8660	a	2770	a	11430	a
9	UREA	96	4-5 leaf	99.3	de	88.3	de	35.3	ab	7153	d	2346	cd	9498	cd
	SBNR-UREA	0	PD												
10	UREA	75	4-5 leaf	99.0	ef	88.0	ef	33.3	bc	7152	d	2181	de	9334	d
	UREA	45	PD												
11	UREA	105	4-5 leaf	100.0	bc	89.0	bc	35.8	a	7519	bcd	2518	abc	10036	bcd
	UREA	45	PD												
12	UREA	135	4-5 leaf	100.5	ab	89.5	ab	35.3	ab	8143	ab	2340	cd	10484	b
	UREA	45	PD												
LSD P=.05				0.62		0.62		2.10		801.0		264.9		805.3	
Standard Deviation				0.43		0.43		1.46		556.8		184.1		559.7	
CV				0.43		0.48		4.22		7.69		8.13		5.89	
Treatment F				32.260		32.260		8.915		15.345		11.763		24.266	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Agronomic Response of Drill-Seeded Titan to Nitrogen Fertilizer
Rate and Time of Application – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-46

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / Titan
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 58. Agronomic response of drill-seeded Titan to N fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		7/26/2018		7/26/2018		7/30/2018		10/31/2018		10/31/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	UREA	0	4-5 leaf	97	a	86	a	31.0	f	0.0	b	0.0	c	3675	c	2657	ab	6332	e
2	UREA	30	4-5 leaf	97	a	86	a	32.3	ef	0.0	b	0.0	c	5684	bc	2443	bcd	8127	de
3	UREA	60	4-5 leaf	97	a	86	a	34.3	de	22.5	ab	1.0	abc	5805	bc	2604	abc	8409	cde
4	UREA	90	4-5 leaf	97	a	86	a	35.3	cd	0.0	b	0.0	c	9406	a	2882	ab	12288	a
5	UREA	120	4-5 leaf	97	a	86	a	36.8	a-d	0.0	b	0.0	c	9800	a	2772	ab	12572	a
6	UREA	150	4-5 leaf	97	a	86	a	37.5	abc	2.5	b	0.5	bc	9846	a	2021	cde	11867	ab
7	UREA	180	4-5 leaf	97	a	86	a	39.0	a	42.5	a	2.0	ab	7231	ab	1739	e	8970	b-e
8	UREA	210	4-5 leaf	97	a	86	a	37.8	abc	45.0	a	2.5	a	9050	a	1850	de	10900	a-d
9	UREA	96	4-5 leaf	97	a	86	a	36.0	bcd	0.0	b	0.0	c	7821	ab	3061	a	10882	a-d
	SBNR-UREA	0	PD																
10	UREA	75	4-5 leaf	97	a	86	a	35.0	cde	0.0	b	0.0	c	8407	ab	2664	ab	11071	a-d
	UREA	45	PD																
11	UREA	105	4-5 leaf	97	a	86	a	37.0	a-d	20.0	ab	1.0	abc	8859	a	2779	ab	11638	abc
	UREA	45	PD																
12	UREA	135	4-5 leaf	97	a	86	a	38.8	ab	7.5	b	0.8	bc	9570	a	2360	bcd	11930	ab
	UREA	45	PD																
LSD P=.05				N/A		N/A		2.77		32.99		1.64		2987.3		613.2		3298.7	
Standard Deviation				0.00		0.00		1.92		22.93		1.14		2076.5		426.3		2292.9	
CV				0.0		0.0		5.36		196.54		176.11		26.19		17.15		22.01	
Treatment F				0.000		0.000		6.580		2.190		2.265		3.589		3.857		2.972	
Treatment Prob(F)				1.0000		1.0000		0.0001		0.0405		0.0344		0.0021		0.0013		0.0076	

N/A = Could not calculate LSD because of error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for PVL108 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-14

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 59. Evaluation of seeding rate and plant population in a stale seedbed for PVL108. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle													
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		8/2/2018		10/31/2018		10/31/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Lodge				Hog Damaged		Yield		Yield		Total Yield	
Rating Unit		number		days		days		in		% plot		rate		% plot		lb/A		lb/A		lb/A	
Sample Size, Unit		1 sq ft																			
Crop Stage Scale		2-3 leaf																			
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name																				
1	5 seeds/ft^2 (11.6 lb/A)	3.9	g	102.0	a	91.0	a	44.5	a	0.0	d	0.0	d	0.0	a	6989	a	2359	d	9348	a
2	7.5 seeds/ft^2 (17.4 lb/A)	5.9	fg	101.5	b	90.5	b	43.0	a	17.5	cd	1.8	cd	0.0	a	7940	a	2529	bcd	10470	a
3	10 seeds/ft^2 (22.3 lb/A)	8.7	ef	101.0	c	90.0	c	42.8	a	32.5	bcd	3.0	bc	0.0	a	7524	a	2492	cd	10016	a
4	15 seeds/ft^2 (34.9 lb/A)	11.4	de	101.0	c	90.0	c	43.3	a	50.0	abc	3.8	ab	1.3	a	8401	a	2700	a-d	11100	a
5	20 seeds/ft^2 (46.6 lb/A)	14.4	d	101.0	c	90.0	c	44.3	a	57.5	ab	3.8	ab	0.0	a	8028	a	2975	a	11003	a
6	25 seeds/ft^2 (58.2 lb/A)	19.3	c	101.0	c	90.0	c	43.0	a	72.5	a	4.8	ab	0.0	a	7883	a	2822	abc	10705	a
7	30 seeds/ft^2 (69.9 lb/A)	22.2	bc	101.3	bc	90.3	bc	44.0	a	77.5	a	5.0	a	2.5	a	8016	a	2893	a	10909	a
8	35 seeds/ft^2 (81.5 lb/A)	24.8	ab	101.3	bc	90.3	bc	43.0	a	70.0	a	5.0	a	0.0	a	7945	a	2864	ab	10810	a
9	40 seeds/ft^2 (93.1 lb/A)	27.9	a	101.3	bc	90.3	bc	42.3	a	72.5	a	4.8	ab	0.0	a	7975	a	2852	ab	10827	a
LSD P=.05		4.61		0.49		0.49		1.69		33.68		1.89		2.58		1434.1		341.7		1380.4	
Standard Deviation		3.16		0.34		0.34		1.15		23.08		1.29		1.77		982.6		234.1		945.9	
CV		20.56		0.33		0.37		2.66		46.16		36.65		424.26		12.51		8.61		8.94	
Treatment F		29.596		3.857		3.857		1.688		5.714		6.972		1.000		0.644		3.308		1.417	
Treatment Prob(F)		0.0001		0.0048		0.0048		0.1531		0.0004		0.0001		0.4613		0.7336		0.0109		0.2401	

Continued.

Table 59. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components											
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)	
Rating Unit		grams		number		grams		grams		number		head	total
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m			
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows			
Crop Stage Majority		Main		Main		Main		Main		Main		Main	Main
Trt No.	Treatment Name												
1	5 seeds/ft^2 (11.6 lb/A)	835.5	a	181	f	365.2	a	26.84	a	1255	a	65.19 a	73.67 a
2	7.5 seeds/ft^2 (17.4 lb/A)	815.5	a	181	ef	364.4	a	30.00	a	1407	a	64.74 a	73.47 a
3	10 seeds/ft^2 (22.3 lb/A)	892.4	a	207	cde	377.5	a	27.48	a	1289	a	65.32 a	73.32 a
4	15 seeds/ft^2 (34.9 lb/A)	794.5	a	185	def	356.7	a	26.13	a	1253	a	64.64 a	73.28 a
5	20 seeds/ft^2 (46.6 lb/A)	874.9	a	209	bcd	386.1	a	30.32	a	1403	a	65.07 a	73.45 a
6	25 seeds/ft^2 (58.2 lb/A)	812.9	a	202	c-f	346.1	a	20.63	a	957	a	65.35 a	74.03 a
7	30 seeds/ft^2 (69.9 lb/A)	869.7	a	236	a	352.4	a	22.04	a	1309	a	64.46 a	73.54 a
8	35 seeds/ft^2 (81.5 lb/A)	839.0	a	221	abc	351.0	a	23.59	a	1135	a	64.75 a	73.56 a
9	40 seeds/ft^2 (93.1 lb/A)	856.1	a	234	ab	356.5	a	25.23	a	1211	a	64.87 a	73.35 a
LSD P=.05		94.56		25.9		51.26		9.848		645.3		1.670	0.784
Standard Deviation		64.80		17.8		35.12		6.748		442.1		1.144	0.537
CV		7.68		8.63		9.71		26.15		35.47		1.76	0.73
Treatment F		1.004		5.748		0.551		0.968		0.393		0.304	0.721
Treatment Prob(F)		0.4589		0.0004		0.8066		0.4832		0.9135		0.9570	0.6714

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for PVL01 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-15

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 60. Evaluation of seeding rate and plant population in a stale seedbed for PVL01. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice	Rice	Rice	Rice	Rice	Rice
Description		Rice Density		Plant-HD		Emer-HD	Tip of Panicle				
Rating Date							7/26/2018	8/2/2018	8/2/2018	10/31/2018	10/31/2018
Rating Type		Stand Count		50% HD		50% HD	Height	Hog Damaged	Yield	Yield	Total Yield
Rating Unit		number		days		days	in	% plot	lb/A	lb/A	lb/A
Sample Size, Unit		1 sq ft									
Crop Stage Scale		2-3 leaf									
Crop Stage Majority		Main		Main		Main	Main	Main	Main	Ratoon	MC+RC
Trt No.	Treatment Name										
1	5 seeds/ft^2 (11.6 lb/A)	3.5	f	108.3	a	97.3 a	40.8 a	17.5 a	6358 a	1824 d	8181 a
2	7.5 seeds/ft^2 (17.4 lb/A)	5.9	ef	109.0	a	98.0 a	38.8 a	0.0 a	7193 a	1992 cd	9186 a
3	10 seeds/ft^2 (22.3 lb/A)	6.9	e	108.5	a	97.5 a	39.0 a	0.0 a	6175 a	2013 bc	8189 a
4	15 seeds/ft^2 (34.9 lb/A)	10.3	d	109.0	a	98.0 a	38.0 a	0.0 a	7312 a	2110 abc	9423 a
5	20 seeds/ft^2 (46.6 lb/A)	16.0	c	108.5	a	97.5 a	40.0 a	5.0 a	6331 a	2096 abc	8428 a
6	25 seeds/ft^2 (58.2 lb/A)	16.5	bc	109.0	a	98.0 a	39.8 a	7.5 a	7231 a	2233 a	9463 a
7	30 seeds/ft^2 (69.9 lb/A)	18.4	bc	108.8	a	97.8 a	39.3 a	0.0 a	6390 a	2067 abc	8457 a
8	35 seeds/ft^2 (81.5 lb/A)	19.4	b	108.5	a	97.5 a	38.8 a	0.0 a	5696 a	2245 a	7941 a
9	40 seeds/ft^2 (93.1 lb/A)	24.0	a	108.5	a	97.5 a	37.0 a	0.0 a	7162 a	2185 ab	9346 a
LSD P=.05		3.27		0.96		0.96	2.37	17.50	1739.8	179.8	1796.3
Standard Deviation		2.24		0.66		0.66	1.63	11.99	1192.2	123.2	1230.9
CV		16.71		0.61		0.67	4.17	359.69	17.93	5.91	14.09
Treatment F		39.279		0.722		0.722	1.855	1.000	0.958	4.622	0.986
Treatment Prob(F)		0.0001		0.6707		0.6707	0.1156	0.4613	0.4906	0.0016	0.4711

Continued.

Table 60. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description					Yield Components						
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed	
Rating Unit		grams		number		grams		grams		number	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m	
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows	
Crop Stage Majority		Main		Main		Main		Main		Main	
Trt No.	Treatment Name										
1	5 seeds/ft^2 (11.6 lb/A)	623.6	a	116	d	259.0	a	31.48	a	1287	a
2	7.5 seeds/ft^2 (17.4 lb/A)	700.9	a	146	c	305.3	a	26.98	a	1127	a
3	10 seeds/ft^2 (22.3 lb/A)	712.6	a	152	bc	302.3	a	26.66	a	1102	a
4	15 seeds/ft^2 (34.9 lb/A)	763.2	a	153	bc	332.7	a	29.84	a	1227	a
5	20 seeds/ft^2 (46.6 lb/A)	748.2	a	179	ab	319.6	a	24.10	a	973	a
6	25 seeds/ft^2 (58.2 lb/A)	677.5	a	174	ab	282.9	a	20.65	a	856	a
7	30 seeds/ft^2 (69.9 lb/A)	764.2	a	182	a	322.9	a	26.32	a	1103	a
8	35 seeds/ft^2 (81.5 lb/A)	693.2	a	178	ab	290.4	a	33.73	a	1621	a
9	40 seeds/ft^2 (93.1 lb/A)	679.8	a	179	ab	270.7	a	23.19	a	942	a
LSD P=.05		122.33		27.5		58.36		11.363		493.6	
Standard Deviation		83.82		18.9		39.99		7.786		338.2	
CV		11.86		11.65		13.4		28.84		29.74	
Treatment F		1.207		5.583		1.535		1.132		1.800	
Treatment Prob(F)		0.3365		0.0005		0.1973		0.3784		0.1267	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for Titan – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-16

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 61. Evaluation of seeding rate and plant population in a stale seedbed for Titan. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle									
Rating Date								7/26/2018		8/2/2018		8/2/2018		8/2/2018		10/31/2018		10/31/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit		number		days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Sample Size, Unit		1sq ft																	
Crop Stage Scale		2-3 leaf																	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name																		
1	5 seeds/ft^2 (11.6 lb/A)	3.9	d	98.0	a	87.0	a	37.0	a	0.0	a	0.0	a	8026	a	2197	a	10223	a
2	7.5 seeds/ft^2 (17.4 lb/A)	6.5	d	98.0	a	87.0	a	37.8	a	17.5	a	1.5	a	8151	a	2326	a	10477	a
3	10 seeds/ft^2 (22.3 lb/A)	7.6	d	98.0	a	87.0	a	38.5	a	27.5	a	2.0	a	8497	a	2303	a	10801	a
4	15 seeds/ft^2 (34.9 lb/A)	12.3	c	98.0	a	87.0	a	38.8	a	27.5	a	1.5	a	7886	a	2358	a	10244	a
5	20 seeds/ft^2 (46.6 lb/A)	12.5	c	98.0	a	87.0	a	39.0	a	32.5	a	1.8	a	7905	a	2293	a	10198	a
6	25 seeds/ft^2 (58.2 lb/A)	17.1	b	98.0	a	87.0	a	39.8	a	45.0	a	3.0	a	7626	a	2161	a	9787	a
7	30 seeds/ft^2 (69.9 lb/A)	19.4	ab	98.0	a	87.0	a	38.0	a	47.5	a	2.5	a	7331	a	2181	a	9512	a
8	35 seeds/ft^2 (81.5 lb/A)	23.2	a	98.0	a	87.0	a	38.8	a	50.0	a	2.3	a	8985	a	2677	a	11662	a
9	40 seeds/ft^2 (93.1 lb/A)	23.0	a	98.0	a	87.0	a	38.3	a	55.0	a	2.8	a	8815	a	2732	a	11547	a
LSD P=.05		3.85		.		.		2.73		35.71		1.73		2223.3		514.5		2032.9	
Standard Deviation		2.64		0.00		0.00		1.87		24.47		1.18		1523.5		352.5		1393.0	
CV		18.91		0.0		0.0		4.87		72.79		61.74		18.73		14.95		13.27	
Treatment F		29.295		0.000		0.000		0.714		2.100		2.276		0.506		1.390		1.096	
Treatment Prob(F)		0.0001		1.0000		1.0000		0.6769		0.0765		0.0570		0.8398		0.2507		0.3995	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLJ01 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-17

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 62. Evaluation of seeding rate and plant population in a stale seedbed for CLJ01. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/3/2018		8/3/2018		8/3/2018		8/3/2018		10/31/2018		10/31/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Lodge				Hog Damaged		Yield		Yield		Total Yield	
Rating Unit		number		days		days		in		% plot		rate		% plot		lb/A		lb/A		lb/A	
Sample Size, Unit		1 sq ft																			
Crop Stage Scale		2-3 leaf																			
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name																				
1	5 seeds/ft^2 (11.6 lb/A)	3.5	f	108.0	a	95.0	a	40.0	a	0.0	a	0.0	a	0.0	a	8915	a	2296	c	11210	a
2	7.5 seeds/ft^2 (17.4 lb/A)	6.7	e	107.5	a	94.5	a	39.0	a	0.0	a	0.0	a	0.0	a	9006	a	2640	b	11647	a
3	10 seeds/ft^2 (22.3 lb/A)	7.4	e	107.3	a	94.3	a	39.8	a	0.0	a	0.0	a	0.0	a	9638	a	2804	ab	12442	a
4	15 seeds/ft^2 (34.9 lb/A)	11.3	d	107.3	a	94.3	a	38.5	a	0.0	a	0.0	a	2.5	a	9082	a	2800	ab	11882	a
5	20 seeds/ft^2 (46.6 lb/A)	15.5	c	106.5	a	93.5	a	39.0	a	0.0	a	0.0	a	22.5	a	7991	a	2774	ab	10766	a
6	25 seeds/ft^2 (58.2 lb/A)	19.4	b	107.5	a	94.5	a	38.8	a	0.0	a	0.0	a	10.0	a	9072	a	2932	a	12004	a
7	30 seeds/ft^2 (69.9 lb/A)	22.0	b	107.0	a	94.0	a	38.5	a	10.0	a	0.8	a	0.0	a	9610	a	2804	ab	12414	a
8	35 seeds/ft^2 (81.5 lb/A)	25.2	a	107.0	a	94.0	a	39.5	a	7.5	a	1.0	a	0.0	a	9480	a	2911	a	12390	a
9	40 seeds/ft^2 (93.1 lb/A)	27.6	a	107.0	a	94.0	a	38.8	a	15.0	a	1.0	a	0.0	a	9444	a	2984	a	12427	a
LSD P=.05		2.97		1.00		1.00		1.90		14.36		1.08		22.52		1526.2		242.1		1597.6	
Standard Deviation		2.03		0.68		0.68		1.30		9.84		0.74		15.43		1045.8		165.9		1094.7	
CV		13.22		0.64		0.72		3.32		272.4		241.89		396.86		11.44		5.99		9.19	
Treatment F		72.961		1.537		1.537		0.704		1.364		1.576		1.000		0.947		6.117		1.215	
Treatment Prob(F)		0.0001		0.1967		0.1967		0.6854		0.2618		0.1843		0.4613		0.4979		0.0002		0.3321	

Continued.

Table 62. Continued.

Crop Name	Rice	Rice	Rice	Rice	Rice
Description			Yield Components		
Rating Type	WP dry wt.	Panicle #	Grain wt.	10 P gr wt.	10 P seed
Rating Unit	grams	number	grams	grams	number
Sample Size, Unit	1 m	1 m	1 m	1 m	1 m
Collection Basis, Unit	2 rows	2 rows	2 rows	2 rows	2 rows
Crop Stage Majority	Main	Main	Main	Main	Main
Trt No. Treatment Name					
1 5 seeds/ft^2 (11.6 lb/A)	748.3 a	176 cd	344.3 a	21.02 a	917 a
2 7.5 seeds/ft^2 (17.4 lb/A)	676.3 a	165 d	285.6 a	26.15 a	1134 a
3 10 seeds/ft^2 (22.3 lb/A)	804.4 a	202 bc	365.1 a	21.28 a	935 a
4 15 seeds/ft^2 (34.9 lb/A)	774.7 a	205 bc	350.2 a	17.73 a	787 a
5 20 seeds/ft^2 (46.6 lb/A)	738.5 a	204 bc	309.1 a	27.17 a	1190 a
6 25 seeds/ft^2 (58.2 lb/A)	736.2 a	216 ab	317.5 a	18.44 a	813 a
7 30 seeds/ft^2 (69.9 lb/A)	758.5 a	221 ab	332.0 a	22.78 a	995 a
8 35 seeds/ft^2 (81.5 lb/A)	715.9 a	217 ab	301.3 a	24.54 a	1060 a
9 40 seeds/ft^2 (93.1 lb/A)	779.3 a	241 a	336.6 a	25.64 a	1116 a
LSD P=.05	106.25	32.7	49.05	7.220	309.3
Standard Deviation	72.80	22.4	33.61	4.947	212.0
CV	9.73	10.91	10.28	21.75	21.32
Treatment F	1.074	4.210	2.297	1.871	1.806
Treatment Prob(F)	0.4133	0.0029	0.0551	0.1124	0.1255

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1111 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-42

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 63. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1111. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice	Rice		Rice		Rice		Rice
Description		Rice Density		Plant-HD		Emer-HD	Tip of Panicle						
Rating Date							7/26/2018		8/3/2018		8/3/2018		10/31/2018		10/31/2018
Rating Type		Stand Count		50% HD		50% HD	Height		Hog Damage		Yield		Yield		Total Yield
Rating Unit		number		days		days	in		% plot		lb/A		lb/A		lb/A
Sample Size, Unit		1 sq ft													
Crop Stage Scale		2-3 leaf													
Crop Stage Majority		Main		Main		Main	Main		Main		Main		Ratoon		MC+RC
Trt No.	Treatment Name														
1	5 seeds/ft^2 (11.6 lb/A)	3.7	e	104.0	a	93.0	a	35.3	a	0.0	a	9536	a	1290	c	10827	a
2	7.5 seeds/ft^2 (17.4 lb/A)	6.3	de	104.8	a	93.8	a	36.8	a	10.0	a	8978	a	1922	ab	10899	a
3	10 seeds/ft^2 (22.3 lb/A)	7.2	d	103.8	a	92.8	a	35.5	a	1.3	a	9424	a	2030	ab	11454	a
4	15 seeds/ft^2 (34.9 lb/A)	13.1	c	103.5	a	92.5	a	37.0	a	12.5	a	9223	a	2168	ab	11391	a
5	20 seeds/ft^2 (46.6 lb/A)	14.3	c	103.5	a	92.5	a	36.3	a	12.5	a	9394	a	1774	b	11168	a
6	25 seeds/ft^2 (58.2 lb/A)	15.5	bc	103.3	a	92.3	a	36.0	a	12.5	a	9868	a	2080	ab	11947	a
7	30 seeds/ft^2 (69.9 lb/A)	17.4	b	103.3	a	92.3	a	35.3	a	15.0	a	9607	a	2129	ab	11737	a
8	35 seeds/ft^2 (81.5 lb/A)	20.7	a	103.3	a	92.3	a	35.8	a	7.5	a	9936	a	2247	a	12183	a
9	40 seeds/ft^2 (93.1 lb/A)	21.8	a	103.3	a	92.3	a	36.0	a	17.5	a	8963	a	2269	a	11232	a
LSD P=.05		3.05		1.03		1.03	1.38		26.76		1742.4		401.9		1819.2	
Standard Deviation		2.09		0.71		0.71	0.95		18.34		1193.9		275.4		1246.6	
CV		15.69		0.68		0.76	2.63		185.95		12.65		13.84		10.91	
Treatment F		37.466		2.023		2.023	1.701		0.420		0.336		4.915		0.542	
Treatment Prob(F)		0.0001		0.0870		0.0870	0.1496		0.8973		0.9432		0.0011		0.8132	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1133 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-43

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 64. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1133. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle													
Rating Date								7/26/2018		8/3/2018		8/3/2018		8/3/2018		8/3/2018		10/31/2018		10/31/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Lodge				Hog Damaged		Yield		Yield		Total Yield	
Rating Unit		number		days		days		in		% plot		rate		% plot		lb/A		lb/A		lb/A	
Sample Size, Unit		1 sq ft																			
Crop Stage Scale		2-3 leaf																			
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name																				
1	5 seeds/ft^2 (11.6 lb/A)	4.5	d	104.8	a	93.8	a	40.3	a	15.0	a	1.5	a	25.0	a	7630	a	597	cd	8228	a
2	7.5 seeds/ft^2 (17.4 lb/A)	5.3	d	104.3	a	93.3	a	41.3	a	35.0	a	2.8	a	26.3	a	7667	a	553	d	8219	a
3	10 seeds/ft^2 (22.3 lb/A)	7.1	d	103.5	a	92.5	a	40.5	a	72.5	a	3.3	a	12.5	a	8911	a	544	d	9455	a
4	15 seeds/ft^2 (34.9 lb/A)	12.5	c	103.5	a	92.5	a	38.8	a	72.5	a	4.0	a	0.0	a	9075	a	649	cd	9724	a
5	20 seeds/ft^2 (46.6 lb/A)	13.3	c	103.8	a	92.8	a	41.3	a	87.5	a	4.3	a	12.5	a	8633	a	771	cd	9404	a
6	25 seeds/ft^2 (58.2 lb/A)	16.8	b	103.8	a	92.8	a	40.3	a	40.0	a	1.8	a	50.0	a	6920	a	916	bc	7836	a
7	30 seeds/ft^2 (69.9 lb/A)	17.1	b	104.0	a	93.0	a	39.8	a	67.5	a	3.0	a	37.5	a	7652	a	1141	ab	8793	a
8	35 seeds/ft^2 (81.5 lb/A)	20.1	a	104.0	a	93.0	a	38.8	a	65.0	a	3.3	a	26.3	a	8126	a	1362	a	9488	a
9	40 seeds/ft^2 (93.1 lb/A)	22.6	a	103.8	a	92.8	a	40.5	a	55.0	a	3.5	a	25.0	a	7590	a	1393	a	8983	a
LSD P=.05		2.79		0.95		0.95		2.43		45.34		2.25		41.06		2163.3		347.3		2096.8	
Standard Deviation		1.91		0.65		0.65		1.66		31.07		1.54		28.13		1482.3		238.0		1436.8	
CV		14.45		0.62		0.7		4.15		54.83		50.9		117.77		18.48		27.02		16.14	
Treatment F		46.691		1.484		1.484		1.221		2.137		1.433		1.081		0.933		8.214		0.885	
Treatment Prob(F)		0.0001		0.2150		0.2150		0.3293		0.0720		0.2338		0.4090		0.5081		0.0001		0.5434	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1030 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-44

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 5, 7.5, 10, 15, 20, 25, 30, 35, and 40 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 2
- **Ratoon Harvest date** ..... : Oct. 31

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 1
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 65. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1030. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle											
Rating Date								7/26/2018		8/3/2018		8/3/2018		8/3/2018		10/31/2018		10/31/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield	
Rating Unit		number		days		days		in		% plot		rate		lb/A		lb/A		lb/A	
Sample Size, Unit		1 sq ft																	
Crop Stage Scale		2-3 leaf																	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name																		
1	5 seeds/ft^2 (11.6 lb/A)	4.5	e	106.3	a	95.3	a	42.0	a	22.5	c	1.5	b	9766	b	1096	cd	10862	c
2	7.5 seeds/ft^2 (17.4 lb/A)	5.5	e	106.0	a	95.0	a	42.8	a	47.5	bc	3.5	a	10070	b	1310	abc	11380	bc
3	10 seeds/ft^2 (22.3 lb/A)	8.4	d	106.0	a	95.0	a	44.3	a	72.5	ab	4.0	a	10451	ab	860	d	11311	bc
4	15 seeds/ft^2 (34.9 lb/A)	10.9	d	106.0	a	95.0	a	43.0	a	65.0	ab	3.8	a	10820	a	1551	ab	12371	a
5	20 seeds/ft^2 (46.6 lb/A)	14.2	c	106.0	a	95.0	a	43.0	a	92.5	a	4.0	a	10927	a	1183	bcd	12109	ab
6	25 seeds/ft^2 (58.2 lb/A)	15.0	c	106.0	a	95.0	a	43.3	a	82.5	a	3.8	a	10761	a	1633	a	12394	a
7	30 seeds/ft^2 (69.9 lb/A)	18.9	b	106.0	a	95.0	a	42.8	a	85.0	a	4.0	a	10863	a	1485	ab	12348	a
8	35 seeds/ft^2 (81.5 lb/A)	20.9	b	106.0	a	95.0	a	42.0	a	92.5	a	4.0	a	10444	ab	1627	a	12071	ab
9	40 seeds/ft^2 (93.1 lb/A)	24.5	a	106.0	a	95.0	a	43.0	a	92.5	a	4.0	a	10433	ab	1638	a	12072	ab
LSD P=.05		2.57		0.24		0.24		1.84		27.99		0.96		688.0		388.4		861.6	
Standard Deviation		1.76		0.17		0.17		1.26		19.18		0.65		471.4		266.1		590.4	
CV		12.91		0.16		0.18		2.95		26.45		18.12		4.49		19.34		4.97	
Treatment F		62.214		1.000		1.000		1.139		6.304		6.146		2.741		4.423		3.529	
Treatment Prob(F)		0.0001		0.4613		0.4613		0.3740		0.0002		0.0002		0.0266		0.0021		0.0078	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for PVL108 – Tensas Parish

Experiment number ..... : 18-SJ-14

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 66. Evaluation of seeding rate and plant population in a stale seedbed for PVL108. Tensas Parish.

Crop Name		Rice	Rice	Rice	Rice	Rice	Rice
Description		Rice Density	Plant-HD	Emer-HD	Tip of Panicle		
Rating Date					8/22/2018	8/23/2018	8/23/2018
Rating Type		Stand Count	50% HD	50% HD	Height	Moisture	Yield
Rating Unit		number	days	days	in	%	lb/A
Sample Size, Unit		1 sq ft					
Crop Stage Scale		2-3 leaf					
Crop Stage Majority		Main	Main	Main	Main	Main	Main
Trt No.	Treatment Name						
1	5 seeds/ft^2 (11.6 lb/A)	3.9 d	80.5 a	72.5 a	42.3 a	19.2 a	6628 d
2	7.5 seeds/ft^2 (17.4 lb/A)	5.0 d	78.5 a	70.5 a	42.5 a	18.4 ab	7074 cd
3	10 seeds/ft^2 (22.3 lb/A)	5.7 d	79.3 a	71.3 a	43.8 a	18.6 ab	7751 ab
4	15 seeds/ft^2 (34.9 lb/A)	9.2 c	79.3 a	71.3 a	42.3 a	17.7 bc	7497 bc
5	20 seeds/ft^2 (46.6 lb/A)	13.7 b	78.8 a	70.8 a	45.3 a	17.4 bc	8249 a
6	25 seeds/ft^2 (58.2 lb/A)	16.1 b	77.8 a	69.8 a	44.5 a	17.0 c	8031 ab
7	30 seeds/ft^2 (69.9 lb/A)	17.1 b	78.0 a	70.0 a	44.0 a	17.1 c	8053 ab
8	35 seeds/ft^2 (81.5 lb/A)	24.6 a	78.5 a	70.5 a	45.3 a	17.4 bc	8371 a
9	40 seeds/ft^2 (93.1 lb/A)	26.9 a	76.5 a	68.5 a	44.8 a	16.8 c	8232 a
LSD P=.05		3.48	2.68	2.68	2.72	1.24	627.0
Standard Deviation		2.39	1.83	1.83	1.86	0.85	429.6
CV		17.61	2.34	2.6	4.25	4.8	5.53
Treatment F		49.642	1.481	1.481	1.747	3.687	7.629
Treatment Prob(F)		0.0001	0.2158	0.2158	0.1385	0.0061	0.0001

Continued.

Table 66. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components													
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)			
Rating Unit		grams		number		grams		grams		number		head		total	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m					
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows					
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name														
1	5 seed/ft^2 (11.6 lb/A)	396.0	a	79	a	169.5	a	23.32	a	1109	a	64.74	a	73.23	a
2	7.5 seed/ft^2 (17.4 lb/A)	264.1	a	57	a	102.5	a	23.92	a	1144	a	65.65	a	73.02	a
3	10 seed/ft^2 (22.3 lb/A)	421.9	a	86	a	166.6	a	22.19	a	1073	a	65.25	a	73.24	a
4	15 seed/ft^2 (34.9 lb/A)	428.0	a	94	a	158.2	a	18.13	a	855	a	65.24	a	72.89	a
5	20 seed/ft^2 (46.6 lb/A)	358.5	a	78	a	131.4	a	28.24	a	1345	a	64.37	a	73.17	a
6	25 seed/ft^2 (58.2 lb/A)	399.6	a	92	a	167.7	a	19.19	a	903	a	65.37	a	73.23	a
7	30 seed/ft^2 (69.9 lb/A)	376.3	a	87	a	141.7	a	25.23	a	1242	a	65.32	a	72.97	a
8	35 seed/ft^2 (81.5 lb/A)	368.3	a	87	a	138.0	a	24.73	a	1163	a	64.96	a	72.88	a
9	40 seed/ft^2 (93.1 lb/A)	344.8	a	88	a	132.9	a	20.05	a	955	a	65.24	a	72.63	a
LSD P=.05		120.27		21.4		49.56		6.718		337.1		1.363		0.564	
Standard Deviation		82.41		14.6		33.96		4.603		231.0		0.934		0.386	
CV		22.09		17.65		23.36		20.21		21.24		1.43		0.53	
Treatment F		1.440		2.228		1.713		1.972		1.926		0.668		1.169	
Treatment Prob(F)		0.2311		0.0618		0.1465		0.0949		0.1025		0.7143		0.3569	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for PVL01 – Tensas Parish

Experiment number ..... : 18-SJ-15

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 67. Evaluation of seeding rate and plant population in a stale seedbed for PVL01. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Tip of Panicle				Yield Components											
Rating Date		5/30/2018		8/22/2018		8/23/2018													
Rating Type		Stand Count		Height		Yield		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)	
Rating Unit		number		in		lb/A		grams		number		grams		grams		number		head	total
Sample Size, Unit		1 sq ft						1 m		1 m		1 m		1 m		1 m			
Collection Basis, Unit								2 rows		2 rows		2 rows		2 rows		2 rows			
Crop Stage Scale		2-3 leaf																	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Main	Main
Trt No.	Treatment Name																		
1	5 seed/ft^2 (11.6 lb/A)	5.5	d	42.0	a	6507	d	468.0	a	79	a	158.9	a	39.74	a	1731	a	64.13	a	72.97	a
2	7.5 seed/ft^2 (17.4 lb/A)	6.3	d	42.5	a	7056	cd	455.4	a	76	a	149.2	a	41.14	a	1787	a	63.20	a	72.41	a
3	10 seed/ft^2 (22.3 lb/A)	7.4	d	41.5	a	7428	bc	377.8	a	78	a	126.3	a	24.77	a	1031	a	63.70	a	72.39	a
4	15 seed/ft^2 (34.9 lb/A)	10.9	cd	40.5	a	7768	ab	462.9	a	92	a	141.5	a	34.56	a	1628	a	63.81	a	72.57	a
5	20 seed/ft^2 (46.6 lb/A)	14.1	bc	43.5	a	8094	ab	353.0	a	62	a	112.4	a	31.33	a	1333	a	63.91	a	72.45	a
6	25 seed/ft^2 (58.2 lb/A)	11.3	cd	43.0	a	7904	ab	381.5	a	73	a	123.6	a	28.16	a	1306	a	63.87	a	72.65	a
7	30 seed/ft^2 (69.9 lb/A)	16.5	abc	43.5	a	8418	a	364.8	a	66	a	116.7	a	34.46	a	1513	a	63.47	a	72.70	a
8	35 seed/ft^2 (81.5 lb/A)	18.6	ab	41.5	a	8068	ab	317.6	a	58	a	94.7	a	36.48	a	1538	a	63.29	a	72.34	a
9	40 seed/ft^2 (93.1 lb/A)	22.3	a	42.8	a	8041	ab	404.8	a	72	a	128.1	a	28.89	a	1245	a	63.56	a	72.73	a
LSD P=.05		6.28		3.22		686.3		145.93		30.2		62.72		11.028		495.5		1.273		0.813	
Standard Deviation		4.31		2.21		470.3		99.99		20.7		42.98		7.557		339.5		0.872		0.557	
CV		34.37		5.22		6.11		25.1		28.46		33.6		22.71		23.31		1.37		0.77	
Treatment F		7.246		0.843		6.516		1.136		0.946		0.837		2.089		2.112		0.488		0.539	
Treatment Prob(F)		0.0001		0.5754		0.0002		0.3756		0.4987		0.5795		0.0779		0.0750		0.8524		0.8156	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLJ01 – Tensas Parish

Experiment number ..... : 18-SJ-17

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 68. Evaluation of seeding rate and plant population in a stale seedbed for CLJ01. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/23/2018		8/23/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Moisture		Yield	
Rating Unit		number		days		days		in		%		lb/A	
Sample Size, Unit		1 sq ft											
Crop Stage Scale		2-3 leaf											
Crop Stage Majority		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name												
1	5 seeds/ft^2 (11.6 lb/A)	2.3	e	82.5	a	74.5	a	42.3	a	19.0	a	9787	a
2	7.5 seeds/ft^2 (17.4 lb/A)	3.5	de	81.5	bc	73.5	bc	42.3	a	18.5	a	7901	a
3	10 seeds/ft^2 (22.3 lb/A)	4.5	de	82.5	a	74.5	a	42.3	a	19.2	a	8221	a
4	15 seeds/ft^2 (34.9 lb/A)	7.2	cd	81.0	bcd	73.0	bcd	43.0	a	18.0	a	8839	a
5	20 seeds/ft^2 (46.6 lb/A)	11.5	bc	81.8	ab	73.8	ab	42.3	a	18.1	a	9277	a
6	25 seeds/ft^2 (58.2 lb/A)	12.2	b	81.5	bc	73.5	bc	42.0	a	17.9	a	9109	a
7	30 seeds/ft^2 (69.9 lb/A)	11.5	bc	80.5	d	72.5	d	41.0	a	17.5	a	9234	a
8	35 seeds/ft^2 (81.5 lb/A)	17.0	a	80.8	cd	72.8	cd	42.5	a	13.4	a	6903	a
9	40 seeds/ft^2 (93.1 lb/A)	16.8	a	80.8	cd	72.8	cd	42.0	a	18.0	a	9324	a
LSD P=.05		4.58		0.96		0.96		1.31		4.20		3428.9	
Standard Deviation		3.14		0.65		0.65		0.90		2.88		2349.6	
CV		32.62		0.8		0.89		2.13		16.24		26.91	
Treatment F		12.308		5.108		5.108		1.389		1.416		0.585	
Treatment Prob(F)		0.0001		0.0009		0.0009		0.2513		0.2403		0.7800	

Continued.

Table 68. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components													
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)			
Rating Unit		grams		number		grams		grams		number		head		total	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m					
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows					
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name														
1	5 seeds/ft^2 (11.6 lb/A)	359.0	a	62	c	154.6	a	27.44	a	1235	a	68.35	a	73.33	a
2	7.5 seeds/ft^2 (17.4 lb/A)	385.4	a	66	c	157.9	a	31.27	a	1367	a	68.65	a	73.92	a
3	10 seeds/ft^2 (22.3 lb/A)	458.8	a	85	abc	189.0	a	27.22	a	1189	a	68.18	a	73.20	a
4	15 seeds/ft^2 (34.9 lb/A)	379.9	a	72	bc	154.4	a	26.20	a	1191	a	68.29	a	73.78	a
5	20 seeds/ft^2 (46.6 lb/A)	494.0	a	101	a	196.5	a	28.38	a	1373	a	69.07	a	73.73	a
6	25 seeds/ft^2 (58.2 lb/A)	480.0	a	96	ab	200.0	a	26.37	a	1168	a	68.25	a	73.44	a
7	30 seeds/ft^2 (69.9 lb/A)	425.1	a	91	ab	173.0	a	27.40	a	1234	a	68.29	a	73.55	a
8	35 seeds/ft^2 (81.5 lb/A)	408.2	a	84	abc	166.6	a	24.72	a	1112	a	68.67	a	73.41	a
9	40 seeds/ft^2 (93.1 lb/A)	358.8	a	76	bc	138.6	a	25.90	a	1164	a	67.67	a	73.63	a
LSD P=.05		103.56		24.4		51.09		8.981		400.8		1.378		0.535	
Standard Deviation		70.96		16.7		35.01		6.154		274.7		0.940		0.365	
CV		17.03		20.58		20.58		22.62		22.41		1.37		0.5	
Treatment F		2.077		2.603		1.469		0.365		0.426		0.684		1.621	
Treatment Prob(F)		0.0796		0.0333		0.2202		0.9290		0.8938		0.7010		0.1757	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1111 – Tensas Parish

Experiment number ..... : 18-SJ-42

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 69. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1111. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/23/2018		8/23/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Moisture		Yield	
Rating Unit		number		days		days		in		%		lb/A	
Sample Size, Unit		1 sq ft											
Crop Stage Scale		2-3 leaf											
Crop Stage Majority		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name												
1	5 seeds/ft^2 (11.6 lb/A)	3.2	d	82.5	a	74.5	a	42.0	a	19.3	ab	8788	d
2	7.5 seeds/ft^2 (17.4 lb/A)	4.3	d	82.3	ab	74.3	ab	41.3	a	19.4	a	9426	cd
3	10 seeds/ft^2 (22.3 lb/A)	7.1	cd	81.5	a-d	73.5	a-d	40.3	a	18.6	abc	9962	bcd
4	15 seeds/ft^2 (34.9 lb/A)	6.9	cd	81.8	abc	73.8	abc	41.8	a	18.5	abc	10004	a-d
5	20 seeds/ft^2 (46.6 lb/A)	10.2	bc	82.0	abc	74.0	abc	42.8	a	18.7	abc	10292	a-d
6	25 seeds/ft^2 (58.2 lb/A)	10.5	bc	81.3	bcd	73.3	bcd	41.0	a	18.5	bc	11075	abc
7	30 seeds/ft^2 (69.9 lb/A)	12.9	b	81.3	bcd	73.3	bcd	41.8	a	18.2	c	10959	abc
8	35 seeds/ft^2 (81.5 lb/A)	17.3	a	80.5	d	72.5	d	42.8	a	17.9	c	11736	a
9	40 seeds/ft^2 (93.1 lb/A)	17.6	a	81.0	cd	73.0	cd	42.0	a	18.3	c	11345	ab
LSD P=.05		4.14		1.01		1.01		2.29		0.90		1732.4	
Standard Deviation		2.84		0.69		0.69		1.57		0.61		1187.1	
CV		28.35		0.85		0.94		3.77		3.31		11.42	
Treatment F		13.589		3.346		3.346		1.049		2.495		2.609	
Treatment Prob(F)		0.0001		0.0103		0.0103		0.4292		0.0397		0.0329	

Continued.

Table 69. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components													
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)			
Rating Unit		grams		number		grams		grams		number		head		total	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m					
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows					
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name														
1	5 seeds/ft^2 (11.6 lb/A)	442.4	a	67	a	208.3	a	30.02	a	1183	a	68.29	a	74.46	a
2	7.5 seeds/ft^2 (17.4 lb/A)	500.0	a	69	a	238.7	a	34.72	a	1415	a	68.67	a	74.71	a
3	10 seeds/ft^2 (22.3 lb/A)	460.7	a	77	a	218.9	a	29.08	a	1155	a	68.08	a	74.52	a
4	15 seeds/ft^2 (34.9 lb/A)	477.9	a	82	a	225.3	a	29.21	a	1142	a	68.43	a	74.54	a
5	20 seeds/ft^2 (46.6 lb/A)	428.9	a	82	a	198.6	a	25.01	a	991	a	69.41	a	74.79	a
6	25 seeds/ft^2 (58.2 lb/A)	419.0	a	75	a	184.8	a	34.32	a	1375	a	68.33	a	74.69	a
7	30 seeds/ft^2 (69.9 lb/A)	400.2	a	75	a	182.0	a	23.97	a	961	a	68.34	a	74.61	a
8	35 seeds/ft^2 (81.5 lb/A)	429.8	a	85	a	198.9	a	22.55	a	911	a	67.86	a	74.46	a
9	40 seeds/ft^2 (93.1 lb/A)	501.0	a	101	a	225.8	a	30.25	a	1202	a	68.17	a	74.58	a
LSD P=.05		150.41		30.1		84.24		9.044		380.8		1.168		0.504	
Standard Deviation		103.06		20.6		57.72		6.197		260.9		0.800		0.345	
CV		22.85		26.04		27.61		21.52		22.72		1.17		0.46	
Treatment F		0.487		0.942		0.458		1.902		1.787		1.220		0.446	
Treatment Prob(F)		0.8533		0.5019		0.8732		0.1068		0.1296		0.3295		0.8810	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1133 – Tensas Parish

Experiment number ..... : 18-SJ-43

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 70. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1133. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/23/2018		8/23/2018		8/23/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Moisture		Yield	
Rating Unit		number		days		days		in		%		lb/A	
Sample Size, Unit		1 sq ft											
Crop Stage Scale		2-3 leaf											
Crop Stage Majority		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name												
1	5 seeds/ft^2 (11.6 lb/A)	2.9	f	85.0	a	77.0	a	46.0	a	23.5	a	7605	c
2	7.5 seeds/ft^2 (17.4 lb/A)	4.1	f	84.3	a	76.3	a	44.5	a	22.4	a	9224	b
3	10 seeds/ft^2 (22.3 lb/A)	4.4	f	85.3	a	77.3	a	45.0	a	23.6	a	8259	c
4	15 seeds/ft^2 (34.9 lb/A)	7.4	e	84.5	a	76.5	a	45.5	a	20.5	a	9839	ab
5	20 seeds/ft^2 (46.6 lb/A)	10.2	d	84.8	a	76.8	a	44.8	a	21.7	a	9932	ab
6	25 seeds/ft^2 (58.2 lb/A)	11.4	cd	84.3	a	76.3	a	44.0	a	19.6	a	10188	a
7	30 seeds/ft^2 (69.9 lb/A)	15.2	ab	84.3	a	76.3	a	44.5	a	20.4	a	9854	ab
8	35 seeds/ft^2 (81.5 lb/A)	13.2	bc	84.8	a	76.8	a	45.0	a	21.4	a	9929	ab
9	40 seeds/ft^2 (93.1 lb/A)	17.0	a	84.3	a	76.3	a	44.0	a	21.1	a	10129	a
LSD P=.05		2.35		1.21		1.21		2.12		3.95		831.9	
Standard Deviation		1.61		0.83		0.83		1.45		2.71		570.0	
CV		16.87		0.98		1.09		3.24		12.55		6.04	
Treatment F		40.293		0.813		0.813		0.824		1.040		10.241	
Treatment Prob(F)		0.0001		0.5985		0.5985		0.5896		0.4346		0.0001	

Continued.

Table 70. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components													
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)			
Rating Unit		grams		number		grams		grams		number		head		total	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m					
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows					
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name														
1	5 seeds/ft^2 (11.6 lb/A)	456.5	a	62	cd	189.3	a	43.09	a	1774	a	67.56	a	73.01	bcd
2	7.5 seeds/ft^2 (17.4 lb/A)	288.1	a	42	d	107.5	a	32.29	a	1331	a	68.75	a	73.61	abc
3	10 seeds/ft^2 (22.3 lb/A)	422.7	a	70	bc	176.6	a	34.14	a	1411	a	68.13	a	72.95	cd
4	15 seeds/ft^2 (34.9 lb/A)	431.6	a	68	bc	186.6	a	30.72	a	1315	a	68.39	a	73.29	abc
5	20 seeds/ft^2 (46.6 lb/A)	419.6	a	72	bc	154.5	a	37.14	a	1527	a	68.34	a	73.52	abc
6	25 seeds/ft^2 (58.2 lb/A)	393.4	a	74	abc	148.3	a	33.93	a	1372	a	68.64	a	73.84	a
7	30 seeds/ft^2 (69.9 lb/A)	475.7	a	94	a	183.7	a	25.64	a	1062	a	68.13	a	72.44	d
8	35 seeds/ft^2 (81.5 lb/A)	406.5	a	84	ab	152.2	a	31.91	a	1188	a	68.51	a	73.52	abc
9	40 seeds/ft^2 (93.1 lb/A)	354.4	a	72	bc	139.9	a	25.08	a	996	a	68.67	a	73.77	ab
LSD P=.05		136.64		20.9		70.88		11.699		494.7		1.052		0.801	
Standard Deviation		93.63		14.3		48.57		8.017		339.0		0.717		0.546	
CV		23.1		20.26		30.38		24.55		25.48		1.05		0.74	
Treatment F		1.440		4.117		1.228		1.899		1.949		1.052		2.762	
Treatment Prob(F)		0.2311		0.0033		0.3253		0.1073		0.0986		0.4299		0.0281	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLX6-1030 – Tensas Parish

Experiment number ..... : 18-SJ-44

Site and design ..... :
- **Location/Cooperator** ..... : Tensas Parish / Warren Ratcliff
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Commerce silt loam / Sharkey clay
- **% organic matter** ..... : 1.71
- **pH** ..... : 7.75
- **Extractable nutrients** ppm ..... : Ca-4568; Cu-6.5; Mg-892; P-47; K-303; Na-51; S-8.3; Zn-2.9

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / May 3
- **Seeding rate/depth** ..... : Multiple rates seeds/ft^2 / 1 inch
- **Emergence date** ..... : May 11
- **Harvest date** ..... : Aug. 23

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 150 lb N/A 46-0-0, May 22

Water management ..... : Surface water irrigation
- **Flush** ..... : Data not available
- **Flood** ..... : May 23
- **Drain** ..... : Aug. 22

Pest management ..... :
- **Herbicides** ..... : 1.5 qt/A Roundup + 8 oz/A Command + 2 oz/A Sharpen, May 3
  4 qt/A Propanil + 0.75 oz/A Permit + 24 oz/A Facet, May 22
- **Insecticides** ..... : None
- **Fungicides** ..... : None

Table 71. Evaluation of seeding rate and plant population in a stale seedbed for CLX6-1030. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Rice Density		Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								8/22/2018		8/23/2018		8/23/2018	
Rating Type		Stand Count		50% HD		50% HD		Height		Moisture		Yield	
Rating Unit		number		days		days		in		%		lb/A	
Sample Size, Unit		1 sq ft											
Crop Stage Scale		2-3 leaf											
Crop Stage Majority		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name												
1	5 seeds/ft^2 (11.6 lb/A)	3.6	d	83.8	a	75.8	a	45.8	ab	23.0	e	8056	c
2	7.5 seeds/ft^2 (17.4 lb/A)	5.4	d	84.8	a	76.8	a	44.8	abc	24.0	de	8454	bc
3	10 seeds/ft^2 (22.3 lb/A)	7.1	d	84.8	a	76.8	a	45.5	ab	24.8	cd	7914	c
4	15 seeds/ft^2 (34.9 lb/A)	8.3	cd	84.8	a	76.8	a	45.5	ab	23.8	de	9174	a
5	20 seeds/ft^2 (46.6 lb/A)	13.6	ab	85.0	a	77.0	a	44.3	bc	25.1	a-d	8832	ab
6	25 seeds/ft^2 (58.2 lb/A)	13.3	bc	85.0	a	77.0	a	46.0	a	25.5	abc	8975	ab
7	30 seeds/ft^2 (69.9 lb/A)	16.2	ab	84.0	a	76.0	a	43.5	c	24.9	bcd	9235	a
8	35 seeds/ft^2 (81.5 lb/A)	16.9	ab	84.5	a	76.5	a	43.8	c	26.2	ab	9153	a
9	40 seeds/ft^2 (93.1 lb/A)	18.5	a	84.8	a	76.8	a	43.3	c	26.3	a	8978	ab
LSD P=.05		5.11		1.05		1.05		1.64		1.41		605.8	
Standard Deviation		3.50		0.72		0.72		1.13		0.97		415.1	
CV		30.64		0.85		0.94		2.52		3.9		4.74	
Treatment F		9.707		1.446		1.446		3.438		5.274		5.667	
Treatment Prob(F)		0.0001		0.2286		0.2286		0.0089		0.0007		0.0004	

Continued.

Table 71. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Yield Components													
Rating Type		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling (%)			
Rating Unit		grams		number		grams		grams		number		head		total	
Sample Size, Unit		1 m		1 m		1 m		1 m		1 m					
Collection Basis, Unit		2 rows		2 rows		2 rows		2 rows		2 rows					
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name														
1	5 seeds/ft^2 (11.6 lb/A)	367.8	a	58	c	135.3	a	30.38	a	1212	a	67.91	a	70.08	a
2	7.5 seeds/ft^2 (17.4 lb/A)	520.9	a	91	a	200.2	a	31.79	a	1289	a	67.86	a	69.85	a
3	10 seeds/ft^2 (22.3 lb/A)	374.4	a	69	bc	142.7	a	30.18	a	1223	a	68.12	a	70.06	a
4	15 seeds/ft^2 (34.9 lb/A)	417.1	a	71	bc	155.3	a	31.18	a	1193	a	68.29	a	70.19	a
5	20 seeds/ft^2 (46.6 lb/A)	462.3	a	83	ab	171.2	a	27.71	a	1067	a	67.70	a	69.79	a
6	25 seeds/ft^2 (58.2 lb/A)	468.7	a	88	ab	171.1	a	32.27	a	1288	a	67.86	a	69.83	a
7	30 seeds/ft^2 (69.9 lb/A)	381.3	a	76	abc	146.5	a	26.15	a	1011	a	68.14	a	70.09	a
8	35 seeds/ft^2 (81.5 lb/A)	410.2	a	77	ab	155.4	a	29.75	a	1177	a	67.90	a	69.74	a
9	40 seeds/ft^2 (93.1 lb/A)	394.0	a	86	ab	141.9	a	30.77	a	1205	a	67.66	a	69.91	a
LSD P=.05		109.75		19.1		50.27		8.042		321.5		0.720		0.650	
Standard Deviation		75.20		13.1		34.45		5.511		220.3		0.493		0.445	
CV		17.83		16.86		21.84		18.36		18.59		0.73		0.64	
Treatment F		1.891		2.613		1.383		0.505		0.703		0.704		0.507	
Treatment Prob(F)		0.1087		0.0327		0.2536		0.8407		0.6859		0.6850		0.8392	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Nitrogen Rate and Timing on Nitrogen Uptake, Nitrogen Use Efficiency, and Grain Yield – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-31

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.26
- **pH** ..... : 6.98
- **Extractable nutrients** ppm ..... : Ca-1205; Cu-1.5; Mg-228; P-12; K-54; Na-87; S-7.0; Zn-7.3

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rates/depth** ..... : 33 seed/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... :

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 72. Evaluation of N rate and timing on N uptake, NUE, and grain yield. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/31/2018			
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb ai/A)	Growth Stage												
1	UTC 0 N	0		98.3	bc	87.3	bc	30.8	d	4328	c	2111	a	6439	c
2	UREA SPF	138	1 DPreF	102.0	a	91.0	a	36.5	a	10109	a	2240	a	12349	a
3	UREA SPostF	138	4 DPostF	98.0	c	87.0	c	32.0	bcd	5954	b	2245	a	8199	b
4	UREA 2/3	92	4 DPostF	98.5	b	87.5	b	31.5	bcd	5648	b	2114	a	7761	bc
	UREA 1/3	46	7 PostF												
5	UREA 2/3	92	4 DPostF	98.0	c	87.0	c	31.3	cd	5771	b	2139	a	7910	b
	UREA 1/3	46	9 DPostF												
6	UREA 2/3	92	4 DPostF	98.3	bc	87.3	bc	31.8	bcd	5707	b	2101	a	7808	b
	UREA 1/3	46	14 DPostF												
7	UREA 1/2	69	4 DPostF	98.0	c	87.0	c	31.8	bcd	5611	b	2081	a	7692	bc
	UREA 1/2	69	7 DPostF												
8	UREA 1/2	69	4 DPostF	98.0	c	87.0	c	31.3	cd	5730	b	2124	a	7854	b
	UREA 1/2	69	9 DPostF												
9	UREA 1/2	69	4 DPostF	98.0	c	87.0	c	32.8	b	6106	b	2124	a	8230	b
	UREA 1/2	69	14 DPostF												
10	UREA 1/3	46	4 DPostF	98.0	c	87.0	c	31.3	cd	5889	b	2216	a	8105	b
	UREA 2/3	92	7 DPostF												
11	UREA 1/3	46	4 DPostF	98.0	c	87.0	c	32.5	bc	5321	bc	2128	a	7449	bc
	UREA 2/3	92	9 DPostF												
12	UREA 1/3	46	4 DPostF	98.3	bc	87.3	bc	32.8	b	6305	b	2294	a	8598	b
	UREA 2/3	92	14 DPostF												
LSD P=.05				0.38		0.38		1.43		1258.7		206.9		1368.1	
Standard Deviation				0.27		0.27		0.99		875.0		143.8		951.0	
CV				0.27		0.31		3.09		14.49		6.66		11.6	
Treatment F				72.080		72.080		9.153		9.843		0.932		8.786	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.5230		0.0001	

Continued.

Table 72. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Tissue		Tissue N		N Uptake		N Fert Eff.		N Fert Eff.	
Part Rated				Abvgrd		Abvgrd		Total					
Rating Type				Biomass-dry									
Rating Unit				lb/A		% N		lb/A		%		%	
Crop Stage Scale				50% HD		50% HD		50% HD		50% HD		50% HD	
Crop Stage Majority				Main		Main		Main		by block		by mean	
Trt No.	Treatment Name	Rate (lb ai/A)	Growth Stage										
1	UTC 0 N	0		3712	c	0.98	bc	36	d	0	c	0	d
2	UREA SPF	138	1 DPreF	9051	a	1.62	a	147	a	80	a	80	a
3	UREA SPostF	138	4 DPostF	4149	bc	1.00	bc	41	bcd	4	bc	5	bcd
4	UREA 2/3	92	4 DPostF	4054	bc	1.04	bc	42	bcd	6	bc	4	bcd
	UREA 1/3	46	7 PostF										
5	UREA 2/3	92	4 DPostF	4963	b	1.07	b	53	bc	12	b	12	b
	UREA 1/3	46	9 DPostF										
6	UREA 2/3	92	4 DPostF	4572	bc	1.00	bc	46	bcd	7	bc	7	bcd
	UREA 1/3	46	14 DPostF										
7	UREA 1/2	69	4 DPostF	3788	c	1.05	bc	40	cd	4	bc	2	cd
	UREA 1/2	69	7 DPostF										
8	UREA 1/2	69	4 DPostF	4972	b	1.07	b	54	b	12	b	13	b
	UREA 1/2	69	9 DPostF										
9	UREA 1/2	69	4 DPostF	4898	b	1.02	bc	50	bcd	10	b	9	bc
	UREA 1/2	69	14 DPostF										
10	UREA 1/3	46	4 DPostF	5043	b	1.00	bc	51	bc	10	b	10	bc
	UREA 2/3	92	7 DPostF										
11	UREA 1/3	46	4 DPostF	4669	bc	0.94	c	44	bcd	8	bc	5	bcd
	UREA 2/3	92	9 DPostF										
12	UREA 1/3	46	4 DPostF	4848	b	1.03	bc	50	bc	10	b	10	bc
	UREA 2/3	92	14 DPostF										
LSD P=.05				991.4		0.114		13.8		9.8		9.1	
Standard Deviation				689.1		0.079		9.6		6.8		6.3	
CV				14.08		7.42		17.55		49.38		47.77	
Treatment F				16.351		20.251		38.371		38.917		46.099	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbl do not significantly differ (P=.05, LSD).

Evaluation of ProGibb Main and Ratoon Crop Yield with and without Stubble Management – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-21

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 73. Evaluation of ProGibb main and ratoon crop yield with and without stubble management. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage												
1	Normal cut (16 in) Without ProGibb			102.0	a	89.0	a	36.3	a	8628	a	2364	bc	10993	a
2	Normal cut (16 in) ProGibb 4 oz	4	Soft dough	102.0	a	89.0	a	35.8	a	8951	a	2815	a	11765	a
3	Normal cut (16 in) ProGibb 6 oz	6	Soft dough	102.0	a	89.0	a	36.8	a	8939	a	2604	ab	11543	a
4	Bush hog (8 in) Without ProGibb			102.0	a	89.0	a	36.5	a	8616	a	2018	c	10634	a
5	Bush hog (8 in) ProGibb 4 oz	4	Soft dough	102.0	a	89.0	a	36.5	a	8605	a	2360	bc	10965	a
6	Bush hog (8 in) ProGibb 6 oz	6	Soft dough	102.0	a	89.0	a	37.0	a	8417	a	2337	bc	10754	a
LSD P=.05				.		.		1.86		787.9		375.9		914.5	
Standard Deviation				0.00		0.00		1.23		522.8		249.4		606.8	
CV				0.0		0.0		3.38		6.01		10.32		5.46	
Treatment F				0.000		0.000		0.488		0.647		4.689		2.185	
Treatment Prob(F)				1.0000		1.0000		0.7800		0.6681		0.0089		0.1106	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 74. Two-way comparison of evaluation of ProGibb main and ratoon crop yield with and without stubble management. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC+RC	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage												
TABLE OF A (Stubble height) MEANS															
1	Normal cut (16 in)			102.0	a	89.0	a	36.3	a	8839	a	2594	a	11434	a
2	Bush hog (8 in)			102.0	a	89.0	a	36.7	a	8546	a	2238	b	10784	b
P				1.000		1.000		0.421		0.1895		0.0032		0.0192	
LSD P=.05				.		.		1.07		454.9		217.0		528.0	
TABLE OF B (Pesticide) MEANS															
1	Without ProGibb			102.0	a	89.0	a	36.4	a	8622	a	2191	b	10813	a
2	ProGibb 4 oz	4	Soft dough	102.0	a	89.0	a	36.1	a	8778	a	2587	a	11365	a
3	ProGibb 6 oz	6	Soft dough	102.0	a	89.0	a	36.9	a	8678	a	2470	a	11149	a
P				1.000		1.000		0.481		0.8346		0.0179		0.2196	
LSD P=.05				.		.		1.31		557.1		265.8		646.7	
TABLE OF A (Stubble height) and B (Pesticide) MEANS															
1	Normal cut (16 in)			102.0	a	89.0	a	36.3	a	8628	a	2364	a	10993	a
1	Without ProGibb														
2	Bush hog (8 in)			102.0	a	89.0	a	36.5	a	8616	a	2018	a	10634	a
1	Without ProGibb														
1	Normal cut (16 in)			102.0	a	89.0	a	35.8	a	8951	a	2815	a	11765	a
2	ProGibb 4 oz	4	Soft dough												
2	Bush hog (8 in)			102.0	a	89.0	a	36.5	a	8605	a	2360	a	10965	a
2	ProGibb 4 oz	4	Soft dough												
1	Normal cut (16 in)			102.0	a	89.0	a	36.8	a	8939	a	2604	a	11543	a
3	ProGibb 6 oz	6	Soft dough												
2	Bush hog (8 in)			102.0	a	89.0	a	37.0	a	8417	a	2337	a	10754	a
3	ProGibb 6 oz	6	Soft dough												
P				1.000		1.000		0.8968		0.6223		0.7566		0.7138	
LSD P=.05				.		.		1.86		787.9		375.9		914.5	
Standard Deviation				0.00		0.00		1.23		522.8		249.4		606.8	
CV				0.00		0.00		3.38		6.0		10.3		5.5	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of ProGibb Application Timing on CL153
Grain Yield – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-22

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 75. Evaluation of ProGibb application timing on CL153 grain yield. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage												
1	Without ProGibb			102.0	a	89.0	a	36.5	a	8569	a	1958	c	10527	a
2	ProGibb 4 oz @ milk	4	Milk	102.0	a	89.0	a	37.3	a	8457	a	2287	ab	10744	a
3	ProGibb 4 oz @ soft dough	4	Soft dough	102.0	a	89.0	a	35.5	a	8300	a	2354	a	10653	a
4	ProGibb 4 oz @ drain	4	Drain	102.0	a	89.0	a	36.5	a	8129	a	2005	bc	10134	a
5	ProGibb 4 oz @ after harvest	4	2 WkAHarvest	102.0	a	89.0	a	36.3	a	8261	a	2295	ab	10556	a
6	ProGibb 4 oz @ soft dough	4	Soft dough	102.0	a	89.0	a	36.0	a	8932	a	2532	a	11464	a
	Karate	2	Soft dough												
LSD P=.05				.		.		1.32		1072.5		293.7		1152.8	
Standard Deviation				0.00		0.00		0.88		711.6		194.8		764.9	
CV				0.0		0.0		2.41		8.43		8.7		7.16	
Treatment F				0.000		0.000		1.783		0.644		5.013		1.307	
Treatment Prob(F)				1.0000		1.0000		0.1770		0.6703		0.0067		0.3128	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of ProGibb Application Timing on PVL01
Grain Yield – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-38

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / PVL01
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 76. Evaluation of ProGibb application timing on PVL01 grain yield. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/26/2018		7/26/2018		10/30/2018	10/30/2018
Rating Type				50% HD		50% HD		Height		Yield		Yield	Total Yield
Rating Unit				days		days		in		lb/A		lb/A	lb/A
Crop Stage Majority				Main		Main		Main		Main		Ratoon	MC + RC
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage										
1	Without ProGibb			108.0	a	95.0	a	36.5	a	7493	a	2086 abc	9579 a
2	ProGibb 4 oz @ milk	4	Milk	108.0	a	95.0	a	37.8	a	7321	a	2589 a	9910 a
3	ProGibb 4 oz @ soft dough	4	Soft dough	108.0	a	95.0	a	35.8	a	7080	a	2354 ab	9434 a
4	ProGibb 4 oz @ drain	4	Drain	108.0	a	95.0	a	36.8	a	7356	a	1638 c	8994 a
5	ProGibb 4 oz @ after harvest	4	2 WkAHarvest	108.0	a	95.0	a	36.3	a	7092	a	1816 c	8908 a
6	ProGibb 4 oz @ soft dough	4	Soft dough	108.0	a	95.0	a	36.3	a	7326	a	2053 bc	9379 a
	Karate	2	Soft dough										
LSD P=.05				.		.		2.00		578.6		515.1	776.1
Standard Deviation				0.00		0.00		1.32		383.9		341.7	514.9
CV				0.0		0.0		3.62		5.27		16.36	5.5
Treatment F				0.000		0.000		1.051		0.705		4.101	2.094
Treatment Prob(F)				1.0000		1.0000		0.4248		0.6283		0.0151	0.1229

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of ProGibb Application Timing on Main and Ratoon Crop Yield with and without Stubble Management – Calcasieu Parish

Experiment number ..... : 18-CP-21

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21
120 lb N/A 46-0-0, May 2

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 77. Evaluation of ProGibb application timing on main and ratoon crop yield with and without stubble Management. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle			
Rating Date								8/9/2018		8/9/2018	
Rating Type				50% HD		50% HD		Height		Yield	
Rating Unit				days		days		in		lb/A	
Crop Stage Majority				Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage								
1	Normal cut (16 in) Without ProGibb			96.0	a	89.0	a	40.8	a	8222	a
2	Normal cut (16 in) ProGibb 4 oz	4	Soft dough	96.0	a	89.0	a	40.5	a	8538	a
3	Normal cut (16 in) ProGibb 6 oz	6	Soft dough	96.0	a	89.0	a	40.3	a	8412	a
4	Bush hog (8 in) Without ProGibb			96.0	a	89.0	a	38.8	a	8283	a
5	Bush hog (8 in) ProGibb 4 oz	4	Soft dough	96.0	a	89.0	a	39.3	a	8560	a
6	Bush hog (8 in) ProGibb 6 oz	6	Soft dough	96.0	a	89.0	a	41.0	a	8632	a
LSD P=.05				N/A		N/A		2.03		728.9	
Standard Deviation				0.00		0.00		1.35		483.6	
CV				0.0		0.0		3.36		5.73	
Treatment F				0.000		0.000		1.748		0.458	
Treatment Prob(F)				1.0000		1.0000		0.1843		0.8011	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 78. Two-way comparison of evaluation of ProGibb application timing on main and ratoon crop yield with and without stubble management. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle			
Rating Date								8/9/2018		8/9/2018	
Rating Type				50% HD		50% HD		Height		Yield	
Rating Unit				days		days		in		lb/A	
Crop Stage Majority				Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage								
TABLE OF A (Stubble height) MEANS											
1	Normal cut (16 in)			96.0	a	89.0	a	40.5	a	8391	a
2	Bush hog (8 in)			96.0	a	89.0	a	39.7	a	8491	a
P				1.000		1.000		2.568		0.261	
LSD P=.05				N/A		N/A		1.17		420.8	
TABLE OF B (Pesticide) MEANS											
1	Without ProGibb			96.0	a	89.0	a	39.8	a	8252	a
2	ProGibb 4 oz	4	Soft dough	96.0	a	89.0	a	39.9	a	8549	a
3	ProGibb 6 oz	6	Soft dough	96.0	a	89.0	a	40.6	a	8522	a
P				1.000		1.000		0.697		0.921	
LSD P=.05				N/A		N/A		1.43		515.4	
TABLE OF A (Stubble height) and B (Pesticide) MEANS											
1	Normal cut (16 in)			96.0	a	89.0	a	40.8	a	8222	a
1	Without ProGibb										
2	Bush hog (8 in)			96.0	a	89.0	a	38.8	a	8283	a
1	Without ProGibb										
1	Normal cut (16 in)			96.0	a	89.0	a	40.5	a	8538	a
2	ProGibb 4 oz	4	Soft dough								
2	Bush hog (8 in)			96.0	a	89.0	a	39.3	a	8560	a
2	ProGibb 4 oz	4	Soft dough								
1	Normal cut (16 in)			96.0	a	89.0	a	40.3	a	8412	a
3	ProGibb 6 oz	6	Soft dough								
2	Bush hog (8 in)			96.0	a	89.0	a	41.0	a	8632	a
3	ProGibb 6 oz	6	Soft dough								
P				1.000		1.000		3.506		0.094	
LSD P=.05				N/A		N/A		2.03		728.9	
Standard Deviation				0.00		0.00		1.35		483.6	
CV				0.00		0.00		3.36		5.70	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of ProGibb Application Timing on CL153 Grain Yield – Calcasieu Parish

Experiment number ..... : 18-CP-22

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21
120 lb N/A 46-0-0, May 2

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 79. Evaluation of ProGibb application timing on CL153 grain yield. Calcasieu Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle			
Rating Date								8/9/2018			
Rating Type				50% HD		50% HD		Height		Yield	
Rating Unit				days		days		in		lb/A	
Crop Stage Majority				Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (oz/A)	Growth Stage								
1	Without ProGibb			96.0	a	89.0	a	38.5	a	8495	a
2	ProGibb 4 oz @ milk	4	Milk	96.0	a	89.0	a	39.3	a	8844	a
3	ProGibb 4 oz @ soft dough	4	Soft dough	96.0	a	89.0	a	39.8	a	8412	a
4	ProGibb 4 oz @ drain	4	Drain	96.0	a	89.0	a	39.5	a	8729	a
5	ProGibb 4 oz @ after harvest	4	2 WkAHarvest	96.0	a	89.0	a	40.5	a	8788	a
6	ProGibb 4 oz @ soft dough	4	Soft dough	96.0	a	89.0	a	40.8	a	9220	a
	Karate	2	Soft dough								
LSD P=.05				N/A		N/A		2.60		790.9	
Standard Deviation				0.00		0.00		1.73		524.7	
CV				0.0		0.0		4.35		6.0	
Treatment F				0.000		0.000		0.918		1.194	
Treatment Prob(F)				1.0000		1.0000		0.4958		0.3584	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

CLXL745 Response to Nitrogen Fertilizer Rates Using Furrow Irrigation – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34A

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CLXL745
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 80. CLXL745 response to N fertilizer rate using furrow irrigation. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle									
Rating Date								7/26/2018		7/26/2018		7/26/2018		7/30/2018		7/30/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Moisture		Yield	
Rating Unit				days		days		in		% plot		rate		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage														
1	UREA	0	4-5 leaf	98.0	c	87.0	c	35.5	b	50.0	a	1.0	a	15.9	bc	5942	c
2	UREA	90	4-5 leaf	102.0	ab	91.0	ab	38.8	a	42.5	a	1.3	a	16.2	bc	8089	b
3	UREA	120	4-5 leaf	101.3	b	90.3	b	39.5	a	62.5	a	1.5	a	16.0	bc	8399	b
4	UREA	150	4-5 leaf	102.8	a	91.8	a	39.0	a	72.5	a	2.3	a	15.7	c	8829	ab
5	UREA	180	4-5 leaf	102.3	ab	91.3	ab	39.8	a	57.5	a	1.8	a	17.1	ab	9548	a
6	UREA	210	4-5 leaf	102.8	a	91.8	a	39.8	a	57.5	a	1.5	a	18.1	a	9548	a
LSD P=.05				1.46		1.46		1.76		59.23		1.83		1.29		787.3	
Standard Deviation				0.97		0.97		1.17		39.30		1.21		0.86		522.4	
CV				0.95		1.07		3.02		68.84		78.78		5.19		6.22	
Treatment F				13.929		13.929		7.729		0.275		0.503		4.440		26.267	
Treatment Prob(F)				0.0001		0.0001		0.0009		0.9199		0.7696		0.0111		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

CLXL745 Response to Nitrogen Fertilizer Application Timing
Using Furrow Irrigation – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34B

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CLXL745
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 81. CLXL745 response to N fertilizer application timing using furrow irrigation. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle									
Rating Date								7/26/2018		7/26/2018		7/26/2018		7/30/2018		7/30/2018	
Rating Type				50% HD		50% HD		Height		Lodge				Moisture		Yield	
Rating Unit				days		days		in		% plot		rate		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage														
1	No N			99.8	b	88.8	b	36.3	a	40.0	a	1.8	a	15.1	a	6245	b
2	Single 138 lb N/A	138	4-5 Leaf	103.0	a	92.0	a	39.3	a	12.5	a	0.3	a	16.7	a	8961	ab
3	2-Split (69 x 2) lb N/A	69	4-5 Leaf	102.5	a	91.5	a	39.0	a	32.5	a	1.0	a	11.8	a	6464	b
		69	4-5 Leaf+21d														
4	3-Split (46 x 3) lb N/A	46	4-5 Leaf	103.0	a	92.0	a	39.5	a	17.5	a	0.5	a	16.4	a	9329	a
		46	4-5 Leaf+7d														
		46	4-5 Leaf+14d														
5	4-Split (34.5 x 4) lb N/A	34.5	4-5 Leaf	103.0	a	92.0	a	39.5	a	25.0	a	1.0	a	16.2	a	11251	a
		34.5	4-5 Leaf+7d														
		34.5	4-5 Leaf+14d														
		34.5	4-5 Leaf+21d														
6	Single 184 lb N/A	184	4-5 Leaf	102.8	a	91.8	a	39.0	a	25.0	a	0.8	a	16.7	a	9517	a
7	2-Split (92 x 2) lb N/A	92	4-5 Leaf	102.5	a	91.5	a	39.5	a	35.0	a	1.0	a	16.1	a	8946	ab
		92	4-5 Leaf+21d														
8	3-Split (61.3 x 3) lb N/A	61.3	4-5 Leaf	103.0	a	92.0	a	39.5	a	12.5	a	0.3	a	16.8	a	9790	a
		61.3	4-5 Leaf+7d														
		61.3	4-5 Leaf+14d														
9	4-Split (46 x 4) lb N/A	46	4-5 Leaf	103.0	a	92.0	a	39.5	a	15.0	a	0.3	a	16.2	a	9659	a
		46	4-5 Leaf+7d														
		46	4-5 Leaf+14d														
		46	4-5 Leaf+21d														
LSD P=.05				0.98		0.98		2.05		45.29		1.33		3.87		2832.9	
Standard Deviation				0.67		0.67		1.41		31.03		0.91		2.65		1941.1	
CV				0.65		0.73		3.6		129.9		121.72		16.8		21.79	
Treatment F				9.933		9.933		2.247		0.436		1.200		1.410		2.713	
Treatment Prob(F)				0.0001		0.0001		0.0598		0.8878		0.3402		0.2427		0.0278	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Ratoon Performance for CLXL745 when Furrow Irrigated – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34C

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CLXL745
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 10 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid
Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 82. Evaluation of ratoon performance for CLXL745 when furrow irrigated. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Rating Date								7/26/2018		7/26/2018		7/26/2018		7/30/2018		7/30/2018		7/30/2018	
Description				Plant-HD		Emer-HD		Tip of Panicle											
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Moisture		Yield	
Rating Unit				days		days		in		% plot		rate		lb/plot		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																
1	Normal cut (16")/No N			99.5	c	88.5	c	37.5	b	70.0	a	2.5	a	10.8	c	13.7	b	6156	c
2	Normal cut (16")	46	4-5 leaf	104.0	a	93.0	a	40.0	a	27.5	a	1.3	a	16.3	b	15.4	a	9127	b
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d																
		46	4-5 leaf+14d																
		46	4-5 leaf+21d																
3	Cut at 8" / No N			100.3	b	89.3	b	37.0	b	50.0	a	1.8	a	11.0	c	13.8	b	6277	c
4	Cut at 8"	46	4-5 leaf	104.0	a	93.0	a	40.3	a	27.5	a	0.8	a	17.5	a	15.6	a	9789	a
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d																
		46	4-5 leaf+14d																
		46	4-5 leaf+21d																
5	Rolled / No N			99.0	c	88.0	c	37.5	b	75.0	a	2.0	a	11.3	c	13.9	b	6462	c
6	Rolled	46	4-5 leaf	104.0	a	93.0	a	40.3	a	17.5	a	0.5	a	17.1	ab	15.9	a	9548	ab
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d																
		46	4-5 leaf+14d																
		46	4-5 leaf+21d																
LSD P=.05				0.63		0.63		1.83		48.00		1.83		1.03		0.95		610.4	
Standard Deviation				0.42		0.42		1.21		31.85		1.21		0.68		0.63		405.0	
CV				0.41		0.46		3.13		71.43		83.28		4.88		4.27		5.13	
Treatment F				137.381		137.381		6.682		2.302		1.588		92.332		10.924		75.751	
Treatment Prob(F)				0.0001		0.0001		0.0018		0.0968		0.2234		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

CL153 Response to Nitrogen Fertilizer Rates Under Furrow Irrigation – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34D

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 83. CL153 respoonse to N fertilizer rates under furrow irrigation. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/26/2018		7/30/2018		7/30/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	UREA	0	4-5 leaf	102.0	c	89.0	c	30.0	a	16.2	d	4714	d
2	UREA	90	4-5 leaf	103.8	b	90.8	b	30.5	a	16.6	cd	6997	c
3	UREA	120	4-5 leaf	104.0	ab	91.0	ab	30.8	a	17.1	bcd	7856	b
4	UREA	150	4-5 leaf	104.0	ab	91.0	ab	31.5	a	17.4	bc	8010	ab
5	UREA	180	4-5 leaf	104.3	ab	91.3	ab	31.3	a	17.6	b	8354	ab
6	UREA	210	4-5 leaf	104.8	a	91.8	a	31.8	a	19.0	a	8578	a
LSD P=.05				0.76		0.76		1.55		1.04		719.3	
Standard Deviation				0.50		0.50		1.03		0.69		477.2	
CV				0.48		0.55		3.31		3.97		6.43	
Treatment F				14.011		14.011		1.654		7.714		36.020	
Treatment Prob(F)				0.0001		0.0001		0.2062		0.0009		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

CL153 Response to Nitrogen Fertilizer Application Timing
Using Furrow Irrigation – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34E

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 84. CL153 response to N fertilizer application timing using furrow irrigation. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/26/2018		7/30/2018		7/30/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	No N			101.0	c	90.0	c	28.3	c	15.9	d	4681	c
2	Single 138 lb N/A	138	4-5 Leaf	103.3	b	92.3	b	31.5	ab	17.4	abc	8104	ab
3	2-Split (69 x 2) lb N/A	69	4-5 Leaf	103.0	b	92.0	b	30.5	b	16.5	cd	7960	b
		69	4-5 Leaf+21d										
4	3-Split (46 x 3) lb N/A	46	4-5 Leaf	104.0	a	93.0	a	31.8	ab	17.5	abc	8432	a
		46	4-5 Leaf+7d										
		46	4-5 Leaf+14d										
5	4-Split (34.5 x 4) lb N/A	34.5	4-5 Leaf	104.0	a	93.0	a	30.8	b	16.9	bcd	8335	ab
		34.5	4-5 Leaf+7d										
		34.5	4-5 Leaf+14d										
		34.5	4-5 Leaf+21d										
6	Single 184 lb N/A	184	4-5 Leaf	103.8	a	92.8	a	31.0	ab	17.5	abc	8187	ab
7	2-Split (92 x 2) lb N/A	92	4-5 Leaf	103.8	a	92.8	a	30.8	b	18.1	ab	8227	ab
		92	4-5 Leaf+21d										
8	3-Split (61.3 x 3) lb N/A	61.3	4-5 Leaf	104.0	a	93.0	a	32.3	a	18.5	a	8462	a
		61.3	4-5 Leaf+7d										
		61.3	4-5 Leaf+14d										
9	4-Split (46 x 4) lb N/A	46	4-5 Leaf	104.0	a	93.0	a	30.5	b	17.8	abc	8331	ab
		46	4-5 Leaf+7d										
		46	4-5 Leaf+14d										
		46	4-5 Leaf+21d										
LSD P=.05				0.42		0.42		1.38		1.51		460.8	
Standard Deviation				0.28		0.28		0.94		1.03		315.7	
CV				0.28		0.31		3.06		5.97		4.02	
Treatment F				47.057		47.057		5.750		2.462		57.937	
Treatment Prob(F)				0.0001		0.0001		0.0004		0.0419		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Ratoon Performance for CL153 Under Furrow Irrigation – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-34F

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.21
- **pH** ..... : 7.38
- **Extractable nutrients** ppm ..... : Ca-1,396; Cu-1.7; Mg-269; P-11; K-60; Na-87; S-7.8; Zn-6.7

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Did not harvest

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : See irrigation sheet
- **Flood** ..... : NA
- **Drain** ..... : NA
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 85. Ratoon performance for CL153 under furrow irrigation. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/26/2018		7/26/2018		7/26/2018	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	Normal cut (16")/No N			101.0	b	90.0	b	28.5	b	16.3	b	4700	b
2	Normal cut (16")	46	4-5 leaf	104.0	a	93.0	a	33.0	a	18.5	a	8288	a
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d										
		46	4-5 leaf+14d										
		46	4-5 leaf+21d										
3	Cut at 8" / No N			101.0	b	90.0	b	28.3	b	16.1	b	4397	b
4	Cut at 8"	46	4-5 leaf	104.0	a	93.0	a	32.3	a	18.0	a	8522	a
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d										
		46	4-5 leaf+14d										
		46	4-5 leaf+21d										
5	Rolled / No N			101.0	b	90.0	b	28.0	b	16.1	b	4304	b
6	Rolled	46	4-5 leaf	104.0	a	93.0	a	31.5	a	18.4	a	8571	a
	4-splits (46 x 4) lb N/A	46	4-5 leaf+7d										
		46	4-5 leaf+14d										
		46	4-5 leaf+21d										
LSD P=.05				.		.		1.74		0.90		553.8	
Standard Deviation				0.00		0.00		1.15		0.60		367.5	
CV				0.0		0.0		3.82		3.47		5.69	
Treatment F				0.000		0.000		15.150		15.383		142.470	
Treatment Prob(F)				1.0000		1.0000		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Water Management Practices on Nitrogen Uptake, Nitrogen Use Efficiency, Yield, and Yield Components – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-29

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.24
- **pH** ..... : 7.70
- **Extractable nutrients** ppm ..... : Ca-1,498; Cu-1.6; Mg-236; P-11; K-54; Na-72; S-7.9; Zn-6.5

Crop/Variety ..... : Rice / CL153 and CLXL745
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : Hybrid-10/Conventional-33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Normal and AWD – July 24, Aerobic – July 30
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : **Conventional Varieties:**
Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Hybrids:
Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid, Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : Normal and AWD – July 13, Aerobic – July 17
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : None

Table 86. Evaluation of water management practices on yield and agronomic data. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle												Biomass	
Rating Date														7/24/2018		10/30/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield		Biomass-dry	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A		lb/A	
Crop Stage Scale																				50% HD	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																		
1	Delayed flood CL153			99.3	f	88.3	f	29.3	h	0.0	a	0.0	a	3068	j	1956	a	5024	j	3430	l
	0 N/A	0																			
2	Delayed flood CL153			101.8	cd	90.8	cd	36.0	de	0.0	a	0.0	a	8199	cd	1892	a	10091	ab	8422	a-d
	150 lb N/A	150	PF																		
3	Delayed flood CL153			100.5	e	89.5	e	35.0	ef	0.0	a	0.0	a	7689	def	1520	b	9209	def	8670	abc
	100 lb N/A	100	PF																		
	50 lb N/A	50	PI																		
4	Delayed flood CL153			101.0	cde	90.0	cde	36.0	de	0.0	a	0.0	a	7341	efg	1485	bc	8826	efg	5724	g-k
	80 lb N/A	80	PF																		
	35 lb N/A	35	PI																		
	35 lb N/A	35	LB																		
5	Delayed flood CLXL745			93.5	i	82.5	i	36.0	de	5.0	a	0.3	a	5315	h	886	de	6201	i	5160	ijk
	0 N/A	0																			
6	Delayed flood CLXL745			96.5	g	85.5	g	43.0	a	12.5	a	0.3	a	9768	a	544	f-k	10313	a	7623	b-f
	150 lb N/A	150	PF																		
7	Delayed flood CLXL745			95.3	h	84.3	h	42.3	a	10.0	a	0.3	a	8921	b	434	h-l	9355	b-f	8889	ab
	100 lb N/A	100	PF																		
	50 lb N/A	50	PI																		
8	Delayed flood CLXL745			95.3	h	84.3	h	41.8	a	0.0	a	0.0	a	8963	b	867	def	9830	a-d	9683	a
	80 lb N/A	80	PF																		
	35 lb N/A	35	PI																		
	35 lb N/A	35	LB																		

Continued.

Table 86. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle												Biomass	
Rating Date														7/24/2018		10/30/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield		Biomass-dry	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A		lb/A	
Crop Stage Scale																				50% HD	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																		
9	AWD CL153 0 N/A	0		98.3	f	87.3	f	29.8	gh	0.0	a	0.0	a	3462	ij	1163	cd	4625	j	3192	l
10	AWD CL153 150 lb N/A	150	PF	102.0	c	91.0	c	34.5	f	0.0	a	0.0	a	8199	cd	806	ef	9005	efg	6841	d-h
11	AWD CL153 100 lb N/A 50 lb N/A	100 50	PF PI	101.8	cd	90.8	cd	34.8	ef	0.0	a	0.0	a	7781	de	657	e-i	8438	g	5930	g-j
12	AWD CL153 80 lb N/A 35 lb N/A 35 lb N/A	80 35 35	PF PI LB	100.8	de	89.8	de	33.8	f	0.0	a	0.0	a	7839	de	760	efg	8599	fg	5835	g-j
13	AWD CLXL745 0 N/A	0		95.0	h	84.0	h	36.8	cd	0.0	a	0.0	a	5770	h	330	jkl	6100	i	4611	jkl
14	AWD CLXL745 150 lb N/A	150	PF	98.5	f	87.5	f	42.0	a	0.0	a	0.0	a	8866	bc	254	jkl	9120	d-g	6262	f-i
15	AWD CLXL745 100 lb N/A 50 lb N/A	100 50	PF PI	98.3	f	87.3	f	42.0	a	0.0	a	0.0	a	9746	a	247	kl	9993	abc	7036	d-g
16	AWD CLXL745 80 lb N/A 35 lb N/A 35 lb N/A	80 35 35	PF PI LB	98.3	f	87.3	f	41.8	a	0.0	a	0.0	a	9223	ab	238	kl	9461	b-e	7898	b-e
17	Aerobic CL153 0 N/A	0		101.8	cd	90.8	cd	26.8	i	0.0	a	0.0	a	3975	i	714	e-h	4689	j	4154	kl

Continued.

Table 86. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle												Biomass	
Rating Date														7/24/2018		10/30/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Lodge				Yield		Yield		Total Yield		Biomass-dry	
Rating Unit				days		days		in		% plot		rate		lb/A		lb/A		lb/A		lb/A	
Crop Stage Scale																				50% HD	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Ratoon		MC + RC		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																		
18	Aerobic CL153			106.8	ab	95.8	ab	30.5	gh	0.0	a	0.0	a	7058	fg	572	e-j	7630	h	6284	f-i
	150 lb N/A	150	PF																		
19	Aerobic CL153			107.5	a	96.5	a	30.5	gh	0.0	a	0.0	a	7181	efg	464	g-l	7645	h	6070	f-j
	100 lb N/A	100	PF																		
	50 lb N/A	50	PI																		
20	Aerobic CL153			106.8	ab	95.8	ab	31.0	g	0.0	a	0.0	a	6925	g	430	h-l	7355	h	6395	e-i
	80 lb N/A	80	PF																		
	35 lb N/A	35	PI																		
	35 lb N/A	35	LB																		
21	Aerobic CLXL745			101.0	cde	90.0	cde	34.8	ef	0.0	a	0.0	a	5949	h	349	i-l	6298	i	5250	h-k
	0 N/A	0																			
22	Aerobic CLXL745			105.8	b	94.8	b	37.5	bc	0.0	a	0.0	a	8769	bc	220	kl	8989	efg	6265	f-i
	150 lb N/A	150	PF																		
23	Aerobic CLXL745			106.0	b	95.0	b	38.8	b	0.0	a	0.0	a	8799	bc	241	kl	9040	efg	6599	e-i
	100 lb N/A	100	PF																		
	50 lb N/A	50	PI																		
24	Aerobic CLXL745			105.8	b	94.8	b	37.3	cd	0.0	a	0.0	a	9036	b	205	l	9241	c-f	7216	c-g
	80 lb N/A	80	PF																		
	35 lb N/A	35	PI																		
	35 lb N/A	35	LB																		
LSD P=.05				1.12		1.12		1.49		9.65		0.25		682.7		324.6		758.0		1592.6	
Standard Deviation				0.79		0.79		1.06		6.84		0.18		484.0		230.1		537.4		1129.0	
CV				0.79		0.88		2.95		597.13		562.95		6.53		32.05		6.61		17.66	
Treatment F				108.23		108.23		78.403		0.928		0.922		63.156		20.934		42.648		8.545	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.5638		0.5709		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 87. Evaluation of water management on N uptake, NUE, and yield components. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Tissue N		N Uptake		N Fert. Eff.		Yield Components													
Rating Type				50% HD		50% HD		50% HD		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling			
Rating Unit				% N		lb/A		% (by mean)		grams		number		grams		grams		number		head		total	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																				
1	Delayed flood CL153			0.90	h-k	30	j	0	e	269	mn	94	gh	112	j	20.2	c-g	824	c-h	54.14	d	69.17	f
	0 N/A	0																					
2	Delayed flood CL153			1.25	c-g	106	a-d	46	ab	619	c-g	154	abc	292	b-e	17.5	f-i	712	f-j	64.32	a	72.35	ab
	150 lb N/A	150	PF																				
3	Delayed flood CL153			1.15	f-i	98	a-f	41	abc	637	b-f	159	abc	306	a-e	18.1	e-h	891	b-f	63.57	ab	72.43	ab
	100 lb N/A	100	PF																				
	50 lb N/A	50	PI																				
4	Delayed flood CL153			1.18	d-h	69	ghi	21	d	549	ghi	145	bcd	272	e-h	21.1	c-f	849	b-g	61.79	abc	71.80	abc
	80 lb N/A	80	PF																				
	35 lb N/A	35	PI																				
	35 lb N/A	35	LB																				
5	Delayed flood CLXL745			0.88	ijk	45	ij	0	e	369	kl	97	gh	186	i	24.4	bcd	1012	a-e	49.76	f	70.66	cde
	0 N/A	0																					
6	Delayed flood CLXL745			1.22	c-g	95	a-g	38	a-d	738	a	148	bc	340	a	28.2	ab	1128	ab	60.87	bc	72.39	ab
	150 lb N/A	150	PF																				
7	Delayed flood CLXL745			1.16	e-i	105	a-e	45	abc	708	ab	145	bcd	331	ab	23.5	b-e	894	b-f	60.23	c	72.11	abc
	100 lb N/A	100	PF																				
	50 lb N/A	50	PI																				
8	Delayed flood CLXL745			1.11	f-j	109	abc	47	ab	662	abc	127	def	341	a	30.6	a	1239	a	60.08	c	72.77	a
	80 lb N/A	80	PF																				
	35 lb N/A	35	PI																				
	35 lb N/A	35	LB																				

Continued.

Table 87. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Tissue N		N Uptake		N Fert. Eff.		Yield Components										Milling			
Rating Type				50% HD		50% HD		50% HD		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		head		total	
Rating Unit				% N		lb/A		% (by mean)		grams		number		grams		grams		number					
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																				
9	AWD CL153 0 N/A	0		0.83	jk	26	j	0	e	193	n	89	h	106	j	17.0	f-i	742	e-j	53.47	de	70.16	def
10	AWD CL153 150 lb N/A	150	PF	1.30	b-f	87	b-g	41	abc	555	f-i	141	b-e	276	d-h	20.8	c-g	892	b-f	62.41	abc	71.60	a-d
11	AWD CL153 100 lb N/A 50 lb N/A	100 50	PF PI	1.28	c-g	76	fgh	33	bcd	597	c-g	169	a	305	a-e	17.8	fgh	754	d-i	62.64	abc	71.98	abc
12	AWD CL153 80 lb N/A 35 lb N/A 35 lb N/A	80 35 35	PF PI LB	1.38	a-f	80	d-g	36	a-d	571	d-h	155	abc	290	c-f	20.6	c-g	1008	a-e	61.61	abc	71.61	a-d
13	AWD CLXL745 0 N/A	0		0.81	k	37	j	0	e	411	jk	112	fg	195	i	24.7	bc	1108	abc	50.46	f	69.84	ef
14	AWD CLXL745 150 lb N/A	150	PF	1.30	c-g	78	e-h	28	cd	640	b-e	146	bcd	308	a-e	27.8	ab	1269	a	60.95	bc	72.05	abc
15	AWD CLXL745 100 lb N/A 50 lb N/A	100 50	PF PI	1.24	c-g	87	c-g	33	bcd	706	ab	155	abc	328	abc	21.4	c-f	1035	a-d	61.07	bc	71.94	abc
16	AWD CLXL745 80 lb N/A 35 lb N/A 35 lb N/A	80 35 35	PF PI LB	1.45	a-e	115	a	52	a	648	bcd	143	b-e	315	a-d	27.6	ab	1081	abc	61.76	abc	72.41	ab
17	Aerobic CL153 0 N/A	0		1.10	f-k	46	ij	0	e	286	lm	124	ef	123	j	10.2	j	466	j	50.94	ef	70.09	ef

Continued.

Table 87. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description				Tissue N		N Uptake		N Fert Eff.		Yield Components													
Rating Type				50% HD		50% HD		50% HD		WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		Milling			
Rating Unit				% N		lb/A		% (by mean)		grams		number		grams		grams		number		head		total	
Crop Stage Majority				Main		Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage																				
18	Aerobic CL153			1.47	a-d	91	a-g	30	bcd	480	ij	161	ab	239	h	15.4	g-j	710	f-j	60.70	bc	72.31	ab
	150 lb N/A	150	PF																				
19	Aerobic CL153			1.48	abc	92	a-g	31	bcd	491	hij	157	abc	250	fgh	12.8	hij	572	g-j	61.39	bc	71.99	abc
	100 lb N/A	100	PF																				
	50 lb N/A	50	PI																				
20	Aerobic CL153			1.51	abc	98	a-f	34	bcd	466	j	171	a	247	gh	13.0	hij	591	g-j	61.52	abc	71.97	abc
	80 lb N/A	80	PF																				
	35 lb N/A	35	PI																				
	35 lb N/A	35	LB																				
21	Aerobic CLXL745			1.00	g-k	52	hij	0	e	355	kl	110	fgh	169	i	17.1	f-i	779	d-h	51.11	ef	71.00	b-e
	0 N/A	0																					
22	Aerobic CLXL745			1.64	a	103	a-f	34	bcd	562	e-i	147	bcd	285	d-g	18.9	d-g	881	b-f	62.24	abc	72.14	ab
	150 lb N/A	150	PF																				
23	Aerobic CLXL745			1.60	ab	105	a-e	38	a-d	621	c-g	157	abc	308	a-e	12.9	hij	537	hij	61.46	abc	71.83	abc
	100 lb N/A	100	PF																				
	50 lb N/A	50	PI																				
24	Aerobic CLXL745			1.62	a	114	ab	41	abc	589	c-g	140	cde	296	b-e	12.1	ij	481	ij	63.14	ab	72.80	a
	80 lb N/A	80	PF																				
	35 lb N/A	35	PI																				
	35 lb N/A	35	LB																				
LSD P=.05				0.299		27.3		17.8		83.24		20.49		40.65		5.576		286.74		2.910		1.455	
Standard Deviation				0.212		19.3		12.6		59.01		14.52		28.82		3.953		203.27		2.063		1.031	
CV				17.01		23.82		45.23		11.13		10.42		11.12		20.04		23.85		3.48		1.44	
Treatment F				5.426		8.136		7.919		25.413		10.535		25.488		8.001		5.078		20.334		3.563	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Nitrogen Source and Timing for Ratoon
Nitrogen Fertilization – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-20

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 88. Evaluation of N source and timing for ratoon N fertilization. H. Rouse Caffey Rice Research Station.

Crop Name			Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description			Plant-HD		Emer-HD		Tip of Panicle									
Rating Date							7/26/2018		7/26/2018		7/26/2018		10/30/2018		10/30/2018		10/30/2018	
Rating Type			50% HD		50% HD		Height		Moist		Yield		Moist		Yield		Total Yield	
Rating Unit			days		days		in		%		lb/A		%		lb/A		lb/A	
Crop Stage Majority			Main		Main		Main		Main		Main		Ratoon		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)																
1	Urea all at harvest	92	100	a	90	a	36.0	a	19.6	bc	8369	a	15.50	a	2158	a	10527	a
2	Urea all post ratoon flood	92	100	a	90	a	36.5	a	19.0	c	8147	a	15.65	a	2222	a	10369	a
3	Urea 1/2 dry ground before harvest	46	100	a	90	a	36.8	a	19.7	abc	8857	a	15.80	a	1991	a	10848	a
	Urea 1/2 at 7 d Postflood	46																
4	Urea 1/2 after harvest	46	100	a	90	a	36.5	a	20.3	ab	8788	a	15.85	a	1890	a	10678	a
	Urea 1/2 at 7 d Postflood	46																
5	Agrotain all at harvest	92	100	a	90	a	36.0	a	19.8	abc	9053	a	15.83	a	2141	a	11194	a
6	Agrotain all post ratoon flood	92	100	a	90	a	36.8	a	19.9	ab	9087	a	15.98	a	2162	a	11249	a
7	Agrotain 1/2 dry ground before harvest	46	100	a	90	a	36.3	a	20.4	a	8634	a	15.75	a	1870	a	10504	a
	Agrotain 1/2 at 7 d Postflood	46																
8	Agrotain 1/2 after harvest	46	100	a	90	a	37.8	a	19.9	ab	8370	a	15.63	a	2003	a	10373	a
	Agrotain 1/2 at 7 d Postflood	46																
LSD P=.05			.		.		1.65		0.80		996.5		0.857		394.9		1096.2	
Standard Deviation			0.00		0.00		1.12		0.54		677.7		0.583		268.6		745.5	
CV			0.0		0.0		3.07		2.73		7.82		3.7		13.07		6.96	
Treatment F			0.000		0.000		1.009		2.519		1.026		0.264		0.996		0.874	
Treatment Prob(F)			1.0000		1.0000		0.4526		0.0478		0.4424		0.9614		0.4612		0.5425	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Stubble Management and Nitrogen Rate for Ratoon Crop of Long-Grain Rice Varieties CL153, CLXL729, and Mermentau – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-24

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153, CLXL745, and Mermentau
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : Hybrid-10/Conventional-33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : **Conventional Varieties:**
Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Hybrids:
Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid, Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
150 lb N/A 46-0-0, May 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 89. Evaluation of stubble management and N rate for ratoon crop of long-grain rice varieties CL153, CLXL729, and Mermentau. H. Rouse Caffey Rice Research Station.

Crop Name				Rice	Rice	Rice	Rice	Rice	Rice
Description				Plant-HD	Emer-HD	Tip of Panicle			
Rating Date						7/26/2018	7/26/2018	10/30/2018	
Rating Type				50% HD	50% HD	Height	Yield	Yield	Total Yield
Rating Unit				days	days	in	lb/A	lb/A	lb/A
Crop Stage Majority				Main	Main	Main	Main	Ratoon	MC + RC
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage						
1	Normal cut CL153 UREA	0	Ratoon-PF	102 a	89 a	38.0 d-g	8575 h-n	1044 l-q	9619 l-r
2	Normal cut CL153 UREA	30	Ratoon-PF	102 a	89 a	38.8 de	9196 d-i	1383 i-n	10580 f-m
3	Normal cut CL153 UREA	60	Ratoon-PF	102 a	89 a	38.3 def	9162 e-j	1856 e-i	11018 d-j
4	Normal cut CL153 UREA	90	Ratoon-PF	102 a	89 a	37.8 d-g	9064 f-l	2119 d-h	11182 c-i
5	Normal cut CL153 UREA	120	Ratoon-PF	102 a	89 a	38.3 def	8662 h-n	2559 bcd	11221 c-i
6	Normal cut CL153 UREA	150	Ratoon-PF	102 a	89 a	38.8 de	8388 i-n	2889 ab	11277 c-i
7	Normal cut CLXL745 UREA	0	Ratoon-PF	97 b	84 b	45.5 a	9870 a-f	660 pqr	10531 g-n
8	Normal cut CLXL745 UREA	30	Ratoon-PF	97 b	84 b	43.5 bc	9977 a-f	1098 k-q	11075 d-i
9	Normal cut CLXL745 UREA	60	Ratoon-PF	97 b	84 b	42.5 c	9641 b-g	1154 j-p	10795 f-j
10	Normal cut CLXL745 UREA	90	Ratoon-PF	97 b	84 b	44.3 abc	10660 a	1379 i-n	12039 a-d
11	Normal cut CLXL745 UREA	120	Ratoon-PF	97 b	84 b	45.3 ab	9788 a-g	1800 f-i	11588 b-g
12	Normal cut CLXL745 UREA	150	Ratoon-PF	97 b	84 b	44.5 ab	10441 ab	2597 bcd	13038 a
13	Normal cut Mermentau UREA	0	Ratoon-PF	102 a	89 a	37.3 d-g	7759 n	1038 l-q	8798 qr

Continued.

Table 89. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
14	Normal cut Mermentau UREA	30	Ratoon-PF	102	a	89	a	36.8	fg	8233	k-n	1144	j-p	9376	pqr
15	Normal cut Mermentau UREA	60	Ratoon-PF	102	a	89	a	37.3	d-g	8088	mn	1379	i-n	9467	n-r
16	Normal cut Mermentau UREA	90	Ratoon-PF	102	a	89	a	37.0	efg	7988	n	1684	f-k	9672	k-q
17	Normal cut Mermentau UREA	120	Ratoon-PF	102	a	89	a	37.5	d-g	7916	n	2024	d-h	9940	j-p
18	Normal cut Mermentau UREA	150	Ratoon-PF	102	a	89	a	37.8	d-g	7914	n	2420	b-e	10334	i-p
19	Bush hog 8" CL153 UREA	0	Ratoon-PF	102	a	89	a	38.3	def	9156	e-k	1177	j-p	10333	i-p
20	Bush hog 8" CL153 UREA	30	Ratoon-PF	102	a	89	a	38.3	def	9072	f-k	1548	h-m	10621	f-l
21	Bush hog 8" CL153 UREA	60	Ratoon-PF	102	a	89	a	39.0	d	9338	d-h	2169	c-g	11506	c-h
22	Bush hog 8" CL153 UREA	90	Ratoon-PF	102	a	89	a	38.5	def	9477	c-h	2741	bc	12218	abc
23	Bush hog 8" CL153 UREA	120	Ratoon-PF	102	a	89	a	39.0	d	8921	g-m	2971	ab	11892	b-e
24	Bush hog 8" CL153 UREA	150	Ratoon-PF	102	a	89	a	38.0	d-g	9161	e-j	3439	a	12600	ab
25	Bush hog 8" CLXL745 UREA	0	Ratoon-PF	97	b	84	b	44.3	abc	10378	abc	387	r	10765	f-j
26	Bush hog 8" CLXL745 UREA	30	Ratoon-PF	97	b	84	b	45.3	ab	10101	a-d	529	qr	10630	f-l

Continued.

Table 89. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
27	Bush hog 8" CLXL745			97	b	84	b	44.8	ab	9858	a-f	988	m-q	10846	e-j
	UREA	60	Ratoon-PF												
28	Bush hog 8" CLXL745			97	b	84	b	44.3	abc	9789	a-g	947	n-r	10736	f-k
	UREA	90	Ratoon-PF												
29	Bush hog 8" CLXL745			97	b	84	b	45.0	ab	10044	a-e	1333	i-o	11377	c-i
	UREA	120	Ratoon-PF												
30	Bush hog 8" CLXL745			97	b	84	b	45.3	ab	10040	a-e	1603	g-l	11643	b-f
	UREA	150	Ratoon-PF												
31	Bush hog 8" Mermentau			102	a	89	a	36.8	fg	7802	n	747	o-r	8548	r
	UREA	0	Ratoon-PF												
32	Bush hog 8" Mermentau			102	a	89	a	37.5	d-g	8385	i-n	1063	l-q	9448	o-r
	UREA	30	Ratoon-PF												
33	Bush hog 8" Mermentau			102	a	89	a	36.3	g	7821	n	1710	f-j	9531	m-r
	UREA	60	Ratoon-PF												
34	Bush hog 8" Mermentau			102	a	89	a	36.8	fg	7807	n	1790	f-i	9597	l-r
	UREA	90	Ratoon-PF												
35	Bush hog 8" Mermentau			102	a	89	a	38.3	def	8241	j-n	2264	c-f	10505	h-o
	UREA	120	Ratoon-PF												
36	Bush hog 8" Mermentau			102	a	89	a	38.5	def	8146	lmn	2556	bcd	10702	f-k
	UREA	150	Ratoon-PF												
LSD P=.05				N/A		N/A		1.95		925.9		595.2		1077.8	
Standard Deviation				0.00		0.00		1.39		660.4		424.5		768.7	
CV				0.0		0.0		3.48		7.32		25.39		7.19	
Treatment F				0.000		0.000		22.280		7.235		12.627		7.219	
Treatment Prob(F)				1.0000		1.0000		0.0001		0.0001		0.0001		0.0001	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 90. Two-way table for the evaluation of stubble management and N rate for ratoon crop of long-grain rice varieties CL153, CLXL729, and Mermentau. H. Rouse Caffey Rice Research Station.

Crop Name				Rice	Rice	Rice	Rice	Rice	Rice
Description				Plant-HD	Emer-HD	Tip of Panicle			
Rating Date						7/26/2018	7/26/2018	10/30/2018	10/30/2018
Rating Type				50% HD	50% HD	Height	Yield	Yield	Total Yield
Rating Unit				days	days	in	lb/A	lb/A	lb/A
Crop Stage Majority				Main	Main	Main	Main	Ratoon	MC + RC
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage						
TABLE OF A (Cultural Practice) MEANS									
1	Normal cut			100.3 a	87.3 a	39.9 a	8962 a	1679 a	10642 a
2	Bush hog 8"			100.3 a	87.3 a	40.2 a	9085 a	1665 a	10750 a
P				1.0	1.0	0.2	0.2664	0.8356	0.4
LSD P=.05				N/A	N/A	0.46	218.2	140.3	254.0
TABLE OF B (Variety) MEANS									
1	CL153			102.0 a	89.0 a	38.4 b	9014 b	2158 a	11172 a
2	CLXL745			97.0 b	84.0 b	44.5 a	10049 a	1206 c	11255 a
3	Mermentau			102.0 a	89.0 a	37.3 c	8008 c	1652 b	9660 b
P				1.000	1.000	0.0001	0.0001	0.0001	0.0001
LSD P=.05				N/A	N/A	0.56	267.3	171.8	311.1
TABLE OF C (Fertility) MEANS									
1	UREA	0	Ratoon-PF	100.3 a	87.3 a	40.0 a	8923 a	842 e	9766 e
2	UREA	30	Ratoon-PF	100.3 a	87.3 a	40.0 a	9161 a	1128 d	10288 d
3	UREA	60	Ratoon-PF	100.3 a	87.3 a	39.7 a	8985 a	1543 c	10527 cd
4	UREA	90	Ratoon-PF	100.3 a	87.3 a	39.8 a	9131 a	1777 c	10907 bc
5	UREA	120	Ratoon-PF	100.3 a	87.3 a	40.5 a	8929 a	2159 b	11087 b
6	UREA	150	Ratoon-PF	100.3 a	87.3 a	40.5 a	9015 a	2584 a	11599 a
P				1.0000	1.0000	0.1661	0.7302	0.0001	0.0001
LSD P=.05				N/A	N/A	0.80	378.0	243.0	440.0
TABLE OF A (Cultural Practice) and B (Variety) MEANS									
1	Normal cut			102.0 a	89.0 a	38.3 a	8841 a	1975 b	10816 b
1	CL153								
2	Bush hog 8"			102.0 a	89.0 a	38.5 a	9188 a	2341 a	11528 a
1	CL153								
1	Normal cut			97.0 b	84.0 b	44.3 a	10063 a	1448 c	11511 a
2	CLXL745								
2	Bush hog 8"			97.0 b	84.0 b	44.8 a	10035 a	965 d	11000 b
2	CLXL745								
1	Normal cut			102.0 a	89.0 a	37.3 a	7983 a	1615 c	9598 c
3	Mermentau								
2	Bush hog 8"			102.0 a	89.0 a	37.3 a	8034 a	1688 c	9722 c
3	Mermentau								
P				1.000	1.000	0.7078	0.3451	0.0001	0.0001
LSD P=.05				N/A	N/A	0.80	378.0	243.0	440.0

Continued.

Table 90. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Cultural Practice) and C (Fertility) MEANS															
1	Normal cut			100.3	a	87.3	a	40.3	a	8735	a	914	a	9649	a
1	UREA	0	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	39.8	a	9112	a	770	a	9882	a
1	UREA	0	Ratoon-PF												
1	Normal cut			100.3	a	87.3	a	39.7	a	9135	a	1208	a	10344	a
2	UREA	30	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	40.3	a	9186	a	1047	a	10233	a
2	UREA	30	Ratoon-PF												
1	Normal cut			100.3	a	87.3	a	39.3	a	8964	a	1463	a	10427	a
3	UREA	60	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	40.0	a	9005	a	1622	a	10628	a
3	UREA	60	Ratoon-PF												
1	Normal cut			100.3	a	87.3	a	39.7	a	9237	a	1727	a	10965	a
4	UREA	90	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	39.8	a	9024	a	1826	a	10850	a
4	UREA	90	Ratoon-PF												
1	Normal cut			100.3	a	87.3	a	40.3	a	8789	a	2128	a	10916	a
5	UREA	120	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	40.8	a	9069	a	2189	a	11258	a
5	UREA	120	Ratoon-PF												
1	Normal cut			100.3	a	87.3	a	40.3	a	8914	a	2635	a	11550	a
6	UREA	150	Ratoon-PF												
2	Bush hog 8"			100.3	a	87.3	a	40.6	a	9116	a	2533	a	11648	a
6	UREA	150	Ratoon-PF												
P				1.000		1.000		0.7148		0.6949		0.6748		0.8761	
LSD P=.05				N/A		N/A		1.13		534.6		343.6		622.3	
TABLE OF B (Variety) and C (Fertility) MEANS															
1	CL153			102.0	a	89.0	a	38.1	a	8866	a	1110	a	9976	a
1	UREA	0	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	44.9	a	10124	a	524	a	10648	a
1	UREA	0	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	37.0	a	7781	a	892	a	8673	a
1	UREA	0	Ratoon-PF												
1	CL153			102.0	a	89.0	a	38.5	a	9134	a	1466	a	10600	a
2	UREA	30	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	44.4	a	10039	a	814	a	10853	a
2	UREA	30	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	37.1	a	8309	a	1103	a	9412	a
2	UREA	30	Ratoon-PF												

Continued.

Table 90. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF B (Variety) and C (Fertility) MEANS (continued)															
1	CL153			102.0	a	89.0	a	38.6	a	9250	a	2012	a	11262	a
3	UREA	60	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	43.6	a	9750	a	1071	a	10820	a
3	UREA	60	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	36.8	a	7955	a	1545	a	9499	a
3	UREA	60	Ratoon-PF												
1	CL153			102.0	a	89.0	a	38.1	a	9270	a	2430	a	11700	a
4	UREA	90	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	44.3	a	10225	a	1163	a	11388	a
4	UREA	90	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	36.9	a	7898	a	1737	a	9635	a
4	UREA	90	Ratoon-PF												
1	CL153			102.0	a	89.0	a	38.6	a	8792	a	2765	a	11557	a
5	UREA	120	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	45.1	a	9916	a	1566	a	11482	a
5	UREA	120	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	37.9	a	8079	a	2144	a	10223	a
5	UREA	120	Ratoon-PF												
1	CL153			102.0	a	89.0	a	38.4	a	8774	a	3164	a	11938	a
6	UREA	150	Ratoon-PF												
2	CLXL745			97.0	b	84.0	b	44.9	a	10240	a	2100	a	12341	a
6	UREA	150	Ratoon-PF												
3	Mermentau			102.0	a	89.0	a	38.1	a	8030	a	2488	a	10518	a
6	UREA	150	Ratoon-PF												
P				1		1		0.8144		0.5963		0.4861		0.5649	
LSD P=.05				N/A		N/A		1.38		654.7		420.9		762.1	
TABLE OF A (Cultural Practice), B (Variety), and C (Fertility) MEANS															
1	Normal cut			102.0	a	89.0	a	38.0	a	8575	a	1044	a	9619	a
1	CL153														
1	UREA	0	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.3	a	9156	a	1177	a	10333	a
1	CL153														
1	UREA	0	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	45.5	a	9870	a	660	a	10531	a
2	CLXL745														
1	UREA	0	Ratoon-PF												

Continued.

Table 90. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Cultural Practice), B (Variety), and C (Fertility) MEANS (continued)															
2	Bush hog 8"			97.0	b	84.0	b	44.3	a	10378	a	387	a	10765	a
2	CLXL745														
1	UREA	0	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.3	a	7759	a	1038	a	8798	a
3	Mermentau														
1	UREA	0	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	36.8	a	7802	a	747	a	8548	a
3	Mermentau														
1	UREA	0	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	38.8	a	9196	a	1383	a	10580	a
1	CL153														
2	UREA	30	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.3	a	9072	a	1548	a	10621	a
1	CL153														
2	UREA	30	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	43.5	a	9977	a	1098	a	11075	a
2	CLXL745														
2	UREA	30	Ratoon-PF												
2	Bush hog 8"			97.0	b	84.0	b	45.3	a	10101	a	529	a	10630	a
2	CLXL745														
2	UREA	30	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	36.8	a	8233	a	1144	a	9376	a
3	Mermentau														
2	UREA	30	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	37.5	a	8385	a	1063	a	9448	a
3	Mermentau														
2	UREA	30	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	38.3	a	9162	a	1856	a	11018	a
1	CL153														
3	UREA	60	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	39.0	a	9338	a	2169	a	11506	a
1	CL153														
3	UREA	60	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	42.5	a	9641	a	1154	a	10795	a
2	CLXL745														
3	UREA	60	Ratoon-PF												

Continued.

Table 90. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Cultural Practice), B (Variety), and C (Fertility) MEANS (continued)															
2	Bush hog 8"			97.0	b	84.0	b	44.8	a	9858	a	988	a	10846	a
2	CLXL745														
3	UREA	60	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.3	a	8088	a	1379	a	9467	a
3	Mermentau														
3	UREA	60	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	36.3	a	7821	a	1710	a	9531	a
3	Mermentau														
3	UREA	60	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.8	a	9064	a	2119	a	11182	a
1	CL153														
4	UREA	90	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.5	a	9477	a	2741	a	12218	a
1	CL153														
4	UREA	90	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	44.3	a	10660	a	1379	a	12039	a
2	CLXL745														
4	UREA	90	Ratoon-PF												
2	Bush hog 8"			97.0	b	84.0	b	44.3	a	9789	a	947	a	10736	a
2	CLXL745														
4	UREA	90	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.0	a	7988	a	1684	a	9672	a
3	Mermentau														
4	UREA	90	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	36.8	a	7807	a	1790	a	9597	a
3	Mermentau														
4	UREA	90	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	38.3	a	8662	a	2559	a	11221	a
1	CL153														
5	UREA	120	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	39.0	a	8921	a	2971	a	11892	a
1	CL153														
5	UREA	120	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	45.3	a	9788	a	1800	a	11588	a
2	CLXL745														
5	UREA	120	Ratoon-PF												

Continued.

Table 90. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018		10/30/2018	
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in		lb/A		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Cultural Practice), B (Variety), and C (Fertility) MEANS (continued)															
2	Bush hog 8"			97.0	b	84.0	b	45.0	a	10044	a	1333	a	11377	a
2	CLXL745														
5	UREA	120	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.5	a	7916	a	2024	a	9940	a
3	Mermentau														
5	UREA	120	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.3	a	8241	a	2264	a	10505	a
3	Mermentau														
5	UREA	120	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	38.8	a	8388	a	2889	a	11277	a
1	CL153														
6	UREA	150	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.0	a	9161	a	3439	a	12600	a
1	CL153														
6	UREA	150	Ratoon-PF												
1	Normal cut			97.0	b	84.0	b	44.5	a	10441	a	2597	a	13038	a
2	CLXL745														
6	UREA	150	Ratoon-PF												
2	Bush hog 8"			97.0	b	84.0	b	45.3	a	10040	a	1603	a	11643	a
2	CLXL745														
6	UREA	150	Ratoon-PF												
1	Normal cut			102.0	a	89.0	a	37.8	a	7914	a	2420	a	10334	a
3	Mermentau														
6	UREA	150	Ratoon-PF												
2	Bush hog 8"			102.0	a	89.0	a	38.5	a	8146	a	2556	a	10702	a
3	Mermentau														
6	UREA	150	Ratoon-PF												
P				1.000		1.000		0.3459		0.7696		0.7672		0.3655	
LSD P=.05				N/A		N/A		1.95		925.9		595.2		1077.8	
Standard Deviation				0.00		0.00		1.39		660.4		424.5		768.7	
CV				0.00		0.00		3.48		7.3		25.4		7.2	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Desiccant (potassium chlorate) Timing, Stubble Management, and Milling Quality for CLXL745 and CL111 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-25

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL111 and CLXL745
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : Hybrid-10/Conventional-33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 30
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : **Conventional Varieties:**
Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Hybrids:
Clothianidin (NipsIt INSIDE)
Fludioxonil (Spirato 480FS)
Fludioxonil (Maxim 4FS)
Gibberellic acid, Zinc
AV-1011 (bird repellent) – 18.3 oz

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 91. Evaluation of desiccant timing, stubble management, and milling quality for CLXL745 and CL111. H. Rouse Caffey Rice Research Station.

Trt No.	Treatment Name	Crop Name	Description	Rating Date	Rating Type	Rating Unit	Crop Stage Majority	Rice Plant-HD 50% HD days Main		Rice Emer-HD 50% HD days Main		Rice Tip of Panicle 7/30/2018 Height in Main		Rice 7/30/2018 Lodge % plot Main		Rice 7/30/2018 Lodge rate Main		Rice 7/30/2018 Yield lb/A Main		Rice Milling (%) Head Main		Rice Milling (%) Total Main		Rice 10/30/2018 Yield lb/A Ratoon		Rice Total Yield lb/A MC + RC	
1	CLXL745/Normal cut 14 days pre harvest							95.0	b	85.0	b	45.0	a	95.0	a	4.0	a	9387	bcd	34.15	cde	68.68	cd	529	c	9916	e
2	CLXL745/Bush hog 8" 14 days pre harvest							95.0	b	85.0	b	44.0	a	100.0	a	3.8	a	7776	f	34.21	cde	67.41	e	260	c	8036	f
3	CLXL745/Normal cut 7 days pre harvest							95.0	b	85.0	b	44.8	a	100.0	a	3.5	a	10373	a	33.08	e	69.00	bcd	468	c	10841	cde
4	CLXL745/Bush hog 8" 7 days pre harvest							95.0	b	85.0	b	45.0	a	92.5	a	3.5	a	9682	bc	33.81	cde	68.51	d	336	c	10019	e
5	CLXL745/Normal cut 1 day pre harvest							95.0	b	85.0	b	45.8	a	100.0	a	4.0	a	9891	ab	36.24	abc	69.03	bcd	402	c	10293	de
6	CLXL745/Bush hog 8" 1 day pre harvest							95.0	b	85.0	b	45.0	a	100.0	a	4.0	a	9398	bcd	37.88	ab	69.00	bcd	541	c	9940	e
7	CL111/Normal cut 14 days pre harvest							98.0	a	88.0	a	38.0	b	7.5	bc	1.0	bc	8411	ef	34.79	cde	69.54	ab	2046	b	10457	de
8	CL111/Bush hog 8" 14 days pre harvest							98.0	a	88.0	a	37.5	b	0.0	c	0.0	c	8709	de	35.08	cde	69.48	ab	2479	ab	11187	bcd
9	CL111/Normal cut 7 days pre harvest							98.0	a	88.0	a	37.5	b	5.0	c	0.5	bc	9161	cd	33.31	de	69.74	a	2611	a	11773	ab
10	CL111/Bush hog 8" 7 days pre harvest							98.0	a	88.0	a	38.3	b	22.5	b	1.5	b	9753	abc	35.33	b-e	69.32	abc	2636	a	12389	a
11	CL111/Normal cut 1 day pre harvest							98.0	a	88.0	a	37.5	b	7.5	bc	1.0	bc	8983	de	36.00	a-d	69.82	a	2584	ab	11567	abc
12	CL111/Bush hog 8" 1 day pre harvest							98.0	a	88.0	a	37.0	b	22.5	b	1.0	bc	9237	bcd	38.32	a	69.74	a	2586	ab	11823	ab
LSD P=.05								.		.		2.02		16.93		1.03		689.5		2.751		0.685		561.3		931.2	
Standard Deviation								0.00		0.00		1.40		11.77		0.72		479.3		1.913		0.476		390.2		647.3	
CV								0.0		0.0		3.4		21.64		31.06		5.19		5.44		0.69		26.79		6.06	
Treatment F								0.000		0.000		29.986		61.071		19.663		8.544		3.078		8.237		31.386		13.238	
Treatment Prob(F)								1.0000		1.0000		0.0001		0.0001		0.0001		0.0001		0.0061		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 92. Two-way table for the desiccant timing, stubble management, and milling quality for CLXL745 and CL111. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-HD		Emer-HD		Tip of Panicle															
Rating Date						7/30/2018		7/30/2018		7/30/2018		7/30/2018		Milling (%)				10/30/2018			
Rating Type		50% HD		50% HD		Height		Lodge				Yield		Head		Total		Yield		Total Yield	
Rating Unit		days		days		in		% plot		rate		lb/A						lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name																				
TABLE OF A (Variety) MEANS																					
1	CLXL745	95.0	b	85.0	b	44.9	a	97.9	a	3.8	a	9418	a	34.89	a	68.60	b	423	b	9841	b
2	CL111	98.0	a	88.0	a	37.6	b	10.8	b	0.8	b	9042	b	35.47	a	69.61	a	2490	a	11533	a
P		1.000		1.000		0.0001		0.0001		0.0001		0.0105		0.304		0.0001		0.0001		0.0016	
LSD P=.05		N/A		N/A		0.82		6.91		0.42		281.5		1.1232		0.2795		229.1		380.2	
TABLE OF B (Timing of Application) MEANS																					
1	14 days pre harvest	96.5	a	86.5	a	41.1	a	50.6	a	2.2	a	8571	c	34.56	b	68.78	b	1328	a	9899	b
2	7 days pre harvest	96.5	a	86.5	a	41.4	a	55.0	a	2.3	a	9742	a	33.88	b	69.14	a	1513	a	11255	a
3	1 day pre harvest	96.5	a	86.5	a	41.3	a	57.5	a	2.5	a	9377	b	37.11	a	69.40	a	1528	a	10906	a
P		1.000		1.000		0.9		0.3		0.4		0.0001		0.000		0.003		0.3104		0.016	
LSD P=.05		N/A		N/A		1.01		8.46		0.52		344.8		1.3757		0.3423		280.6		465.6	
TABLE OF C (Cultural Practice) MEANS																					
1	Normal cut	96.5	a	86.5	a	41.4	a	52.5	a	2.3	a	9368	a	34.60	b	69.30	a	1440	a	10808	a
2	Bush hog 8"	96.5	a	86.5	a	41.1	a	56.3	a	2.3	a	9093	a	35.77	a	68.91	b	1473	a	10566	a
P		1.000		1.000		0.5		0.3		0.8		0.0551		0.041		0.008		0.756		0.5816	
LSD P=.05		N/A		N/A		0.82		6.91		0.42		281.5		1.1232		0.2795		229.1		380.2	
TABLE OF A (Variety) and B (Timing of Application) MEANS																					
1	CLXL745	95.0	b	85.0	b	44.5	a	97.5	a	3.9	a	8581	a	34.18	a	68.04	a	394	a	8976	a
1	14 days pre harvest																				
2	CL111	98.0	a	88.0	a	37.8	a	3.8	a	0.5	a	8560	a	34.93	a	69.51	a	2262	a	10822	a
1	14 days pre harvest																				
1	CLXL745	95.0	b	85.0	b	44.9	a	96.3	a	3.5	a	10028	a	33.44	a	68.76	a	402	a	10430	a
2	7 days pre harvest																				
2	CL111	98.0	a	88.0	a	37.9	a	13.8	a	1.0	a	9457	a	34.32	a	69.53	a	2624	a	12081	a
2	7 days pre harvest																				
1	CLXL745	95.0	b	85.0	b	45.4	a	100.0	a	4.0	a	9645	a	37.06	a	69.01	a	472	a	10117	a
3	1 day pre harvest																				
2	CL111	98.0	a	88.0	a	37.3	a	15.0	a	1.0	a	9110	a	37.16	a	69.78	a	2585	a	11695	a
3	1 day pre harvest																				
P		1.000		1.000		0.3474		0.3758		0.2392		0.2087		0.8287		0.0722		0.4257		0.016	
LSD P=.05		N/A		N/A		1.43		11.97		0.73		487.6		1.9455		0.4841		396.9		658.4	

Continued.

Table 92. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-HD		Emer-HD		Tip of panicle															
Rating Date						7/30/2018		7/30/2018		7/30/2018		7/30/2018		Milling (%)				10/30/2018			
Rating Type		50% HD		50% HD		Height		Lodge				Yield		Head		Total		Yield		Total Yield	
Rating Unit		days		days		in		% plot		rate		lb/A						lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name																				
TABLE OF A (Variety) and C (Cultural Practice) MEANS																					
1	CLXL745	95.0	b	85.0	b	45.2	a	98.3	a	3.8	a	9884	a	34.49	a	68.90	a	466	a	10350	b
1	Normal cut																				
2	CL111	98.0	a	88.0	a	37.7	a	6.7	a	0.8	a	8852	b	34.70	a	69.70	a	2414	a	11266	a
1	Normal cut																				
1	CLXL745	95.0	b	85.0	b	44.7	a	97.5	a	3.8	a	8952	b	35.30	a	68.31	a	379	a	9331	c
2	Bush hog 8"																				
2	CL111	98.0	a	88.0	a	37.6	a	15.0	a	0.8	a	9233	b	36.24	a	69.51	a	2567	a	11800	a
2	Bush hog 8"																				
P		1.000		1.000		0.6101		0.1864		0.842		0.0001		0.5103		0.1451		0.2899		0.5816	
LSD P=.05		N/A		N/A		1.16		9.77		0.60		398.1		1.5885		0.3952		324.1		537.6	
TABLE OF B (Timing of Application) and C (Cultural Practice) MEANS																					
1	14 days pre harvest	96.5	a	86.5	a	41.5	a	51.3	a	2.5	a	8899	a	34.47	a	69.11	a	1288	a	10186	a
1	Normal cut																				
2	7 days pre harvest	96.5	a	86.5	a	41.1	a	52.5	a	2.0	a	9767	a	33.20	a	69.37	a	1539	a	11307	a
1	Normal cut																				
3	1 day pre harvest	96.5	a	86.5	a	41.6	a	53.8	a	2.5	a	9437	a	36.12	a	69.43	a	1493	a	10930	a
1	Normal cut																				
1	14 days pre harvest	96.5	a	86.5	a	40.8	a	50.0	a	1.9	a	8242	a	34.64	a	68.45	a	1369	a	9612	a
2	Bush hog 8"																				
2	7 days pre harvest	96.5	a	86.5	a	41.6	a	57.5	a	2.5	a	9718	a	34.56	a	68.92	a	1486	a	11204	a
2	Bush hog 8"																				
3	1 day pre harvest	96.5	a	86.5	a	41.0	a	61.3	a	2.5	a	9318	a	38.10	a	69.37	a	1564	a	10881	a
2	Bush hog 8"																				
P		1.000		1.000		0.3916		0.5618		0.1006		0.1628		0.4064		0.2086		0.8745		0.6619	
LSD P=.05		N/A		N/A		1.43		11.97		0.73		487.6		1.9455		0.4841		396.9		658.4	

Continued.

Table 92. Continued.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-HD		Emer-HD		Tip of Panicle															
Rating Date						7/30/2018		7/30/2018		7/30/2018		7/30/2018		Milling (%)				10/30/2018			
Rating Type		50% HD		50% HD		Height		Lodge				Yield		Head		Total		Yield		Total Yield	
Rating Unit		days		days		in		% plot		rate		lb/A						lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name																				
TABLE OF A (Variety), B (Timing of Application), and C (Cultural Practice) MEANS																					
1	CLXL745/Normal cut	95.0	b	85.0	b	45.0	a	95.0	a	4.0	a	9387	a	34.15	a	68.68	a	529	a	9916	a
1	14 days pre harvest																				
2	CL111/Normal cut	98.0	a	88.0	a	38.0	a	7.5	a	1.0	a	8411	a	34.79	a	69.54	a	2046	a	10457	a
1	14 days pre harvest																				
1	CLXL745/Normal cut	95.0	b	85.0	b	44.8	a	100.0	a	3.5	a	10373	a	33.08	a	69.00	a	468	a	10841	a
2	7 days pre harvest																				
2	CL111/Normal cut	98.0	a	88.0	a	37.5	a	5.0	a	0.5	a	9161	a	33.31	a	69.74	a	2611	a	11773	a
2	7 days pre harvest																				
1	CLXL745/Normal cut	95.0	b	85.0	b	45.8	a	100.0	a	4.0	a	9891	a	36.24	a	69.03	a	402	a	10293	a
3	1 day pre harvest																				
2	CL111/Normal cut	98.0	a	88.0	a	37.5	a	7.5	a	1.0	a	8983	a	36.00	a	69.82	a	2584	a	11567	a
3	1 day pre harvest																				
1	CLXL745/Bush hog 8"	95.0	b	85.0	b	44.0	a	100.0	a	3.8	a	7776	a	34.21	a	67.41	a	260	a	8036	a
1	14 days pre harvest																				
2	CL111/Bush hog 8"	98.0	a	88.0	a	37.5	a	0.0	a	0.0	a	8709	a	35.08	a	69.48	a	2479	a	11187	a
1	14 days pre harvest																				
1	CLXL745/Bush hog 8"	95.0	b	85.0	b	45.0	a	92.5	a	3.5	a	9682	a	33.81	a	68.51	a	336	a	10019	a
2	7 days pre harvest																				
2	CL111/Bush hog 8"	98.0	a	88.0	a	38.3	a	22.5	a	1.5	a	9753	a	35.32	a	69.32	a	2636	a	12389	a
2	7 days pre harvest																				
1	CLXL745/bush hog 8"	95.0	b	85.0	b	45.0	a	100.0	a	4.0	a	9398	a	37.88	a	69.00	a	541	a	9940	a
3	1 day pre harvest																				
2	CL111/Bush hog 8"	98.0	a	88.0	a	37.0	a	22.5	a	1.0	a	9237	a	38.32	a	69.74	a	2586	a	11823	a
3	1 day pre harvest																				
P		1.000		1.000		0.9895		0.0804		0.2392		0.2439		0.9254		0.1326		0.312		0.6619	
LSD P=.05		N/A		N/A		2.02		16.93		1.03		689.5		2.7513		0.6846		561.3		931.2	
Standard Deviation		0.00		0.00		1.40		11.77		0.72		479.3		1.9125		0.4759		390.2		647.3	
CV		0.00		0.00		3.40		21.64		31.06		5.2		5.4360		0.6886		26.8		6.1	

N/A = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Nitrogen Rate and Stubble Management on Yield of Main and Ratoon Crops for CL153 – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-26

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 26
- **Ratoon Harvest date** ..... : Oct. 30

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
90 lb N/A 46-0-0, Aug. 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : Aug. 6
- **Ratoon drain** ..... : Oct. 15

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 93. Evaluation of N rate and stubble management on yield of main and ratoon crops for CL153. H. Rouse Caffey Rice Research Station.

Crop Name			Rice		Rice		Rice		Rice		Rice		Rice	
Description			Plant-HD		Emer-HD		Tip of Panicle							
Rating Date							7/26/2018		7/26/2018		10/30/2018			
Rating Type			50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit			days		days		in							
Crop Stage Majority			Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)												
1	Normal cut UTC	0	100.0	h	87.0	h	30.3	g	1464	f	1783	a	3247	h
2	Normal cut UREA 30	30	99.5	h	86.5	h	32.5	f	4278	e	2205	a	6483	f
3	Normal cut UREA 60	60	101.8	g	88.8	g	34.8	e	6778	d	2202	a	8980	e
4	Normal cut UREA 90	90	102.5	fg	89.5	fg	36.0	de	7603	cd	2105	a	9707	de
5	Normal cut UREA 120	120	103.3	def	90.3	def	37.0	cd	8268	bc	2028	a	10296	bcd
6	Normal cut UREA 150	150	104.0	bcd	91.0	bcd	37.3	bcd	9388	a	2236	a	11624	a
7	Normal cut UREA 180	180	104.3	abc	91.3	abc	39.0	ab	9553	a	2380	a	11933	a
8	Normal cut UREA 210	210	104.5	ab	91.5	ab	39.3	a	8882	ab	2247	a	11129	ab
9	Normal cut UREA 240	240	104.3	abc	91.3	abc	39.8	a	8630	abc	2214	a	10845	abc
10	Bush hog 8” UTC	0	99.8	h	86.8	h	29.5	g	2199	f	2241	a	4441	g
11	Bush hog 8” UREA 30	30	100.0	h	87.0	h	31.3	fg	4359	e	2393	a	6751	f
12	Bush hog 8” UREA 60	60	101.8	g	88.8	g	34.5	e	7626	cd	2175	a	9800	cde
13	Bush hog 8” UREA 90	90	103.0	ef	90.0	ef	36.0	de	8240	bc	2108	a	10348	bcd
14	Bush hog 8” UREA 120	120	103.5	cde	90.5	cde	36.8	cd	9024	ab	2082	a	11106	ab
15	Bush hog 8” UREA 150	150	104.3	abc	91.3	abc	36.8	cd	9184	ab	2067	a	11251	ab
16	Bush hog 8” UREA 180	180	104.8	ab	91.8	ab	38.0	abc	9399	a	2191	a	11590	a
17	Bush hog 8” UREA 210	210	105.0	a	92.0	a	38.3	abc	9028	ab	2075	a	11102	ab
18	Bush hog 8” UREA 240	240	105.0	a	92.0	a	38.3	abc	9517	a	2316	a	11833	a
LSD P=.05			0.81		0.81		1.77		1085.5		321.5		1100.6	
Standard Deviation			0.57		0.57		1.25		764.7		226.5		775.3	
CV			0.55		0.63		3.48		10.32		10.44		8.09	
Treatment F			45.664		45.664		24.992		45.253		1.565		45.373	
Treatment Prob(F)			0.0001		0.0001		0.0001		0.0001		0.1098		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 94. Two-way table for the evaluation of N rate and stubble management on yield of main and ratoon crops for CL153. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in							
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Stubble Management) MEANS															
1	Normal cut			102.7	b	89.7	b	36.2	a	7205	b	2155	a	9360	b
2	Bush hog			103.0	a	90.0	a	35.5	b	7620	a	2183	a	9803	a
P				0.0		0.0		0.0		0.0255		0.6098		0.0192	
LSD P=.05				0.27		0.27		0.59		361.8		107.2		366.9	
TABLE OF B (N Rates) MEANS															
1	UTC	0	Preflood	99.9	f	86.9	f	29.9	e	1832	f	2012	a	3844	f
2	UREA 30	30	Preflood	99.8	f	86.8	f	31.9	d	4318	e	2299	a	6617	e
3	UREA 60	60	Preflood	101.8	e	88.8	e	34.6	c	7202	d	2188	a	9390	d
4	UREA 90	90	Preflood	102.8	d	89.8	d	36.0	b	7921	cd	2106	a	10028	cd
5	UREA 120	120	Preflood	103.4	c	90.4	c	36.9	b	8646	bc	2055	a	10701	bc
6	UREA 150	150	Preflood	104.1	b	91.1	b	37.0	b	9286	ab	2151	a	11437	ab
7	UREA 180	180	Preflood	104.5	ab	91.5	ab	38.5	a	9476	a	2285	a	11762	a
8	UREA 210	210	Preflood	104.8	a	91.8	a	38.8	a	8955	ab	2161	a	11115	ab
9	UREA 240	240	Preflood	104.6	ab	91.6	ab	39.0	a	9074	ab	2265	a	11339	ab
P				0.0		0.0		0.0		0.0001		0.1483		0.0001	
LSD P=.05				0.57		0.57		1.25		767.6		227.3		778.2	
TABLE OF A (Stubble Management) and B (N Rates) MEANS															
1	Normal cut			100.0	a	87.0	a	30.3	a	1464	a	1783	a	3247	a
1	UTC	0	Preflood												
2	Bush hog			99.8	a	86.8	a	29.5	a	2199	a	2241	a	4441	a
1	UTC	0	Preflood												
1	Normal cut			99.5	a	86.5	a	32.5	a	4278	a	2205	a	6483	a
2	UREA 30	30	Preflood												
2	Bush hog			100.0	a	87.0	a	31.3	a	4359	a	2393	a	6751	a
2	UREA 30	30	Preflood												
1	Normal cut			101.8	a	88.8	a	34.8	a	6778	a	2202	a	8980	a
3	UREA 60	60	Preflood												
2	Bush hog			101.8	a	88.8	a	34.5	a	7626	a	2175	a	9800	a
3	UREA 60	60	Preflood												
1	Normal cut			102.5	a	89.5	a	36.0	a	7603	a	2105	a	9707	a
4	UREA 90	90	Preflood												
2	Bush hog			103.0	a	90.0	a	36.0	a	8240	a	2108	a	10348	a
4	UREA 90	90	Preflood												
1	Normal cut			103.3	a	90.3	a	37.0	a	8268	a	2028	a	10296	a
5	UREA 120	120	Preflood												
2	Bush hog			103.5	a	90.5	a	36.8	a	9024	a	2082	a	11106	a
5	UREA 120	120	Preflood												

Continued.

Table 94. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle							
Rating Date								7/26/2018		7/26/2018		10/30/2018			
Rating Type				50% HD		50% HD		Height		Yield		Yield		Total Yield	
Rating Unit				days		days		in							
Crop Stage Majority				Main		Main		Main		Main		Ratoon		MC + RC	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage												
TABLE OF A (Stubble Management) and B (N Rates) MEANS (continued)															
1	Normal cut			104.0	a	91.0	a	37.3	a	9388	a	2236	a	11624	a
6	UREA 150	150	Preflood												
2	Bush hog			104.3	a	91.3	a	36.8	a	9184	a	2067	a	11251	a
6	UREA 150	150	Preflood												
1	Normal cut			104.3	a	91.3	a	39.0	a	9553	a	2380	a	11933	a
7	UREA 180	180	Preflood												
2	Bush hog			104.8	a	91.8	a	38.0	a	9399	a	2191	a	11590	a
7	UREA 180	180	Preflood												
1	Normal cut			104.5	a	91.5	a	39.3	a	8882	a	2247	a	11129	a
8	UREA 210	210	Preflood												
2	Bush hog			105.0	a	92.0	a	38.3	a	9028	a	2075	a	11102	a
8	UREA 210	210	Preflood												
1	Normal cut			104.3	a	91.3	a	39.8	a	8630	a	2214	a	10845	a
9	UREA 240	240	Preflood												
2	Bush hog			105.0	a	92.0	a	38.3	a	9517	a	2316	a	11833	a
9	UREA 240	240	Preflood												
P				0.7914		0.7914		0.9501		0.7146		0.1225		0.3607	
LSD P=.05				0.81		0.81		1.77		1085.5		321.5		1100.6	
Standard Deviation				0.57		0.57		1.25		764.7		226.5		775.3	
CV				0.55		0.63		3.48		10.3		10.4		8.1	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Urea Treated with NBPT Products (ContaiN, Agrotain, N Fixx, and ContaiN Max) on Rice Grain Yield – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-32

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.43
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-1,512; Cu-1.8; Mg-252; P-15; K-60; Na-81; S-8.2; Zn-9.1

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 25
- **Ratoon Harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 13
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 95. Evaluation of urea treated with NBPT products (ContaiN, Agrotain, N Fixx, and ContaiN Max) on rice grain yield. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-HD		Emer-HD		Tip of Panicle					
Rating Date								7/25/2017		7/25/2017		7/25/2017	
Rating Type				50% HD		50% HD		Height		Moisture		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	Untreated Check			99	e	88	e	29.5	h	15.9	e	3412	g
2	UREA	100	10 DPF	99	e	88	e	33.0	g	15.6	e	6771	f
3	UREA	150	10 DPF	100	d	89	d	34.8	f	16.8	d	8015	b-e
4	UREA	200	10 DPF	101	ab	90	ab	36.0	c-f	18.4	c	8977	a
5	UREA + ContaiN	100	10 DPF	100	d	89	d	35.3	ef	16.9	d	7905	cde
6	UREA + ContaiN	150	10 DPF	101	ab	90	ab	36.0	c-f	18.7	bc	8947	a
7	UREA + ContaiN	200	10 DPF	101	ab	90	ab	37.8	a	19.8	a	8539	abc
8	UREA + Agrotain Advanced	100	10 DPF	101	cd	90	cd	35.0	ef	17.2	d	7569	ef
9	UREA + Agrotain Advanced	150	10 DPF	101	bc	90	bc	36.8	a-d	18.9	bc	8429	a-d
10	UREA + Agrotain Advanced	200	10 DPF	102	a	91	a	37.5	ab	20.0	a	8538	abc
11	UREA + N Fixx	100	10 DPF	100	d	89	d	35.5	def	17.1	d	7625	de
12	UREA + N Fixx	150	10 DPF	102	a	91	a	37.0	abc	19.0	bc	8825	ab
13	UREA + N Fixx	200	10 DPF	101	ab	90	ab	37.8	a	20.1	a	9105	a
14	UREA + ContaiN Max	100	10 DPF	100	d	89	d	35.3	ef	17.5	d	7562	ef
15	UREA + ContaiN Max	150	10 DPF	101	ab	90	ab	36.3	b-e	19.3	ab	9221	a
16	UREA + ContaiN Max	200	10 DPF	102	a	91	a	36.8	a-d	20.1	a	8930	a
LSD P=.05				0.62		0.62		1.43		0.80		811.8	
Standard Deviation				0.44		0.44		1.00		0.56		570.0	
CV				0.43		0.49		2.82		3.11		7.1	
Treatment F				19.565		19.565		16.793		28.367		24.579	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Prevent and Profound on Phosphorus Response of CL153 – H. Rouse Caffey Rice Research Station (South Unit)

Experiment number ..... : 18-CS-02

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (South Unit)
- **Tillage type** ..... : Spring stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.59
- **pH** ..... : 6.13
- **Extractable nutrients** ppm ..... : Ca-1281; Cu-1.8; Mg-237; P-4.9; K-59; Na-56; S-2.6; Zn-6.5

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / May 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : May 21
- **Harvest date** ..... : Sept. 10
- **Ratoon Harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, May 15
150 lb N/A 46-0-0, June 4

Water management ..... : Underground irrigation
- **Flush** ..... : May 16 and 24
- **Flood** ..... : June 5
- **Drain** ..... : Aug. 27
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2.1 pt/A Prowl H_2O + 4 qt/A Propanil + .5 oz/A Permit, June 1
  15 oz/A Clincher SF + 1 qt/A Crop Oil, June 11
- **Insecticides** ..... : 3.2 oz/A Mustang Max, July 30
- **Fungicides** ..... : None

Table 96. Evaluation of Prevent and Profound on phosphorus response of CL153. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description					Plant-HD		Emer-HD		Tip of Panicle											
Rating Date									9/5/2018		9/10/2018		9/10/2018		9/10/2018		9/10/2018		9/10/2018	
Rating Type					50% HD		50% HD		Height		Lodge				Moisture		Yield		Straw wt		Grain wt	
Rating Unit					days		days		in		% plot		rate		%		lb/A		lb/A		lb/A	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage																		
1	P treated Prevent (full rate)	60	lb ai/A	ATPLAN	77.3	a	70.3	a	44.3	a	97.5	a	4.0	a	21.6	a	5297	a	12444	a	8850	a
2	P treated Prevent (75% rate)	45	lb ai/A	ATPLAN	77.3	a	70.3	a	42.8	a	90.0	a	4.0	a	19.8	a	5773	a	12392	a	9760	a
3	P treated Prevent (50% rate)	30	lb ai/A	ATPLAN	77.5	a	70.5	a	42.3	a	95.0	a	4.0	a	20.0	a	4988	a	9263	a	7665	a
4	P Untreated (full rate)	60	lb ai/A	ATPLAN	77.8	a	70.8	a	42.5	a	92.5	a	4.0	a	22.6	a	4480	a	10628	a	6862	a
5	P Untreated (75% rate)	45	lb ai/A	ATPLAN	77.5	a	70.5	a	41.3	a	95.0	a	4.3	a	21.2	a	5145	a	9644	a	6244	a
6	P Untreated (50% rate)	30	lb ai/A	ATPLAN	77.8	a	70.8	a	42.3	a	97.5	a	4.3	a	21.6	a	5199	a	12355	a	10964	a
7	ProFound	16	oz/A	Emergence	77.3	a	70.3	a	43.0	a	90.0	a	4.0	a	19.9	a	6214	a	10568	a	8125	a
8	P Untreated (50% rate)	30	lb ai/A	ATPLAN	77.8	a	70.8	a	43.5	a	95.0	a	4.0	a	19.1	a	5521	a	12542	a	10725	a
	ProFound	16	oz/A	Emergence																		
9	UTC	0	lb ai/A		77.5	a	70.5	a	42.3	a	87.5	a	4.0	a	19.8	a	5968	a	8510	a	7164	a
LSD P=.05					0.83		0.83		2.49		7.16		0.32		3.058		1354.5		4195.4		4084.7	
Standard Deviation					0.57		0.57		1.71		4.91		0.22		2.096		928.1		2874.8		2798.9	
CV					0.74		0.81		4.0		5.26		5.44		10.16		17.19		26.31		32.99	
Treatment F					0.574		0.574		1.010		2.077		1.000		1.203		1.318		1.184		1.476	
Treatment Prob(F)					0.7884		0.7884		0.4549		0.0795		0.4613		0.3386		0.2818		0.3489		0.2177	

Continued.

Table 96. Continued.

Part Rated					Pre-Plant Soil Analysis																	
Rating Date					5/4/2018																	
Rating Type					pH (1:1)		P		K		Ca		Mg		Na		S		Cu		Zn	
Rating Unit							ppm		ppm		ppm		ppm		ppm		ppm		ppm		ppm	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage																		
1	P treated Prevent (full rate)	60	lb ai/A	ATPLAN	6.49	a	7.0	a	64	a	1313	a	240	a	66	a	8.8	bc	1.8	ab	8.8	a
2	P treated Prevent (75% rate)	45	lb ai/A	ATPLAN	6.46	a	6.8	a	72	a	1317	a	246	a	69	a	9.4	a	1.8	a	8.8	a
3	P treated Prevent (50% rate)	30	lb ai/A	ATPLAN	6.65	a	6.5	a	67	a	1314	a	246	a	70	a	8.7	bc	1.8	abc	8.5	a
4	P Untreated (full rate)	60	lb ai/A	ATPLAN	6.43	a	6.3	a	63	a	1276	a	236	a	65	a	8.7	bc	1.7	c	8.4	a
5	P Untreated (75% rate)	45	lb ai/A	ATPLAN	6.49	a	18.0	a	60	a	1308	a	240	a	67	a	8.6	c	1.8	ab	8.8	a
6	P Untreated (50% rate)	30	lb ai/A	ATPLAN	6.37	a	5.6	a	62	a	1244	a	238	a	71	a	8.5	c	1.8	c	8.5	a
7	ProFound	16	oz/A	Emergence	6.74	a	6.5	a	66	a	1304	a	246	a	69	a	9.0	abc	1.8	a	8.6	a
8	P Untreated (50% rate)	30	lb ai/A	ATPLAN	6.53	a	6.6	a	66	a	1258	a	235	a	68	a	8.9	bc	1.8	abc	8.9	a
	ProFound	16	oz/A	Emergence																		
9	UTC	0	lb ai/A		6.54	a	6.7	a	70	a	1263	a	240	a	72	a	9.1	ab	1.8	bc	8.8	a
LSD P=.05					0.3275		11.761		11.731		98.54		9.48		10.59		0.457		0.068		0.951	
Standard Deviation					0.2244		8.059		8.038		67.52		6.49		7.26		0.313		0.047		0.652	
CV					3.44		103.76		12.25		5.24		2.7		10.63		3.53		2.59		7.51	
Treatment F					1.018		0.919		0.836		0.705		1.860		0.414		2.756		3.483		0.305	
Treatment Prob(F)					0.4493		0.5180		0.5801		0.6847		0.1145		0.9009		0.0260		0.0083		0.9566	

Continued.

Table 96. Continued.

Part Rated					Post-Harvest Soil Analysis																	
Rating Date					9/14/2018																	
Rating Type					pH (1:1)		P		K		Ca		Mg		Na		S		Cu		Zn	
Rating Unit							ppm		ppm		ppm		ppm		ppm		ppm		ppm		ppm	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage																		
1	P treated Prevent (full rate)	60	lb ai/A	ATPLAN	7.20	a	5.4	a	64	a	1550	a	316	a	195	a	7.6	a	1.6	a	6.0	a
2	P treated Prevent (75% rate)	45	lb ai/A	ATPLAN	7.30	a	4.9	a	67	a	1751	a	353	a	206	a	7.4	a	1.7	a	6.1	a
3	P treated Prevent (50% rate)	30	lb ai/A	ATPLAN	7.36	a	4.8	a	68	a	1568	a	350	a	226	a	7.6	a	1.7	a	5.7	a
4	P Untreated (full rate)	60	lb ai/A	ATPLAN	7.25	a	5.4	a	65	a	1525	a	321	a	186	a	7.5	a	1.7	a	7.3	a
5	P Untreated (75% rate)	45	lb ai/A	ATPLAN	7.33	a	4.9	a	67	a	1573	a	347	a	220	a	7.6	a	1.6	a	5.9	a
6	P Untreated (50% rate)	30	lb ai/A	ATPLAN	7.33	a	4.7	a	61	a	1475	a	334	a	232	a	7.4	a	1.5	a	5.7	a
7	ProFound	16	oz/A	Emergence	7.29	a	4.6	a	64	a	1390	a	311	a	181	a	7.4	a	1.7	a	7.1	a
8	P Untreated (50% rate)	30	lb ai/A	ATPLAN	7.34	a	4.8	a	66	a	1469	a	316	a	193	a	7.1	a	1.5	a	6.7	a
	ProFound	16	oz/A	Emergence																		
9	UTC	0	lb ai/A		7.38	a	4.5	a	68	a	1584	a	365	a	246	a	7.7	a	1.6	a	5.6	a
LSD P=.05					0.240		1.233		6.676		231.3		40.22		54.08		1.041		0.299		2.371	
Standard Deviation					0.165		0.845		4.574		158.5		27.56		37.06		0.713		0.205		1.625	
CV					2.250		17.230		6.97		10.27		8.24		17.69		9.530		12.67		26.01	
Treatment F					0.467		0.638		0.976		1.603		2.030		1.488		0.240		0.446		0.582	
Treatment Prob(F)					0.867		0.738		0.478		0.1762		0.086		0.2133		0.979		0.881		0.782	

Continued.

Table 96. Continued.

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Part Rated									STRAW										GRAIN			
Rating Date																						
Rating Type					P		P Uptake		K		S		Zn		P		P Uptake		K		S		Zn	
Rating Unit					%		lb/A		%		%		ppm		%		lb/A		%		%		ppm	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage																				
1	P treated Prevent (full rate)	60	lb ai/A	ATPLAN	0.34	a	43	a	0.27	a	0.11	ab	30	a	0.11	a	10	a	1.02	a	0.08	a	71	a
2	P treated Prevent (75% rate)	45	lb ai/A	ATPLAN	0.32	a	40	a	0.26	ab	0.11	abc	28	a	0.12	a	11	a	1.15	a	0.09	a	72	a
3	P treated Prevent (50% rate)	30	lb ai/A	ATPLAN	0.33	a	31	a	0.27	a	0.12	a	30	a	0.12	a	9	a	1.10	a	0.09	a	71	a
4	P Untreated (full rate)	60	lb ai/A	ATPLAN	0.31	a	33	a	0.25	bc	0.11	abc	28	a	0.14	a	9	a	0.88	a	0.10	a	78	a
5	P Untreated (75% rate)	45	lb ai/A	ATPLAN	0.32	a	30	a	0.27	ab	0.11	ab	29	a	0.13	a	8	a	0.93	a	0.10	a	77	a
6	P Untreated (50% rate)	30	lb ai/A	ATPLAN	0.29	a	36	a	0.24	c	0.10	bc	26	a	0.10	a	10	a	0.90	a	0.08	a	69	a
7	ProFound	16	oz/A	Emergence	0.29	a	30	a	0.25	abc	0.10	c	26	a	0.10	a	8	a	1.10	a	0.08	a	73	a
8	P Untreated (50% rate)	30	lb ai/A	ATPLAN	0.31	a	38	a	0.25	bc	0.10	bc	27	a	0.09	a	10	a	0.99	a	0.08	a	63	a
	ProFound	16	oz/A	Emergence																		
9	UTC	0	lb ai/A		0.32	a	27	a	0.26	ab	0.11	ab	29	a	0.12	a	8	a	1.01	a	0.10	a	81	a
LSD P=.05					0.037		15.7		0.024		0.011		2.94		0.033		4.1		0.253		0.018		12.53	
Standard Deviation					0.025		10.7		0.017		0.007		2.02		0.023		2.8		0.174		0.013		8.59	
CV					8.12		31.33		6.46		6.79		7.22		20.18		30.74		17.25		14.19		11.81	
Treatment F					1.711		0.965		2.356		2.538		1.856		1.857		0.697		1.202		1.433		1.501	
Treatment Prob(F)					0.147		0.485		0.050		0.037		0.115		0.115		0.691		0.339		0.234		0.209	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of Nitrogen Sources and Time of Applications on Rice Yield, Nitrogen Uptake, and Nitrogen Use Efficiency – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-40

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.4
- **pH** ..... : 7.1
- **Extractable nutrients** ppm ..... : Ca-1381; Cu-1.7; Mg-274; P-14; K-67; Na-79; S-9.2; Zn-6.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / .5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15

Water management ..... :
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 97. Effect of N sources and time of applications on rice grain yield, N uptake, and NUE. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-HD	Emer-HD								NUE	NUE
Rating Date			7/26/2018	8/1/2018	8/1/2018	8/1/2018	6/26/2018				
Rating Type	50% HD	50% HD	Height	Moisture	Test Wt.	Yield	Biomass @ 50% HD	N	N uptake		
Rating Unit	days	days	in	%	lb/bu	lb/A	lb/A	%	lb/A	%	%
Crop Stage Maturity	Main	Main	Main	Main	Main	Main	Main	Main	Main	by block	by means
N Source at N Application Timings											
Urea 15DPF	101 ab	90.3 ab	35.8 cd	13.9 cd	46.7 a	8610 b	8545 a	1.19 de	102 abc	60.0 bc	60.0 a-d
Urea 10DPF	100 b	89.3 b	36.3 bcd	13.8 d	46.6 a	8454 b	7299 a	1.09 e	79 c	41.0 c	41.0 d
Urea 5DPF	102 a	90.5 a	36.5 bcd	15.1 a	46.6 a	10017 a	7963 a	1.39 a-d	113 abc	68.0 ab	69.0 abc
Urea 1DPF	101 ab	90.3 ab	37.0 a-d	14.7 ab	47.0 a	9460 a	8533 a	1.49 ab	127 ab	80.0 ab	80.0 ab
Agrotain Adv. - Urea at 15DPF	101 ab	90.0 ab	35.5 d	14.1 cd	46.5 a	8647 b	7457 a	1.25 cde	94 bc	54.0 bc	54.0 cd
Agrotain Adv. - Urea at 10DPF	102 a	90.5 a	37.5 abc	14.4 bc	46.9 a	9550 a	9126 a	1.32 bcd	122 ab	73.0 ab	74.0 abc
Agrotain Adv. - Urea at 5DPF	102 a	90.8 a	38.5 a	14.9 a	46.9 a	10082 a	9048 a	1.51 ab	136 a	87.0 a	86.0 a
Agrotain Adv. - Urea at 1DPF	101 ab	90.3 ab	38.8 a	14.8 ab	46.8 a	9434 a	8797 a	1.46 abc	130 ab	76.0 ab	75.0 abc
ANVOL - Urea at 15DPF	101 ab	90.0 ab	36.3 bcd	14.0 cd	46.5 a	8402 b	9174 a	1.10 e	102 abc	60.0 abc	60.0 a-d
ANVOL - Urea at 10DPF	101 ab	90.0 ab	37.8 ab	14.3 bc	46.6 a	9423 a	8304 a	1.21 de	100 abc	58.0 bc	58.0 bcd
ANVOL - Urea at 5DPF	101 ab	90.3 ab	37.0 a-d	14.6 ab	46.8 a	9858 a	8503 a	1.54 a	133 a	78.0 ab	77.0 abc
ANVOL - Urea at 1DPF	101 ab	90.0 ab	38.8 a	14.7 ab	46.9 a	9573 a	8595 a	1.37 a-d	118 ab	73.0 ab	73.0 abc
0 N	98 c	87.0 c	31.0 e	14.7 ab	44.8 a	3308 c	3653 b	0.82 f	30 d	0.0 d	0.0 e
LSD P=.05	1.21	1.21	1.76	0.50	1.25	685	1949	0.21	37.1	26.8	26.7
Standard Deviation	0.84	0.84	1.23	0.35	0.87	478	1359	0.15	25.9	18.7	18.6
CV	0.83	0.93	3.35	2.43	1.87	5.41	16.8	11.60	24.3	30.0	29.9
Replicate F	0.51	0.51	3.55	2.04	0.82	4.54	0.75	7.02	4.04	2.99	3.61
Replicate Prob(F)	0.6790	0.6790	0.0239	0.1257	0.4932	0.0085	0.5290	0.0008	0.01	0.0435	0.0225
Treatment F	5.10	5.10	10.76	5.73	1.73	54.11	4.56	7.60	4.89	5.79	5.79
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.1021	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 98. Factorial analysis on the effect of N sources applied at different times on rice grain yield, N uptake, and NUE. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-HD	Emer-HD								NUE	NUE
Rating Date			7/26/2018	8/1/2018	8/1/2018	8/1/2018	6/26/2018				
Rating Type	50% HD	50% HD	Height	Moisture	Test Wt.	Yield	Biomass @ 50% HD	N	N uptake		
Rating Unit	days	days	in	%	lb/bu	lb/A	lb/A	%	lb/A	%	%
Crop Stage Maturity	Main	Main	Main	Main	Main	Main	Main	Main	Main	by block	by means
N Source											
Urea	101 a	90.1 a	36.4 b	14.3 a	46.7 a	9135 a	8085 a	1.29 a	105 a	62.0 a	62.0 a
Agrotain Advanced - Urea	101 a	90.4 a	37.6 a	14.5 a	46.8 a	9428 a	8607 a	1.38 a	121 a	72.0 a	72.0 a
ANVOL - Urea	101 a	90.1 a	37.4 a	14.4 a	46.7 a	9314 a	8644 a	1.30 a	113 a	68.0 a	67.0 a
LSD P=.05	0.63	0.63	0.91	0.24	0.17	341.8	1020	0.11	19.2	13.9	13.8
Standard Deviation	0.88	0.88	1.26	0.33	0.24	475.1	1418	0.15	26.7	19.3	19.2
CV	0.87	0.97	3.39	2.31	0.50	5.1	16.8	11.33	23.6	28.6	28.5
N Application Timings											
15DPF	101 a	90.1 a	35.8 b	14.0 b	46.6 b	8553 c	8392 a	1.18 b	99 b	58.0 b	58.0 b
10DPF	101 a	89.9 a	37.2 a	14.1 b	46.7 ab	9143 b	8243 a	1.21 b	101 b	58.0 b	58.0 b
5DPF	102 a	90.5 a	37.3 a	14.9 a	46.7 ab	9986 a	8505 a	1.48 a	127 a	78.0 a	77.0 a
1DPF	101 a	90.2 a	38.2 a	14.7 a	46.9 a	9489 b	8642 a	1.44 a	125 a	76.0 a	76.0 a
LSD P=.05	0.73	0.73	1.05	0.28	0.20	395	1178	0.12	22.2	16.0	15.9
Standard Deviation	0.88	0.88	1.26	0.33	0.24	475	1418	0.15	26.7	19.3	19.2
CV	0.87	0.97	3.39	2.31	0.50	5.1	16.8	11.34	23.6	28.6	28.5
N Source x N Application Timing											
Urea x 15DPF	101 a	90.3 a	35.8 a	13.9 a	46.7 a	8610 a	8545 a	1.19 a	102 a	60.0 a	60.0 a
Agrotain Adv. - Urea x 15DPF	101 a	90.0 a	35.5 a	14.1 a	46.5 a	8647 a	7457 a	1.25 a	94 a	54.0 a	54.0 a
ANVOL - Urea x 15DPF	101 a	90.0 a	36.3 a	14.0 a	46.5 a	8402 a	9174 a	1.10 a	102 a	60.0 a	60.0 a
Urea x 10DPF	100 a	89.3 a	36.3 a	13.8 a	46.6 a	8454 a	7299 a	1.10 a	79 a	41.0 a	41.0 a
Agrotain Adv. - Urea x 10DPF	102 a	90.5 a	37.5 a	14.4 a	46.9 a	9550 a	9126 a	1.32 a	122 a	73.0 a	74.0 a
ANVOL - Urea x 10DPF	101 a	90.0 a	37.8 a	14.3 a	46.6 a	9423 a	8304 a	1.21 a	100 a	58.0 a	58.0 a
Urea x 5DPF	102 a	90.5 a	36.5 a	15.1 a	46.6 a	10017 a	7963 a	1.39 a	113 a	68.0 a	69.0 a
Agrotain Adv. - Urea x 5DPF	102 a	90.8 a	38.5 a	14.9 a	46.9 a	10082 a	9048 a	1.51 a	136 a	87.0 a	86.0 a
ANVOL - Urea x 5DPF	101 a	90.3 a	37.0 a	14.6 a	46.8 a	9858 a	8503 a	1.54 a	133 a	78.0 a	77.0 a
Urea x 1DPF	101 a	90.3 a	37.0 a	14.7 a	47.0 a	9460 a	8533 a	1.49 a	127 a	80.0 a	80.0 a
Agrotain Adv. - Urea x 1DPF	101 a	90.3 a	38.8 a	14.8 a	46.8 a	9434 a	8797 a	1.46 a	130 a	76.0 a	75.0 a
ANVOL - Urea x 1DPF	101 a	90.0 a	38.8 a	14.7 a	46.9 a	9573 a	8595 a	1.37 a	118 a	73.0 a	73.0 a
LSD P=.05	1.26	1.26	1.81	0.48	0.34	683.6	2040	0.22	38.5	27.8	27.6
Standard Deviation	0.88	0.88	1.26	0.33	0.24	475.1	1418	0.15	26.7	19.3	19.2
CV	0.87	0.97	3.39	2.31	0.50	5.1	16.8	11.33	23.6	28.6	28.5

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of Nitrogen Sources and Time of Applications on Rice Yield, Nitrogen Uptake, and Nitrogen Use Efficiency – Calcasieu Parish

Experiment number ..... : 18-CP-40

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 99. Effect of N sources and time of applications on rice grain yield, N uptake, and NUE. Calcasieu Parish.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-HD	Emer-HD							N Uptake/Total	NUE	NUE
Rating Date			8/9/2018	9/13/2018	9/13/2018	9/13/2018	6/28/2018				
Rating Type	50% HD	50% HD	Height	Moisture	Test Wt.	Yield	Biomass @ 50% HD	N	N Uptake		
Rating Unit	days	days	in	%	lb/bu	lb/A	lb/A	%	lb/A	%	%
Crop Stage Maturity	Main	Main	Main	Main	Main	Main	Main	Main	Main	by block	by means
N Source at N Application Timing											
Urea 15DPF	94.0 b	87.0 b	36.8 ab	14.6 a	41.6 a	6491 ab	9276 a	1.87 b	173 bc	71.0 a	72.0 b
Urea 10DPF	93.0 c	86.0 c	35.0 bc	11.2 a	31.1 a	4780 c	8976 a	1.54 d	139 d	47.0 b	44.0 c
Urea 5DPF	96.8 a	89.8 a	38.3 a	14.6 a	41.1 a	6270 ab	9488 a	1.93 b	182 ab	74.0 a	80.0 ab
Urea 1DPF	96.8 a	89.8 a	37.8 a	14.7 a	41.5 a	6232 ab	9625 a	1.95 ab	187 ab	71.0 a	80.0 ab
Agrotain Adv. - Urea @ 15DPF	94.0 b	87.0 b	37.0 ab	14.7 a	41.9 a	6748 a	10692 a	1.79 bc	192 ab	68.0 ab	77.0 ab
Agrotain Adv. - Urea @ 10DPF	93.0 c	86.0 c	36.8 ab	15.2 a	41.7 a	5611 abc	9882 a	1.79 bc	177 b	72.0 a	75.0 ab
Agrotain Adv. - Urea @ 5DPF	97.0 a	90.0 a	38.3 a	15.6 a	41.1 a	5376 bc	9940 a	2.16 a	214 a	86.0 a	95.0 a
Agrotain Adv. - Urea @ 1DPF	96.5 a	89.5 a	38.0 a	14.7 a	41.1 a	6116 ab	9716 a	1.86 b	180 b	76.0 a	78.0 ab
ANVOL - Urea @ 15DPF	94.0 b	87.0 b	37.0 ab	14.5 a	41.8 a	6424 ab	9877 a	1.74 bcd	173 bc	64.0 ab	72.0 b
ANVOL - Urea @ 10DPF	93.0 c	86.0 c	37.3 a	15.4 a	41.6 a	5281 bc	8867 a	1.62 cd	143 cd	47.0 b	47.0 c
ANVOL - Urea @ 5DPF	96.8 a	89.8 a	37.8 a	14.8 a	41.6 a	5945 abc	9264 a	1.85 b	171 bcd	65.0 ab	71.0 b
ANVOL - Urea @ 1DPF	96.5 a	89.5 a	37.0 ab	14.8 a	41.6 a	6072 ab	9127 a	1.81 bc	166 bcd	66.0 ab	66.0 bc
0 N	93.0 c	86.0 c	33.5 c	11.6 a	30.8 a	3342 d	7871 a	1.30 e	103 e	0.0 c	0.0 d
LSD P=.05	0.51	0.51	2.23	4.29	11.12	1241	1413	0.22	33.3	22.8	22.2
Standard Deviation	0.35	0.35	1.55	2.99	7.76	865	985	0.15	23.2	15.9	15.5
CV	0.37	0.40	4.20	20.88	19.45	15.1	10.44	8.63	13.7	25.6	23.5
Replicate F	4.67	4.67	3.79	1.31	2.31	14.52	1.58	3.29	2.75	31.42	2.47
Replicate Prob(F)	0.0074	0.0074	0.0184	0.2867	0.0927	0.0001	0.2104	0.0315	0.0566	0.0001	0.0773
Treatment F	97.718	97.718	2.992	0.820	1.049	4.40	1.88	7.38	5.71	7.26	9.52
Treatment Prob(F)	0.0001	0.0001	0.0054	0.6294	0.4286	0.0003	0.0709	0.0001	0.0001	0.0001	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 100. Factorial analysis on the effect of N sources applied at different times on rice grain yield, N uptake, and NUE. Calcasieu Parish.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-HD	Emer-HD							N Uptake/Total	NUE	NUE
Rating Date			8/9/2018	9/13/2018	9/13/2018	9/13/2018	6/28/2018				
Rating Type	50% HD	50% HD	Height	Moisture	Test Wt.	Yield	Biomass @ 50% HD	N	N uptake		
Rating Unit	days	days	in	%	lb/bu	lb/A	lb/A	%	lb/A	%	%
Crop Stage Maturity	Main	Main	Main	Main	Main	Main	Main	Main	Main	by block	by means
N Source											
Urea	95.1 a	88.1 a	36.9 a	13.8 a	38.8 a	5943 a	9341 b	1.82 a	170 b	66.0 ab	69.0 b
Agrotain Advanced - Urea	95.1 a	88.1 a	37.5 a	15.0 a	41.5 a	5963 a	10058 a	1.89 a	191 a	75.0 a	81.0 a
ANVOL - Urea	95.1 a	88.1 a	37.3 a	14.8 a	41.6 a	5931 a	9284 b	1.76 a	163 b	60.0 b	64.0 b
P											
LSD P=.05	0.26	0.26	1.15	1.64	4.31	604	676	0.11	16.7	10.6	11.5
Standard Deviation	0.36	0.36	1.60	2.28	5.99	840	940	0.16	23.3	14.7	16.0
CV	0.38	0.41	4.31	15.66	14.74	14.1	9.8	8.71	13.3	21.8	22.5
N Application Timings											
15DPF	94.0 b	87.0 b	36.9 a	14.6 a	41.8 a	6554 a	9949 a	1.79 b	179 a	68.0 ab	74.0 a
10DPF	93.0 c	86.0 c	36.3 a	13.9 a	38.1 a	5224 b	9241 a	1.65 c	153 b	56.0 b	55.0 b
5DPF	96.8 a	89.8 a	38.1 a	15.0 a	41.3 a	5864 ab	9564 a	1.98 a	189 a	75.0 a	82.0 a
1DPF	96.6 a	89.6 a	37.6 a	14.7 a	41.4 a	6140 a	9489 a	1.87 ab	178 a	71.0 a	75.0 a
P											
LSD P=.05	0.30	0.30	1.33	1.89	4.97	698	781	0.13	19.3	12.2	13.3
Standard Deviation	0.36	0.36	1.60	2.28	5.99	840	940	0.16	23.3	14.7	16.0
CV	0.38	0.41	4.31	15.66	14.74	14.1	9.8	8.71	13.3	21.8	22.5
N Source x N Application Timing											
Urea x 15DPF	94.0 a	87.0 a	36.8 a	14.6 a	41.6 a	6491 a	9276 a	1.87 a	173 a	71.0 a	72.0 a
Agrotain Adv. - Urea x 15DPF	94.0 a	87.0 a	37.0 a	14.7 a	41.9 a	6748 a	10692 a	1.79 a	192 a	68.0 a	77.0 a
ANVOL - Urea x 15DPF	94.0 a	87.0 a	37.0 a	14.5 a	41.8 a	6424 a	9877 a	1.74 a	173 a	64.0 a	72.0 a
Urea x 10DPF	93.0 a	86.0 a	35.0 a	11.2 a	31.1 a	4780 a	8976 a	1.55 a	139 a	47.0 a	44.0 a
Agrotain Adv. - Urea x 10DPF	93.0 a	86.0 a	36.8 a	15.2 a	41.7 a	5611 a	9882 a	1.79 a	177 a	72.0 a	75.0 a
ANVOL - Urea x 10DPF	93.0 a	86.0 a	37.3 a	15.4 a	41.6 a	5281 a	8867 a	1.62 a	143 a	47.0 a	47.0 a
Urea x 5DPF	96.8 a	89.8 a	38.3 a	14.6 a	41.1 a	6270 a	9488 a	1.93 a	182 a	74.0 a	80.0 a
Agrotain Adv. - Urea x 5DPF	97.0 a	90.0 a	38.3 a	15.6 a	41.1 a	5376 a	9940 a	2.16 a	214 a	86.0 a	95.0 a
ANVOL - Urea x 5DPF	96.8 a	89.8 a	37.8 a	14.8 a	41.6 a	5945 a	9264 a	1.85 a	171 a	65.0 a	71.0 a
Urea x 1DPF	96.8 a	89.8 a	37.8 a	14.7 a	41.5 a	6232 a	9625 a	1.95 a	187 a	71.0 a	80.0 a
Agrotain Adv. - Urea x 1DPF	96.5 a	89.5 a	38.0 a	14.7 a	41.1 a	6116 a	9716 a	1.86 a	180 a	76.0 a	78.0 a
ANVOL - Urea x 1DPF	96.5 a	89.5 a	37.0 a	14.8 a	41.6 a	6072 a	9127 a	1.81 a	166 a	66.0 a	66.0 a
P											
LSD P=.05	0.52	0.52	2.31	3.28	8.62	1208	1352	0.23	33.5	21.1	23.1
Standard Deviation	0.36	0.36	1.60	2.28	5.99	840	940	0.16	23.3	14.7	16.0
CV	0.38	0.41	4.31	15.66	14.74	14.1	9.8	8.71	13.3	21.8	22.5

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Inbred and Hybrids for CPS Experimental Varieties (18-Y3-11 and 18-Y3-22) – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-36 and 18-CM-37

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.43
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-1,512; Cu-1.8; Mg-252; P-15; K-60; Na-81; S-8.2; Zn-9.1

Crop/Variety ..... : Rice / See data sheet
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : Inbred-33, Hybrid-10 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : Aug. 1
- **Ratoon Harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15
120 lb N/A 46-0-0, May 3

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 13
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 101. Agronomic data and yield of inbred and hybrid varieties. CPS trial number 18-Y3-11. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-HD		Emer-HD		Tip of Panicle													
Rating Date						8/1/2018		8/1/2018		8/1/2018		8/1/2018							
Rating Type		50% HD		50% HD		Height		Lodge				Moisture		Yield		Milling (%)			
Rating Unit		days		days		in		% plot		rate		%		lb/A		head		total	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name																		
1	14R-T225-66-2	99	efg	88	efg	36.3	fg	5.0	e	0.5	e	17.2	bc	9099	b-e	54.5	a	69.2	b
2	14R-T285-14-1	101	cd	90	cd	39.3	ab	5.0	e	0.8	e	16.3	cde	9466	bcd	36.0	e-h	67.9	ef
3	14R-T285-14-3	99	ef	88	ef	37.3	c-f	57.5	bcd	2.3	bcd	17.2	bc	9531	bcd	37.9	efg	67.3	ef
4	14R-T285-21-1	102	bc	91	bc	37.8	b-f	0.0	e	0.0	e	15.3	ef	9869	bc	38.5	ef	68.2	cde
5	14R-T285-21-3	103	ab	92	ab	34.5	h	0.0	e	0.0	e	14.4	fgh	9146	bcd	34.6	ghi	69.0	bcd
6	14R-T285-21-5	101	cd	90	cd	34.8	gh	25.0	de	1.0	de	13.6	h	8707	de	33.2	hi	68.1	ef
7	14R-T285-21-7	101	d	90	d	36.8	def	0.0	e	0.0	e	13.5	h	8721	de	34.9	fgh	68.2	cde
8	15R-T240-78	99	e	88	e	39.0	ab	100.0	a	4.0	a	18.3	a	9943	b	43.8	d	67.4	ef
9	13R-201-72	102	cd	91	cd	37.0	c-f	0.0	e	0.0	e	18.0	ab	8948	cde	47.6	c	67.3	f
10	15R-T238-24	102	cd	91	cd	38.3	bcd	32.5	cde	1.3	cde	16.0	de	8205	e	43.5	d	69.1	bc
11	14R-T222-112-1	98	fg	87	fg	36.5	ef	67.5	abc	2.3	bcd	14.7	fg	9919	b	46.2	cd	68.1	def
12	14R-T222-112-5	99	efg	88	efg	38.5	bc	100.0	a	3.5	ab	16.5	cd	9788	bc	46.2	cd	69.0	bcd
13	14R-T222-112-7	98	g	87	g	38.0	b-e	75.0	ab	2.5	bc	16.5	cd	9936	b	51.5	ab	69.0	bcd
14	Diamond	103	a	92	a	39.3	ab	5.0	e	0.5	e	17.1	bc	8198	e	39.7	e	69.5	b
15	CL153	102	bc	91	bc	37.0	c-f	0.0	e	0.0	e	16.7	cd	9241	bcd	49.7	bc	70.9	a
16	XL753	98	g	87	g	40.5	a	25.0	de	1.0	de	14.2	gh	11284	a	30.9	i	71.1	a
LSD P=.05		1.13		1.13		1.63		36.87		1.36		1.01		938.6		3.7708		0.9166	
Standard Deviation		0.80		0.80		1.14		25.89		0.96		0.71		659.0		2.6477		0.6436	
CV		0.79		0.89		3.05		83.26		78.62		4.44		7.03		6.33		0.94	
Treatment F		22.245		22.245		8.039		8.117		7.402		18.602		5.515		28.722		12.424	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Table 102. Agronomic data and yield of inbred and hybrid varieties. CPS trial number 18-Y3-22. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-HD		Emer-HD		Tip of Panicle											
Rating Date						8/1/2018		8/1/2018		8/1/2018		8/1/2018					
Rating Type		50% HD		50% HD		Height		Lodge				Moisture		Yield		Milling (%)	
Rating Unit		days		days		in		% plot		rate		%		lb/A		head	total
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		Main	Main
Trt No.	Treatment Name																
1	14R-T225-66-1	99	fg	88	fg	36.8	de	7.5	c	0.8	def	16.8	ab	8459	gh	56.3	a	69.5	bc
2	14R-T285-14-2	102	d	91	d	37.8	b-e	10.0	c	1.0	de	17.4	a	9627	d	44.3	efg	68.0	ef
3	14R-T285-14-4	102	cd	91	cd	38.3	a-d	10.0	c	1.0	de	17.3	a	8532	gh	45.7	efg	68.9	cd
4	14R-T285-21-2	103	bc	92	bc	37.8	b-e	0.0	c	0.0	f	14.2	e	9295	d-g	42.3	efg	69.4	bc
5	14R-T285-21-4	102	cd	91	cd	37.0	cde	0.0	c	0.0	f	13.7	e	9504	de	41.0	gh	69.2	cd
6	14R-T285-21-6	102	d	91	d	37.3	cde	5.0	c	0.3	ef	13.3	e	8917	d-h	41.5	fgh	69.0	cd
7	14R-T285-21-8	102	cd	91	cd	36.8	de	0.0	c	0.0	f	13.6	e	8598	fgh	36.9	h	68.6	de
8	14R-128-16	100	e	89	e	36.8	de	17.5	c	0.5	ef	15.1	d	9260	d-g	42.6	efg	68.5	de
9	15R-T290-19	105	a	94	a	33.8	f	2.5	c	0.3	ef	17.6	a	8081	h	52.0	ab	69.4	bc
10	15R-T240-76	99	f	88	f	39.5	ab	92.5	a	3.5	a	16.3	bc	9692	cd	50.5	bcd	67.7	f
11	14R-T222-112-4	99	f	88	f	38.8	abc	92.5	a	2.5	b	15.6	cd	10560	bc	46.9	cde	69.1	cd
12	14R-T222-112-6	100	e	89	e	39.5	ab	60.0	b	1.5	cd	16.0	bcd	10704	ab	51.0	bc	69.2	cd
13	14R-T222-112-2	98	g	87	g	36.5	de	95.0	a	2.0	bc	14.1	e	10793	ab	46.2	def	68.2	ef
14	Diamond	103	b	92	b	37.5	cde	2.5	c	0.3	ef	16.1	bc	8753	e-h	42.0	fg	70.0	b
15	CL153	102	cd	91	cd	36.3	e	0.0	c	0.0	f	15.7	cd	9459	def	51.9	ab	71.5	a
16	XL753	98	g	87	g	39.8	a	0.0	c	0.0	f	13.4	e	11493	a	31.6	i	71.5	a
LSD P=.05		0.75		0.75		1.93		20.94		0.95		0.93		873.9		4.737		0.689	
Standard Deviation		0.53		0.53		1.36		14.71		0.67		0.65		613.6		3.326		0.484	
CV		0.52		0.59		3.62		59.57		79.38		4.26		6.47		7.36		0.7	
Treatment F		62.068		62.068		4.916		25.385		9.724		21.255		9.996		14.305		19.487	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of SymTRX20S on Agronomic Data, Rice Yield, and Nitrogen Uptake when Applied at Planting – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-33

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.43
- **pH** ..... : 7.34
- **Extractable nutrients** ppm ..... : Ca-1,512; Cu-1.8; Mg-252; P-15; K-60; Na-81; S-8.2; Zn-9.1

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 14
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 25
- **Ratoon Harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 3
- **Drain** ..... : July 13
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 103. Effect of SymTRX20S on agronomic data, rice yield, and N uptake when applied at planting. H. Rouse Caffey Rice Research Station.

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Part Rated					Plant-HD		Emer-HD		Tip of Panicle				Above Ground (50% HD)					
Rating Date									7/25/2018		7/25/2018							
Rating Type					50% HD		50% HD		Height		Yield		Biomass-dry		N		N Uptake	
Rating Unit					days		days		in		lb/A		lb/A		%		lb/A	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage														
1	No Starter				100.8	a	89.8	a	35.0	a	8566	a	8363	a	1.34	a	111	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
2	SymTRX20S - 120 units	120	lb/A	Pre-flood	100.3	a	89.3	a	36.0	a	8522	a	8197	a	1.24	a	101	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
3	171113-2 - 125 units	125	lb/A	Pre-flood	100.3	a	89.3	a	36.8	a	8255	ab	8311	a	1.30	a	108	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
4	Exp 2W - 125 units	125	lb/A	Pre-flood	100.3	a	89.3	a	36.8	a	8590	a	8753	a	1.23	a	107	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
5	AMS - 100 units	100	lb/A	Pre-flood	100.3	a	89.3	a	36.0	a	8267	ab	8844	a	1.26	a	111	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Mi season N	46	lb ai/A	Green ring														
6	SymTRX20S - 100 units	100	lb/A	Pre-flood	100.3	a	89.3	a	35.8	a	8313	a	9908	a	1.32	a	131	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
7	171113-2 - 105 units	105	lb/A	Pre-flood	100.5	a	89.5	a	35.3	a	8664	a	8356	a	1.29	a	107	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
8	AMS - 83 units	83	lb/A	Pre-flood	100.3	a	89.3	a	36.3	a	8682	a	9047	a	1.27	a	114	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
9	No Starter No N				100.5	a	89.5	a	35.8	a	7802	b	8694	a	1.23	a	106	a
LSD P=.05					0.63		0.63		1.47		487.2		1554.7		0.144		20.2	
Standard Deviation					0.43		0.43		1.01		333.8		1065.3		0.099		13.8	
CV					0.43		0.48		2.8		3.97		12.22		7.75		12.5	
Treatment F					0.704		0.704		1.401		2.833		0.985		0.653		1.482	
Treatment Prob(F)					0.6854		0.6854		0.2463		0.0229		0.4715		0.7260		0.2155	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of SymTRX20S on Agronomic Data, Rice Yield, and Nitrogen Uptake when Applied at 10 Days Preflood – H. Rouse Caffey Rice Research Station

Experiment number ..... : 18-CM-53

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (Crowley Main)
- **Tillage type** ..... : Fall stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.40
- **pH** ..... : 7.27
- **Extractable nutrients** ppm ..... : Ca-1,595; Cu-2.0; Mg-288; P-15; K-63; Na-75; S-8.6; Zn-8.8

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 15
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 0.5 inch
- **Emergence date** ..... : March 25
- **Harvest date** ..... : July 25
- **Ratoon Harvest date** ..... : NA

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 15

Water management ..... : Underground irrigation
- **Flush** ..... : No irrigation flushing was needed
- **Flood** ..... : May 4
- **Drain** ..... : July 16
- **Ratoon flood** ..... : NA
- **Ratoon drain** ..... : NA

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command + 1.5 qt/A Roundup + 1% MSO, March 15
  2 qt/A Propanil + 1 oz/A Gambit + 1 qt/A MSO, April 30
  20 oz/A Clincher + 1 qt/A Crop Oil, May 31
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 104. Effect of SymTRX20S on agronomic data, rice yield, and N uptake when applied at 10 days preflood. H. Rouse Caffey Rice Research Station.

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice	
Part Rated					Plant-HD		Emer-HD		Tip of Panicle				Above Ground (50% HD)			
Rating Date									6/18/2018		7/25/2018					
Rating Type					50% HD		50% HD		Height		Yield		Biomass-dry		N		N Uptake	
Rating Unit					days		days		in		lb/A		lb/A		%		lb/A	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage														
1	SymTRX20S 120	120	lb ai/A	10 DPF	99.8	a	89.8	a	33.8	a	6954	a	8339	a	1.13	a	94	a
2	AMS 120	120	lb ai/A	10 DPF	100.0	a	90.0	a	33.3	a	6952	a	8136	a	1.07	a	87	a
3	SymTRX20S 90	90	lb ai/A	10 DPF	99.0	b	89.0	b	32.5	a	6345	b	7556	a	1.03	ab	78	ab
4	AMS 90	90	lb ai/A	10 DPF	99.0	b	89.0	b	32.3	a	6059	b	7164	a	0.91	b	66	b
LSD P=.05					0.40		0.40		2.64		504.4		1727.3		0.118		18.3	
Standard Deviation					0.25		0.25		1.65		315.4		1079.9		0.074		11.5	
CV					0.25		0.28		5.02		4.79		13.85		7.13		14.1	
Treatment F					17.000		17.000		0.695		8.115		0.992		5.979		4.555	
Treatment Prob(F)					0.0005		0.0005		0.5782		0.0063		0.4394		0.0159		0.0333	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of SymTRX20S on Agronomic Data, Rice Yield, and Nitrogen Uptake when Applied at Planting – Calcasieu Parish

Experiment number ..... : 18-CP-33

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / CL153
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 21

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 105. Effect of SymTRX20S on agronomic data, rice yield, and N uptake when applied at planting. Calcasieu Parish.

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Part Rated					Plant-HD		Emer-HD		Tip of Panicle				Above Ground (50% HD)					
Rating Date									8/9/2018		8/13/2018							
Rating Type					50% HD		50% HD		Height		Yield		Biomass-dry				N Uptake	
Rating Unit					days		days		in		lb/A		lb/A		% N		lb N/A	
Crop Stage Majority					Main		Main		Main		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage														
1	No Starter				96.0	a	89.0	a	38.8	a	8454	a	10526	a	1.80	a	189	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
2	SymTRX20S - 120 units	120	lb/A	Pre-flood	96.0	a	89.0	a	39.3	a	8791	a	10051	a	1.96	a	197	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
3	171113-2 - 125 units	125	lb/A	Pre-flood	96.0	a	89.0	a	39.5	a	8941	a	9882	ab	1.78	a	176	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
4	Exp 2W - 125 units	125	lb/A	Pre-flood	96.0	a	89.0	a	38.8	a	8760	a	10215	a	1.87	a	190	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
5	AMS - 100 units	100	lb/A	Pre-flood	96.0	a	89.0	a	38.5	a	8865	a	9938	a	1.87	a	186	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
6	SymTRX20S - 100 units	100	lb/A	Pre-flood	96.0	a	89.0	a	38.8	a	8739	a	8531	c	1.93	a	164	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
7	171113-2 - 105 units	105	lb/A	Pre-flood	96.0	a	89.0	a	39.3	a	8599	a	10686	a	1.76	a	188	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
8	AMS - 83 units	83	lb/A	Pre-flood	96.0	a	89.0	a	39.8	a	8964	a	10280	a	1.82	a	188	a
	2/3 Preflood N	92	lb ai/A	1 DPF														
	1/3 Midseason N	46	lb ai/A	Green ring														
9	No Starter No N				96.0	a	89.0	a	38.8	a	8354	a	8754	bc	1.77	a	155	a
LSD P=.05					.		.		2.58		829.7		1166.3		0.147		27.6	
Standard Deviation					0.00		0.00		1.77		568.5		799.2		0.100		18.9	
CV					0.0		0.0		4.53		6.52		8.09		5.46		10.41	
Treatment F					0.000		0.000		0.229		0.549		3.492		2.035		2.097	
Treatment Prob(F)					1.0000		1.0000		0.9817		0.8078		0.0082		0.0854		0.0768	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

Effect of SymTRX20S on Agronomic Data, Rice Yield, and Nitrogen Uptake when Applied at 10 Days Preflood – Calcasieu Parish

Experiment number ..... : 18-CP-53

Site and design ..... :
- **Location/Cooperator** ..... : Calcasieu Parish / Johnny Hensgens
- **Tillage type** ..... : Conventional
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 4.67 x 16 ft
- **Row width/rows per plot** ..... : 8 in / 7

Soil type ..... : Crowley-Vidrine complex
- **% organic matter** ..... : 1.93
- **pH** ..... : 5.74
- **Extractable nutrients** ppm ..... : Ca-650; Cu-1.3; Mg-133; P-17; K-110; Na-29; S-8.8; Zn-4.6

Crop/Variety ..... : Rice / CL111
- **Planting method/date** ..... : Drill seeded / March 20
- **Seeding rate/depth** ..... : 33 seeds/ft^2 / 1 inch
- **Emergence date** ..... : March 27
- **Harvest date** ..... : Aug. 13

Seed treatment/cwt ..... : Dithane (fungicide) – 114 g
Release (gibberellic acid) – 10 g
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
AV-1011 (bird repellent) – 18.3 oz
Dermacor X-100 – 0.137 lb ai/cwt

Fertilization ..... : 250 lb/A 0-24-24-2.7, April 13

Water management ..... : Underground irrigation
- **Flush** ..... : NA
- **Flood** ..... : May 3
- **Drain** ..... : July 16

Pest management ..... :
- **Herbicides** ..... : 2 oz/A Sharpen + 10 oz/A Command, March 21
  0.5 oz/A Permit + 2.1 pt/A Prowl H_2O + 0.5% Crop Oil, April 20
  2 qt/A Stam + 1 oz/A Gambit + 1 qt/A MSO, April 30
- **Insecticides** ..... : No blanket applications
- **Fungicides** ..... : 15 oz/A Amistar Top, June 15

Table 106. Effect of SymTRX20S on agronomic data, rice yield, and N uptake when applied at 10 days preflood. Calcasieu Parish.

Crop Name					Rice		Rice		Rice		Rice		Rice		Rice	
Part Rated					Plant-HD		Emer-HD		Tip of Panicle				Above Ground (50% HD)			
Rating Date									8/9/2018		8/13/2018					
Rating Type					50% HD		50% HD		Height		Yield		Biomass-dry			N Uptake
Rating Unit					days		days		in		lb/A		lb/A		% N	lb N/A
Crop Stage Majority					Main		Main		Main		Main		Main		Main	Main
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage												
1	SymTRX20S 120	120	lb ai/A	10 DPF	89.0	a	82.0	a	33.8	a	4821	a	8620	a	2.13 a	184 a
2	AMS 120	120	lb ai/A	10 DPF	89.0	a	82.0	a	33.3	a	5123	a	8271	a	2.03 a	169 a
3	SymTRX20S 90	90	lb ai/A	10 DPF	89.0	a	82.0	a	32.5	a	3329	a	7633	a	1.52 b	116 b
4	AMS 90	90	lb ai/A	10 DPF	89.0	a	82.0	a	32.5	a	3164	a	7739	a	1.64 b	127 b
LSD P=.05					.		.		2.61		1965.6		1449.0		0.257	41.0
Standard Deviation					0.00		0.00		1.63		1228.8		905.8		0.161	25.6
CV					0.0		0.0		4.95		29.9		11.23		8.78	17.17
Treatment F					0.000		0.000		0.563		2.681		1.045		13.626	6.408
Treatment Prob(F)					1.0000		1.0000		0.6532		0.1099		0.4186		0.0011	0.0130

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

ROTATIONAL CROP RESEARCH

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INTRODUCTION

The following research focuses on soybean production in southwestern Louisiana. Research topics include the effects of planting date and maturity group on soybean yield, potassium and phosphorus rate and time of application, and sulfur fertilization rate.

Evaluation of Date of Planting on Non-Irrigated Soybeans in Southwest Louisiana – H. Rouse Caffey Rice Research Station (South Unit)

Experiment number ..... : 18-CS-Soybean DOP

Site and design ..... :
- **Location/Cooperator** ..... : H. Rouse Caffey Rice Research Station (South Unit)
- **Tillage type** ..... : Spring stale
- **Experimental design** ..... : Randomized complete block
- **Number of reps** ..... : 4
- **Plot size** ..... : 5.33 x 20 ft
- **Row width/rows per plot** ..... : 16 in / 4

Soil type ..... : Crowley silt loam
- **% organic matter** ..... : 1.82
- **pH** ..... : 5.99
- **Extractable nutrients** ppm ..... : Ca-1383; Cu-1.6; Mg-193; P-25; K-76; Na-35; S-9.1; Zn-6.3

Crop/Variety ..... : Soybeans / See data sheet
- **Planting method** ..... : Drill seeded
- **Planting/ Emergence date** ..... : DOP1 – March 28 / April 7
  DOP2 – April 12 / April 23
  DOP3 – April 25 / May 2
  DOP4 – May 11 / May 19
  DOP5 – June 15 / June 21
- **Seeding rate/depth** ..... : 130,000 seeds/A / .5 to 2 inches depending on soil moisture
- **Harvest date** ..... : DOP1 – July 23 (row 1 & 2), Aug. 17 (row 3-6)
  DOP2 – Aug. 17 (row 1 & 2), Sept. 18 (row 3-6)
  DOP3 – Sept. 18 (row 1-6)
  DOP4 – Oct. 5 (row 1-6)
  DOP5 – Oct. 5 (row 1 & 2), Oct. 22 (row 3-6)

Seed treatment/cwt ..... : NA

Fertilization ..... : 250 lb/A 0-24-24-2.7, March 28

Water management ..... :
- **Flush** ..... : None

Pest management ..... :
- **Herbicides** ..... : 1.33 pt/A Dual Magnum + 1.5 qt/A Roundup, April 27
  1.33 pt/A Dual Magnum + 1.5 qt/A Roundup, June 21
  2.25 pt/A Poast Plus + 2.4 pt/A Basagran + 0.05% Crop Oil, June 29
- **Insecticides** ..... : 4 oz/A Mustang Max + 1% NIS, May 25
  1 lb/A Livid 90 + 1% NIS, June 12
  1 lb/A Livid 90, June 29
  1 lb/A Livid 90 + 1% NIS, Aug. 17
- **Fungicides** ..... : 7 oz/A Quadris Top SBX, June 12
  7 oz/A Quadris Top SBX, June 29
  7 oz/A Quadris Top SBX, Aug. 17

Table 1. Evaluation of date of planting on non-irrigated soybeans in southwest Louisiana. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Plt Height		Moisture		Yield	
Rating Date				9/21/2018		9/21/2018		9/21/2018	
Rating Type				Height		Moisture		Yield	
Rating Unit		days		in		%		bu/A	
Trt No.	Treatment Name								
TABLE OF A (Date of Planting) MEANS									
1	DOP-1 (March 28)	115.1	c	18.1	d	14.11	d	17.7	e
2	DOP-2 (April 12)	123.8	b	19.1	c	13.62	e	23.1	d
3	DOP-3 (April 25)	123.3	b	19.9	b	14.50	c	27.7	c
4	DOP-4 (May 11)	126.8	a	23.5	a	16.55	b	34.2	a
5	DOP-5 (June 15)	114.2	d	23.5	a	17.38	a	30.9	b
P		0.0001		0.0001		0.0001		0.0001	
LSD P=.05		0.84		0.70		0.320		2.39	
TABLE OF B (Group/Variety) MEANS									
1	Bayer CZ4181RY (T1)	113.2	ef	23.3	ab	15.52	bcd	27.7	cd
2	Terrell REV41A48 (T2)	111.9	f	20.5	de	14.97	e	19.4	g
3	NK S41-A1X (T3)	112.6	ef	21.5	cd	15.47	cd	22.9	efg
4	Group III filler	113.2	e	23.8	a	15.05	de	26.7	cd
5	Pioneer P47T36R (T4)	119.0	d	22.4	bc	14.10	f	22.7	fg
6	Petrus 4916 GT (T5)	123.3	c	19.9	ef	14.36	f	26.5	cde
7	DG S45XS37 (T6)	123.6	c	23.7	a	14.90	e	26.0	c-f
8	Group IV filler	120.0	d	21.0	d	14.00	f	24.5	def
9	Bayer CZ5375RY (T7)	130.3	a	17.4	g	16.89	a	31.9	b
10	Pioneer P54A54X (T8)	127.5	b	19.8	ef	16.02	b	36.5	a
11	DG S52RY75 (T9)	126.6	b	19.2	f	15.69	bc	29.2	bc
12	Group V filler	126.9	b	17.9	g	15.79	bc	26.4	c-f
P		0.0001		0.0001		0.0001		0.0001	
LSD P=.05		1.30		1.09		0.496		3.70	

Continued.

Table 1. Continued.

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Plt Height		Moisture		Yield	
Rating Date				9/21/2018		9/21/2018		9/21/2018	
Rating Type				Height		Moisture		Yield	
Rating Unit		days		in		%		bu/A	
Trt No.	Treatment Name								
TABLE OF A (Date of Planting) and B (Group/Variety) MEANS									
1	DOP-1 (March 28)	104.8	v	18.3	o-u	14.43	m-s	12.0	ABC
1	Bayer CZ4181RY (T1)								
2	DOP-2 (April 12)	113.5	p-s	21.5	g-l	14.10	p-v	26.4	j-t
1	Bayer CZ4181RY (T1)								
3	DOP-3 (April 25)	117.0	k-n	22.8	f-j	13.38	s-w	24.0	m-v
1	Bayer CZ4181RY (T1)								
4	DOP-4 (May 11)	119.5	ijk	28.5	a	16.63	e-i	43.2	a
1	Bayer CZ4181RY (T1)								
5	DOP-5 (June 15)	111.0	st	25.5	cde	19.08	a	32.7	c-l
1	Bayer CZ4181RY (T1)								
1	DOP-1 (March 28)	103.5	v	17.3	r-v	13.13	uvw	10.0	C
2	Terrell REV41A48 (T2)								
2	DOP-2 (April 12)	113.0	qrs	19.3	l-s	14.00	q-v	17.0	v-C
2	Terrell REV41A48 (T2)								
3	DOP-3 (April 25)	117.0	k-n	20.5	j-o	13.53	r-w	14.8	w-C
2	Terrell REV41A48 (T2)								
4	DOP-4 (May 11)	114.8	n-q	24.0	def	15.75	h-k	30.8	f-n
2	Terrell REV41A48 (T2)								
5	DOP-5 (June 15)	111.0	st	21.5	g-l	18.43	ab	24.4	l-v
2	Terrell REV41A48 (T2)								
1	DOP-1 (March 28)	103.3	v	17.0	s-v	14.05	p-v	11.4	BC
3	NK S41-A1X (T3)								
2	DOP-2 (April 12)	112.5	qrs	18.3	o-u	14.20	o-u	18.7	s-B
3	NK S41-A1X (T3)								
3	DOP-3 (April 25)	117.0	k-n	21.0	h-m	14.23	n-u	18.2	t-C
3	NK S41-A1X (T3)								
4	DOP-4 (May 11)	119.0	jkl	26.8	abc	16.65	e-i	37.1	a-g
3	NK S41-A1X (T3)								
5	DOP-5 (June 15)	111.0	st	24.3	def	18.23	a-d	29.2	f-o
3	NK S41-A1X (T3)								

Continued.

Table 1. Continued.

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Plt Height		Moisture		Yield	
Rating Date				9/21/2018		9/21/2018		9/21/2018	
Rating Type				Height		Moisture		Yield	
Rating Unit		days		in		%		bu/A	
Trt No.	Treatment Name								
TABLE OF A (Date of Planting) and B (Group/Variety) MEANS (Continued)									
1	DOP-1 (March 28)	105.5	uv	17.5	q-v	13.50	r-w	10.6	BC
4	Group III filler								
2	DOP-2 (April 12)	113.5	p-s	20.3	k-o	14.13	p-v	22.5	n-w
4	Group III filler								
3	DOP-3 (April 25)	117.0	k-n	23.3	e-h	13.08	vw	25.1	l-v
4	Group III filler								
4	DOP-4 (May 11)	119.0	jkl	28.8	a	16.15	g-j	35.4	a-i
4	Group III filler								
5	DOP-5 (June 15)	111.0	st	29.0	a	18.40	abc	39.9	a-d
4	Group III filler								
1	DOP-1 (March 28)	108.3	tu	17.8	p-v	13.45	r-w	12.5	y-C
5	Pioneer P47T36R (T4)								
2	DOP-2 (April 12)	120.3	hij	20.5	j-o	11.90	xy	14.7	w-C
5	Pioneer P47T36R (T4)								
3	DOP-3 (April 25)	122.3	ghi	22.0	f-k	13.63	r-w	25.9	k-u
5	Pioneer P47T36R (T4)								
4	DOP-4 (May 11)	129.0	cd	27.8	abc	15.33	j-n	34.4	b-j
5	Pioneer P47T36R (T4)								
5	DOP-5 (June 15)	115.3	m-q	23.8	d-g	16.20	f-j	26.3	j-t
5	Pioneer P47T36R (T4)								
1	DOP-1 (March 28)	123.8	fg	21.5	g-l	13.78	r-w	27.7	i-r
6	Petrus 4916 GT (T5)								
2	DOP-2 (April 12)	127.0	de	20.3	k-o	13.20	t-w	28.1	h-r
6	Petrus 4916 GT (T5)								
3	DOP-3 (April 25)	122.3	ghi	18.8	m-t	13.35	s-w	28.8	h-o
6	Petrus 4916 GT (T5)								
4	DOP-4 (May 11)	129.5	cd	16.8	tuv	16.20	f-j	20.4	q-z
6	Petrus 4916 GT (T5)								
5	DOP-5 (June 15)	114.0	o-r	22.0	f-k	15.25	j-o	27.6	i-r
6	Petrus 4916 GT (T5)								

Continued.

Table 1. Continued.

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Plt Height		Moisture		Yield	
Rating Date				9/21/2018		9/21/2018		9/21/2018	
Rating Type				Height		Moisture		Yield	
Rating Unit		days		in		%		bu/A	
Trt No.	Treatment Name								
TABLE OF A (Date of Planting) and B (Group/Variety) MEANS (continued)									
1	DOP-1 (March 28)	123.8	fg	18.8	m-t	14.45	m-s	20.5	p-y
7	DG S45XS37 (T6)								
2	DOP-2 (April 12)	124.8	efg	20.8	i-n	12.83	wx	19.8	r-A
7	DG S45XS37 (T6)								
3	DOP-3 (April 25)	122.8	gh	24.3	def	14.10	p-v	27.4	i-r
7	DG S45XS37 (T6)								
4	DOP-4 (May 11)	130.5	bc	28.8	a	15.88	h-k	31.9	d-m
7	DG S45XS37 (T6)								
5	DOP-5 (June 15)	116.0	m-p	26.0	bcd	17.25	d-g	30.4	f-n
7	DG S45XS37 (T6)								
1	DOP-1 (March 28)	111.8	rs	17.3	r-v	13.35	s-w	12.1	z-C
8	Group IV filler								
2	DOP-2 (April 12)	122.5	gh	20.8	i-n	11.68	y	17.7	u-C
8	Group IV filler								
3	DOP-3 (April 25)	122.8	gh	19.3	l-s	13.60	r-w	31.7	d-m
8	Group IV filler								
4	DOP-4 (May 11)	129.0	cd	28.0	ab	15.98	h-k	32.5	c-l
8	Group IV filler								
5	DOP-5 (June 15)	113.8	o-s	19.8	k-q	15.38	j-m	28.4	h-q
8	Group IV filler								
1	DOP-1 (March 28)	127.3	de	16.8	tuv	16.68	e-i	25.2	l-v
9	Bayer CZ5375RY (T7)								
2	DOP-2 (April 12)	135.0	a	15.5	v	15.13	j-p	26.8	j-s
9	Bayer CZ5375RY (T7)								
3	DOP-3 (April 25)	135.5	a	16.3	uv	16.75	e-h	33.6	c-k
9	Bayer CZ5375RY (T7)								
4	DOP-4 (May 11)	134.5	a	17.3	r-v	17.93	bcd	42.1	ab
9	Bayer CZ5375RY (T7)								
5	DOP-5 (June 15)	119.0	jkl	21.0	h-m	17.95	bcd	31.5	e-m
9	Bayer CZ5375RY (T7)								

Continued.

Table 1. Continued.

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Plt Height		Moisture		Yield	
Rating Date				9/21/2018		9/21/2018		9/21/2018	
Rating Type				Height		Moisture		Yield	
Rating Unit		days		in		%		bu/A	
Trt No.	Treatment Name								
TABLE OF A (Date of Planting) and B (Group/Variety) MEANS (continued)									
1	DOP-1 (March 28)	125.8	ef	20.0	k-p	14.90	k-q	32.0	d-m
10	Pioneer P54A54X (T8)								
2	DOP-2 (April 12)	135.0	a	18.8	m-t	14.53	l-r	34.5	b-j
10	Pioneer P54A54X (T8)								
3	DOP-3 (April 25)	127.0	de	18.5	n-u	15.60	i-l	40.4	abc
10	Pioneer P54A54X (T8)								
4	DOP-4 (May 11)	133.0	ab	18.5	n-u	17.38	b-e	36.3	a-h
10	Pioneer P54A54X (T8)								
5	DOP-5 (June 15)	116.5	l-o	23.0	f-i	17.68	b-e	39.5	a-e
10	Pioneer P54A54X (T8)								
1	DOP-1 (March 28)	125.8	ef	19.5	l-r	14.28	m-t	24.9	l-v
11	DG S52RY75 (T9)								
2	DOP-2 (April 12)	135.0	a	17.3	r-v	14.18	o-v	30.2	f-n
11	DG S52RY75 (T9)								
3	DOP-3 (April 25)	125.8	ef	17.3	r-v	15.35	j-m	30.3	f-n
11	DG S52RY75 (T9)								
4	DOP-4 (May 11)	130.5	bc	18.3	o-u	17.40	b-e	28.7	h-p
11	DG S52RY75 (T9)								
5	DOP-5 (June 15)	116.0	m-p	23.8	d-g	17.25	d-g	31.7	d-m
11	DG S52RY75 (T9)								
1	DOP-1 (March 28)	117.8	j-m	16.3	uv	13.30	t-w	13.1	x-C
12	Group V filler								
2	DOP-2 (April 12)	134.0	a	16.5	tuv	13.55	r-w	21.1	o-x
12	Group V filler								
3	DOP-3 (April 25)	133.8	a	15.5	v	17.38	b-e	31.7	d-m
12	Group V filler								
4	DOP-4 (May 11)	133.0	ab	18.5	n-u	17.30	c-f	37.2	a-f
12	Group V filler								
5	DOP-5 (June 15)	116.0	m-p	22.8	f-j	17.43	b-e	28.9	g-o
12	Group V filler								
P		0.0001		0.0001		0.0001		0.0001	
LSD P=.05		2.91		2.44		1.109		8.28	
Standard Deviation		2.09		1.75		0.794		5.93	
CV		1.73		8.38		5.217		22.23	

Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

RICE DISEASE CONTROL RESEARCH

RICE DISEASE CONTROL STUDIES, 2018[1]

D.E. Groth, C.W. Dischler, and L.L. Monte

Numerous diseases pose major threats to rice (*Oryzae sativa* L.) production. In Louisiana, sheath blight (*Rhizoctonia solani* Kuhn), bacterial panicle blight (*Burkholderia glumae* Kurita and Tabei), blast (*Pyricularia grisea* Sacc.), and narrow brown leaf spot (*Cercospora oryzae* (Racib.) O. Const.) continue to be the most important diseases of rice causing significant yield and quality reductions costing farmers millions of dollars each year. Narrow brown leaf spot developed into a major pest during the 2006 growing season, and since that year, it has been problematic in later-planted rice and the second crop. Bacterial panicle blight has been a major problem in many rice fields during abnormally hot conditions. In 2010 and 2011, strobilurin fungicide-resistant sheath blight pathogen was detected in Acadia Parish. Most recently in 2012 and 2015, major blast epidemics developed on several major rice varieties causing significant damage. Information is critically needed on these disease pests and their interactions to determine best control practices. Data from inoculated research plots and surveys in farmers' fields suggest that these rice diseases cause an average 6 to 25% loss each year in yield and quality. With present production costs and the low rice prices, these yield and quality losses can represent negative net returns due to rice diseases. Direct losses to disease include thin stands, lodging, spotted kernels, fewer and smaller grains, reduced milling, and a general reduction in plant efficiency. Indirect losses include the cost of pesticides used to manage diseases, application costs, and reduced yields associated with special cultural control practices that reduce disease but may not be conducive to producing maximum yields.

A number of factors affect disease development, including varietal resistance, cultural management, cropping history, weather, and pesticides. Host resistance is the best control method, but often it is not available or breaks down after varietal release. Most long-grain varieties are susceptible to sheath blight, and several major varieties are also susceptible to blast. Cultural practices often play an important role in disease development as evidenced by the fact that sheath blight was a minor disease until the introduction of semidwarf varieties, high fertilization rates, and soybeans as a rotational crop. Cultural practices, such as reducing seeding rates and nitrogen levels, can reduce disease development, but this can limit yield. As a result, rice farmers often rely on fungicides to control diseases. Constant effort on breeding for resistance and development of effective chemical control programs is needed to keep rice diseases at tolerable levels.

Diseases occur in all rice growing regions of the world. In the United States, disease pressure is higher in the mid-south growing region than in the arid California production area, although California has had significantly more disease pressure recently with the introduction of blast in 1997 and the introduction of bakanae in 1999. The United States is fortunate that it does not have any of the devastating viral diseases that occur in most other production areas of the world. Also, the United States has a limited number of nematode and bacterial diseases compared with most of the world production areas. Unfortunately, there are enough fungal diseases that increase production costs and reduce yields and quality to limit the economic return U.S. farmers receive for their crop.

The objective of these studies is to develop effective economical rice disease management practices. These include disease resistance, cultural management, and chemical control.

[1] This research is supported in part by funds provided by rice producers through the Louisiana Rice Research Board and various agricultural chemical companies.

Table 1. List of fungicides tested in 2018.

Trade Name	**Common Name**	**Company**
Quadris 2.08 SC	Azoxystrobin	Syngenta
Stratego 2.08 EC	Trifloxystrobin/Propiconazole	Bayer
GEM 500 SC	Trifloxystrobin	Bayer
Sercadis	Xemium	BASF
Tilt 3.6 EC	Propiconazole	Syngenta
Quilt Xcel 2.2SC	Azoxystrobin/Propiconazole	Syngenta
Elegia	Flutolanil	Nichino
Amistar Top	Azoxystrobin/Difenoconazole	Syngenta

2018 Rice Disease Nurseries

Location: H. Rouse Caffey Rice Research Station, Crowley, LA

Soil Type: Crowley silt loam (pH 6.0, Clay 12%, Silt 71%, Sand 17%, CEC 9.4 /kg)

Variety/Seed Rate: Various / 100 lb/A

Plot Size: 1 row x 4 ft

Planting Method/Date: Drill seeded / March 20

Fertilization: Preplant 0-60-60+**7** Zn, Sept. 26; Preflood 145-0-0, April 30

Experimental Design: Randomized complete block design with 2-4 replications

Water Management: Flooded, May 1

Herbicides: Tank-Mix propanil 1 qt/A and Prowl 1 qt/A, April 3
Tank-Mix propanil 2 qt/A, RiceBeaux 2 qt/A, and Basagran 1.5 pt/A, April 27

Insecticides: Dermacor X-100 seed treatment

Fungicides: None

Inoculation Dates: *Rhizoctonia solani* culture grown on rice grain/hull mixture, June 5
Burkholderia glumae in July

Application Equipment: CO_2 backpack sprayer, 1 tip (TJ8002) hand wand

Disease Ratings: Sheath blight (SB) and bacterial panicle blight (BPB), July 25

Drained: July 16

Harvest: N/A

Results: See Tables 2-10

Comments: Sheath blight severity was high and bacterial panicle blight was light.

Table 2. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018.

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 16	July 23	July 23	Aug. 29
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. No. Treatment Name				
1 Caffey	5.0def	4.6ijk	2.8efg	2.2ghi
2 Catahoula	1.3l-o	6.8bcd	2.2gh	1.8h-k
3 Cheniere	4.5d-g	5.0g-k	1.8gh	2.8e-h
4 CL111	0.5no	8.0a	5.2abc	2.2ghi
5 CL151	5.3cde	6.0c-g	4.8a-d	2.8e-h
6 CL152	4.5d-g	6.2c-f	2.2gh	4.2cde
7 CL153	0.8no	7.0abc	4.2b-e	2.2ghi
8 CL163	5.3cde	7.0abc	5.2abc	5.2bc
9 CL172	0.8no	5.6e-i	3.2d-g	1.6h-k
10 CL272	6.5bc	4.6ijk	4.8a-d	4.6bcd
11 LAH169	1.0mno	5.8d-h	3.4d-g	2.2ghi
12 CLXL745	1.5k-n	4.8h-k	1.8gh	0.6jk
13 Cocodrie	2.3j-m	6.8bcd	2.8efg	2.6fgh
14 Cypress	5.0def	6.2c-f	3.2d-g	2.8e-h
15 Della-2	5.0def	5.8d-h	2.8efg	2.6fgh
16 Jazzman	2.5i-l	4.4jk	5.6abc	2.0g-j
17 Jazzman-2	1.8k-n	5.6e-i	5.0abc	2.2ghi
18 Jupiter	6.5bc	5.2f-j	2.0gh	1.8h-k
19 LaKast	3.5g-j	4.0kl	2.2gh	4.0c-f
20 Mermentau	2.8h-k	5.4f-j	2.6e-h	3.4d-g
21 Roy J	3.8f-i	3.2lm	2.4fgh	4.6bcd
22 Titan	6.5bc	6.0c-g	3.0efg	2.8e-h
23 XP753	2.5i-l	4.8h-k	2.4fgh	1.4h-k
24 XP760	1.0mno	2.6m	1.0h	0.4k
25 PVL01	4.0e-h	6.6cde	2.6e-h	5.4bc
26 Diamond	5.0def	4.0kl	2.2gh	4.2cde
27 Thad	5.8bcd	6.0c-g	5.2abc	5.8b
28 MM14	6.8b	5.4f-j	6.0a	2.4ghi
29 Gemini 214 CL	0.0o	2.8m	1.0h	1.0ijk
30 Presidio	3.8f-i	6.2c-f	2.2gh	3.4d-g
31 CLJ01	2.3j-m	6.0c-g	3.4d-g	2.0g-j
32 PVL108	3.3g-j	5.4f-j	5.8ab	2.6fgh
33 M202	9.0a	7.8ab	4.0c-f	8.0a
LSD P=.05	1.20	0.93	1.38	1.26
Standard Deviation	0.85	0.74	1.10	1.01
CV	23.56	13.44	33.41	34.09
Replicate F	0.291	1.982	0.361	2.188
Replicate Prob(F)	0.8315	0.1011	0.8360	0.0740
Treatment F	26.905	15.121	8.297	12.679
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 3. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group I).

Character Rated		Leaf Blast	SB	BPB	RNB
Rating Date		July 19	July 25	July 25	Aug. 23
Rating Data Type		Severity	Severity	Severity	Severity
Rating Unit		0-9	0-9	0-9	0-9
Trt. No.	Treatment Name				
1	IRGA409/RXMT/5/NWBT/3/LBNT/9902//LBLE/4/MILL/6/LBNT....	0.0f	4.5ef	3.5abc	0.0d
2	CCDR/JEFF//CFX-26/9702128/3/WELLS/CFX-18//DREW/CFX-18	3.8de	7.3a	2.8a-e	4.0a
3	CL131/PSCL	5.3abc	5.3c-f	3.0a-d	3.8ab
4	PVL108	-	3.0g	1.0f	-
5	RU0801076/5/KATY/NWBT//L201/7402003/3/WLLS/4/L201/....	3.5de	4.3f	3.8ab	3.8ab
6	CL131/TRNS	0.5f	6.0a-d	2.8a-e	1.3cd
7	RSMT/3/MARS/NWRX//TBNT/4/CL151	6.3a	5.3c-f	3.5abc	1.8bcd
8	L202/LQ39a//SABR	-	-	-	-
9	19991516/19951166/7/LBNT/9902/3/DAWN/9695//STBN/4/.....	1.0f	4.8def	4.0a	1.5cd
10	CHNR/MRMT	4.3cd	6.0a-d	2.0c-f	3.3abc
11	CL151//COLUMBIA2/BENGAL	5.3abc	4.3f	1.3ef	3.8ab
12	CPRS/NWBT//KATY/3/CCDR	3.0e	-	-	-
13	RU1102192/4/WLLS/CFX-18/3/CFX-18//CCDR/9770532 DH2	5.5ab	6.5abc	2.3b-f	4.0a
14	BNGL//MERC/RICO/3/EARL/4/BNGL/CL161	6.3a	6.5abc	3.8ab	3.3abc
15	CL151/JSMN85//CL161	6.0a	5.0def	2.5a-f	3.3abc
16	CPRS/CCDR	1.0f	-	-	0.0d
17	91642//KATY/NWBT/5/RU9201176/4/KATY/NWBT/3/LBNT/S....	4.5bcd	5.8b-e	1.8def	5.3a
18	CL153	0.0f	6.8ab	2.8a-e	1.3cd
19	PRESIDIO	4.5bcd	5.3c-f	1.8def	3.3abc
20	CL111	0.0f	7.3a	3.0a-d	0.5d
LSD P=.05		0.98	1.14	1.45	1.80
Standard Deviation		0.69	0.80	1.02	1.27
CV		20.43	14.59	38.23	48.49
Replicate F		0.453	1.857	5.164	1.012
Replicate Prob(F)		0.7164	0.1495	0.0036	0.3960
Treatment F		45.554	8.395	3.107	5.988
Treatment Prob(F)		0.0001	0.0001	0.0012	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 4. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group II).

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. No. Treatment Name				
21 RU1302048/RU1302045	1.0d	6.8a	4.3b	1.0ef
22 CAFFEY/CL261	6.3ab	5.3b-e	2.8b-f	4.0a-d
23 CL151/JSMN85//CL161	6.8a	5.3b-e	3.3bcd	4.3abc
24 IR64/IR 1321-12	0.0d	4.5e	1.5ef	0.0f
25 RU0502068/RU1202088	0.0d	6.8a	2.0def	0.0f
26 CL131/3/CPRS/KBNT//9502008-A/4/LGRU/CLR 11/...	0.0d	6.3abc	2.5c-f	0.5f
27 Rex/CL151	7.0a	4.8de	6.3a	2.5cde
28 WAB 450-11-1-1-P31-HB (NERICA 5)/RSMT	5.3bc	5.0cde	1.8def	4.8ab
29 JPTR/TITN	6.8a	6.0a-d	1.8def	2.0def
30 9502008-A/DREW//CLR 20/4/CPRS/KBNT//9502008-A	0.0d	6.5ab	3.3bcd	0.0f
31 BOWMAN/CL131	4.5c	6.8a	2.3def	4.8ab
32 IR64/IR 1321-12	0.0d	4.3e	1.3f	0.0f
33 RU1202168/JPTR	6.0ab	4.8de	1.8def	4.0a-d
34 CPRS/5/LGRU/CLR 11/4/9302065/3/CFX-29/.....	4.5c	6.0a-d	3.0b-e	3.5bcd
35 BOWMAN/CL131	6.0ab	6.3abc	2.5c-f	5.0ab
36 AC110DH2/AC108DH2//CHEN	4.0c	4.3e	1.3f	4.3abc
37 CCDR/CL131	4.3c	6.3abc	2.5c-f	3.3bcd
38 WELLS	5.0bc	5.3b-e	4.0bc	5.0ab
39 LAKAST	4.3c	4.3e	2.8b-f	4.5abc
40 DIAMOND	5.0bc	4.5e	3.3bcd	6.0a
LSD P=.05	1.17	1.14	1.40	1.81
Standard Deviation	0.83	0.81	0.99	1.28
CV	21.64	14.73	36.69	43.1
Replicate F	11.410	3.308	2.173	4.261
Replicate Prob(F)	0.0001	0.0264	0.1011	0.0088
Treatment F	39.876	5.219	5.817	10.111
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 5. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group III).

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
41 WLLS/CL161//TGRT/3/DREW/CL161//CL142-AR	3.5fg	5.8b-e	3.8abc	3.5abc
42 MERMENTAU/3/FRANCIS/CLR 13//9502008-A/DREW	2.8g	6.3abc	2.3d-g	3.0a-d
43 CL151/JSMN85//CL161	6.5bc	5.3c-f	3.5a-d	3.5abc
44 CPRS/9901081	0.8h	-	-	3.2a-d
45 MRMT/RU0502068	3.0g	5.8b-e	2.5c-g	2.0cde
46 CCDR/JEFF//CFX-26/9702128/3/CL151	5.3de	6.5ab	2.8b-f	4.3ab
47 Cheniere/Banks	0.0h	4.0g	2.0efg	0.8e
48 WAB 450-11-1-1-P31-HB (NERICA 5)/RSMT	3.5fg	5.5b-f	1.3g	4.4ab
49 STG05-IMI-02-055/CL142-AR/7/IRGA409/RXMT/.....	5.3de	4.0g	4.0ab	4.5ab
50 CCDR/JEFF//CFX-26/9702128/3/CL151	5.3de	5.8b-e	3.8abc	2.5b-e
51 Texmont/TeQing(BF7-46)/Trenasse	7.3ab	6.0a-d	2.5c-g	4.0ab
52 043752/0047277/CHEN	4.3ef	5.8b-e	1.5fg	4.0ab
53 EARL/9902028//RU1202068	7.3ab	5.0d-g	1.8fg	5.0a
54 CCDR/JEFF//CFX-26/9702128/3/CL151	5.5cd	4.8efg	3.3b-e	4.3ab
55 Bowman//RSMT/KATY	0.3h	7.0a	4.8a	1.5de
56 SABR/CCDR//PRESIDIO	3.0g	-	-	3.4a-d
57 Cheniere/Banks	8.3a	6.5ab	1.8fg	4.0ab
58 CHENIERE	5.0de	4.5fg	1.3g	3.5abc
59 COCODRIE	3.5fg	6.0a-d	1.8fg	0.8e
60 CL272	6.0cd	4.5fg	2.8b-f	5.0a
LSD P=.05	1.07	0.96	1.20	1.53
Standard Deviation	0.76	0.67	0.84	1.08
CV	17.59	12.31	32.01	32.15
Replicate F	2.273	3.775	0.651	7.329
Replicate Prob(F)	0.0898	0.0161	0.5859	0.0003
Treatment F	37.021	6.694	5.759	5.546
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 6. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group IV).

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. No. Treatment Name				
61 CL172/RU1102192	2.5f	5.5bc	1.8e	4.3abc
62 CL152/5/9502008-A/DREW//CLR 20/....	3.0ef	5.3bcd	3.0b-e	3.3b-e
63 RSMT/KATY//Bowman	5.5ab	7.3a	2.3de	3.5a-d
64 043752/0047277/CHEN	4.3cd	5.0b-e	3.0b-e	4.8ab
65 JZMN/PI597046	3.0ef	4.8b-f	4.5abc	3.0b-f
66 NEPTUNE/4/9502065/3/MERC//MERC/…	6.0a	5.5bc	2.8cde	3.8a-d
67 RSMT/KATY//Bowman	5.8ab	6.0b	1.8e	3.5a-d
68 CL161/CPRS	4.8bc	4.1d-g	3.5a-e	3.5a-d
69 CL142AR//KBNT/Q36194/3/WLLS/CL161//..	5.0abc	5.3bcd	3.0b-e	5.3a
70 NEPTUNE/5/BNGL/SHORTRICO/4/9502065/3/....	5.5ab	4.5c-f	3.8a-e	4.0abc
71 JODON/3/KATY//GFMT/PCOS/Templeton	5.0abc	4.8b-f	4.8ab	3.3b-e
72 L202/LQ39a//SABR	2.3f	-	-	1.3fgh
73 BRAZ/T489//MARS/3/M201/KATY/4/LMNT....	1.0g	3.5fg	5.0a	0.0h
74 LAH169	0.0h	4.8b-f	2.3de	0.8gh
75 JODON/3/KATY//GFMT/PCOS/Templeton	3.5de	4.5c-f	4.3a-d	3.0b-f
76 IR64/IR 1321-12	0.0h	3.8efg	1.8e	0.0h
77 043752/0047277/CHEN	2.3f	4.0d-g	2.3de	1.5e-h
78 JUPITER	5.5ab	5.5bc	3.3a-e	2.0d-g
79 ROY J	4.8bc	3.0g	2.0e	4.3abc
80 TITAN	5.5ab	5.5bc	2.8cde	2.8c-f
LSD P=.05	0.87	1.10	1.64	1.54
Standard Deviation	0.61	0.78	1.15	1.08
CV	16.34	15.95	38.25	37.41
Replicate F	6.304	1.523	0.355	1.578
Replicate Prob(F)	0.0009	0.2194	0.7854	0.2048
Treatment F	39.042	6.208	3.198	7.509
Treatment Prob(F)	0.0001	0.0001	0.0005	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 7. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group V).

Character Rated Rating Date Rating Data Type Rating Unit	Leaf Blast July 19 Severity 0-9	SB July 25 Severity 0-9	BPB July 25 Severity 0-9	RNB Aug. 23 Severity 0-9
Trt. Treatment No. Name				
81 91642//KATY/NWBT/5/RU9201176/4/KATY/NWBT/....	5.0def	5.0d-g	2.5-	5.5ab
82 TRNS/BASF 1-10	5.5de	7.5ab	2.0-	3.5a-d
83 CL151/JSMN85//CL151	4.0efg	4.5efg	3.0-	2.5a-d
84 CPRS/3/CPRS/NWBT/KATY	0.0i	5.1d-g	1.8-	2.4a-d
85 LGRU//LMNT/RA73/3/LGRU/4/WLLS/5/CYBT/6/ROYJ	6.5bcd	4.5efg	3.0-	4.0abc
86 CHENIERE/BASF 1-2	5.0def	5.0d-g	2.0-	5.0abc
87 Rex/CL151	9.0a	5.5c-f	3.0-	2.5a-d
88 CPRS/NWBT//KATY/3/CCDR	3.0g	6.1b-e	0.8-	4.4abc
89 LGRU//KATY/STBN/3/FRNS//WLLS/CLI6I/4/RU0801081	6.0cd	5.0d-g	2.0-	5.0abc
90 CHENIERE/BASF 1-2	5.5de	6.5a-d	3.5-	3.5a-d
91 CL151/JSMN85//CL161	6.5bcd	5.5c-f	4.0-	3.0a-d
92 Hayakogane/BALDO	4.0efg	-	-	3.4a-d
93 LMNT//82CAY21/CICA8/3/DLMT/4/BASMATI-(120)/BOND//....	3.5fg	5.0d-g	5.0-	4.5abc
94 CHENIERE/BASF 1-6	5.5de	5.5c-f	4.0-	3.5a-d
95 CL151/JSMN85//CL161	8.0ab	6.0b-e	2.5-	2.5a-d
96 CPRS/3/CPRS/NWBT/KATY	3.5fg	5.5c-f	1.0-	4.5abc
97 RU1102034/RU1302045	0.0i	7.5ab	3.0-	0.0d
98 CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	1.0hi	8.0a	2.0-	2.0bcd
99 CL151/JSMN85//CL161	6.5bcd	6.0b-e	2.0-	3.5a-d
100 Hayakogane/BALDO	1.0hi	3.9fg	2.2-	2.5a-d
101 CL172/RU1102034	0.0i	6.5a-d	2.5-	0.0d
102 CHNR/3/NWBT/KATY//9902207X2/4/BASF 2-21	3.0g	-	-	-
103 CL151/JSMN85//CL161	8.5a	5.5c-f	1.0-	3.5a-d
104 CPRS/CCDR	2.5gh	6.0b-e	1.5-	2.0bcd
105 JZMN/RU0701124//PI632283	4.0efg	5.5c-f	2.0-	1.5cd
106 CHENIERE//CCDR/JEFF/3/BASF 2-26	0.0i	6.5a-d	2.0-	2.0bcd
107 GFMT/KDM105//CL151/JSMN85	6.5bcd	4.0fg	3.0-	1.5cd
108 CarolinaGoldSelect/Presidio	6.0cd	3.5g	1.0-	3.5a-d
109 JZMN/PI560239//JES	0.0i	5.5c-f	3.0-	0.0d
110 CPRS/BASF 1-14	-	-	-	-
111 GFMT/KDM105//CL151/JSMN85	7.5abc	5.5c-f	4.0-	1.5cd
112 CarolinaGoldSelect/Presidio	3.5fg	4.5efg	1.5-	2.0bcd
113 RU1002128/RU1202097	1.0hi	6.5a-d	4.0-	2.0bcd
114 PVL01Sub	6.5bcd	5.5c-f	5.0-	4.0abc
115 Rex/CL181-AR	7.5abc	4.5efg	3.0-	2.5a-d
116 CL161/CPRS	4.0efg	-	-	-

Continued.

Table 7. Continued.

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
117 Bolivar/Drew	4.0efg	7.0abc	2.0-	1.5cd
118 Mo0327005/CL161	5.0def	6.0b-e	2.5-	5.0abc
120 CL163	7.5abc	5.0d-g	2.0-	6.0a
LSD P=.05	1.51	1.53	2.80	3.07
Standard Deviation	0.74	0.75	1.37	1.51
CV	17.41	13.38	51.84	53.27
Replicate F	0.098	0.669	0.802	4.371
Replicate Prob(F)	0.7566	0.4195	0.3773	0.0443
Treatment F	25.800	3.517	1.204	2.112
Treatment Prob(F)	0.0001	0.0003	0.2993	0.0163

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 8. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group VI).

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. No. Treatment Name				
121 EARL/9902028//JPTR	6.0bc	5.0c-f	4.0-	2.5b-f
122 CPRS/KBNT//9502008-A/5/KATY/CPRS//NWBT/KATY....	4.5c-f	6.0a-d	3.5-	4.5abc
123 Rex/CL151	5.5bcd	5.0c-f	2.0-	4.0a-d
124 Hayakogane/BALDO	2.5g-j	5.1c-f	2.9-	2.0c-f
125 RU1302045/CL111	5.0b-e	8.0a	3.0-	4.0a-d
126 CCDR/JEFF//CFX-26/9702128/3/CL151	5.0b-e	5.5b-e	2.5-	2.0c-f
127 Rex/CL181-AR	9.0a	5.0c-f	2.0-	5.0ab
128 AC110DH2/AC108DH2//CYBT	2.0h-k	-	-	1.5def
129 JPTR/J062	5.5bcd	4.5def	2.5-	0.0f
130 CCDR/JEFF//CFX-26/9702128/3/CL151	5.5bcd	7.0abc	2.0-	4.5abc
131 Rex/CL151	6.0bc	6.0a-d	5.0-	3.5a-e
132 CPRS/3/CPRS/NWBT/KATY	4.0d-g	4.9c-f	2.1-	2.5b-f
133 CL172/4/9502008-A//AR1188/CCDR/3/CFX-26/9702128	0.0l	4.5def	3.5-	1.0ef
134 TRNS/5/9502008-A/DREW//CLR 20/4/CPRS/KBNT...	3.0f-i	6.0a-d	2.5-	2.5b-f
135 Taggart/CL111	2.5g-j	6.0a-d	4.0-	3.0a-e
136 CPRS/3/CPRS/NWBT/KATY	-	-	-	-
137 14SIT818/RU1501096	5.0b-e	6.5a-d	1.5-	2.5b-f
138 PRESIDO/CL111	5.0b-e	7.0abc	2.0-	0.0f
139 CL161/Priscilla//CL151/JSMN85	1.5i-l	4.5def	5.5-	0.0f
140 4579	0.0l	3.0f	1.0-	0.0f
141 LGRU//KATY/STBN/5/LGRU//LMNT/RA.....	4.5c-f	4.5def	6.0-	5.5a
142 9502008-A/DREW//CFX 26/WELLS/4/CPRS/....	3.5e-h	5.0c-f	3.5-	3.0a-e
143 CL161/Priscilla//CL151/JSMN85	5.0b-e	4.5def	2.0-	1.0ef
144 9302065/LMNT	4.5c-f	5.0c-f	2.5-	4.0a-d
145 ROYJ/CL142-AR	4.5c-f	3.5ef	3.0-	4.5abc
146 LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031/5/CHENIERE	1.5i-l	7.5ab	5.0-	0.0f
147 Rex/CL151	6.0bc	5.0c-f	5.0-	3.5a-e
148 CPRS/3/CPRS/NWBT/KATY	3.5e-h	7.0abc	4.0-	4.0a-d
149 CYBT/TMPT/7/DREW/CL161/6/LGRU//KATY/STBN/5/..	3.5e-h	5.0c-f	2.5-	3.5a-e
150 LGRU/CLR 11/4/9302065/3/CFX-29/AR 1142/LA 2031.....	0.5kl	6.5a-d	2.0-	1.5def
151 Trenasse/Bowman	3.0f-i	6.5a-d	1.0-	4.0a-d
152 AC110DH2/AC108DH2//CYBT	2.0h-k	7.0abc	3.0-	2.0c-f
153 FRNS//WLLS/CL161/7/FRNS/6/LBNT/9902/3/DAWN/9695..	5.5bcd	4.5def	6.0-	5.0ab
154 CAFFEY/3/BNGL/9502065//EARL	4.5c-f	6.0a-d	4.5-	2.0c-f
155 Trenasse/Bowman	5.5bcd	8.0a	3.0-	4.0a-d
156 CCDR/MILL	3.0f-i	5.0c-f	4.5-	3.0a-e
157 NIL219_2-9/Mo0212002	1.0jkl	5.0c-f	1.0-	0.0f

Continued.

Table 8. Continued.

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
158 Mo0204044/Kataki	6.5b	5.5b-e	4.0-	3.5a-e
159 CPRS/CCDR (ANTONIO)	3.5e-h	5.5b-e	2.5-	0.0f
160 Thad	6.5b	6.5a-d	4.0-	5.5a
LSD P=.05	1.50	1.98	3.07	2.29
Standard Deviation	0.74	0.97	1.51	1.13
CV	18.49	17.35	47.35	42.26
Replicate F	0.215	0.367	0.298	8.410
Replicate Prob(F)	0.6456	0.5488	0.5883	0.0062
Treatment F	14.068	2.800	1.598	4.546
Treatment Prob(F)	0.0001	0.0014	0.0832	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 9. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group VII).

Character Rated		Leaf Blast	SB	BPB	RNB
Rating Date		July 19	July 25	July 25	Aug. 23
Rating Data Type		Severity	Severity	Severity	Severity
Rating Unit		0-9	0-9	0-9	0-9
Trt. No.	Treatment Name				
161	LGRU//KATY/STBN/5/LGRU//LMNT/RA73/3/LGRU....	6.0bcd	5.0d-g	3.0-	5.5a
162	TRNS//CCDR/JEFF/4/CHNR/3/NWBT/KATY//…….	4.5d-g	5.0d-g	2.0-	3.5a-d
163	CPRS//NWBT/KATY/3/Bowman	6.5abc	6.5a-d	4.0-	4.5abc
164	CPRS/3/CPRS/NWBT/KATY	6.5abc	5.5c-f	2.5-	4.0abc
165	RU1102034/RU1302045	2.5hi	7.5ab	4.5-	2.5b-e
166	CHNR/3/NWBT/KATY//9902207X2/4/CATAHOULA	4.5d-g	6.5a-d	4.5-	3.5a-d
167	RSMT/KATY//Bowman	6.5abc	5.0d-g	3.0-	2.5b-e
168	CPRS/NWBT//KATY/3/CCDR	5.0c-f	5.5c-f	2.0-	2.5b-e
169	ROYJ/RU1501024	2.0ij	5.0d-g	1.5-	0.0e
170	NEPTUNE/4/9502065/3/MERC//MERC/4/9902028	6.5abc	5.5c-f	3.5-	4.5abc
171	RSMT/KATY//Bowman	6.0bcd	8.0a	3.0-	4.5abc
172	AC110DH2/AC108DH2//CHEN	4.0e-h	3.5gh	1.5-	5.0ab
173	ROYJ/RU1102192	3.5f-i	4.0fgh	2.5-	2.5b-e
174	ORIN/3/MERC/CAM9/MARS/4/BNGL/5/NEPTUNE	5.5b-e	6.5a-d	2.0-	3.0a-d
175	RSMT/KATY//Bowman	5.5b-e	8.0a	4.0-	3.5a-d
176	CPRS/CCDR//WELLS	3.5f-i	5.0d-g	2.5-	2.0cde
177	KATY/NWBT//L201/7402003/3/WLLS/4/FRNS/5/DREW...	6.0bcd	6.0b-e	2.5-	3.0a-d
178	NEPTUNE//BNGL/CL161/3/BNGL/CL161	6.5abc	6.0b-e	1.5-	3.5a-d
179	RSMT/KATY//Bowman	6.0bcd	7.5ab	2.5-	3.5a-d
180	CPRS/CCDR//CCDR	1.0jk	5.5c-f	3.5-	2.5b-e
181	WLLS/CL161//TGRT	6.5abc	5.5c-f	6.0-	5.0ab
182	BNGL/CL161/3/NEPTUNE//BNGL/CL161	5.5b-e	5.5c-f	3.0-	3.5a-d
183	DXBL//NWBT/KATY/3/Bowman	7.0ab	6.0b-e	4.0-	4.0abc
184	CPRS/SABR//MADISON	0.0k	5.0d-g	1.5-	1.0de
185	CHNR/CTHL	0.0k	6.5a-d	2.0-	1.0de
186	NEPTUNE//BNGL/CL161/3/JPTR	6.0bcd	6.0b-e	4.0-	3.5a-d
187	DXBL//NWBT/KATY/3/Bowman	5.5b-e	5.5c-f	3.0-	5.0ab
188	Jangseongbyeo/IR 1321-12	0.0k	3.5gh	1.5-	0.0e
189	JZMN/RU0701124//PI632283	3.0ghi	4.5e-h	3.0-	0.0e
190	NEPTUNE//BNGL/CL161/5/BNGL//MERC/RICO/3/MERC/.....	5.5b-e	6.0b-e	4.0-	3.0a-d
191	Bowman/L201//TBNT/BLMT/3/RXMT/IR36	6.5abc	7.0abc	2.5-	3.5a-d
192	Jangseongbyeo/IR 1321-12	0.5k	3.5gh	3.0-	0.0e
193	TGRT/3/DREW/CL161//CL142-AR	6.5abc	4.5e-h	4.5-	5.5a
194	CL272 sub A	8.0a	4.5e-h	3.0-	4.5abc
195	Bowman/L201//TBNT/BLMT/3/RXMT/IR36	7.0ab	5.5c-f	1.5-	5.5a
196	CCDR/L202//TRENASSE	3.5f-i	5.5c-f	4.0-	2.0cde
197	Soberana Q241-1/Francis	5.5b-e	4.0fgh	3.5-	4.0abc

Continued.

Table 9. Continued.

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
198 Mo0204074/Nil16_2-1	3.5f-i	8.0a	3.0-	3.5a-d
199 RHONDO	0.0k	3.0h	1.5-	0.0e
200 CL151	5.5b-e	6.5a-d	2.5-	4.5abc
LSD P=.05	1.35	1.41	2.33	2.19
Standard Deviation	0.67	0.70	1.15	1.08
CV	14.55	12.52	39.46	34.66
Replicate F	4.738	0.000	16.553	9.590
Replicate Prob(F)	0.0356	1.0000	0.0002	0.0036
Treatment F	23.114	6.555	1.685	4.497
Treatment Prob(F)	0.0001	0.0001	0.0537	0.0001

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 10. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast (RNB) at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018. (URN Group VIII).

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
201 LGRU//KATY/STBN/5/LGRU//LMNT/RA73/3/LGRU/....	4.0de	4.5efg	4.5a-e	4.5ab
202 CL272 sub B	7.0ab	5.0def	5.5abc	1.5bcd
203 Soberana Q241-2/Wells	5.0cde	7.5ab	3.0c-f	1.5bcd
204 Bowman/L201//TBNT/BLMT/3/RXMT/IR36	6.0bc	6.0b-e	2.0def	4.5ab
205 PVL108	-	3.0g	2.0def	-
206 JZMN//DREW/UA99-167	0.0g	7.5ab	5.0a-d	1.5bcd
207 TRNS//CCDR/JEFF/5/9502008-A/DREW//CLR 20/4/.....	0.0g	7.5ab	4.0a-f	1.0bcd
208 Mo0239718/CL161	3.5e	6.5a-d	2.0def	2.5a-d
209 JODON/3/KATY//GFMT/PCOS/Templeton	0.0g	5.0def	2.5c-f	1.5bcd
210 PVL108	-	3.0g	1.0f	-
211 9865216DH2/EARL//JPTR	5.5cd	6.5a-d	2.0def	2.0a-d
212 CL131/3/CPRS/KBNT//9502008-A	4.0de	8.0a	4.5a-e	2.5a-d
213 NIL219_2-9/RU0001108	5.5cd	6.5a-d	2.5c-f	4.5ab
214 REX/Templeton	5.0cde	5.0def	3.0c-f	4.0abc
215 CPRS/SABR//Gulfmont	2.0f	7.0abc	1.5ef	0.5cd
216 CL142-AR//KBNT/Q36194/7/DREW/CL161/6/LGRU...	5.5cd	5.0def	1.0f	5.5a
217 9502008/3/MBLE//LMNT/20001-5/4/WELLS/CFX18/....	0.0g	7.0abc	3.0c-f	1.5bcd
218 NIL43_2-1/Mo0205014	4.0de	6.5a-d	3.0c-f	3.0a-d
219 REX/Templeton	4.0de	6.0b-e	5.0a-d	3.5a-d
220 CPRS/SABR//MADISON	4.0de	5.0def	2.0def	1.0bcd
221 CTHL/CL172	0.0g	5.5c-f	2.0def	1.5bcd
222 CPRS/KBNT//9502008-A/3/CCDR/4/CL131	0.0g	7.0abc	4.5a-e	1.0bcd
223 Mo0215035 / CIRAD141Q244-3	4.0de	8.0a	5.0a-d	4.0abc
224 REX/Templeton	5.0cde	5.0def	6.5ab	2.0a-d
225 CPRS/SABR//MADISON	2.0f	5.5c-f	3.0c-f	0.0d
226 CL142-AR//KBNT/Q36194/3/DREW/CL161//TMPT	3.5e	5.5c-f	4.0a-f	4.0abc
227 CHENIERE/6/CPRS/KBNT//9502008A/5/KATY/CPRS....	4.5de	6.0b-e	2.0def	4.0abc
228 RU0403166/Spring	6.5abc	8.0a	2.5c-f	2.5a-d
229 REX/Templeton	6.5abc	4.0fg	2.0def	2.0a-d
230 FRAN/WELLS//BANKS	4.0de	5.5c-f	4.0a-f	5.5a
231 JZMN/RU0701124//RU0401145	5.5cd	4.5efg	1.5ef	1.5bcd
232 KATY/CPRS//NWBT/KATY/3/9502008/4/CLR 9/5/KATY/CPRS.....	6.5abc	5.5c-f	2.0def	4.5ab
233 STGL01L-49-173/RU0001108	5.0cde	7.5ab	4.5a-e	4.0abc
234 REX/Templeton	5.5cd	5.5c-f	3.0c-f	3.5a-d
235 CPRS/SABR//MADISON	1.0fg	5.0def	3.5b-f	0.0d
236 NIL219_1-5/Mo0205014	1.0fg	5.5c-f	7.0a	1.0bcd
237 JPTR/EARL	6.0bc	5.5c-f	4.0a-f	1.5bcd

Continued.

Table 10. Continued.

Character Rated	Leaf Blast	SB	BPB	RNB
Rating Date	July 19	July 25	July 25	Aug. 23
Rating Data Type	Severity	Severity	Severity	Severity
Rating Unit	0-9	0-9	0-9	0-9
Trt. Treatment No. Name				
238 EARL/9902028//RU1202068	6.0bc	6.0b-e	2.5c-f	2.0a-d
239 DELLA-2	4.5de	6.5a-d	4.0a-f	2.0a-d
240 Rex	7.5a	5.0def	1.5ef	3.5a-d
LSD P=.05	1.25	1.63	2.80	3.22
Standard Deviation	0.62	0.80	1.38	1.59
CV	15.73	13.71	43.21	62.58
Replicate F	0.859	0.484	4.421	11.510
Replicate Prob(F)	0.3601	0.4908	0.0420	0.0017
Treatment F	26.827	4.843	2.251	1.781
Treatment Prob(F)	0.0001	0.0001	0.0065	0.0417

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

2018 Second Crop (Ratoon) Stubble Management and Fungicide Trial

Location: H. Rouse Caffey Rice Research Station, Crowley, LA

Soil Type: Crowley silt loam (pH 6.0, Clay 12%, Silt 71%, Sand 17%, CEC 9.4 /kg)

Variety/Seed Rate: CL111 / 100 lb/A

Plot Size: 4 x 16 ft

Planting Method/Date: Drill seeded / March 20

Fertilization: Preplant 0-60-60+7 Zn, Sept. 26; Preflood 145-0-0, April 30
Ratoon Crop: 100 lb/A N, Aug. 3

Experimental Design: Randomized complete block design with four replications

Water Management: Flooded, May 1
Ratoon Crop: Flooded, Aug. 6

Herbicides: Tank-Mix propanil 1 qt/A and Prowl 1 qt/A, April 3
Tank-Mix propanil 2 qt/A, RiceBeaux 2 qt/A, and Basagram 1.5 pt/A, April 27

Insecticides: Dermacor X-100 seed treatment

Fungicides: Various

Inoculation Dates: *Rhizoctonia solani* culture grown on rice grain/hull mixture, June 5

Application Equipment: CO_2 backpack sprayer, 3 tip (TJ8002) hand wand, 20 gal/A

Application Dates:	Growth Stage	Time	Temp	Wind	RH	Clouds	Dew
Second Crop Applications:							
Sept. 5	5 wks. post harvest	9:00	81°F	3 mph	82%	30%	Slight
Sept. 19	7 wks. post harvest	9:00	85°F	3 mph	91%	Hazy	Heavy

Disease Ratings: Oct. 11

Drained: July 16
Ratoon Crop: Oct. 10

Harvest: Aug. 2
Ratoon Crop: Oct. 24

Results: See Table 11

Comments: Cercospora severity was light. Sheath blight severity was moderate. Yield potential was very high.

Table 11. Effect of stubble management and fungicide application on Cercospora (NBLS) and sheath blight (SB) development and rice yield. H. Rouse Caffey Rice Research Station, Crowley, Louisiana. 2018.

Character Rated							NBLS	SB	Ratoon
Rating Date							Oct. 11	Oct. 11	Oct. 24
Rating Data Type							Severity	Severity	Yield
Rating Unit							0-9	0-9	lb/A
Trt. No.	Treatment Name	Form Conc.	Form Unit	Form Type	Rate	Rate Unit	Growth Stage			
1	Uncut Untreated							4.3a	7.4a	4618-
2	Uncut Amistar Top			SC	15	oz/A	5 wks post	3.2b	5.6b	5571-
3	Uncut Amistar Top			SC	15	oz/A	7 wks post	2.5bc	4.8bcd	5625-
4	Uncut Tilt	3.6	lb/gal	EC	9	oz/A	5 wks post	3.3b	7.0a	5266-
5	Uncut Tilt	3.6	lb/gal	EC	9	oz/A	7 wks post	2.1cd	7.2a	5201-
6	Cut Untreated							1.7de	5.6b	4578-
7	Cut Amistar Top			SC	15	oz/A	5 wks post	1.4de	3.6e	5549-
8	Cut Amistar Top			SC	15	oz/A	7 wks post	1.6de	4.2de	5881-
9	Cut Tilt	3.6	lb/gal	EC	9	oz/A	5 wks post	1.2e	4.6cd	5123-
10	Cut Tilt	3.6	lb/gal	EC	9	oz/A	7 wks post	1.6de	5.2bc	5393-
11	Rolled Untreated							1.9cd	5.4bc	5194-
12	Rolled Amistar Top			SC	15	oz/A	5 wks post	1.6de	3.6e	5125-
13	Rolled Amistar Top			SC	15	oz/A	7 wks post	1.5de	3.6e	5789-
14	Rolled Tilt	3.6	lb/gal	EC	9	oz/A	5 wks post	1.4de	4.6cd	5095-
15	Rolled Tilt	3.6	lb/gal	EC	9	oz/A	7 wks post	1.9cd	5.0bcd	5189-
LSD P=.10								0.59 - 0.95	0.84	755.5
Standard Deviation								1.33t	0.79	714.2
CV								16.37t	15.41	13.53
Replicate F								5.897	1.034	0.407
Replicate Prob(F)								0.0005	0.3979	0.8026
Treatment F								7.784	12.443	1.361
Treatment Prob(F)								0.0001	0.0001	0.2032

Means followed by the same letter or symbol do not significantly differ (P=.05, Duncan's New MRT).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

GENETIC MAPPING, BREEDING, AND DEVELOPMENT OF NEW STRATEGIES TO IMPROVE RICE DISEASE MANAGEMENT FOR SHEATH BLIGHT AND BACTERIAL PANICLE BLIGHT

J.H. Ham, J. Ontoy, A. Maharjan, I.K. Barphagha, A.N. Famoso, and D.E. Groth

Introduction

This project aims to reduce the damages in rice production from bacterial panicle blight (BPB) and sheath blight (SB) through multiple approaches, including genetic studies, breeding efforts, and application of chemical and biological materials. Bacterial panicle blight, caused by the bacterial pathogens *Burkholderia glumae* (major pathogen) and *Burkholderia gladioli* (minor pathogen), cannot be managed by fungicide application, and few disease management options are available for this disease. Sheath blight is caused by the fungal pathogen *Rhizoctonia solani* and can be managed by fungicide application. However, this disease management option accompanies high cost and risk of fungicide-resistant pathogen isolates. Major research activities conducted in 2018 include: 1) genetic mapping of the quantitative trait loci (QTLs) associated with BPB and SB, 2) investigation of rice genes specifically expressed in the BPB-resistant variety Jupiter, and 3) testing of biotic and abiotic materials for their efficacy to manage BPB and SB. In addition, QTLs for other traits, including early heading, plant height, panicle length, panicle type, and flag leaf size, were also identified during the genetic mapping of QTLs for diseases.

Research Progress in 2018

I. Genetic Mapping of QTLs Associated with Diseases and Other Traits of Rice

Four populations of recombinant inbred lines (RILs) derived from the crosses between disease-resistant rice (i.e. Jupiter and LM-1) and disease-susceptible rice (i.e. Trenasse and Bengal) have been constructed at their F_{10} generation as a foundation material for genetic and genomic studies. Each population contains 288-300 RILs, ensuring the population size to be large enough for reliable statistical analysis. Genetic linkage mapping of the QTLs related to BPB and SB were performed with the multi-year phenotypic data of the Trenasse/Jupiter RIL population and the genotypic data of the same population for various molecular markers identified from this project, which include simple sequence repeat (SSR) and single nucleotide polymorphism (SNP) markers (Fig. 1). One conspicuous locus on a top part of Chromosome 3 was highly associated with both BPB and SB as well as early heading and panicle length throughout the years tested for each trait (Fig. 2 and Table 1). Rice genes located in the identified locus include candidate genes that are possibly responsible for early heading and disease resistance, such as *Rp1*, and genes encoding putative NB-LRR disease resistance proteins and pathogenesis-related protein 10 (Table 2). Other QTLs for the diseases were also found in other areas of the rice genome, including Chromosomes 2, 9, and 10, but their effects on disease phenotypes were variable in different growing seasons (Fig. 2 and Table 1). In addition, two major QTLs (one on Chromosome 1 from Trenasse and the other on Chromosome 3 from Jupiter) were found to be associated with the susceptibility to the pathogen of BPB in rice plants at the vegetative stage, according to the greenhouse tests in 2018 (Fig. 2 and Table 1).

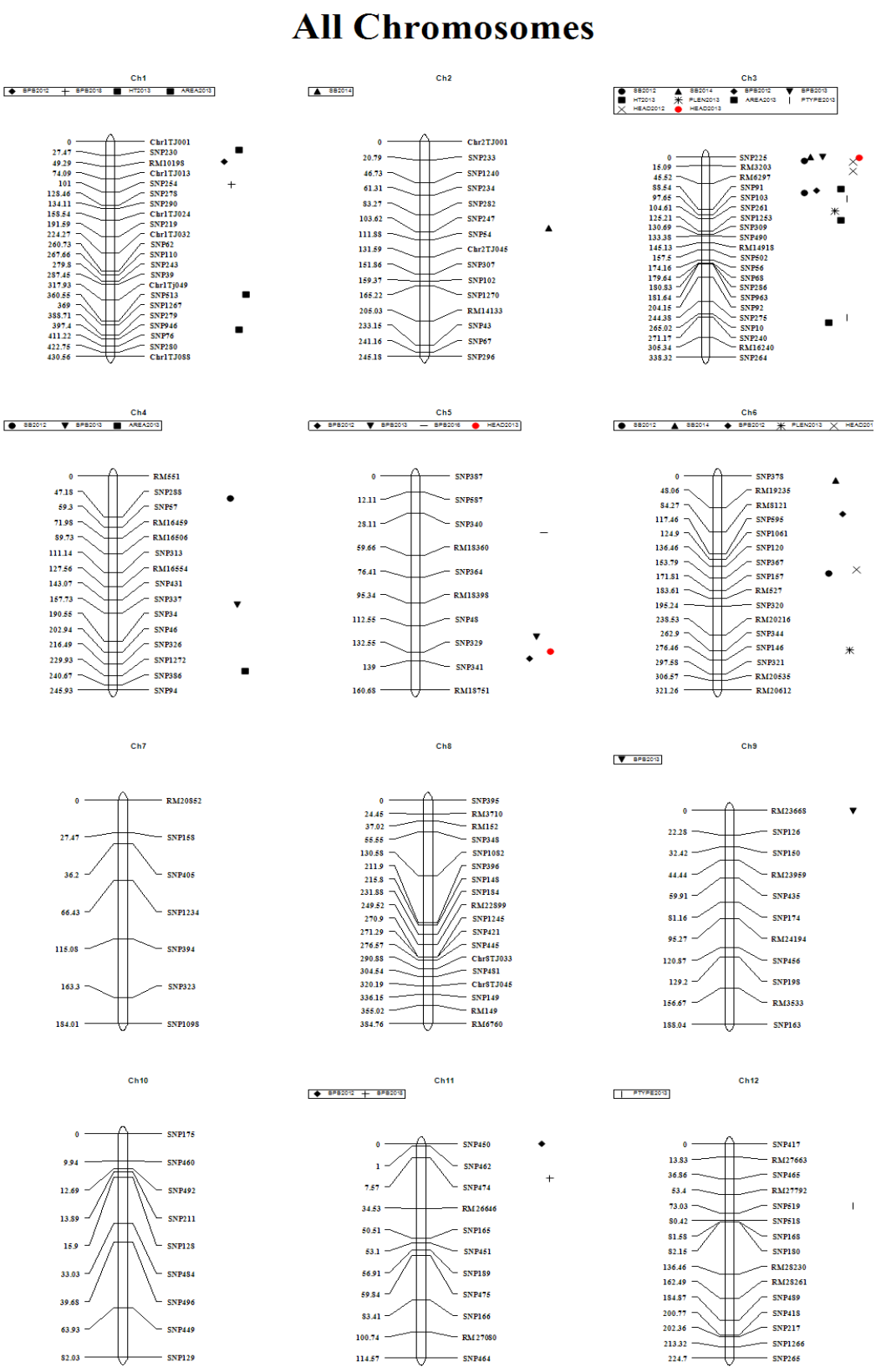

Figure 1. The molecular makers used for the QTL mapping in the rice genome and the phenotypic traits associated with the markers.

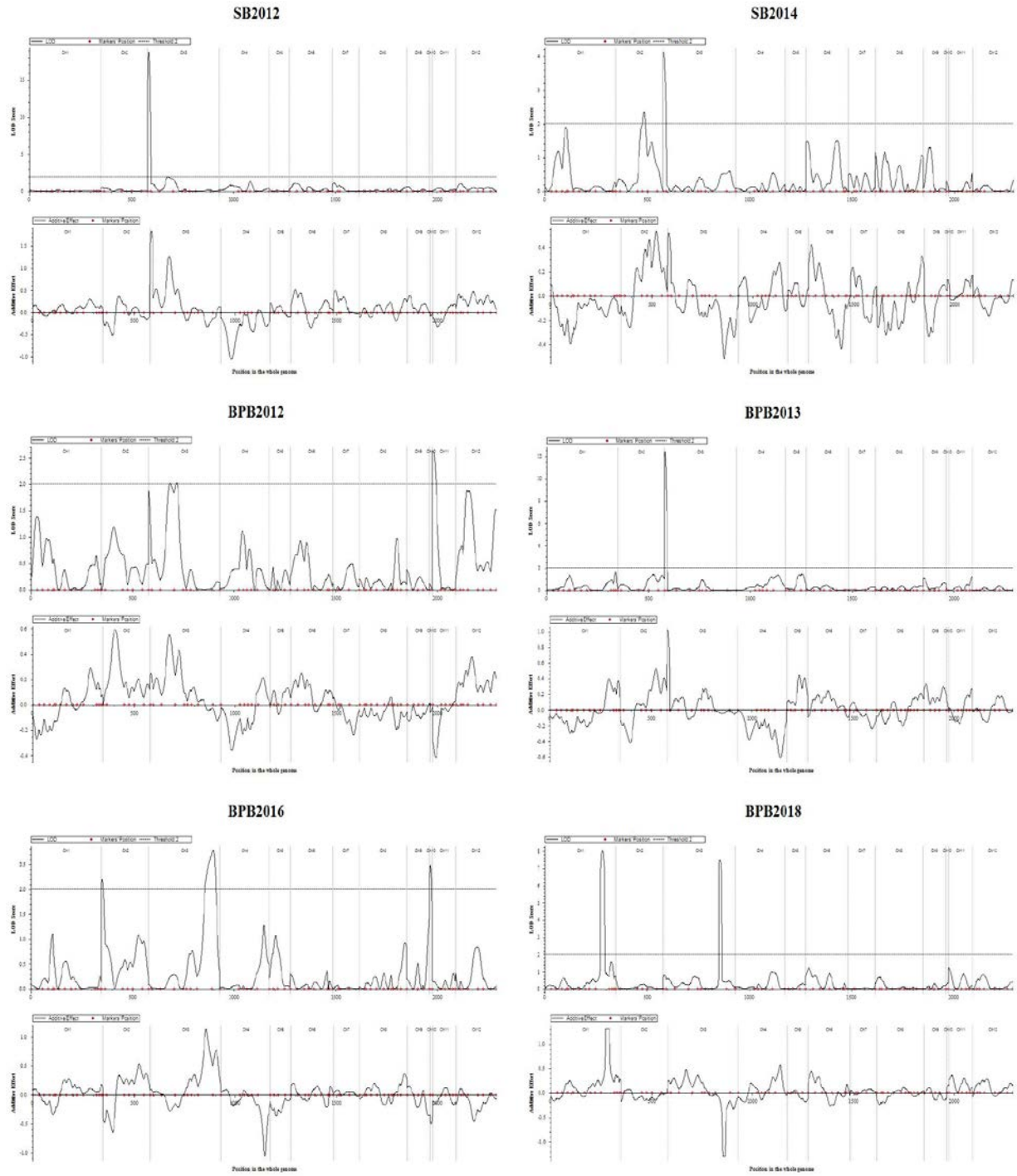

Figure 2. The molecular genetic map showing the positions of QTLs for disease and morpho-physiological traits investigated. Linkage and QTL mapping were implemented in ICIMapping 4.0 using 170 SSR-SNP markers in 255 Trenasse/Jupiter RILs.

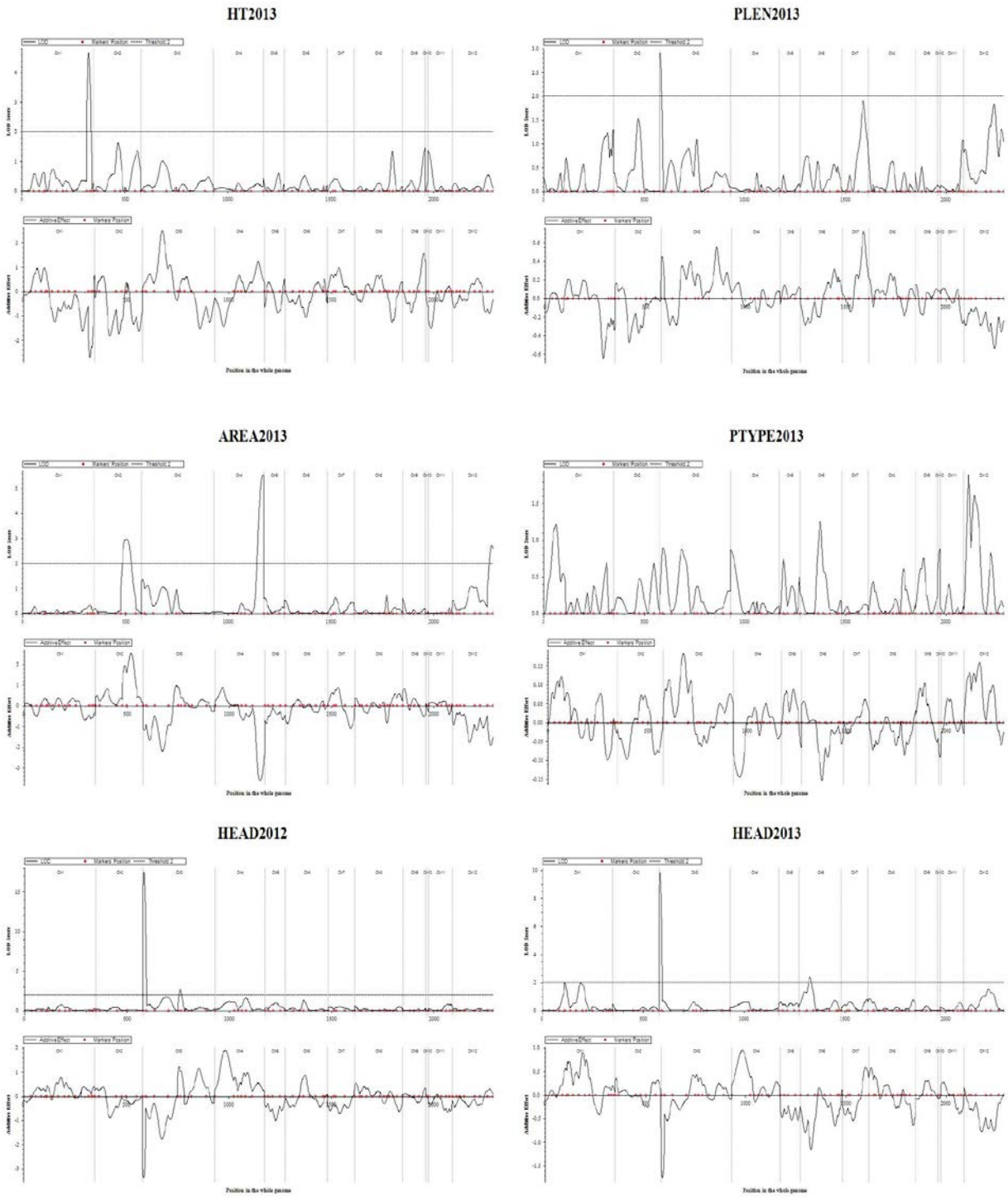

Figure 2. Continued.

Table 1. QTLs detected by inclusive composite interval mapping of the Trenasse/Jupiter RILs.

TraitID	TraitName	Ch	Position	LeftMarker	RightMarker	LOD	PVE(%)	Add	LeftCI	RightCI	Source of allele
SB score	$SB2012_{3.1}$	3	7	SNP225	RM3203	13.7765	23.5065	1.2897	3.5	10.5	Trenasse
	$SB2012_{3.2}$	3	94	SNP91	SNP103	5.1871	7.1475	0.7165	89.5	97.5	Trenasse
	$SB2012_{4.1}$	4	53	SNP288	SNP57	2.1599	3.1171	-0.4769	47.5	58.5	Jupiter
	$SB2012_{6.1}$	6	169	SNP367	SNP157	2.2771	3.1333	-0.4792	159.5	180.5	Jupiter
	$SB2014_{2.1}$	2	109	SNP247	SNP54	3.8335	5.563	0.4121	103.5	111.5	Trenasse
	$SB2014_{3.1}$	3	0	SNP225	RM3203	4.1399	4.9832	0.3884	0	7.5	Trenasse
	$SB2014_{6.2}$	6	15	SNP378	RM19235	2.0116	6.5107	0.4438	0	33.5	Trenasse
BPB score	$BPB2012_{1.1}$	1	48	SNP230	RM10198	2.6027	3.2864	-0.2408	36.5	48.5	Jupiter
	$BPB2012_{3.1}$	3	92	SNP91	SNP103	5.214	7.1297	0.3567	88.5	96.5	Trenasse
	$BPB2012_{5.1}$	5	137	SNP329	SNP341	2.1239	2.6335	0.2174	127.5	148.5	Trenasse
	$BPB2012_{6.1}$	6	106	RM8121	SNP595	2.0484	4.7893	0.2928	87.5	116.5	Trenasse
	$BPB2012_{11.1}$	11	0	SNP450	SNP462	3.3792	3.7976	-0.2593	0	1.5	Jupiter
	$BPB2013_{3.2}$	3	1	SNP225	RM3203	15.6005	17.7099	0.8198	0	5.5	Trenasse
	$BPB2013_{4.1}$	4	172	SNP337	SNP34	4.2323	9.0616	-0.5862	158.5	182.5	Jupiter
	$BPB2013_{5.2}$	5	128	SNP48	SNP329	4.3362	6.086	0.4856	120.5	131.5	Trenasse
	$BPB2013_{9.1}$	9	1	RM23668	SNP126	2.581	2.6267	0.3155	0	13.5	Trenasse
	$BPB2016_{5.3}$	5	41	SNP340	RM18360	2.1232	3.6237	-0.5399	19.5	58.5	Jupiter
	$BPB2018_{1.2}$	1	106	SNP254	SNP278	2.0277	3.8165	0.3216	86.5	122.5	Trenasse
	$BPB2018_{11.2}$	11	5	SNP462	SNP474	2.3095	3.5606	0.307	0	22.5	Trenasse
Plant height	$HT2013_{1.1}$	1	22	Chr1TJ001	SNP230	4.1262	6.4211	2.1697	11.5	27.5	Trenasse
	$HT2013_{1.2}$	1	403	SNP946	SNP76	6.0299	8.1387	-2.4735	397.5	408.5	Jupiter
	$HT2013_{3.1}$	3	256	SNP275	SNP10	2.8348	4.8293	-1.9206	244.5	265.5	Jupiter
Panicle length	$PLEN2013_{3.1}$	3	113	SNP261	SNP1253	3.6717	6.4573	0.5053	105.5	122.5	Trenasse
	$PLEN2013_{6.1}$	6	281	SNP146	SNP321	2.0876	3.1866	0.3708	267.5	292.5	Trenasse
Leaf Area	$AREA2013_{1.1}$	1	360	Chr1Tj049	SNP513	2.2793	2.5487	1.1814	343.5	365.5	Trenasse
	$AREA2013_{3.1}$	3	91	SNP91	SNP103	5.7825	7.7765	-2.0732	79.5	95.5	Jupiter
	$AREA2013_{3.2}$	3	127	SNP1253	SNP309	3.7369	4.7211	1.6067	118.5	130.5	Trenasse
	$AREA2013_{4.1}$	4	238	SNP1272	SNP386	5.993	8.6793	-2.189	233.5	240.5	Jupiter
Panicle type	$PTYPE2013_{3.1}$	3	99	SNP103	SNP261	2.6221	4.6009	0.1202	93.5	104.5	Trenasse
	$PTYPE2013_{3.2}$	3	244	SNP92	SNP275	4.6934	7.9055	-0.1618	235.5	249.5	Jupiter
	$PTYPE2013_{12.1}$	12	73	RM27792	SNP519	2.1351	3.2822	0.1021	62.5	80.5	Trenasse
Heading	$HEAD2012_{3.1}$	3	8	SNP225	RM3203	21.0138	17.3896	-3.1791	4.5	10.5	Jupiter
	$HEAD2012_{3.2}$	3	28	RM3203	RM6297	8.5157	14.2649	-2.8816	20.5	32.5	Jupiter
	$HEAD2012_{6.1}$	6	164	SNP367	SNP157	2.093	1.4779	0.9398	150.5	178.5	Trenasse
	$HEAD2013_{3.1}$	3	2	SNP225	RM3203	12.5721	20.5306	-1.5072	0	7.5	Jupiter
	$HEAD2013_{5.1}$	5	135	SNP329	SNP341	2.3532	3.5279	-0.6308	122.5	138.5	Jupiter

PVE: phenotypic variance. CI: confidence interval.

Table 2. Rice genes located at the SNP225 – RM3202 region.

Name	Description (Direct description or transfer from target)
LOC_Os03g18600	cyclase/dehydrase family protein, putative, expressed
LOC_Os07g33730	NB-ARC domain containing protein, expressed
LOC_Os04g11165	gamma-thionin family domain containing protein
LOC_Os11g11580	NB-ARC domain containing protein, expressed
LOC_Os02g19890	stripe rust resistance protein Yr10, putative, expressed
LOC_Os07g33690	NBS-LRR type disease resistance protein Hom-F, putative, expressed
LOC_Os01g57270	disease resistance RPP13-like protein 1, putative, expressed
LOC_Os01g57280	rp1, putative, expressed
LOC_Os06g49360	NBS-LRR disease resistance protein, putative, expressed
LOC_Os07g33740	vrgal, putative, expressed
LOC_Os12g36860	pathogenesis-related protein 10, putative, expressed
LOC_Os12g10340	NBS-LRR type resistance protein, putative, expressed
LOC_Os09g09490	disease resistance protein RPM1, putative, expressed

II. Rice Gene Expression Related to BPB Resistance

Rice genes specifically expressed upon the BPB pathogen were also analyzed through an RNA-sequencing approach with both susceptible and resistant varieties (Bengal and Jupiter, respectively) to understand the rice defense/resistance mechanisms against BPB and to develop new molecular markers for disease resistance. Rice plants were inoculated with the BPB pathogen *Burkholderia glumae* at the early heading stage, and RNA samples were collected at 0, 6, and 24 hours after inoculation. Through RNA-sequencing analyses, rice genes specifically expressed in the resistant variety Jupiter were identified at each time point, which are listed in Tables 3, 4, and 5. The genes identified from this experiment include many genes encoding putative elements of disease resistance and plant defense signaling systems, such as NB-LRR or NB-ARC domain proteins, RPP13-like and RPM1-like proteins, and pathogenesis-related protein 10.

Table 3. Genes related to defense response identified during 0 hr post BPB infection in Jupiter.

Name	Description (Direct description or transfer from target)
LOC_Os03g18600	cyclase/dehydrase family protein, putative, expressed
LOC_Os07g33730	NB-ARC domain containing protein, expressed
LOC_Os04g11165	gamma-thionin family domain containing protein
LOC_Os11g11580	NB-ARC domain containing protein, expressed
LOC_Os02g19890	stripe rust resistance protein Yr10, putative, expressed
LOC_Os07g33690	NBS-LRR type disease resistance protein Hom-F, putative, expressed
LOC_Os01g57270	disease resistance RPP13-like protein 1, putative, expressed
LOC_Os01g57280	rp1, putative, expressed
LOC_Os06g49360	NBS-LRR disease resistance protein, putative, expressed
LOC_Os07g33740	vrga1, putative, expressed
LOC_Os12g36860	pathogenesis-related protein 10, putative, expressed
LOC_Os12g10340	NBS-LRR type resistance protein, putative, expressed
LOC_Os09g09490	disease resistance protein RPM1, putative, expressed

Table 4. Genes related to defense response identified during 6 hr post BPB infection in Jupiter.

Name	Description (Direct description or transfer from target)
LOC_Os07g33730	NB-ARC domain containing protein, expressed
LOC_Os11g11580	NB-ARC domain containing protein, expressed
LOC_Os01g57280	rp1, putative, expressed
LOC_Os01g57340	rp1, putative, expressed
LOC_Os11g17014	NB-ARC domain containing protein, expressed
LOC_Os07g33740	vrga1, putative, expressed
LOC_Os07g33690	NBS-LRR type disease resistance protein Hom-F, putative, expressed
LOC_Os01g57270	disease resistance RPP13-like protein 1, putative, expressed
LOC_Os09g09490	disease resistance protein RPM1, putative, expressed

Table 5. Genes related to defense response identified during 24 hr post BPB infection in Jupiter.

Name	Description (Direct description or transfer from target)
LOC_Os04g11165	gamma-thionin family domain containing protein
LOC_Os11g11580	NB-ARC domain containing protein, expressed
LOC_Os06g49380	NBS-LRR disease resistance protein, putative, expressed
LOC_Os02g19890	stripe rust resistance protein Yr10, putative, expressed
LOC_Os01g57280	rp1, putative, expressed
LOC_Os06g49360	NBS-LRR disease resistance protein, putative, expressed
LOC_Os11g17014	NB-ARC domain containing protein, expressed
LOC_Os04g11130	DEF9 - Defensin and Defensin-like DEFL family, expressed
LOC_Os04g11195	gamma-thionin family domain containing protein
LOC_Os07g33690	NBS-LRR type disease resistance protein Hom-F, putative, expressed
LOC_Os09g09490	disease resistance protein RPM1, putative, expressed

III. New Biotic and Abiotic Materials for Disease Management of BPB and SB

More than 100 bacterial strains isolated from various parts of rice plants have been identified as potential biological control agents for BPB and SB. Field and greenhouse tests have been conducted for multiple years to evaluate the efficacy of these bacterial agents to suppress major rice diseases, including SB, BPB, and blast. Abiotic materials, including ascorbic acid and ZnO, have been identified as potential alternative measures to manage BPB through comparative and combinational trials with the commercial copper agent, Kocide 3000.

In 2018, the biological material REB711 (a strain of *Bacillus* sp.) exhibited a significant disease suppression activity against SB when the bacterial cells were cultured on a solid medium condition (Fig. 3). Ascorbic acid showed a good efficacy again in 2018 to manage BPB at 100 ppm (Fig. 4). Severe damage on rice panicles were observed with Kocide 3000 at the application dosage of 3 lb/A (Fig. 5). Efficacy of bacterial agents to suppress BPB could not be determined due to the low disease pressure (Fig. 5).

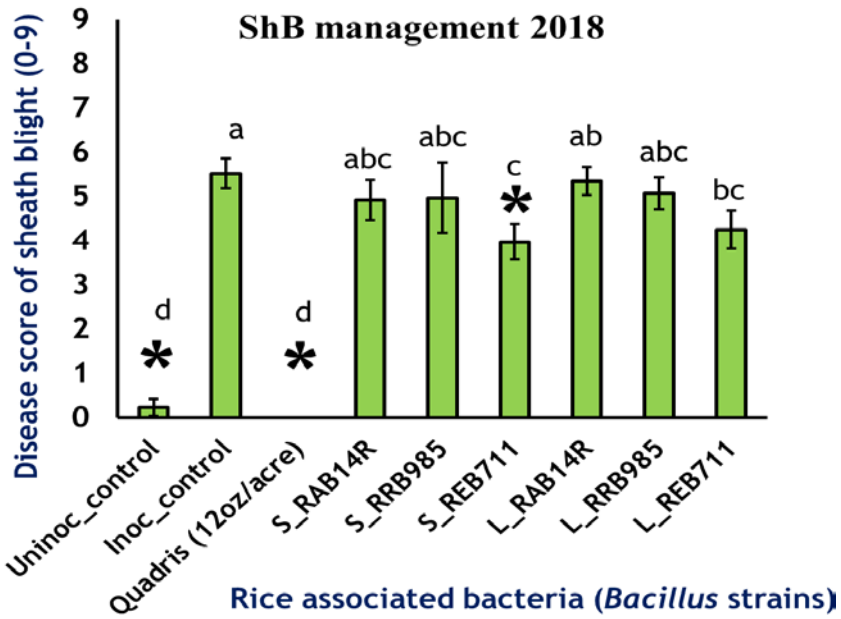

Figure 3. Suppression of SB by the strains of *Bacillus* spp. Treatments tested were un-inoculated control (Uninoc_control), inoculated control (Inoc_control), Quadris, and the bacterial strains RAB14R, RRB985, and REB711 cultured in solid (S) or liquid medium (L).

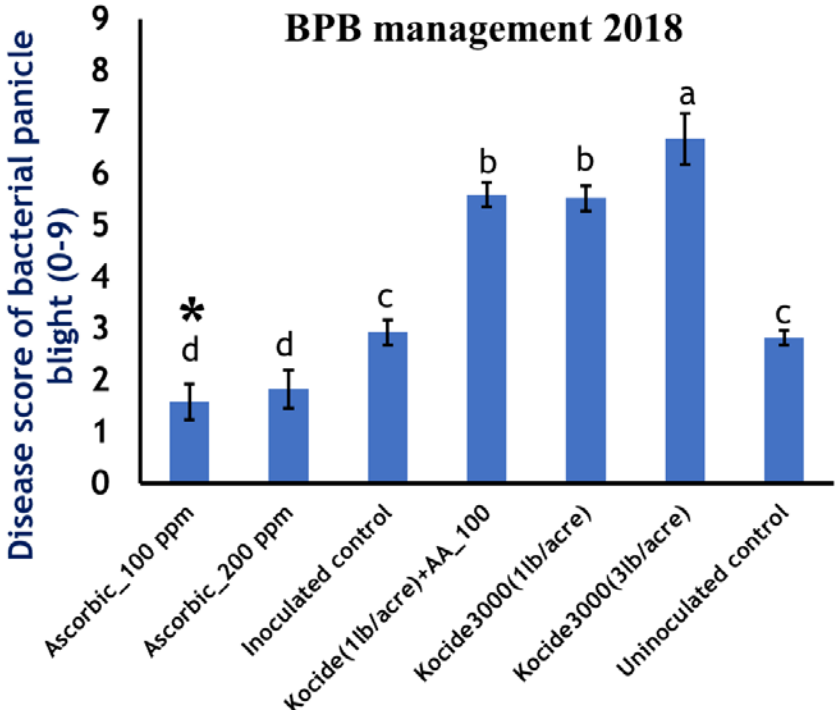

Figure 4. Suppression of BPB by ascorbic acid in comparison with Kocide 3000.

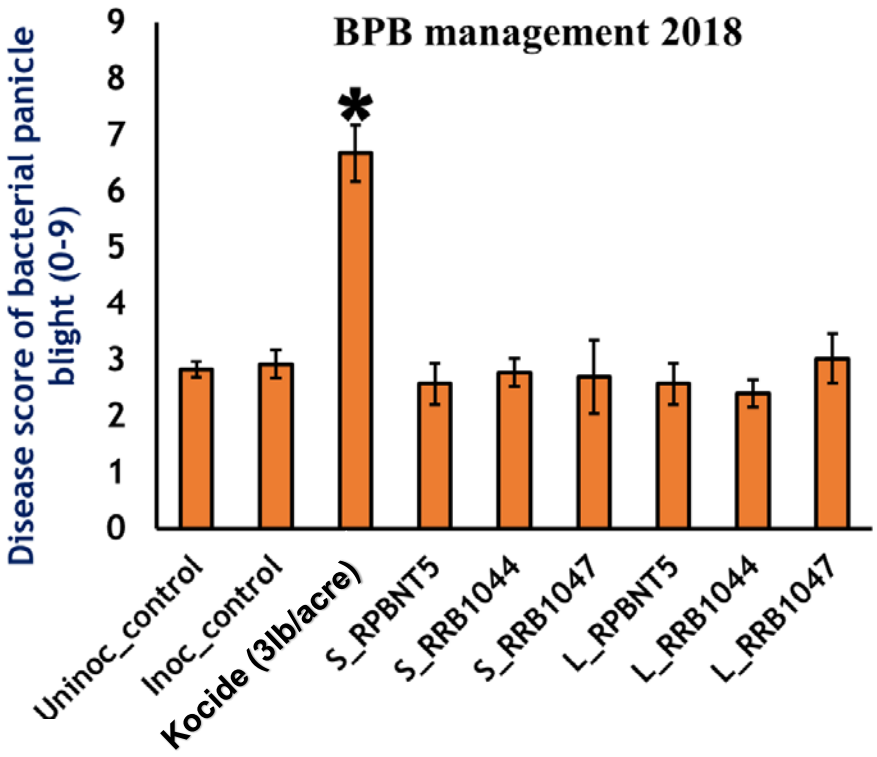

Figure 5. Suppression of BPB by the strains of *Pseudomonas* spp. Treatments tested were un-inoculated control (Uninoc_control), inoculated control (Inoc_control), Kocide 3000 (Kocide), and the bacterial strains RPBNT5, RRB1044, and RRB1047 cultured in solid (S) or liquid medium (L).

RICE INSECTS RESEARCH

ASSESSMENT OF INSECTICIDAL SEED TREATMENT COMBINATIONS FOR CONTROL OF RICE WATER WEEVIL AND STEM BORERS

B.E. Wilson, J.M. Villegas, M.M. Mulcahy, M.J. Frey, and M.J. Stout

Stem borers, including the sugarcane borer, Mexican rice borer, and rice stalk borer, are becoming increasingly problematic in southwestern Louisiana rice. Injury to rice stems results in blanked panicles, also called whiteheads. The effect of insecticidal seed treatments on rice water weevil, stem borers, and rice yield was evaluated in a small plot field trial under natural infestation levels. Seeds of medium-grain rice variety CL153 were drill-planted at a seeding rate of 70 lb/A on April 13, 2018. Plots were 4.1 ft wide and 30 ft long with 7 rows at 7-inch spacing. Plots were cored for weevil densities on June 21 and 28, 2018. Stem borer damage was assessed by recording the total number of whiteheads on Aug. 7 (main crop) and Oct. 25, 2018, (ratoon crop). Whitehead data was analyzed using a generalized linear mixed model (SAS, PROC GLIMMIX) with insecticide treatment as a fixed effect and block as a random effect. Means were separated using LSD ($\alpha = 0.05$).

Differences among insecticide treatments were detected ($P < 0.1$) in weevil densities at both core dates and rice yields in the main crop as well as whitehead incidence in the ratoon crop (Table 1).

Table 1. Stem borer injury (whiteheads) as affected by insecticide treatments, Crowley, Louisiana, 2018.

Treatment	Main Crop				Ratoon Crop	
	RWW/core		Whiteheads per m^2	Yield (lb/A)	RWW/core	Whiteheads per m^2
	Core 1	Core 2				
Nontreated	10.1a	7.5a	6.2	9,189b	2.7	0.7ab
Fungicide only	8.0a	4.9ab	3.0	9,664ab	1.2	0.7ab
Cruiser 5FS	5.4ab	2.5b	1.9	9,941ab	1.6	0.9ab
CruiserMaxx	5.7ab	5.0ab	4.6	10,438a	0.7	1.1a
Dermacor X-100 (1.5 oz/A)	2.1b	1.6b	0.5	9,981ab	0.5	0.6b
Dermacor X-100 (1.5 oz/A) + CruiserMaxx	0.8b	1.2b	1.2	10,118ab	1.8	0.3b
Dermacor X-100 (1.5 oz/A) + Cruiser 5FS	2.1b	0.9b	0.4	10,161ab	0.7	0.2b
Dermacor X-100 (1.0 oz/A) + CruiserMaxx	1.0b	1.2b	0.7	10,364ab	1.3	0.3b
F =	7.20	6.79	0.98	3.26	1.65	1.95
df =	7, 68	7, 32	7, 32	7, 31	7, 31	7, 32
P =	<0.001	<0.001	0.21	0.010	0.159	0.093

Means within a column followed by the same letter are not significantly different (P>0.10, LSD).

EXAMINATION OF FOLIAR APPLIED INSECTICIDES FOR CONTROL OF RICE STEM BORERS

B.E. Wilson, J.M. Villegas, M.M. Mulcahy, and M.J. Frey

Stem borers, including the sugarcane borer, Mexican rice borer, and rice stalk borer, are becoming increasingly problematic in southwestern Louisiana rice. Injury to rice stems results in blanked panicles, also called whiteheads. The efficacy of foliar applied insecticides against stem borer infestations in rice was evaluated in a small plot field trial under natural infestation levels. Seeds of medium-grain rice variety Caffey were drill-planted at a seeding rate of 70 lb/A on May 9, 2018. Plots were 4.1 ft wide and 30 ft long with seven rows at 7-inch spacing. Four insecticide treatments and an untreated check were assigned to plots following a randomized complete block design with four blocks and one replicate per block. Foliar applications of three rates of Prevathon® (AI: chlorantraniliprole) and one rate of Mustang Maxx® (AI: zeta-cypermethrin) were made on July 13, 2018, in addition to nontreated control plots. Insecticide treatments were applied using a CO_2-pressurized backpack sprayer calibrated to deliver 10 gpa at 30 psi. The sprayer is equipped with two Teejet TP11001 nozzles at 19-inch spacing. Stem borer damage was assessed by recording the total number of whiteheads in each plot at 100% heading. Whitehead data was analyzed using a generalized linear mixed model (SAS, PROC GLIMMIX) with insecticide treatment as a fixed effect and block as a random effect. Means were separated using LSD ($\alpha = 0.05$).

Differences among insecticide treatments were detected ($F_{4, 13} = 15.17$, $P < 0.001$) for whitehead incidence (Table 1). Prevathon® at 20 and 14 fl oz/A provided the highest level of stem borer control among treatments. Prevathon is not currently labeled for use in rice but may obtain registration in the future.

Table 1. Stem borer injury (whiteheads) as affected by insecticide treatments, Crowley, Louisiana, 2018.

Treatment	Rate (fl oz/A)	Whiteheads/m^2
Untreated Check	N/A	5.7a
Prevathon®	10	2.4b
Prevathon®	14	0.6cd
Prevathon®	20	0.2d
Mustang Maxx®	1.9	1.9cb

Means within a column followed by the same letter are not significantly different (P>0.05, LSD).

EFFECTS OF MYCORRHIZAL AND NIPSIT INSIDE SEED TREATMENTS ON STEM BORERS

L. Bernaola, M.J. Frey, and M.J. Stout

The sugarcane borer (SCB; *Diatraea saccharalis*), Mexican rice borer (MRB; *Eoreuma loftini*), and rice stalk borer (RSB; *Chilo plejadellus*) constitute the complex of stem-boring pests of rice in Lousiana. Larvae of these borers injure the vascular tissue of the stems during reproductive stages of rice, impairing maturation of the panicle and grain development, and thereby causing a typical symptom of blank panicles called whitehead.

Purpose:

The objective of this study was to evaluate the efficacies of the neonicotinoid insecticide, clothianidin (NipsIt INSIDE), and mycorrhiza (MycoApply EndoMaxx) as seed treatments against stem borer infestations in the conventional variety of rice CL111 in two field studies. Activity of neonicotinoid seed treatments has not been evaluated against stem borers, and mycorrhiza are known to influence plant resistance.

Experimental narrative and analysis:

Data were recorded from an experiment designed to measure the tolerance of CL111 against the rice water weevil. Rice was drill seeded at a rate of 60 lb/A at the LSU AgCenter H. Rouse Caffey Rice Research Station, Crowley, Louisiana (HRCRRS), on March 27 (Exp-1) and May 3 (Exp-2) in 2018. Seeds were treated by the manufacturer (Valent USA) at a rate of 1.92 fl oz of NipsIt INSIDE per 100 lb of seed and 2 lb/A for the mycorrhizal formulation. Field plots in both experiments were 4.1 ft wide by 18 ft long (seven rows at 7-inch spacing). Rice seedlings emerged by April 17 and May 17 for Exp-1 and Exp-2, respectively. Plots were cultivated following recommendations of the LSU AgCenter for drill-seeded rice with the exception of insect control. Each experiment consisted of a 2x2 factorial design with 10 replications of each treatment combination. Treatments consisted of treating or not treating rice seeds with clothianidin (+NsI and –NsI) and inoculating or not inoculating seeds with mycorrhizal fungi (+AMF and –AMF). Incidence of whiteheads resulting from stem borer infestations at the reproductive stage was assessed by counting the total number of whiteheads in each plot weekly on five different dates. Counts were initiated when plants reached 80-100% heading. In addition, during the last three weeks of whitehead sampling, plants showing whitehead symptoms were collected, and tillers with whiteheads were dissected longitudinally with a knife to remove and identify the stem borer species. Numbers of whiteheads and stem borers were totaled over five and three weeks, respectively, to obtain the number of whiteheads and stem borers in each plot. Whitehead and stem borer data were analyzed for each experiment by two-way ANOVA using PROC MIXED in SAS with insecticide, mycorrhizal, and their interaction as fixed effects and block as a random effect. Means were separated using LSD ($P \leq 0.05$).

Results:

Infestations with stem borers were widespread in both field experiments planted at the HRCRRS. About 70% of stem borer larvae collected after dissecting rice stems were found to be MRB with the remaining larvae a mix of SCB and RSB.

Inoculation of plots with AMF significantly increased whitehead numbers compared to –AMF plots in Exp-2 (F=4.74, P=0.03) but not Exp-1 (F=2.31, P=0.13). NipsIt INSIDE seed treatment significantly reduced whitehead numbers compared to –NsI plots in Exp-2 (F=42.6, P<0.0001) but not Exp-1 (F=3.52, P=0.06) (Figure 1). Results also showed no significant interaction between mycorrhizal fungi and insecticide treatments in either experiment (Exp-1: F=1.96, P=0.16; Exp-2: F=1.80, P=0.18).

Neither mycorrhizal (F=0.00, P=0.97) nor insecticidal (F=1.74, P=0.19) seed treatments reduced stem borer numbers in Exp-1 (Figure 1). However, NipsIt INSIDE seed treatments significantly reduced stem borer numbers in Exp-2 (F=18.17, P<0.0001). The interaction of mycorrhizal and insecticidal seed treatments did not significantly impact stem borer numbers in either experiment (Exp-1: F=3.67, P=0.06; Exp-2: F=0.12, P=0.73).

Conclusions:

NipsIt INSIDE appears to have some effect against stem borer incidence, but more studies need to be conducted to confirm this. Early planting is recommended to avoid high infestation by stem borers**.**

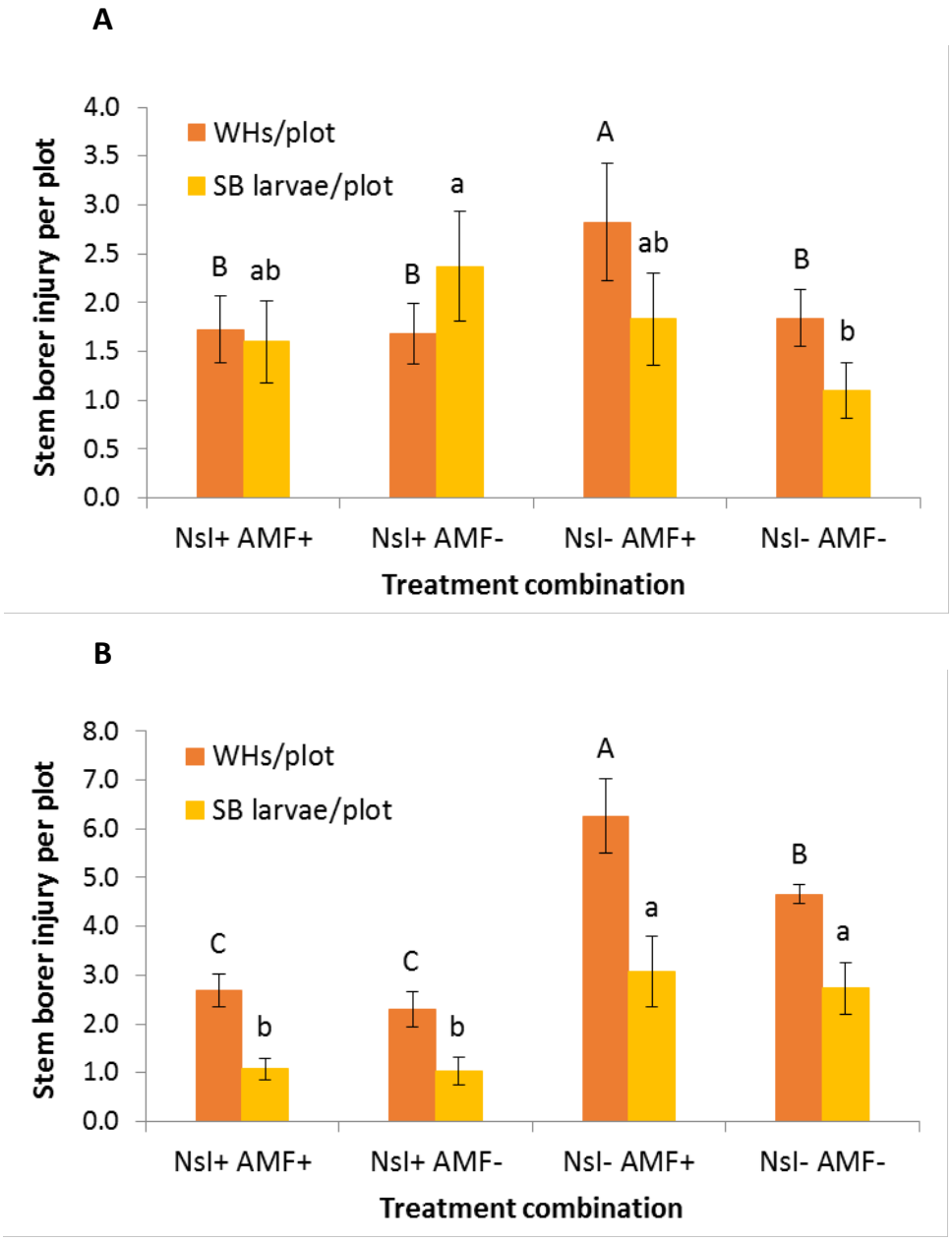

Figure 1. Effects of mycorrhizal and insecticidal seed treatments on numbers of whiteheads per plot (± S.E.) and stem borer larvae per plot grown in two field experiments, Exp-1 (A) and Exp-2 (B). Bars represent standard error of the means.

EFFICACY OF SELECT INSECTICIDES AGAINST RICE STINK BUGS

J.M. Villegas, B.E. Wilson, M.J. Frey, and M.J. Stout

The rice stink bug, *Oebalus pugnax* (F), is the most important late-season pest of rice in the southern United States. Injury due to feeding of these bugs on headed rice can reduce yield as well as grain quality. Feeding of this pest on developing grains at the flowering, grain filling, milk, and dough stages of grain development can result in grains that are empty or partially filled and kernels that are discolored or broken. Moreover, feeding of stink bugs at milk and soft dough stages of development reportedly lead to higher incidence of pecky rice. Loss of income for producers arises from the reduction in grain quality and yield.

To scout for rice stink bugs in the field, it is suggested to use a 15-inch diameter sweep net and take 10 sweeps at 10 different areas throughout the field. The captured adult and immature stink bugs are counted after every 10 sweeps. If there are 30 or more stink bugs per 100 sweeps, the field should be treated with insecticides.

Two field trials were conducted at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana, in 2018, which examined the efficacy of several foliar applied insecticides against rice stink bugs.

Trial 1

Seeds of long-grain Clearfield rice variety CL153 were drill-planted at a seeding rate of 60 lb/A in 4.1 by 38-ft field plots with 7 rows at 7-inch spacing on March 23, 2018. At heading, prior to insecticide application, the presence of rice stink bugs was assessed in each plot using insect sweep nets (15-inch diameter). Foliar applications of two rates of Fastac (AI: alpha-cypermethrin), two rates of Mustang Maxx (AI: zeta-cypermethrin), and an untreated check were made on July 13, 2018, using a CO_2-pressurized backpack sprayer calibrated to deliver 10 gpa at 30 psi. The sprayer is equipped with two Teejet TP11001 nozzles at 19-inch spacing. Treatments were assigned to plots following a randomized complete block design with four blocks. Densities of rice stink bugs were assessed by recording the total number of nymphs and adults per 10 sweeps in each plot at 3, 7, and 10 days after treatment (DAT).

Trial 2

Seeds of medium-grain rice variety Caffey were drill-planted in small field plots (4.1 by 23 ft, 7 rows at 7-inch spacing) at a seeding rate of 70 lb/A on May 9, 2018. At heading, prior to insecticide application, the presence of rice stink bugs was assessed in each plot using insect sweep nets. Foliar applications of Tenchu (AI: dinotefuran), Warrior (AI: lambda-cyhalothrin), Malathion (AI: malathion), Mustang Maxx (AI: zeta-cypermethrin), and an untreated check were made on Aug. 15, 2018, using a CO_2-pressurized backpack sprayer as described in *Trial 1*. The experimental design was a randomized complete block with four blocks and one replicate per block. Densities of rice stink bugs were assessed by recording the total number of nymphs and adults per ten sweeps in each plot at 6 and 9 DAT.

Stink bug data were analyzed separately for each sampling date in both trials using a generalized linear mixed model (SAS, PROC GLIMMIX) with insecticide treatment as a fixed effect and block as a random effect. Means were separated using LSD ($\alpha = 0.10$).

Results

Trial 1

Densities of rice stink bugs were affected by insecticide treatment at 3 DAT but not at 7 or 10 DAT (Table 1). At 3 DAT, plots treated with Fastac at 3.2 oz/A and Mustang Maxx at 4 oz/A had significantly fewer stink bugs compared to the untreated check. During the experiment, pest densities never reached the threshold of three rice stink bugs per 10 sweeps in any of the plots.

Table 1. Effects of foliar applied insecticides on the densities of rice stink bugs (Trial 1).

Treatment	Rate (fl oz/A)	Mean RSB/10 sweeps		
		3 DAT	7 DAT	10 DAT
Fastac	3.2	0.0b	0.3	2.0
Fastac	3.8	0.5ab	1.5	1.0
Mustang Maxx	3.2	0.5ab	0.3	1.3
Mustang Maxx	4.0	0.0b	0.8	1.3
Untreated Check	-	1.5a	0.8	1.0
P>F		0.09	0.15	0.79

Means within a column followed by the same letter are not significantly different (P>0.10, LSD).

Trial 2

There were no differences among insecticide treatments observed for stink bug densities at 6 and 9 DAT (Table 2). Pest densities surpassed the threshold of 3 stink bugs per 10 sweeps in all plots. The density of stink bugs might have been exacerbated by uncontrolled weeds around each plot and late planting of *Trial 2*.

Table 2. Effects of foliar applied insecticides on the densities of rice stink bugs (Trial 2).

Treatment	Rate (fl oz/A)	Mean RSB/10 sweeps	
		6 DAT	9 DAT
Tenchu	7.5	11.5	7.5
Warrior	1.9	4.8	5.0
Malathion	24.0	8.3	5.5
Mustang Maxx	3.2	8.9	4.3
Untreated Check	-	10.0	6.3
P>F		0.14	0.41

INTEGRATION OF CHEMICAL AND CULTURAL CONTROL METHODS FOR THE CONTROL OF RICE WATER WEEVIL IN LOUISIANA RICE

M.M. Mulcahy, B.E. Wilson, T.E. Reagan, and M.J. Frey

Rice water weevil (RWW), *Lissorhoptrus oryzophilus Kuschel*, is the most destructive insect pest of rice in the United States. Currently, insecticidal seed treatments are used throughout Louisiana to pre-emptively control RWW. The insecticidal seed treatment, chlorantraniliprole, is known to be effective against both RWW and lepidopteran stem borers. This has led to chlorantraniliprole being used on >75% of rice acreage in Louisiana. While this seed treatment has been shown to reduce the damage inflicted by RWW, it is typically used as a preventative measure and is, therefore, traditionally incompatible with integrated pest management (IPM) programs. The broad-scale use of chlorantraniliprole may also result in the development of insecticide resistance within targeted pest populations. Thus, field experiments were conducted to evaluate the potential of utilizing cultural control tactics along with alternative insecticidal seed treatments to improve the management of RWW according to IPM principles.

Two separate small plot experiments were planted to evaluate the effect of planting date, flooding date, and alternative seed treatments on RWW populations. The first small plot experiment was planted in March 2018 (early-planted rice), and the second was planted in late April 2018 (late-planted rice). All plots were drill-planted with Clearfield variety CL153 at a seeding rate of 60 lb/A, and weeds were managed according to recommended practices. Each of the experiments were subjected to different flooding regimes and insecticidal seed treatments using a split plot randomized complete block design with 4 replicates. An early (21 days after planting) and delayed (42 days after planting) flooding regime was applied to different plots that had been treated with either chlorantraniliprole (Dermacor X-100) or a neonicotinoid (Cruiser 5FS) seed treatment. The neonicotinoid, Cruiser 5FS, was chosen as an alternative to chlorantraniliprole. This was done to assess the feasibility of using Cruiser 5FS together with different cultural strategies as a potential tool for mitigating resistance build-up against chlorantraniliprole. Untreated rice seeds were also planted as the control in each of the small plot experiments. Rice water weevil numbers were measured using five soil core samples per plot at two and four weeks after the permanent flood. These data were combined, and a multi-factorial ANOVA was used to analyze the data (PROC GLM in SAS 9.4).

These experiments were used to identify which cultural control strategies could be successfully integrated with chemical controls. According to the results (Table 2), it is recommended that farmers plant their rice early and delay flooding as a means of reducing RWW infestations. Despite this, evidence shows that cultural control mechanisms do not provide enough protection to forgo seed treatments altogether. Dermacor X-100 remains the most effective means of controlling RWW populations. However, if rice is managed correctly, Cruiser 5FS can significantly decrease infestations. This means that neonicotinoid seed treatments can be successfully used as an alternative to chlorantraniliprole, especially in areas where RWW pressure is lower and in areas where lepidopteran stem borers are not prevalent. Further research is needed to determine whether reducing yield loss potential, with cultural control methods, will allow farmers to alternate neonicotinoid seed treatments with chlorantraniliprole or allow them to reduce their use of seed treatments altogether.

Table 1. Multi-factorial ANOVA source table for mean rice water weevil densities across all treatments, Crowley, Louisiana, 2018.

Source	DF	Sum of Squares	Mean Square	F-value	Pr > F
Model	11	19913.71667	1810.33788	31.21	<0.0001
Error	468	27148.25	58.00908		
Corrected total	479	47061.96667			

Table 2. Mean rice water weevil density per soil core as affected by planting date, flooding date, and insecticidal seed treatments, Crowley, Louisiana, 2018.

Treatment	Early planting date		Late planting date	
	Early flood	Delayed flood	Early flood	Delayed flood
Untreated control	14.825a	10.625a	25.225d	12.45a
Dermacor X-100	1.9b	1.7b	3.82bc	5.55c
Cruiser 5FS	4.95c	4.8c	12.175a	8.9ac

Means within cells followed by the same letters are not significantly different (P>0.05, LSD).

RICE WEED MANAGEMENT

WEED MANAGEMENT IN HERBICIDE-RESISTANT/TOLERANT AND CONVENTIONAL RICE

E.P. Webster, B.M. McKnight, S.Y. Rustom, Jr., L.C. Webster, M.J. Osterholt, and D.C. Walker

The entire Annual Weed Management Research Report can be located at the link below.

https://edit.lsuagcenter.com/~/media/system/3/3/6/1/3361c7ec4eba194b1d007389cac02ca9/2018%20webster%20rice%20weed%20annual%20report%20adapdf.pdf

FOUNDATION SEED RICE PROGRAM

R.E. Zaunbrecher

INTRODUCTION

Foundation seed rice has been produced by the LSU AgCenter's H. Rouse Caffey Rice Research Station (HRCRRS) for distribution to Louisiana farmers since 1949. The HRCRRS's seed rice program was instituted in response to the critical shortage of pure planting stocks that existed during and after World War II. Since its inception, the program has made available to Louisiana growers more than 170,700 cwt. of pedigreed stock of more than 50 rice varieties.

Concurrent with the distribution of pure seed by the HRCRRS, an industry was developed in Louisiana composed of independent seed dealers through whom farmers could conduct trade in registered and certified classes of pedigreed rice.

Foundation seed rice, the planting stock from which registered and certified seed are produced, is the farmer's link with the work of the plant breeder. It is the product of hybridization and successive generations of selection and testing to establish its value as crop seed and eventually as a commercial commodity. For this reason, foundation seed and the basic stocks from which it is produced must be grown and conditioned in a manner that will ensure that viability is maintained and that it be genetically pure and free from mechanical mixtures or contamination by noxious weeds.

Through the HRCRRS's seed program, Louisiana farmers may obtain seed rice of improved varieties developed through the HRCRRS's breeding program and of established commercial varieties originating either at Crowley or at research centers in neighboring states.

To fulfill the objectives of the seed program, the HRCRRS uses the personnel, land, machinery, and other facilities needed to plant, harvest, condition, and store its annual seed rice crop. The production of breeder seed, planting stock for the foundation fields, and the maintenance of purity in commercial rice varieties are functions of the seed program. Breeder seed is sometimes grown within fields of foundation rice or in a special nursery set aside for propagating the HRCRRS's seed stocks. The nursery also serves as a site for evaluating, purifying, and increasing selections from the HRCRRS's breeding program that show promise as new varieties.

The distribution of pedigreed seed rice produced by the HRCRRS is done according to a formula adopted by the Louisiana Seed Rice Growers Association. For each rice-producing parish, the amount of seed allotted is determined by the percentage of the state's total rice acreage grown in that parish during the previous crop year.

Personnel from the Louisiana Cooperative Extension Service, in cooperation with parish committees of the Seed Rice Growers Association, assist in the allocation of foundation seed rice. It is at the parish committee level that the allocation of seed to individual growers is decided. The county agents receive applications for seed rice from growers and handle information and publicity for the pure seed program.

In this state, the official seed-certifying agency for all crops is the Louisiana Department of Agriculture and Forestry (LDAF). The rules and regulations pertaining to the certification of agricultural seeds are part of the Louisiana Seed Law. They are formulated by the Louisiana Seed Commission and enforced by the Agronomic Programs Division of the LDAF. Personnel of the Agronomic Programs Division, operating from district offices, conduct field inspections of growing rice and sampling of bagged rice for laboratory analyses, which consist of purity determinations and germination tests.

PRODUCTION PRACTICES

Each year, the HRCRRS devotes approximately 80 acres of land to the production of foundation seed rice. To eliminate noxious weeds, especially red rice, that can disqualify rice from certification, the fields are fallowed for a 2-year period before planting. This also enables the fields to meet the crop history requirements specified in the seed rice regulations.

Seedbed preparation of foundation fields is done in the fall. Burndown herbicides are applied prior to seeding. The foundation fields are planted into a stale seedbed by means of a 24-runner minimum tillage drill. The breeder stock is planted at rates that may vary from 10 to 100 lb/A. The rice receives a preflood application of urea in which the rate of

nitrogen (N) may vary from 45 to 90 lb/A, as well as basic fertilizer applications based on soil test recommendations. A midseason application of N in rates from 21 to 55 lb/A is also applied.

Seedling grasses and weeds are controlled by means of commercially available herbicides applied by airplane or ground rig. Similarly, aerial applications of insecticides are used to protect the fields from outbreaks of harmful insects.

Roguing of the rice fields for the removal of off-types, varietal mixtures, and noxious weeds begins at the onset of heading and continues until harvest. During this interval, the headed rice is inspected by personnel of the Agronomic Programs Division to determine whether it meets minimum field standards of the certifying agency.

The rice is harvested with a conventional combine and dried in the HRCRRS's eight 21-foot diameter grain bins, equipped with vented drying floors and centrifugal fans with temperature-controlled heaters. The rice is dried to a moisture level of approximately 12%. During the storage period between drying and cleaning, the rice is treated with an insecticide to protect it from stored-grain insects.

Cleaning of foundation and breeder seed usually starts in late October and continues until late December. The rice first moves through an air and screen cleaner that removes chaff, straw, and other foreign material and grades the grain according to width and thickness.

It then flows through three length-grading machines that consist of rotating, indented metal cylinders. The first two remove small grains and broken or dehulled kernels of rice. The third one removes stemmy rice grains that have long awns that are attached to portions of the panicle. In the next phase of cleaning, the rice moves through a machine that performs precision grading of the grain by means of rotating perforated cylinders. This machine is designed to separate medium-grain and/or red rice from long-grain rice. It also removes shriveled and slender kernels from medium-grain rice.

In the final phase of cleaning, the rice moves through a machine that aspirates the grain, removing any chaff, straw, and other foreign material from the conditioned product.

From the cleaning machines, foundation and breeder seed rice are bagged, assigned lot numbers, and placed in storage in the HRCRRS's seed rice warehouse where they remain until they are distributed to Louisiana farmers.

The field and laboratory purity standards for foundation seed rice are strict with regard to varietal mixtures and noxious weeds. Therefore, in all phases of production, great care must be exercised to prevent these impurities from contaminating the seed stocks. It is routine procedure at the HRCRRS to partially disassemble all planting and harvesting equipment and to clean it thoroughly with water and/or compressed air before using it in the field. The dryer and cleaning plant, including all elevators and other conveying equipment, are also subjected to meticulous cleaning and inspection before and after use in stubble fields. Therefore, tractors, plows, harrows, and land levelers are carefully washed before they enter fallow land. These measures, together with the inspection and roguing, which are done during the growing season, help to ensure that foundation seed is genetically pure and free of mechanical mixtures and noxious weed seeds.

2018 ACTIVITIES

Of the 291 cwt. of foundation seed rice sold in 2018, the varieties and quantities were as follows: Mermentau, 29 cwt.; Caffey, 61 cwt.; Cocodrie, 54 cwt.; Jazzman, 48 cwt.; and Della-2, 99 cwt.

The HRCRRS's foundation seed crop in 2018 consisted of 10 acres of Cheniere, 1.5 acres of Jazzman, 4.3 acres of Caffey, 5 acres of Della-2, 6 acres of Jupiter, 3 acres of Titan, and 1.5 acres of Catahoula.

Headrows of Cheniere, Jazzman, Caffey, Catahoula, Titan, Jupiter, and Della-2 were grown for replenishment of breeder seed stock.

RICE PRODUCTION ECONOMICS RESEARCH IN 2018

M.A. Deliberto

The 2018 projected cost and return rice enterprise budgets were developed in December 2017 for alternative rice production systems in Louisiana. One of the research objectives in developing these enterprise budgets is that they act to serve as a farm management planning tool for the upcoming crop year. Projected rice crop enterprise budgets were estimated for six typical rice production systems in the southwestern region of Louisiana as well as two rice production system alternatives in the northeastern region of the state. For southwest Louisiana, rice enterprise budgets were estimated for: (a) conventional variety rice that is water planted, (b) Clearfield variety rice that is water planted, (c) conventional variety rice that is drill planted, (d) Clearfield variety rice that is drill planted, (e) Clearfield hybrid variety rice that is drill planted, and (f) a ratoon rice crop. For northeast Louisiana, rice crop enterprise budgets were estimated for: (a) conventional variety rice that is drill planted and (b) Clearfield variety rice that is drill planted.

A summary of this enterprise budget analysis for rice production systems in southwest Louisiana is presented in Tables 1-4. The values contained in these tables represent tenant operator net returns above total specified production costs per acre. Direct production costs include expenses for custom farming operation charges, drying, fertilizers, chemicals, labor, fuel, repair, and interest on operating capital. Total specified expenses include the aforementioned direct (variable) production expenses plus fixed costs of ownership on machinery and equipment. The land tenure arrangement assumption that is made in each of the enterprise tables consists of a 70/30 share rental arrangement with the landlord/waterlord financing the irrigation pumping costs. Returns from the rice crop are assumed to be allocated 70% to the producer and 30% to the landlord/waterlord. Net return estimates for the conventional variety drill-planted production system (Table 1) are based on production cost estimates of $471.55 per acre of variable costs and $561.50 per acre for total specified costs. Net return estimates for the Clearfield variety drill-planted production system (Table 2) are based on production cost estimates of $534.65 per acre of variable costs and $623.49 per acre for total specified costs. Net return estimates for the Clearfield hybrid variety drill-planted production system (Table 3) are based on production cost estimates of $626.05 per acre of variable costs and $710.62 per acre for total specified costs. Net return estimates for the ratoon crop production system (Table 4) are based on production cost estimates of $116.71 per acre of variable costs and $139.03 per acre for total specified costs.

To further assist rice producers in planning for the 2018 crop year, the Projected 2018 Rice Cash Flow Model was developed. The interactive model, programmed in Microsoft® Excel, allows individual rice producers to evaluate the impact on net returns above variable and total (variable plus fixed) production costs for alternative land rental arrangements as well as planting various percentages of available rice base acres. The user enters projected acreage, yield, market price, and production cost data for 2018, and the model will automatically generate estimates for net returns above variable and total production costs. Farm program payments of the Agricultural Act of 2014 relating to the Price Loss Coverage (PLC) Program are also embedded in the model and are included in net return calculations, if triggered.

Table 1. Estimated Net Returns above Total Specified Costs for a Tenant Operator Rice, Conventional Variety, Drill Planted, Conventional Tillage, Southwest Louisiana, 2018.

		Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
	Yield	Rice Market Price ($/cwt)								
Percent	(cwt.)	$9.20	$9.78	$10.35	$10.93	$11.50	$12.08	$12.65	$13.23	$13.80
		---------- ($/A) ----------								
80%	56.0	-46	-27	-7	12	31	51	70	89	109
85%	59.5	-23	-3	18	39	59	80	101	122	142
90%	63.0	-1	21	43	66	88	110	132	154	176
95%	66.5	22	45	69	92	116	139	163	187	210
100%	70.0	44	69	94	119	144	169	194	219	244
105%	73.5	67	93	119	146	172	199	225	251	278
110%	77.0	89	117	145	173	200	228	256	284	312
115%	80.5	112	141	170	199	229	258	287	316	345
120%	84.0	134	165	195	226	257	287	318	349	379

Net returns above total specified costs for a tenant operator is calculated here as the grower's share of market revenue less total specified costs paid by the grower. Specified costs include charges for direct costs and fixed machinery costs but exclude charges for general farm overhead and management expenses. The land rental arrangement charge represented here is a 30% crop share with the landlord paying variable and fixed irrigation pumping costs.

Table 2. Estimated Net Returns above Total Specified Costs for a Tenant Operator Rice, Clearfield Variety, Drill Planted, Conventional Tillage, Southwest Louisiana, 2018.

		Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
	Yield	Rice Market Price ($/cwt)								
Percent	(cwt.)	$9.20	$9.78	$10.35	$10.93	$11.50	$12.08	$12.65	$13.23	$13.80
		---------- ($/A) ----------								
80%	56.0	-108	-89	-69	-50	-31	-11	8	27	47
85%	59.5	-85	-65	-44	-23	-3	18	39	60	80
90%	63.0	-63	-41	-19	4	26	48	70	92	114
95%	66.5	-40	-17	7	30	54	77	101	125	148
100%	70.0	-18	7	32	57	82	107	132	157	182
105%	73.5	5	31	57	84	110	137	163	189	216
110%	77.0	27	55	83	111	138	166	194	222	250
115%	80.5	50	79	108	137	167	196	225	254	283
120%	84.0	72	103	134	164	195	225	256	287	317

Net returns above total specified costs for a tenant operator is calculated here as the grower's share of market revenue less total specified costs paid by the grower. Specified costs include charges for direct costs and fixed machinery costs but exclude charges for general farm overhead and management expenses. The land rental arrangement charge represented here is a 30% crop share with the landlord paying variable and fixed irrigation pumping costs.

Table 3. Estimated Net Returns above Total Specified Costs for a Tenant Operator Rice, Clearfield Hybrid Variety, Drill Planted, Conventional Tillage, Southwest Louisiana, 2018.

		Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
	Yield	Rice Market Price ($/cwt)								
Percent	(cwt.)	$9.20	$9.78	$10.35	$10.93	$11.50	$12.08	$12.65	$13.23	$13.80
		---------- ($/A) ----------								
80%	64.0	-138	-116	-94	-72	-50	-27	-5	17	39
85%	68.0	-112	-89	-65	-41	-17	6	30	54	77
90%	72.0	-86	-61	-36	-10	15	40	65	91	116
95%	76.0	-61	-34	-7	20	47	74	101	128	155
100%	80.0	-35	-6	22	51	79	108	136	165	193
105%	84.0	-9	21	51	81	111	142	172	202	232
110%	88.0	17	48	80	112	144	175	207	239	271
115%	92.0	42	76	109	142	176	209	243	276	309
120%	96.0	68	103	138	173	208	243	278	313	348

Net returns above total specified costs for a tenant operator is calculated here as the grower's share of market revenue less total specified costs paid by the grower. Specified costs include charges for direct costs and fixed machinery costs but exclude charges for general farm overhead and management expenses. The land rental arrangement charge represented here is a 30% crop share with the landlord paying variable and fixed irrigation pumping costs.

Table 4. Estimated Net Returns above Total Specified Costs for a Tenant Operator Rice, Ratoon Crop, Southwest Louisiana, 2018.

		Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
	Yield	Rice Market Price ($/cwt)								
Percent	(cwt.)	$9.20	$9.78	$10.35	$10.93	$11.50	$12.08	$12.65	$13.23	$13.80
		---------- ($/A) ----------								
80%	18.4	22	29	35	41	48	54	61	67	73
85%	19.6	30	37	43	50	57	64	71	78	84
90%	20.7	37	44	52	59	66	74	81	88	95
95%	21.9	45	52	60	68	76	83	91	99	107
100%	23.0	52	60	68	77	85	93	101	109	118
105%	24.2	59	68	77	85	94	103	111	120	129
110%	25.3	67	76	85	94	103	112	122	131	140
115%	26.5	74	84	93	103	113	122	132	141	151
120%	27.6	82	92	102	112	122	132	142	152	162

Net returns above total specified costs for a tenant operator is calculated here as the grower's share of market revenue less total specified costs paid by the grower. Specified costs include charges for direct costs and fixed machinery costs but exclude charges for general farm overhead and management expenses. The land rental arrangement charge represented here is a 30% crop share with the landlord paying variable and fixed irrigation pumping costs.

LOUISIANA RICE RESEARCH VERIFICATION PROGRAM - 2018[1]

K.A. Fontenot and D.L. Harrell

INTRODUCTION

The Louisiana Rice Research Verification Program (LRRVP) began in 1997 in three parishes: Allen, Calcasieu, and Jefferson Davis. In 1998, the program was funded and expanded to a total of 11 parishes (Acadia, Allen, Avoyelles, Calcasieu, East Carroll, Evangeline, Jefferson Davis, Madison, Morehouse, St. Landry, and Vermilion). From 1999 to 2017, 138 fields had been included in the verification program. In 2018, the program included four fields (Figure 1).

The fields were visited on a weekly basis by a specialist, extension associate, or county agent to make production practice recommendations. These recommendations included, but were not limited to, fertilization, weed control, disease control, insect control, and water management to a limited degree. The fields were followed from planting to harvest.

Yield data were collected for each of the fields (Table 1). Yields of the first crop averaged 7,686 lb/A (47.4 bbl/A or 170.8 bu/A) at 12% moisture. Second crop was only harvested in Calcasieu Parish, adding another 780 lb/A to the total for a final average of 7,843.2 lb/A (48.3 bbl/A or 174.1 bu/A). This is the twelfth highest ranked overall yield of the verification program in the 21 years that the program has been carried out.

Economic data continue to reveal large production cost differences between growers. It also is clear that more needs to be done to help farmers reduce production costs (Table 2). Harvest and water costs remain the most elusive to capture and are often underestimated by all parties involved in the verification program.

The program continues to provide an accurate evaluation of current recommendations and insight into other areas of research. The educational value of the program to all concerned (farmers, researchers, consultants, and extension personnel) increases each year.

[1] This project is supported in part by funding provided by rice producers through their check-off contributions to the Louisiana Rice Research Board.

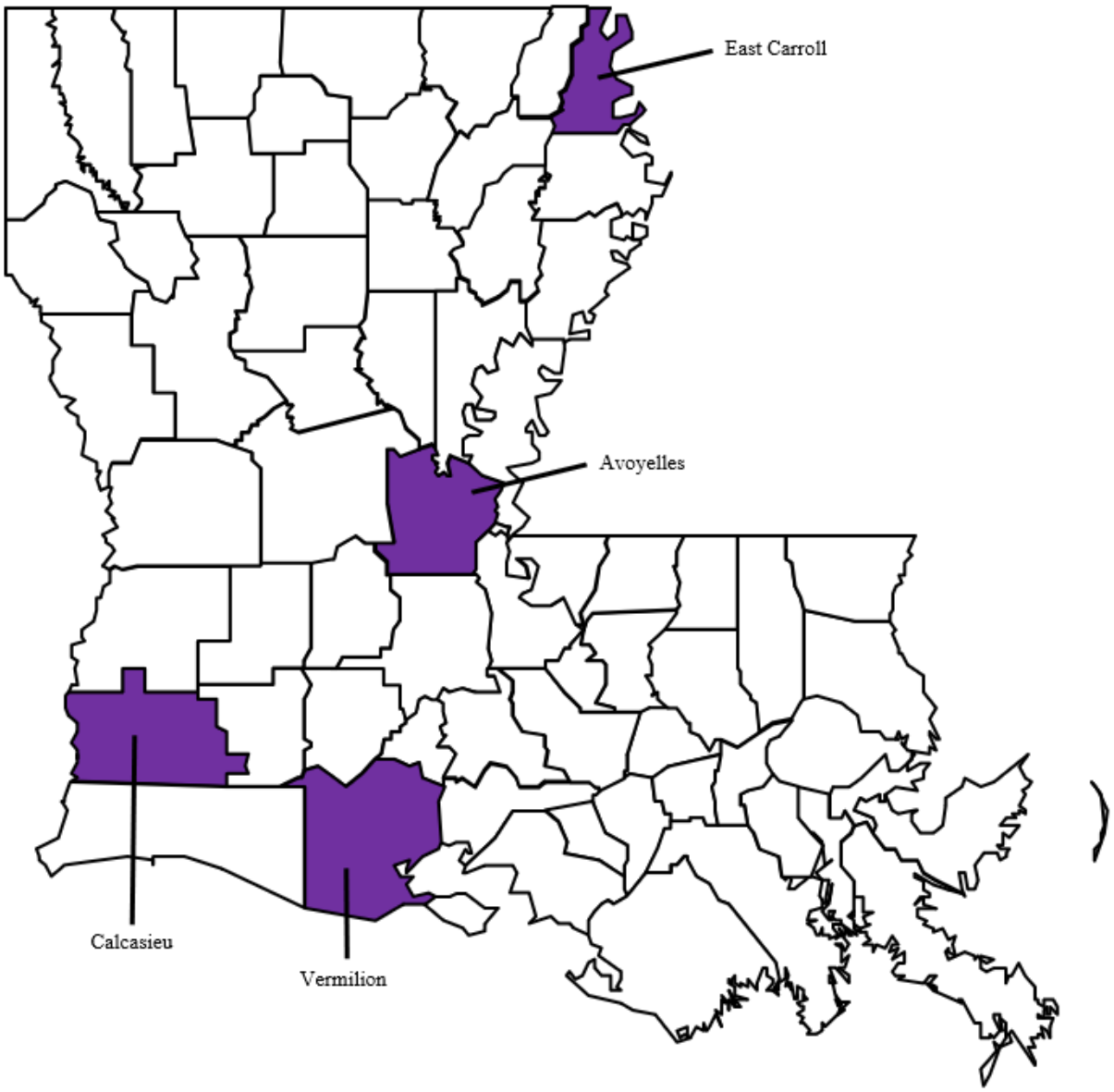

Figure 1. Verification Parishes in 2018.

Table 1. Yields of Verification Fields in 2018.

Parish	Acres	Variety	Cwt/A Green	Bbl/A Green	Bu/A Green	Cwt/A Dry	Bbl/A Dry	Bu/A Dry
Avoyelles	31.0	Cheniere	78.81	48.65	175.14	75.28	46.47	167.20
Calcasieu[1]	16.9	CL153	80.07	49.40	177.60	77.30	47.70	171.30
East Carroll	6.0	CLXL745	99.10	61.17	220.00	91.17	56.27	202.60
Vermilion	30.0	CL153	84.69	52.20	188.20	79.78	49.20	177.20
Total Acres	83.9							

[1] Yield includes second crop.

Table 2. 2018 Louisiana Rice Research Verification Program Yield, Milling, and Economic Summary.

Parish	Variety	Yield at 12% Moisture (cwt/A)	Milling (% Whole / % Total)	Variable Costs ($/A)[2]	Cost of Production ($/cwt)[2]	Return on Variable Costs ($/A)[2,3]
Avoyelles	Cheniere	75.28	60.57/71.24	392.91	5.22	443.45
Calcasieu[1]	CL153	77.30	65.01/72.42	684.42	8.85	174.16
East Carroll	CLXL745	91.17	55.55/71.90	527.36	5.78	485.53
Vermilion	CL153	79.78	66.45/70.44	537.97	6.74	348.38

[1] Figure includes ratoon crop yield.
[2] Costs captured are from land preparation to harvest. They do not include land rent, transporting, drying, storing, or fixed costs.
[3] This value was obtained using a selling price of $11.11/cwt.

AVOYELLES PARISH

This 31-acre field was the latest planted verification field in the program this year due to crawfish production. Phosphorus and potash fertilizer were fall applied with a variable rate applicator according to soil test results. After seedbed preparation, treated Cheniere seed was flown into the water at a rate of 120 lb/A on May 14. Emergence was 11 days after planting and appeared very uniform across the field with light weed and grass pressure. With a healthy and vigorous stand of 2- to 3-leaf rice established, a herbicide tank mix of 120 oz of propanil and 13 oz of Command was applied followed by 100 lb/A of a 38-0-0-12 fertilizer. The field was then flushed, which was held to incorporate and activate the fertilizer and herbicide.

Approximately 13 days later, an application of 125 lb of urea was made which enhanced tillering and overall plant growth and vigor. A period of drier weather and sunshine really enhanced the growth and vigor of the rice. Fifteen days later on June 29 at the green ring growth stage, the final fertilizer application of 100 lb of urea was applied.

Rice stink bugs were present on field edges and in the field. Populations were monitored as this was an intended crawfish field; however, an insecticide was not recommended for control. Sheath blight lesions were found low in the canopy and were monitored up to the 50% heading stage when an application of 21 oz of Stratego was applied. Monitoring of the insects and disease continued through the heading, flowering, and filling stages until the field was drained on Aug. 18. There was no further development of disease, and the rice stink bug population, although present, remained below threshold levels.

Growth stages on this field were as follows: Planting – May 14, Emergence – May 25, Green Ring – June 28, Panicle Differentiation – July 10, 50% Heading – July 27, Drained – Aug. 18, and Harvest – Sept. 17.

Harvest was on Sept. 17 at 15.5% moisture with the total yield being 78.81 cwt/A, 175.14 bu/A, or 48.65 bbl/A. When adjusted to 12% moisture, the yield was 75.28 cwt/A, 167.2 bu/A, or 46.47 bbl/A.

According to the producer, this was the highest yield of rice this field had ever produced for him. The quality of the rice was also high as milling tests conducted later showed results of 60.57/71.24 (% Whole / % Total).

AVOYELLES PARISH

Cooperator: Kevin Lacour
Agent: Justin Dufour
Consultant: None
Field Size: 31 acres

Cultural Practices

Variety: Cheniere
Method of Planting: Water Seeded
Water Management: Delayed flood
Seeding Rate: 120 lb/A
Date of Planting: May 14
Date of Emergence: May 25

Growth and Development

Stage	Observation Date
Green Ring	June 28
Panicle Differentiation	July 10
50% Heading	July 27
Drain for Harvest	Aug. 18
Harvest	Sept. 17

Yield, Milling, and Economic Data

	Yield at 12% Moisture (cwt/A)	Milling Yield (% Whole / % Total)	Variable Costs ($/A)[1]	Cost of Production ($/cwt)[1]	Return on Variable Costs ($/A)[1,2]
First Crop	75.28	60.57 / 71.24	392.91	5.22	443.45

[1] Costs captured are from land preparation to harvest. They do not include land rent, transportation, drying, storage, or fixed costs.
[2] This value was obtained using a selling price of $11.11/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
Fall 2017				variable	variable		
May 30	38-0-0-12	100	38	0	0	12	0
June 13	46-0-0	125	58	0	0	0	0
June 29	46-0-0	100	46	0	0	0	0
First Crop / Season Total			142	variable	variable	12	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Various broadleaves/grasses	May 30	13 oz Command + 120 oz Propanil

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath blight	July 27	21 oz Stratego

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice stink bug	May 14	Dermacor X-100

AVOYELLES PARISH

Item	Description	Cost/A	Acres	Total
Fall Fertilizer Application	P & K Fall Application	$41.63	31	$1,290.53
Application Cost - Fertilizer	Ground Rig	$10.00	31	$310.00
Field Work, Disking, etc.		$7.50	31	$232.50
Water Leveling, Bed Leveling, etc.		$5.71	31	$177.01
Ditching		$1.24	31	$38.44
Seed	Cheniere at 120 lb/A	$78.65	31	$2,438.15
Seed Treatment (If Separate)	Dermacor X-100	$14.20	31	$440.20
Planting	Water Planted / Airplane	$6.75	31	$209.25
Fertilizer	100 lb 38-0-0-12	$24.92	31	$772.52
Application Cost - Fertilizer	Airplane application	$9.90	31	$306.90
Herbicide	120 oz Propanil + 13 oz Command	$35.21	31	$1,091.51
Application Cost - Herbicide	Airplane application	$6.00	31	$186.00
Herbicide				$0.00
Application Cost - Herbicide				$0.00
Fertilizer	125 lb 46-0-0	$18.75	31	$581.25
Application Cost - Fertilizer	Airplane application	$8.17	31	$253.27
Fertilizer	100 lb 46-0-0	$18.00	31	$558.00
Application Cost - Fertilizer	Airplane application	$6.75	31	$209.25
Fungicide	21 oz Stratego	$18.00	31	$558.00
Application Cost - Fungicide	Airplane application	$6.00	31	$186.00
Insecticide				$0.00
Application Cost - Insecticide				$0.00
Harvest - Cart with Tractor		$6.30	31	$195.30
Harvest - Combine		$44.23	31	$1,371.13
Water Cost		$25.00	31	$775.00
First Crop Totals		$392.91		$12,180.21

Ratoon Crop

Item	Description	Cost/A	Acres	Total
Ratoon Crop Manipulation				$0.00
Ratoon Crop Fertilizer				$0.00
Ratoon Fertilizer Application				$0.00
Ratoon Crop Water Cost				$0.00
Ratoon Crop Harvest Cart				$0.00
Ratoon Crop Harvest Combine				$0.00
Ratoon Crop Totals		$0.00		$0.00

Total for First Crop and Ratoon	$392.91		$12,180.21

CALCASIEU PARISH

This 16.9-acre field was one section of a 90-acre piece farmed by the producer. A burndown application of 32 oz of glyphosate (Cornerstone) and 10.2 oz of Class Act was applied by air in early March. On April 2, the field was lightly disked then harrowed in preparation for planting. The field was drill planted on April 3, with Dermacor X-100-treated CL153 seed at the rate of 72 lb/A. After planting, an application of 200 lb of 0-23-33-5 Zn fertilizer impregnated with 8 oz of Command herbicide was applied by spreader truck. Emergence was called on April 16. Rains continuously affected the timing of management practices both early and late in the season, especially affecting early season fertilizer and herbicide applications. Another issue that affected field management was the water well power unit failing and having to be replaced, which took a couple of weeks.

After the well was re-installed, weed control and fertilizer applications were adjusted to compensate for rice and weed growth. Stand evaluation was very good. The weeds that were present in the field were a few grasses but primarily broadleaves, such as alligatorweed, jointvetch, ducksalad, eclipta, and dayflower. Early weed control at planting consisted of 8 oz of Command impregnated on fertilizer. At green ring, there were persistent alligatorweed infested areas. Along with the green ring application of 125 lb of urea, 24 oz of 2,4-D plus 6.4 oz of MasterLock were applied. Leaf spotting occurred from the 2,4-D application, but it did not affect plant growth. After this point for about two weeks, cloudy and rainy weather delayed plant growth. Some areas of the field had very light sheath blight lesions low in the canopy near the waterline. This field was very uneven during the heading development growth stage. When rice reached 2-inch panicle with some approaching boot split, the decision was made to apply 19 oz of Stratego plus 6 oz of Topaz fungicide and 6 oz Masterlock for sheath blight control. Stink bug levels were monitored throughout heading and filling stages but never approached economic threshold levels.

The growth stages on the field were noted as: Planting – April 3, Emergence – April 16, Green Ring – June 4, Panicle Differentiation – July 11, 50% Heading – July 2, Drain for Harvest – July 30, and Harvest – Aug. 20.

After first harvest, the stubble was shredded to stimulate plants for the ratoon crop production. This was followed by applying 100 lb of 75-30-30 fertilizer to the stubble on Aug. 25. Second crop was harvested on November 23.

First crop harvest was on August 20 with harvest moisture averaging 14.8% and total yield being 71.77 cwt/A, 159 bu/A, or 44.3 bbl/A. When adjusted to 12% moisture, the yield was 69.48 cwt/A, 154 bu/A, or 42.9 bbl/A.

The ratoon crop was harvest on Nov. 23. Harvest moisture averaged 18%, and total yield was 8.4 cwt/A, 18.6 bu/A, or 5.1 bbl/A. When adjusted to 12% moisture, the yield was 7.8 cwt/A, 17.3 bu/A, or 4.8 bbl/A.

As these numbers indicate, ratoon harvest, yield, and quality were delayed and severely limited due to very prolonged wet conditions during growth and after draining for harvest.

Total yield (first and ratoon) when adjusted to 12% moisture was 77.3 cwt/A, 171.3 bu/A, or 47.7 bbl/A.

CALCASIEU PARISH

Cooperator: Brandon Vail
Agent: Bradley Pousson / Jimmy Meaux / Frances Guidry
Consultant: Kim Landry
Field Size: 16.9 Acres

Cultural Practices

Variety: CL153
Method of Planting: Drill seeded
Water Management: Delayed flood
Seeding Rate: 72 lb/A
Date of Planting: April 3
Date of Emergence: April 16

Growth and Development

Stage	Observation Date
Green Ring	June 4
Panicle Differentiation	June 11
50% Heading	July 2
Drain for Harvest	July 30
Harvest	Aug. 20
Ratoon Harvest	Nov. 23

Yield, Milling, and Economic Data

	Yield at 12% Moisture (cwt/A)	Milling Yield (% Whole / % Total)	Variable Costs ($/A)[1,3]	Cost of Production ($/cwt)[1,3]	Return on Variable Costs ($/A)[1,2,3]
First Crop	69.48	65.01 / 72.42	531.62	7.65	240.30
Ratoon Crop	7.80	26.60 / 56.90	152.80	19.58	(66.15)
Total Crop	77.28		684.42	8.85	174.16

[1] Costs captured are from land preparation to harvest. They do not include land rent, transportation, drying, storage, or fixed costs.
[2] This value was obtained using a selling price of $11.11/cwt.
[3] Costs and returns for first and ratoon crop combined.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
April 4	0-23-33	200	0	44	66	0	0
April 4	Zinc Sulfate (35.5% Zn + 16.5% S)	5	0	0	0	0.825	1.775
May 15	30-0-0	200	76	0	0	14	0
June 11	46-0-0	125	58	0	0	0	0
First Crop Total			134	44	66	14	0
Aug. 25	75-30-30	100	75	30	30	0	0
Ratoon Crop Total			75	30	30	0	0
Season Total			209	74	96	14	00

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Field burndown	March 1	32 oz Cornerstone + 10.2 oz Class Act
Alligatorweed, ducksalad, dayflower, eclipta, sedges, and few grasses at planting	April 4	8 oz Command
Alligator weed, sedges, and a few grasses	April 15	5 oz Newpath + 1 oz Gambit + 1.5 pt Prowl
Alligatorweed	June 8	24 oz 2,4-D + 6.4 oz MasterLock

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath blight	July 3	19 oz Stratego + 6 oz Topaz + 6 oz MasterLock

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice water weevil	Seed treatment – April 3	Dermacor X-100

CALCASIEU PARISH

Item	Description	Cost/A	Acres	Total
Burndown	32 oz Cornerstone + 10.2 oz Class Act	$6.57	16.9	$111.03
Application Cost - Herbicide	Airplane	$9.50	16.9	$160.55
Field Work, Disking, etc.	Disk once	$19.28	16.9	$325.83
Water Leveling, Bed Leveling, etc.	Bed level and harrow	$18.41	16.9	$311.13
Ditching	55 hp tractor and ditcher	$1.24	16.9	$20.96
Seed	CL153 at 72 lb/A	$82.20	16.9	$1,389.18
Seed Treatment (If Separate)	Dermacor X-100	$15.83	16.9	$267.53
Planting	Drill Planted	$12.41	16.9	$209.73
Fertilizer	200 lb 0-22-33 + 5 lb Zn Sulfate	$43.61	16.9	$737.01
Application Cost - Fertilizer	Truck applied Command impregnated fertilizer	$7.00	16.9	$118.30
Herbicide	8 oz Command	$7.50	16.9	$126.75
Application Cost - Herbicide	Airplane	$9.50	16.9	$160.55
Herbicide	5 oz Newpath + 1 oz Gambit + 1.5 pt Prowl	$36.88	16.9	$623.27
Application Cost - Herbicide	Airplane	$9.50	16.9	$160.55
Fertilizer	200 lb 39-0-0 + Agrotain	$47.21	16.9	$797.85
Application Cost - Fertilizer	Airplane	$9.50	16.9	$160.55
Herbicide	24 oz 2,4-D + 6.4 oz MasterLock	$6.08	16.9	$102.75
Application Cost - Herbicide	Airplane	$9.50	16.9	$160.55
Fertilizer	125 lb 46-0-0	$20.38	16.9	$344.42
Application Cost - Fertilizer	Airplane	$9.50	16.9	$160.55
Fungicide	19 oz Stratego + 6 oz Topaz + 6 oz MasterLock	$27.99	16.9	$473.03
Application Cost - Fungicide	Airplane	$9.50	16.9	$160.55
Insecticide				$0.00
Application Cost - Insecticide				$0.00
Harvest - Cart with Tractor		$6.30	16.9	$106.47
Harvest - Combine		$44.23	16.9	$747.49
Water Cost		$62.00	16.9	$1,047.80
First Crop Totals		$531.62		$8,984.38

Ratoon Crop

Item	Description	Cost/A	Acres	Total
Ratoon Crop Manipulation	Shred Stubble	$7.77	16.9	$131.31
Ratoon Crop Fertilizer	100 lb 75-30-30 + Agrotain	$64.55	16.9	$1,090.90
Ratoon Fertilizer Application	Spreader Truck	$8.00	16.9	$135.20
Ratoon Crop Water Cost		$22.02	16.9	$372.14
Ratoon Crop Harvest Cart		$6.30	16.9	$106.47
Ratoon Crop Harvest Combine		$44.23	16.9	$747.49
Ratoon Crop Totals		$152.87		$2,583.50

Total for First Crop and Ratoon	$684.49		$11,567.88

EAST CARROLL PARISH

The East Carroll Parish field management practices were seriously affected by rainfall from planting through harvest in 2018. A burndown application of 42 oz of Gramoxone tank mixed with 1 oz of Sharpen was applied in mid-March. The field was disked and leveled following an application of 200 lb of 0-46-0 fertilizer prior to planting. Planting occurred on April 20 with treated CLXL745 seed drill planted at a rate of 22 lb/A onto a flat seedbed with no pulled levees. A post-planting herbicide application of 42 oz of Gramoxone plus 1 oz of Sharpen was applied the same day. Emergence was on May 1 with the stand being full and vigorous. On May 14, 180 lb/A of 39-0-0-6.7 fertilizer was applied and pulling of levees was completed. Grasses, smell melon, dayflower, and sedges were the major weed problems seen in the field. An application of 4 oz of Newpath plus 4 oz of League along with CPS growth enhancement products, Awaken and Radiate, were applied on May 20 followed by flushing to incorporate the herbicides. The rice grew well and tillered exceptionally well from that point on. Rice water weevil adults and their feeding scars were seen early in the field in very low numbers. Since treated seed was used, no control was necessary. Plant leaves and roots were monitored throughout the growing period with no discernible impact from the insects.

The water management system chosen for this field was alternate wetting and drying. Gauged pipes were positioned in the field to monitor the irrigation and soil moisture levels above and below the soil surface during the growing season. With a wet season, the alternate wetting and drying management practice turned into a constant flood throughout the growing season. Under good conditions, plant growth and weed control were excellent. The field reached the green ring stage on June 5, and 200 lb of urea was applied.

A kernel smut preventative application of 8.25 oz of Tilt fungicide was applied at the 2- to 4-inch panicle development stage on June 28. Continued scouting of the field revealed no other disease development. Rice stink bug monitoring during heading stages was conducted, and the economic threshold for treatment was reached on July 10. An application of 1.8 oz of Warrior insecticide was carried out on July 13. Continuous monitoring of the field revealed panicles filling well with no further insect population surges. Filled and hardened seed changing color indicated draining was due, so the field was drained on July 31. Harvest occurred on Sept. 5. The portion of the field that was measured for harvest was a 6-acre paddy, part of a much larger 90-acre field.

Harvest at 18.9% moisture had the following yield total: 99.10 cwt/A, 220 bu/A, or 61.2 bbl/A. When adjusted to 12% moisture, the yield total was 91.17 cwt/A, 202 bu/A, or 56.3 bbl/A.

EAST CARROLL PARISH

Cooperator: Robert and Ty Warren
Agent: Donna Lee and Bruce Garner
Consultant: None
Field Size: 6 acres of a 90-acre field

Cultural Practices

Variety: CLXL745
Method of Planting: Drill seeded
Water Management: Alternate Wet and Dry
Seeding Rate: 22 lb/A
Date of Planting: April 20
Date of Emergence: May 1

Growth and Development

Stage	Observation Date
Green Ring	June 5
Panicle Differentiation	June 12
50% Heading	July 2
Drain for Harvest	July 31
Harvest	Sept. 5

Yield, Milling, and Economic Data

	Yield at 12% Moisture (cwt/A)	Milling Yield (% Whole / % Total)	Variable Costs ($/A)[1]	Cost of Production ($/cwt)[1]	Return on Variable Costs ($/A)[1,2]
First Crop	91.17	55.55 / 71.39	530.96	5.82	481.93

[1] Costs captured are from land preparation to harvest. They do not include land rent, transportation, drying, storage, or fixed costs.
[2] This value was obtained using a selling price of $11.11/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
April 1	0-46-0	200	0	92	0	0	0
May 14	39-0-0-6.7	180	70	0	0	12.6	0
June 7	46-0-0	200	92	0	0	0	0
First Crop / Season Total			162	92	0	12.6	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Burndown	March 20	42 oz Gramoxone + 1 oz Sharpen
Various grasses and broadleaves	May 20	4 oz League + 4 oz Newpath + Awaken + Radiate + Surfactant

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Kernel smut	June 28	8.25 oz Tilt

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice water weevil	Seed treatment – March 20	RiceTec package
Rice stink bug	July 13	1.8 oz Warrior

EAST CARROLL PARISH

Item	Description	Cost/A	Acres	Total
Burndown	42 oz Gramoxone + 1 oz Sharpen	$11.84	6	$71.04
Application Cost - Herbicide		$5.50	6	$33.00
Field Work, Disking, etc.	Field cultivator	$5.71	6	$34.26
Water Leveling, Bed Leveling, etc.	Pull levees	$15.49	6	$92.94
Ditching		$1.24	6	$7.44
Seed	CLXL745 at 22 lb/A	$147.00	6	$882.00
Seed Treatment (If Separate)	RiceTec Seed Treatment	$9.00	6	$54.00
Planting	Drill Plant 300 hp tractor + 25-ft drill	$13.30	6	$79.80
Fertilizer	200 lb 0-46-0	$33.96	6	$203.76
Application Cost - Fertilizer	Ground rig	$6.75	6	$40.50
Herbicide	4 oz League + 4 oz Newpath + Awaken + Radiate + Surfactant	$40.62	6	$243.72
Application Cost - Herbicide	Ground rig	$4.00	6	$24.00
Herbicide				$0.00
Application Cost - Herbicide				$0.00
Fertilizer	180 lb 39-0-0-6.7	$28.67	6	$172.02
Application Cost - Fertilizer	Ground rig	$6.75	6	$40.50
Fertilizer	200 lb 46-0-0	$31.28	6	$187.68
Application Cost - Fertilizer	Airplane	$7.35	6	$44.10
Fungicide	8.25 oz Tilt	$6.26	6	$37.56
Application Cost - Fungicide	Airplane	$6.82	6	$40.92
Insecticide	1.8 oz Warrior	$3.60	6	$21.60
Application Cost - Insecticide	Airplane	$6.82	6	$40.92
Harvest - Cart with Tractor	300 hp Tractor + 1,000 bu Cart	$6.30	6	$37.80
Harvest - Combine	9240 Combine / 30-ft Header	$47.87	6	$287.22
Water Cost	Alternate wetting and drying	$84.83	6	$508.98
First Crop Totals		$530.96		$3,185.76

Ratoon Crop

Item	Description	Cost/A	Acres	Total
Ratoon Crop Manipulation				$0.00
Ratoon Crop Fertilizer				$0.00
Ratoon Fertilizer Application				$0.00
Ratoon Crop Water Cost				$0.00
Ratoon Crop Harvest Cart				$0.00
Ratoon Crop Harvest Combine				$0.00
Ratoon Crop Totals		$0.00		$0.00

Total for First Crop and Ratoon	$530.96		$3,185.76

VERMILION PARISH

When county agent Andrew Granger contacted me about this field and cooperators, he said it was “a pretty unique situation with people that needed our help.” I had no way of knowing how true this was, nor how much it would impact agents and neighbors working with them personally.

Josh Sonnier, the 28-year-old producer in this situation, had terminal brain cancer and was being assisted in managing and producing this crop by his father, Kevin Sonnier. Kevin had very little experience in producing agriculture as he worked in Louisiana oilfields most of his adult life. Many of the major field operations were performed by or with the assistance of their neighbor, Kent Lounsberry, his men, and Josh’s hired man.

The 30-acre field was burned down with 24 oz of glyphosate, 8 oz of 2,4-D, and .50 oz Interactive in February. After being fertilized with 250 lb of 0-23-30 + 1pt zinc, it was drill planted onto a very clean, level, and well-prepared seedbed with treated CL153 seed at a rate of 60 lb/A on April 20. Emergence was called on April 26 with a very uniform and vigorous stand. Weeds present included sedges, jointvetch, sprangletop, and other grasses. At the 2-leaf growth stage, the field was sprayed with a tank mix of 4.8 oz Newpath, .25 oz Halomax, 3 qt Stam, and 1.75 pt Prowl. It was fertilized the next day with 200 lb of urea, then covered with a light flood. The rice grew vigorously and canopied the drill rows with excellent tillering within 14 days. Weed control was excellent, and the field remained clean with good water management. Twenty days from initial fertilization and flood up the rice reached green ring and was fertilized with 100 lb of urea. The flood level was then increased and maintained. The rice was checked weekly for disease and insect presence. Cercospora and bacterial panicle blight were positively identified on samples by Dr. Don Groth; although, it was localized in a very small area. Some sheath blight was seen again but on a very light scale. On July 2, 15 oz of Amistar Top fungicide along with 16 oz of Headstart and 9 oz of Penetrator were flown onto the field. The agents, Andrew Granger and Jeremy Hebert (regional rice agent), discussed and agreed upon the fungicide recommendation. The other product decisions were made by the company dealer representative and Kevin Sonnier.

Growth stages on this field were: Planting – April 20, Emergence – April 26, Green Ring – June 4, Panicle Differentiation – June 11, 50% Heading – July 2, Drained for Harvest – July 30, and Harvest – Aug. 14.

In the early days of the season, Josh Sonnier would accompany the agents and his dad on field visits, usually riding in a side-by-side ATV while others walked the field. Later in the season, his weakened state did not allow him to accompany us, so his father would take over the management of the crop. On July 4, Josh Sonnier passed away ending his battle with cancer.

Weekly field visits continued as Andrew Granger, Jeremy Hebert, and Kevin Sonnier monitored the field checking water levels as well as insect and disease presence and levels. The field reached maturity on July 30 and was then drained for harvest.

Harvest began the afternoon of Aug. 14 and finished Aug. 15. At 17.2% moisture, the 30-acre field had a green yield of 8,469 lb/A, 52.2 bbl/A, or 188.2 bu/A. When adjusted to 12% moisture, the yield was 7,977 lb/A, 49.24 bbl/A, or 177.2 bu/A.

A quick note about this situation and the cooperative efforts of Louisiana Rice Producers and the LSU AgCenter. Due to the caring attitude and personalities of two AgCenter agents, Andrew and Jeremy, this program was conducted to assist a producer in their area. From this, the cooperativeness, assistance, and help rendered by friends, neighbors, family, and businesses, all of which were part of the rice industry, was nothing short of amazing to see. This was a real testament to the character of these agents, rice producers and industry, and the people of the area.

VERMILION PARISH

Cooperator: Josh and Kevin Sonnier
Agent: Andrew Granger and Jeremy Hebert
Consultant: Doug Leonards
Field Size: 30 acres

Cultural Practices

Variety: CL153
Method of Planting: Drill seeded
Water Management: Delayed flood
Seeding Rate: 60 lb/A
Date of Planting: April 20
Date of Emergence: April 26

Growth and Development

Stage	Observation Date
Green Ring	June 5
Panicle Differentiation	June 11
50% Heading	July 2
Drain for Harvest	July 30
Harvest	Aug. 14-15

Yield, Milling, and Economic Data

	Yield at 12% Moisture (cwt/A)	Milling Yield (% Whole / % Total)	Variable Costs ($/A)[1]	Cost of Production ($/cwt)[1]	Return on Variable Costs ($/A)[1,2]
First Crop	79.78	66.45 / 70.4	552.50	6.92	333.85

[1] Costs captured are from land preparation to harvest. They do not include land rent, transportation, drying, storage, or fixed costs.
[2] This value was obtained using a selling price of $11.11/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
April 20	8-24-24	250	20	60	60	0	0
May 15	46-0-0	200	92	0	0	0	0
June 4	46-0-0	100	46	0	0	0	0
First Crop / Season Total			158	60	60	0	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Hemp sesbania, sprangletop, various other grasses, and broadleaves	March 1	24 oz glyphosate + 8 oz 2,4-D + 0.5 oz Interactive
Various broadleaves, grasses, and sedges	May 14	4.8 oz Newpath + .25 oz Halomax + 3 qt Stam + 1.75 pt Prowl

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath blight	June 29	15 oz Amistar Top + 16 oz Headstart + 9 oz Penetrator

Note: Disease pressure was very light with a positive ID of Cercospora and bacterial panicle blight from very small concentrated areas.

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice water weevil	Seed treatment – April 20	Dermacor X-100

VERMILION PARISH

Item	Description	Cost/A	Acres	Total
Burndown	24 oz glyphosate (Roundup) + 8 oz 2,4-D + .50 oz Interactive	$7.17	30	$215.10
Application Cost - Herbicide	Airplane	$7.00	30	$210.00
Field Work, Disking, etc.	Disking	$7.50	30	$225.00
Water Leveling, Bed Leveling, etc.	Bed level	$5.71	30	$171.30
Ditching	Ditching	$1.24	30	$37.20
Seed	CL153 60 lb/A	$66.00	30	$1,980.00
Seed Treatment (If Separate)	Dermacor X-100 + Fungicide + Kickstand PGR	$25.64	30	$769.20
Planting	Drill Planted	$14.53	30	$435.90
Fertilizer	250 lb 0-23-30 + 1 pt Zinc	$56.50	30	$1,695.00
Application Cost - Fertilizer	Ground rig	$9.00	30	$270.00
Herbicide	4.8 oz Newpath + .25 oz Halomax + 3 qt Stam + 1.75 pt Prowl	$52.31	30	$1,569.30
Application Cost - Herbicide	Ground rig	$8.50	30	$255.00
Herbicide				$0.00
Application Cost - Herbicide				$0.00
Fertilizer	200 lb 46-0-0 + N-Fix	$39.13	30	$1,173.90
Application Cost - Fertilizer	Airplane or ground rig	$8.00	30	$240.00
Fertilizer	100 lb 46-0-0	$16.85	30	$505.50
Application Cost - Fertilizer	Airplane	$7.35	30	$220.50
Fungicide	15 oz Amistar Top + 16 oz Headstart + 9 oz Penetrator	$38.50	30	$1,155.00
Application Cost - Fungicide	Airplane	$7.35	30	$220.50
Insecticide				$0.00
Application Cost - Insecticide				$0.00
Harvest - Cart with Tractor		$6.30	30	$189.00
Harvest - Combine		$44.23	30	$1,326.90
Water Cost	Fuel and Maintenance	$123.69	30	$3,710.70
First Crop Totals		$552.50		$16,575.00

Ratoon Crop

Item	Description	Cost/A	Acres	Total
Ratoon Crop Manipulation				$0.00
Ratoon Crop Fertilizer				$0.00
Ratoon Fertilizer Application				$0.00
Ratoon Crop Water Cost				$0.00
Ratoon Crop Harvest Cart				$0.00
Ratoon Crop Harvest Combine				$0.00
Ratoon Crop Totals		$0.00		$0.00

Total for First Crop and Ratoon	$552.50		$16,575.00

Table 1. Summary of Management Practices and Economic Data per Acre for 2018 Verification Fields.

Parish	Planting Method	Rice Variety	Planting Date	Water Management	Seed Cost ($/A)	Insecticide Seed Treatment Cost ($/A)	Herbicide Cost ($/A)	Herbicide Application Cost ($/A)
Avoyelles	Water plant	Cheniere	May 14	Delayed Flood	18.65	14.20	35.21	6.00
Calcasieu	Drill	CL153	April 3	Delayed Flood	82.20	15.83	57.03	35.50
East Carroll	Drill	CLXL745	April 20	Alternate Wetting and Dry	147.00	9.00	52.46	9.50
Vermilion	Drill	CL153	April 20	Delayed Flood	66.00	25.64	59.48	15.50

Continued.

Table 1. Continued.

Parish	Fertilizer Cost ($/A)	Fertilizer Application Cost ($/A)	Fungicide Cost ($/A)	Fungicide Application Cost ($/A)	Insecticide Cost ($/A)[2]	Insecticide Application Cost ($/A)	Water Cost ($/A)
Avoyelles	103.30	34.82	18.00	6.00	N/A	N/A	25.00
Calcasieu[1]	175.75	34.00	27.99	9.50	N/A	N/A	84.02
East Carroll	93.91	20.85	6.26	6.82	3.60	6.82	84.83
Vermilion	112.48	24.35	38.50	7.35	N/A	N/A	123.69

[1] Costs include first and ratoon crop.
[2] Does not include insecticide seed treatment.

Continued.

Table 1. Continued.

Parish	Harvest Date	Yield at 12% Moisture[1]			Milling % (% Whole / % Total)	Variable Cost ($/A)[1]	Cost of Production ($/cwt)[1]	Return on Variable Cost ($/A)[1,2]
		cwt	bbls	bu				
Avoyelles	Sept. 17	75.28	46.40	167.20	60.57/71.24	392.91	5.22	443.45
Calcasieu[1]	Aug. 20 Nov. 23	77.30	47.70	171.30	65.01/72.40	684.42	8.85	174.16
East Carroll	Sept. 5	91.17	56.20	202.60	55.55/71.90	530.96	5.82	481.93
Vermilion	Aug. 14-15	79.78	49.20	177.20	66.45/70.40	552.50	6.92	333.85

[1] Costs and yields include first and ratoon crop.
[2] Value obtained using selling price of $11.11/cwt.

Table 3. Louisiana Rice Research Verification Summary – 21 Years.

1998 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	53.0	32.8	118.1	5,314
Avoyelles	32.5	42.9	154.4	6,950
Calcasieu[1]	60.0	34.1	122.8	5,524
East Carroll	33.9	41.1	148.0	6,658
Evangeline	33.0	42.9	154.4	6,950
Jefferson Davis[1]	61.8	37.3	134.3	6,043
Madison	36.6	39.0	140.4	6,318
Morehouse	63.0	33.8	121.7	5,476
St. Landry	37.1	38.2	137.5	6,188
Vermilion	16.7	29.4	105.8	4,763
TOTALS	**427.6**	**37.2**	**133.7**	**6,018**

[1] Yield includes ratoon crop.

1999 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	31.1	37.4	134.6	6,059
Avoyelles	32.5	46.6	167.8	7,549
Calcasieu	49.3	34.6	124.6	5,605
Catahoula	30.4	33.4	120.2	5,411
East Carroll	36.1	47.0	169.2	7,614
Evangeline	22.3	43.1	155.2	6,982
Jefferson Davis[1]	26.6	30.8	110.9	4,990
Madison	38.1	39.0	140.4	6,318
St. Landry	30.1	38.8	139.7	6,286
Vermilion	23.8	36.5	131.4	5,913
TOTALS	**320.3**	**38.7**	**139.4**	**6,273**

[1] Yield includes ratoon crop.

Table 3. Continued.

2000 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia	53.3	39.4	141.8	6,383
Avoyelles	63.2	36.7	132.1	5,945
Calcasieu	22.1	25.1	90.4	4,066
Catahoula	39.6	36.4	131.0	5,897
East Carroll	45.1	49.1	176.8	7,956
Evangeline	19.9	38.2	137.5	6,188
Jefferson Davis	30.6	26.7	96.1	4,325
Morehouse	27.7	28.3	101.9	4,585
St. Landry	70.7	39.2	141.1	6,350
Vermilion[1]	21.6	37.7	135.7	6,107
TOTALS	**393.8**	**35.7**	**128.4**	**5,780**

[1] Yield includes ratoon crop.

2001 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	60.6	50.8	182.9	8,230
Allen	41.6	35.1	126.4	5,686
Avoyelles	63.2	38.1	137.2	6,172
Calcasieu[1]	61.9	39.4	142.0	6,388
Concordia	79.6	36.1	130.1	5,853
Evangeline[1]	20.8	52.7	189.7	8,538
Jefferson Davis[1]	21.6	57.3	206.4	9,289
Richland	65.9	46.0	165.5	7,447
St. Landry[1]	40.6	51.1	184.0	8,282
Vermilion[1]	33.3	52.4	188.7	8,493
TOTALS	**489.1**	**45.9**	**165.3**	**7,438**

[1] Yield includes ratoon crop.

Table 3. Continued.

2002 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	38.4	49.8	179.3	8,068
Allen[1]	25.1	46.0	165.6	7,452
Avoyelles	37.4	49.9	179.6	8,084
Beauregard[1]	49.5	53.1	191.2	8,602
Calcasieu[1]	41.4	42.4	152.6	6,869
Concordia	67.6	48.2	173.5	7,808
Evangeline	42.0	37.6	135.4	6,091
Jefferson Davis[1]	31.7	45.0	162.0	7,290
Richland	35.8	42.1	151.5	6,819
St. Landry	32.7	48.8	175.7	7,906
Vermilion[1]	32.0	49.8	179.4	8,072
TOTALS	**433.6**	**46.6**	**167.8**	**7,551**

[1] Yield includes ratoon crop.

2003 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia	57.2	44.0	158.4	7,128
Allen[1]	35.7	46.1	166.0	7,469
Avoyelles	37.4	50.1	180.4	8,116
Beauregard[1]	45.7	48.7	175.2	7,884
Concordia	79.5	49.2	177.1	7,970
Evangeline[1]	48.4	44.5	160.2	7,209
Jefferson Davis[1]	52.9	28.7	103.3	4,649
Richland	40.2	44.7	160.8	7,234
St. Landry[1]	32.7	61.1	220.0	9,898
Vermilion[1]	33.0	40.0	144.0	6,480
TOTALS	**462.7**	**45.7**	**164.5**	**7,404**

[1] Yield includes ratoon crop.

Table 3. Continued.

2004 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Allen[1]	53.2	40.9	147.1	6,620
Avoyelles	33.3	32.8	118.0	5,307
Beauregard[1]	21.8	42.5	153.3	6,899
Concordia	82.3	36.0	130.0	5,843
East Carroll	54.8	45.8	165.0	7,427
Evangeline	30.7	34.8	125.2	5,638
Jefferson Davis[1]	42.3	38.5	138.6	6,237
Natchitoches	47.2	44.1	158.8	7,144
St. Landry[1]	60.1	65.1	234.3	10,543
Vermilion[1]	30.0	42.1	151.6	6,824
TOTALS	**455.7**	**42.3**	**152.2**	**6,848**

[1] Yield includes ratoon crop.

2005 Verification Acres and Yields[1]				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia	28.9	39.6	143.8	6,427
Allen	76.7	25.6	92.0	4,140
Avoyelles	32.1	35.9	129.3	5,819
Calcasieu	49.0	51.0	184.0	8,282
Concordia	60.5	43.0	156.0	7,003
East Carroll	30.4	47.9	172.7	7,771
Evangeline	30.0	37.1	133.6	6,014
Jefferson Davis	39.2	32.5	117.0	5,264
Natchitoches	30.0	43.3	156.0	7,022
Richland	47.4	49.2	177.2	7,974
St. Landry	61.7	47.5	170.9	7,689
Vermilion	52.8	40.9	147.3	6,631
TOTALS	**538.7**	**41.1**	**148.3**	**6,670**

[1] No ratoon crop was harvested in the verification program in 2005.

Table 3. Continued.

2006 Verification Acres and Yields[1]				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	41.8	43.0	155.0	6,972
Concordia	54.7	50.8	183.0	8,237
East Carroll	60.4	44.5	150.0	7,210
Evangeline	29.4	32.3	116.0	5,227
Jefferson Davis	21.5	43.8	157.8	6,000
St. Landry	40.9	36.8	132.5	5,962
Vermilion	29.6	37.0	133.3	7,100
West Carroll	50.1	53.1	191.2	8,603
TOTALS	**328.4**	**43.4**	**156.4**	**7,040**

[1] No ratoon crop was harvested in the verification program in 2005.

2007 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	40.9	56.7	204	9,187
Concordia	53.8	53.6	193	8,680
East Carroll	23.0	49.0	176	7,917
Evangeline – St. Landry	33.9	50.1	180	8,122
Jefferson Davis[1]	38.9	55.8	201	9,046
Vermilion[1]	36.6	46.0	166	7,451
West Carroll	40.2	45.4	164	7,356
TOTALS	**267.3**	**51.2**	**184**	**8,293**

[1] Yield includes ratoon crop.

2008 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	40.9	47	170	7,657
Calcasieu[1]	55.1	51	183	8,247
Concordia	54.7	44	160	7,178
Evangeline	46.4	42	152	6,840
Madison	41.5	51	182	8,208
Jefferson Davis[1]	37.7	52	189	8,481
St. Landry	60.2	48	173	7,801
Vermilion[1]	51.1	70	252	11,359
TOTALS	**387.6**	**51**	**183**	**8,228**

[1] Yield includes ratoon crop.

Table 3. Continued.

2009 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	56.6	70.9	255.3	11,489
Avoyelles	28.6	50.7	182.5	8,214
Calcasieu[1]	41.7	58.1	209.3	9,418
Concordia	57.0	49.6	178.6	8,035
East Carroll	33.6	41.3	148.7	6,692
Evangeline[1]	22.5	61.7	222.2	9,999
Madison	29.0	50.4	181.5	8,168
St. Landry	49.4	49.3	177.5	7,987
Vermilion[1]	41.5	66.9	241.0	10,843
TOTALS	**359.9**	**56.0**	**201.7**	**9,078**

[1] Yield includes ratoon crop.

2010 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	41.8	49.7	179.0	8,057
Jefferson Davis[1]	35.8	67.5	243.1	10,941
St. Landry	31.3	44.3	159.4	7,171
TOTALS	**108.9**	**54.0**	**194.4**	**8,750**

[1] Yield includes ratoon crop.

2011 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Allen	23.2	48.1	173.3	7,799
Cameron[1]	17.6	57.6	207.4	9,332[1]
Madison	10.5[2]	57.9	208.5	9,382
St. Landry	45.7	42.5	153.1	6,890
Vermilion	24.0	54.0	194.5	8,754
TOTALS	**121.0**	**49.4**	**177.9**	**8,005**

[1] Yield includes ratoon crop.
[2] Yield calculated on 10.5 acres, total field acres 73.4.

Table 3. Continued.

2012 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Allen	30.7	45.6	164.2	7,391
Cameron[1]	35.7	42.3	152.4	6,858
Concordia	37.4	45.2	162.7	7,321
St. Landry[1]	44.1	64.9	233.6	10,510
Vermilion	16.5	44.1	158.6	7,137
TOTALS	**164.4**	**49.8**	**179.3**	**8,071**

[1] Yield includes second crop.

2013 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Evangeline	38.0	51.7	186.0	8,368
Jefferson Davis[1]	39.3	65.1	234.2	10,541
St. Landry[1]	52.4	75.2	270.7	12,183
Vermilion	17.3	36.4	131.1	5,898
W. Carroll	34.5	65.3	235.2	10,582
TOTALS	**181.5**	**62.5**	**225.0**	**10,125**

[1] Yield includes second crop.

2014 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Concordia	23.0	48.5	174.8	7,865
Evangeline	20.7	46.2	166.3	7,483
Jefferson Davis[1]	42.6	83.8	301.6	13,574
Vermilion[1]	41.0	47.3	107.2	7,658
W. Carroll	32.2	51.4	185.1	8,329
TOTALS	**159.5**	**57.9**	**208.5**	**9,381**

[1] Yield includes second crop.

Table 3. Continued.

2015 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	40.5	85.5	308	13,867
Cameron[1]	45	65	233	10,522
Concordia	18	52	189	8,487
Vermilion	39.2	40	145	6,529
W. Carroll	36.5	56	202	9,089
TOTALS	**179.2**	**61**	**219.9**	**9,908**

[1] Yield includes second crop.

2016 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Acadia[1]	45	74.34	267.6	12,040
Cameron[1]	25	61.5	221.4	9,960
Concordia	18	48.9	176	7,930
Richland	24	42	151	6,902
Vermilion[2]	18	--	--	--
TOTALS[3]	**112**	**60.4**	**217**	**9,814**

[1] Yield includes ratoon crop.
[2] Not harvested due to flood.
[3] Harvested acres only.

2017 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	31.6	35.12	137.23	6,475
Calcasieu[1]	19.5	54.79	197.3	8,887
East Carroll	5.0[2]	59.8	215.75	9,709
Richland	32.7	52.25	188.12	8,465
Morehouse	34.4	65.8	237	10,667
TOTALS	**123.2**	**52.3**	**191.28**	**8,686**

[1] Yield includes ratoon crop.
[2] Yield calculated on 5 acres of a 90-acre field.

Table 3. Continued.

2018 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	**Acres**	**Barrels/A**	**Bushels/A**	**Pounds/A**
Avoyelles	31.0	46.47	167.2	7,528
Calcasieu[1]	16.9	47.7	171.3	7,730
East Carroll	6.0[2]	56.2	202.6	9,117
Vermilion	30.0	49.2	177.2	7,978
TOTALS	**83.9**	**48.3**	**174.1**	**7,843**

[1] Yield includes second crop.
[2] Yield calculated on 6 acres of a 90-acre field.

1998 – 2018 Rice Research Verification Yield Summary

Verification Totals			Verification Parish Totals[†]		
Year	**Acres**	**Pounds/A**	**Acres**	**Pounds/A**	**Difference**
1998	427.6	6,018	475,103	5,052	966
1999	320.3	6,273	444,015	5,502	771
2000	393.8	5,780	385,824	5,620	160
2001	489.1	7,438	412,286	5,794	1,644
2002	433.6	7,551	412,630	5,764	1,787
2003	462.7	7,404	327,843	5,843	1,561
2004	455.7	6,848	311,606	5,582	1,266
2005	538.7	6,670	402,759	6,165	505
2006	328.4	7,040	185,249	5,644	1,396
2007	267.3	8,293	183,357	6,501	1,792
2008	387.6	8,228	258,845	6,047	2,181
2009	359.9	9,078	246,793	6,715	2,363
2010	108.9	8,750	125,856	6,488	2,262
2011	121.0	8,005	110,236	6,175	1,830
2012	164.4	8,071	109,823	6,043	2,028
2013	181.5	10,125	202,366	7,524	2,602
2014	118.5	9,931	194,761	7,541	2,390
2015	179.2	9,908	149,888	6,860	3,048
2016	112.0	9,814	111,177.9	7,352	2,462
2017	123.2	8,686	50,176	7,482	1,204
2018	**83.9**	**7,843**	*****	*****	*****
Totals	**5,934.1**		**4,951,417.9**		

* Not available at press time.
[†] Verification Parish Totals derived by participating parish acreage multiplied by average parish yield (taken from Ag Summary), add totals, and divide by participating parish total acreage to get lb/A.

COASTAL PLANT PROJECT

SELECTION FOR SUPERIOR CALIFORNIA BULRUSH

H.S. Utomo, I. Wenefrida, and G.M. Zaunbrecher

As an emergent aquatic perennial plant, California bulrush [*Schoenoplectus californicus* (C.A. Mey.) Palla] is a freshwater plant species capable of tolerating 6 ppt (w/w) salinity. Selection for superior salt-tolerant California bulrush is important to increase the utilization of this coastal marsh species to support various erosion control efforts, while also helping to create more productive habitats for fish and many wildlife and remediate both industrial and agricultural pollutants from freshwater to brackish marsh environments. Three salt-tolerant California bulrush plant materials were deposited in the National Plant Germplasm System and currently are in the process of registration, LABR275 (PI 679591), LABR281 (PI 679592), and LABR284 (PI 679594). A brief description of each of the three lines is as follows.

LABR275 was developed through selections of 44 California bulrush ecotypes collected from coastal marshes that experienced periodic exposure to the elevated levels of salinity in 10 Louisiana parishes and one Texas county (Plaquemines, Calcasieu, Cameron, Lafourche, Terrebonne, St. Mary, Iberia, Vermilion, St. Charles, and Tangipahoa, Louisiana; and Orange, Texas). LABR275 is a salt-tolerant California bulrush capable of tolerating salinity of 10 ppt (w/w). It has excellent growth characteristics in both freshwater and brackish environments. Under freshwater environments, LABR275 has a linear spread of 1.45 m, stem count of 19 per m^2, average height of 1.63 m, and stem diameter of 1.4 cm. Under brackish environments, it has a linear spread of 1.75 m, stem count of 39.4 per m^2, height of 1.63 m, and stem diameter of 1.1 cm. As a comparison, cultivar 'Restorer' has an average linear spread of 1.51 m, stem count of 30.2 per m^2, height of 1.56 m, and stem diameter of 1.2 cm.

LABR281 was also developed through selections of 44 California bulrush ecotypes collected from coastal marshes as previously described. It is a salt-tolerant California bulrush that can tolerate salinity of 10 ppt (w/w) and has excellent growth characteristics in both freshwater and brackish environments. Under freshwater environments, LABR281 has a linear spread of 1.43 m, stem count of 33 per m^2, average height of 1.70 m, and stem diameter of 1.2 cm. Under brackish environments, it has a linear spread of 3.83 m, stem count of 43 per m^2, height of 1.58 m, and stem diameter of 1.1 cm.

LABR284 was also developed similarly through selections of 44 California bulrush ecotypes collected from coastal marshes. It is a salt-tolerant California bulrush capable of tolerating salinity of 10 ppt (w/w). LABR284 has excellent growth characteristics in both freshwater and brackish environments. It has superior spread under brackish environments. Under freshwater conditions, LABR284 has a linear spread of 1.40 m, stem count of 16 per m^2, average height of 1.67 m, and stem diameter of 1.4 cm. Under brackish environments, it has a linear spread of 4.29 m, stem count of 44 per m^2, height of 1.47 m, and stem diameter of 1.1 cm.

Below is the greenhouse evaluation for salt tolerance and field performance of some select lines of California bulrush grown in the freshwater plots at the H. Rouse Caffey Rice Research Station in 2018.

Table 1. Greenhouse evaluation[1] of salt tolerance among 45 California bulrush genotypes at the H. Rouse Caffey Rice Research Station.

Accession	Biomass %[2]	Tolerance Level[3]	Accession	Biomass %[2]	Tolerance Level[3]	Accession	Biomass %[2]	Tolerance Level[3]
68284	77.6	T	**Restorer[4]**	53.6	MT	**68336**	46.9	S
68275	77.4	T	**68298**	53.2	MT	**68265**	46.5	S
68281	76.9	T	**68279**	53.0	MT	**68269**	46.2	S
68310	76.4	T	**68326**	53.0	MT	**68299**	46.2	S
68293	75.9	T	**68327**	48.2	S	**68273**	46.2	S
68267	70.7	T	**68330**	48.1	S	**68280**	46.0	S
68268	70.5	T	**68337**	48.0	S	**68287**	45.9	S
68309	70.2	T	**68328**	47.9	S	**68370**	45.9	S
68274	70.0	T	**68295**	47.9	S	**68282**	45.5	S
68371	69.9	T	**68312**	47.5	S	**68333**	45.4	S
68271	69.4	T	**68325**	47.5	S	**68323**	44.9	S
68324	61.9	MT	**68276**	47.5	S	**68335**	43.9	S
68301	61.7	MT	**68313**	47.5	S	**68270**	43.7	S
68283	61.3	MT	**68278**	47.3	S	**68272**	43.2	S
60281	61.1	MT	**68277**	47.0	S	**68329**	40.2	S

[1] The salt tolerance levels of each genotype were determined using continuous exposure to salt concentration of 15 ppt for 6 months under greenhouse conditions.

[2] Mean = 54.7; CV = 9%; LSD (0.05) = 2.9; Biomass was expressed as percent growth of treated to untreated line [(oven dried above ground biomass of treated entry) / (oven dried above ground biomass of untreated entry) x 100%], after continuous exposure to 15 ppt salts for 6 months. Values were based on replicated tests.

[3] T = tolerant; MT = moderately tolerant; and S = susceptible.

[4] Restorer is a California bulrush cultivar released by the NRCS Plant Material Center, Americus, Georgia.

Table 2. Mean of stem diameter, stem density, height, and spread among 20 California bulrush genotypes in freshwater plots at the H. Rouse Caffey Rice Research Station in 2018.

Line	Stem diameter (mm)	Rank	Stem density	Rank	Height (cm)	Rank	Spread (cm^2)	Rank
60281	14.33	14	12.1	1	180.67	1	2702	2
68267	14.42	12	7.8	8	147.67	17	2171	8
68268	14.58	11	4.4	17	151.83	15	2863	1
68271	15.42	3	6.5	11	151.33	16	1121	17
68274	15.33	5	4.3	18	145.67	19	852	19
68275	15.08	6	6.3	12	162.00	4	2202	5
68279	14.83	7	7.1	9	153.33	12	1760	14
68281	13.67	16	11.1	2	162.78	3	2172	7
68283	14.00	15	9.7	4	154.83	9	1773	13
68284	15.42	2	5.2	14	161.50	5	2124	9
68293	15.67	1	5.2	13	151.83	14	2175	6
68298	14.67	10	3.8	20	143.83	20	1040	18
68301	13.25	19	10.9	3	152.00	13	1098	10
68309	15.42	4	8.7	6	156.33	7	2646	3
68310	14.75	8	3.8	19	157.83	6	1802	12
68324	13.33	18	5.1	15	155.83	8	1133	16
68326	14.42	13	9.6	5	165.00	2	1232	15
68328	13.00	20	4.6	16	153.50	11	592	20
68371	14.67	9	6.8	10	153.67	10	2226	4
Restorer	13.58	17	8.5	7	146.83	18	1893	11
LSD(0.05)	1.55		9.2		N.S.		1160	
Mean	14.47		7.1		154.9		1805	
CV	9.18		24.1		8.97		39	

STATION PERSONNEL

Donald E. Groth, Professor ----------Resident Coordinator	
Valerie B. Dartez	Administrative Coordinator 3
Raymond R. Dilly, Jr.	Safety Coordinator/Research Associate
Kimberly G. Guidry	Accounting Specialist 1
Carol D. LeDoux	Administrative Program Specialist-A
Donna L. Sonnier	Custodian 1
Adam N. Famoso, Assistant Professor ---------- Rice Breeding	
Brijesh Angira[1]	Assistant Professor-Research
Karen F. Bearb	Research Associate/Coordinator
Corey A. Conner	Research Associate/Specialist
Jennifer D. Dartez[2]	Research Farm Specialist 2
Gavin J. Guidry	Research Associate/Specialist
Brady L. Williams	Research Farm Specialist 1
Christopher K. Addison	Graduate Assistant
Tommaso Cerioli[3]	Graduate Assistant
Mona M. Meche, Research Associate/Coordinator[4] **----------Rice Anther Culture/Tissue Culture**	
Donald E. Groth, Professor ---------- Rice Pathology	
Carl W. Dischler	Research Associate/Specialist
Laura L. Monte	Research Farm Specialist 1
Dustin L. Harrell, Professor/Research Coordinator ---------- Rice Agronomy/Rotational Crops/Extension	
Jacob S. Fluitt	Research Associate/Specialist
Jason R. Hartman	Research Farm Assistant 2
James P. Leonards	Research Associate/Specialist
Nutifafa Adotey	Postdoctoral Researcher
Anna E. Coker	Graduate Assistant
Manoch Kongchum, Assistant Professor-Research ----------Rice Agronomy/Rotational Crops	
William J. Leonards, Jr., Research Associate/Coordinator/Manager ----------Farm Management	
Brent W. Theunissen	Research Associate/Coordinator/Manager
Brian D. Broussard	Research Farm Supervisor
Brandon J. Frey	Research Farm Manager
Paul A. Miller	Research Farm Specialist 1
Jimmy D. Pellerin	Research Farm Specialist 2
Thomas J. Reed	Research Farm Specialist 2
Dustin M. Reiners[5]	Research Farm Specialist 1

[1] Promoted from Research Associate 12/01/2018
[2] Transferred to Breeding 01/02/2018
[3] Appointed 01/03/2018
[4] Retired 01/02/2018
[5] Appointed 03/17/2018

STATION PERSONNEL
(Continued)

W. Ray McClain, Professor[6] ---------- **Aquaculture**

John J. Sonnier	Research Farm Specialist 2

James H. Oard, Professor ---------- **Rice Hybrid Breeding**

Chanse G. Caillouet[7]	Research Farm Specialist 1
Weiki Li[8]	Visiting Scientist
Lazo N. Pavich[9]	Research Associate/Specialist
Tara L. Roy[10]	Research Farm Specialist 1
Jessica L. Thornton[11]	Research Associate/Specialist
Anna H. Borjas Artica	Graduate Assistant
Dominique C.A. Galam	Graduate Assistant
Leonard M. Gaspar[12]	Graduate Assistant
Paola Mosquera	Graduate Assistant
Democrito Banay Rebong II	Graduate Assistant

Glenn J. Schexnayder, Research Farm Maintenance Manager[13] ---------- **Maintenance Department**
Dean J. LeJeune, Research Farm Maintenance Manager[14] ----------**Maintenance Department**

Nathan T. Breaux[15]	Maintenance Repairer 1
Justin P. Sarver[16]	Maintenance Repairer 2
Ted R. Trahan[17]	Maintenance Repairer 2

Blake E. Wilson, Assistant Professor ----------**Rice Entomology**

Marty J. Frey	Research Associate/Specialist

Herry S. Utomo, Professor ----------**Marker-Assisted Selection Breeding/Biotechnology**

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Gretchen M. Zaunbrecher	Research Associate/Specialist

Ida Wenefrida, Associate Professor-Research---------- **Biotechnology**

Richard E. Zaunbrecher, Research Associate/Coordinator ----------**Foundation Seed Rice**

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[6] Retired 01/31/2018
[7] Appointed 05/28/2018; Separated 09/24/2018
[8] Appointed 04/23/2018
[9] Separated 02/09/2018
[10] Appointed 12/10/2018
[11] Transferred from Breeding 03/01/2018
[12] Appointed 01/03/2018
[13] Retired 04/27/2018
[14] Appointed 04/23/2018
[15] Transferred from Farm Crew 01/06/2018
[16] Transferred from Hybrid Breeding 04/16/2018
[17] Retired 01/12/2018
[18] Separated 06/29/2018

LSU AGCENTER CAMPUS PERSONNEL

LSU AgCenter personnel conducting research at the H. Rouse Caffey Rice Research Station include the following:

Michael A. Deliberto, Assistant Professor for Research ---------- Economics
Department of Agricultural Economics and Agribusiness

Jong Hyun Ham, Associate Professor ---------- Rice Diseases
Department of Plant Pathology and Crop Physiology

Inderjit K. Barphagha	Research Associate
Jobelle Bruno	Graduate Assistant
John Ontoy[1]	Graduate Assistant

Michael E. Salassi, Professor ---------- Economics
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Michael J. Stout, Professor ---------- Rice Entomology
Department of Entomology

Marty J. Frey (HRCRRS)	Research Associate/Specialist
Blake E. Wilson	Assistant Professor
Lina Bernaola Alvarado	Graduate Assistant
Emily C. Kraus[2]	Graduate Assistant
Luna Lama[3]	Graduate Assistant
Megan M. Mulcahy	Graduate Assistant
James M.P. Villegas	Research Associate

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Gustavo Teló[4]	Postdoctoral Researcher
Benjamin M. McKnight[5]	Research Associate
Matthew J. Osterholt[6]	Graduate Assistant
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David C. Walker[7]	Graduate Assistant
L. Connor Webster	Graduate Assistant

[1] Appointed 01/01/2018
[2] Graduated 12/14/2018
[3] Graduated 05/2018
[4] Separated 05/31/2018
[5] Promoted 03/01/2018
[6] Graduated 12/14/2018
[7] Appointed 06/02/2018

COOPERATING PERSONNEL

Cooperating personnel on research projects at the H. Rouse Caffey Rice Research Station include the following:

Lucas Aviles ---------- **Rice Breeding**
University of Puerto Rico Research and Extension Center
Lajas, Puerto Rico

Niranjan Baisakh---------- **Rice Breeding**
School of Plant, Environmental and Soil Sciences
Louisiana State University Agricultural Center

Steve A. Harrison---------- **Wheat, Oats, and Coastal Erosion Control**
School of Plant, Environmental and Soil Sciences
Louisiana State University Agricultural Center

Clayton A. Hollier----------**Soybean and Rice Disease Control**
Department of Plant Pathology and Crop Physiology
Louisiana State University Agricultural Center
Retired 2018

Todd Spivey ---------- **Soybeans**
Dean Lee Research and Extension Center
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Anthony Rivera---------- **Rice Breeding**
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Lajas, Puerto Rico

Aaron P. Smith ---------- **Rice Breeding**
Department of Biological Sciences
Louisiana State University

Prasanta K. Subudhi ---------- **Rice Breeding**
School of Plant, Environmental and Soil Sciences
Louisiana State University Agricultural Center

Brenda Tubaña ---------- **Rice Fertilization**
School of Plant, Environmental and Soil Sciences
Louisiana State University Agricultural Center

E. Allen Wilson ----------**Bird Control**
USDA Animal Damage Control
Crowley, Louisiana
Retired 12/31/2018

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William B. Richardson, LSU Vice President for Agriculture
Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service
LSU College of Agriculture

April 2019

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