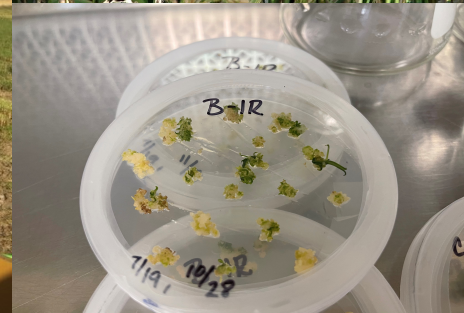


113th Annual Research Report



CROWLEY, LOUISIANA



113th Annual Research Report

**H. ROUSE CAFFEY
RICE RESEARCH STATION
Crowley, Louisiana**

2021

**Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service
Louisiana College of Agriculture
Dr. Luke Laborde, Interim LSU Vice President
of Agriculture**

**H. Rouse Caffey Rice Research Station
Dustin Harrell, Resident Coordinator**

*The LSU Agricultural Center is a statewide campus of the LSU System
and provides equal opportunities in programs and employment.*

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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 2021 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 statewide 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 2021 are presented in this report representing the 113th 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, many farmers, extension personnel, and others were trained and otherwise contacted during 2021. Approximately 300 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 the station, and worked individually with farmers and others in solving immediate problems. Several thousand people received services from the HRCRRS during 2021.

Projects at this station are conducted under the supervision of research scientists from the HRCRRS and by cooperating personnel from certain departments of the Louisiana Agricultural Experiment Station. Following the reports, station personnel and cooperators in 2021 are listed.

MONTHLY RAINFALL DATA
H. ROUSE CAFFEY RICE RESEARCH STATION - CROWLEY, LA
2021

DATE	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YEAR TOTAL
1	0.33			0.37	0.51					1.59			
2			0.58						0.67				
3					0.05	1.20	0.42	0.46		0.02			
4						4.75	0.05	0.48	0.04	0.02			
5		0.15				3.30							
6		0.65	0.06			0.16	0.39		0.50				
7	0.99					0.65			0.36			0.45	
8				0.90				0.10					
9				0.02			1.67	0.06					
10				0.36	1.93		0.05					0.04	
11	0.61	0.93			0.40		0.06				0.17		
12		0.85			5.50		0.15				0.05	0.13	
13		0.02			0.03		0.49						
14		0.25		2.60		0.37	0.38	0.72	2.00				
15				0.20			0.05	0.58	2.20				
16		0.05	0.16	0.90		0.02	0.18	0.02	0.30				
17				0.26	0.13		0.17		0.35				
18		0.60	0.15	0.05	4.05		0.04		0.03				
19				0.02	0.88							1.28	
20					1.49		2.35	0.11	0.68			0.05	
21					0.03		0.07						
22	0.35		0.08		0.32	1.30			0.15		0.50		
23	0.11		1.49			0.24	0.20						
24	0.06		0.15	1.36		0.68	0.67			0.19			
25						0.45		0.15					
26	0.04					1.42	0.02				0.12		
27			0.03			0.49	0.27	0.11					
28						0.35	0.05			2.78	0.29		
29			0.26		0.04	0.05		0.11	1.52			0.03	
30							0.40	0.02	0.18				
31	0.05												
MONTHLY TOTALS													
2021	2.54	3.50	2.96	7.04	15.36	15.43	8.13	2.92	8.98	4.60	1.13	1.98	74.57
2020	5.56	3.88	3.23	4.58	7.21	2.31	5.85	8.87	3.56	4.85	4.85	3.84	58.59

RICE BREEDING

GENETIC IMPROVEMENT OF RICE FOR LOUISIANA PRODUCTION¹

A.N. Famoso, B. Angira, V.B. Dartez, B.M. Frey, J.A. John II, C.W. LeJeune, B.L. Williams, J.D. Dartez, M.F. Lejeune, W. Li, T. Cerioli, R. Guerra, M.G. Montiel, J. Amores, C. Hernandez, F. Maulana, and P.A. Mosquera.

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 2021 rice breeding nursery included more than 45,000 breeding rows. Over 590 new breeding crosses were made, and approximately 45 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 10,000 yield plots. Preliminary Yield testing (PY) included over 1,400 new lines evaluated in 2,800 plots. In 2021, the Regional Yield test (RYT) consisted of 166 entries in their second year of yield testing. The RYT was conducted over six locations and 1,660 plots. Advanced stages of testing included the Cooperative Uniform Regional Rice Nursery (URRN), which contained 240 experimental lines and checks (51 Louisiana entries). The Commercial Advanced (CA) trial consisted of 80 entries and was tested across eight locations totaling 1,920 plots. The Pre-Commercial (PC) test was initiated in 2021 through a collaboration with the University of Arkansas, Horizon Ag., and Nutrien Ag. The PC test was conducted at 25 locations and included 20 entries.

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

PRE-COMMERCIAL TRIAL

The Pre-Commercial (PC) trial is a multi-location test conducted in collaboration with the University of Arkansas, Horizon Ag., and Nutrien Ag. The PC test was conducted at 25 locations and included 20 entries. 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.

Test locations in 2021 included two at the H. Rouse Caffey Rice Research Station (HRCRRS) and twenty-three on-farm test sites throughout Louisiana and southern Texas and Arkansas. Planting and harvesting dates are shown in Table 1 across all locations.

Twenty entries were tested in a randomized complete block design with four replications. Varieties and hybrids were seeded at 90 and 38 lb/A, respectively. Entries are listed in Table 2. Results from these trials are shown in Tables 3-27.

Table 1. Planting and harvesting dates for the Pre-Commercial trial in 2021.

Location	Trial	State	Program	Researcher	Planting	Harvesting
Bay City	21PC_BC	TX	Nutrien	Q. Shao	4/12	-
Desha County	21PC_DES	AR	UA Agronomy	J. Hardke	5/20	-
Iowa	21PC_IA	LA	LSU	A. Famoso	3/19	8/10
Iowa	21PC_IA_2	LA	LSU	D. Harrell	3/19	8/10
Lake Arthur	21PC_LA	LA	LSU	A. Famoso	3/13	8/5
Lawrence County	21PC_LAW	AR	UA Agronomy	J. Hardke	4/12	-
Mamou	21PC_MM	LA	LSU	A. Famoso	4/29	8/27
Mowata	21PC_MW	LA	LSU	A. Famoso	4/29	8/26
Northeast Res & Ext Ctr	21PC_NEREC_1	AR	UA Breeding	X. Sha	4/19	-
Northeast Res & Ext Ctr	21PC_NEREC_2	AR	UA Agronomy	J. Hardke	4/19	-
Northeast Rice Res & Ext Ctr	21PC_NERICE	AR	UA Agronomy	J. Hardke	5/13	-
Nutrien Rice Breeding Station	21PC_NAS	TX	Nutrien	Q. Shao	4/11	-
Palmetto/St. Landry	21PC_SL	LA	LSU	D. Harrell	3/22	8/16
Pine Tree Research Station	21PC_PTRS_1	AR	UA Breeding	X. Sha	4/13	-
Pine Tree Research Station	21PC_PTRS_2	AR	UA Agronomy	J. Hardke	4/13	-
Rice Res & Ext Ctr	21PC_RREC_1	AR	UA Breeding	X. Sha	4/12	-
Rice Res & Ext Ctr	21PC_RREC_2	AR	UA Breeding	X. Sha	4/26	-
Rice Res & Ext Ctr	21PC_RREC_3	AR	UA Agronomy	J. Hardke	3/24	-
Rice Research Station	21PC_RRS	LA	LSU	A. Famoso	3/10	7/29
Rice Research Station	21PC_RRS_2	LA	LSU	D. Harrell	3/10	7/29
Rice Research Station South	21PC_SF	LA	LSU	A. Famoso	4/12	8/18
St. Joseph	21PC_SJ	LA	LSU	A. Famoso	5/31	9/30
St. Joseph	21PC_SJ_2	LA	LSU	D. Harrell	5/31	9/30
Winnsboro	21PC_WB	LA	LSU	A. Famoso	4/22	9/10
Wintermann Rice Research Station	21PC_WRRS	TX	TAMU	J. Samford	4/6	-

Table 2. Entry number, pedigree, grain type, and source information for entries in the Pre-Commercial trial, 2021.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN					
(Hybrid)	1	XP753	XP753	LG	RiceTec
CL	2	CLL17	CLL17	LG	LAES
CN	3	Diamond	Diamond	LG	AAES
CL	4	Jupiter	Jupiter	LG	LAES
CN	5	RU1902207	CTHL/4/CPRS/KBNT//9502008/3/CCDR	LG	LAES
CN	6	RU1902212	TRNS//CCDR/JEFF/3/AR1188/CCDR//9502008/LGRU	LG	LAES
CL	7	RU1902026	WLLS/CFX18//DREW/CFX18/3/CHNR//CCDR/JEFF	LG	LAES
PV	8	PVL03	PVL03	LG	LAES
PV	9	PVL02	PVL02	LG	LAES
CL	10	CLL16	CLL16	LG	AAES
CL	11	CLHA02	RSMT/3/MARS/NWRX//TBNT/4/CL151	LG	MAES
CL	12	RU2001129	RU1102131/CL172	LG	AAES
CL	13	RU2001093	ROYJ/CL142-AR	LG	AAES
CL	14	RU1801101	CL172/RU1102034	LG	AAES
CL	15	RU2001121	RU1102131/14CSIT203	LG	AAES
CN	16	RU1601010	91642//KATY/NWBT/5/RU9201176/4/KATY/NWBT/3/ LBNT/STBN//NWBT/6/CYBT/7/FRNS	LG	AAES
CN	17	DG263L	DG263L	LG	Nutrien
CN	18	20DGL274	-	LG	Nutrien
CN	19	20DGL037	-	LG	Nutrien
CN	20	DGM004	-	MG	Nutrien

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelles type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Crowley; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Bay City, TX.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		81.0	123.6	55.0	70.0		11176.3
13	RU2001093		89.0	114.3	56.0	71.0		10334.1
10	CLL16		89.7	119.4	55.0	68.0		10260.6
17	DG263L		83.7	101.6	59.0	70.0		9608.8
15	RU2001121		84.3	112.6	61.0	69.0		9382.5
19	20DGL037		88.7	101.6	57.0	69.0		9332.6
7	RU1902026		82.7	107.5	59.0	69.0		9286.1
16	RU1601010		84.0	110.9	56.0	69.0		8819.1
14	RU1801101		86.7	114.3	61.0	70.0		8758.1
12	RU2001129		90.0	110.1	60.0	69.0		8736.3
2	CLL17		83.0	113.5	61.0	69.0		8715.2
4	Jupiter		91.3	99.9	61.0	69.0		8684.9
20	DGM004		89.0	100.8	58.0	71.0		8667.4
11	CLHA02		85.3	111.8	60.0	71.0		8600.3
3	Diamond		87.7	107.5	56.0	70.0		8575.1
8	PVL03		85.0	114.3	57.0	69.0		8546.7
6	RU1902212		81.7	103.3	60.0	69.0		8212.8
5	RU1902207		84.7	108.4	61.0	70.0		8108.8
18	20DGL274		89.7	114.3	61.0	70.0		7841.1
9	PVL02		83.0	118.5	57.0	69.0		6936.9

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

Table 4. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Desha County, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		74.8	100.8	60.3	70.8		9823.7
17	DG263L		76.0	100.5	59.5	68.3		9690.3
19	20DGL037		82.5	101.8	57.5	67.3		9377.5
11	CLHA02		77.8	98.0	63.3	69.4		8875.4
13	RU2001093		75.0	93.0	58.3	67.4		8860.8
7	RU1902026		77.5	97.5	60.7	69.1		8802.2
10	CLL16		77.0	103.0	58.9	67.8		8777.8
3	Diamond		74.8	101.3	62.3	69.7		8761.4
15	RU2001121		74.5	100.0	64.4	70.7		8683.6
16	RU1601010		75.3	97.0	58.8	69.8		8488.6
20	DGM004		78.3	103.0	66.2	72.1		8426.0
6	RU1902212		76.3	104.5	62.1	69.7		8383.5
12	RU2001129		77.0	96.8	63.7	69.7		8381.9
5	RU1902207		74.3	101.5	64.4	70.9		8264.2
8	PVL03		80.5	101.5	63.9	70.7		8205.6
14	RU1801101		75.5	101.3	63.5	70.0		8056.1
4	Jupiter		73.8	100.8	67.1	71.0		7710.3
2	CLL17		75.3	97.5	60.7	68.0		5561.0
9	PVL02		75.3	100.8	64.2	71.1		5155.0
18	20DGL274		78.3	101.3	61.2	68.5		5064.0

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

Table 5. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Iowa – Test 1, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
13	RU2001093	2.3	85.3	113.5				10358.3
1	XP753	3.0	76.5	108.5				10139.1
10	CLL16	2.8	86.8	109.8				9397.3
14	RU1801101	3.5	83.5	102.8				9256.5
18	20DGL274	6.0	92.0	107.0				9151.2
12	RU2001129	3.0	86.3	96.3				8990.5
19	20DGL037	3.3	84.3	99.0				8915.0
8	PVL03	2.8	84.0	101.0				8638.7
16	RU1601010	3.0	79.8	106.8				8313.6
5	RU1902207	2.5	81.3	102.3				8250.4
6	RU1902212	3.3	76.0	97.3				8232.9
15	RU2001121	3.0	80.5	99.3				8203.0
11	CLHA02	3.0	83.3	100.0				8172.4
20	DGM004	3.0	90.8	103.8				8136.1
7	RU1902026	2.5	80.5	92.3				8084.7
4	Jupiter	3.5	89.5	95.3				7867.2
3	Diamond	2.5	82.8	105.5				7827.9
17	DG263L	3.0	80.8	97.0				7720.0
9	PVL02	3.3	83.5	117.0				7160.4
2	CLL17	3.5	83.3	100.3				6131.3

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

Table 6. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Iowa – Test 2, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		87.5					10725.0
16	RU1601010		89.0					9449.6
6	RU1902212		81.8					9018.2
8	PVL03		90.5					8872.3
3	Diamond		89.8					8848.2
13	RU2001093		91.5					8824.8
7	RU1902026		85.8					8684.1
15	RU2001121		86.3					8525.3
14	RU1801101		89.8					8495.5
12	RU2001129		93.3					8454.4
19	20DGL037		90.3					8406.8
4	Jupiter		94.0					8381.1
11	CLHA02		84.5					8222.9
10	CLL16		93.8					8040.7
5	RU1902207		87.8					7971.5
18	20DGL274		91.0					7937.7
9	PVL02		87.5					7436.2
17	DG263L		86.0					7429.5
20	DGM004		92.5					7011.5
2	CLL17		86.8					6558.5

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

Table 7. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	6.3	82.3	104.8	66.4	73.3	17.9	11649.6
13	RU2001093	3.3	89.5	102.0	59.6	70.0	21.0	11104.1
10	CLL16	3.3	93.8	107.0	62.5	70.5	14.1	10806.1
17	DG263L	5.3	85.5	94.5	63.8	70.1	13.6	10532.0
8	PVL03	2.8	86.5	95.3	68.7	74.2	9.0	10402.6
3	Diamond	2.3	82.3	100.8	64.0	72.3	14.4	10317.9
16	RU1601010	2.8	81.8	97.5	64.0	72.4	11.9	10254.4
5	RU1902207	3.0	84.8	93.8	67.3	73.4	12.7	10234.3
12	RU2001129	3.3	94.0	91.5	67.9	73.2	8.7	10156.2
15	RU2001121	3.8	87.8	93.0	70.0	74.0	15.6	9965.8
11	CLHA02	2.5	90.8	94.3	68.0	72.9	13.1	9928.3
7	RU1902026	3.8	86.3	86.3	67.6	72.9	14.7	9895.2
14	RU1801101	2.8	86.0	95.3	68.5	72.5	11.6	9876.7
19	20DGL037	4.8	88.3	96.8	63.5	70.3	5.7	9612.8
20	DGM004	3.8	94.3	92.8	69.2	71.8	12.3	9561.9
2	CLL17	3.0	90.5	95.8	66.2	70.9	10.7	9394.0
18	20DGL274	6.3	97.0	101.8	64.9	70.3	17.3	9138.1
4	Jupiter	5.3	93.8	88.8	65.7	69.1	15.1	9128.6
6	RU1902212	3.5	78.0	85.3	70.0	73.4	7.3	8921.6
9	PVL02	2.3	84.0	106.5	69.3	73.6	8.4	8639.5

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

Table 8. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Lawrence County, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		85.8	96.2	44.2	71.8		12086.2
10	CLL16		88.0	90.8	47.0	69.9		10499.7
17	DG263L		84.0	83.2	51.2	67.9		10327.8
13	RU2001093		87.0	98.4	50.2	69.9		10239.3
14	RU1801101		88.3	86.4	55.2	70.8		10127.0
3	Diamond		86.8	93.0	49.9	70.6		10041.3
6	RU1902212		84.3	81.3	57.8	71.0		9957.5
16	RU1601010		86.3	98.1	43.7	70.5		9749.5
19	20DGL037		87.5	89.2	47.6	68.2		9705.2
4	Jupiter		91.5	87.0	62.0	70.2		9700.5
11	CLHA02		88.3	80.3	56.1	69.9		9692.8
7	RU1902026		86.3	74.3	56.0	70.1		9649.6
20	DGM004		90.5	89.9	57.6	72.1		9419.9
8	PVL03		88.0	87.9	52.6	71.2		9392.3
18	20DGL274		98.0	91.8	59.1	68.9		9321.5
12	RU2001129		89.8	78.1	60.4	71.2		9308.2
2	CLL17		87.0	83.8	58.3	69.0		8960.5
15	RU2001121		85.5	83.8	55.8	71.4		8871.0
5	RU1902207		86.8	82.9	57.9	71.5		8694.9
9	PVL02		85.0	88.6	60.0	71.7		8281.9

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

Table 9. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Mamou, Evangeline Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	2.8	72.3	121.0	64.5	72.0	15.5	13910.9
13	RU2001093	2.8	79.8	107.5	61.0	66.9	15.4	10375.6
17	DG263L	3.0	73.5	102.3	64.5	69.4	13.9	10310.3
16	RU1601010	3.3	74.5	105.0	61.4	71.0	13.3	9915.1
10	CLL16	2.8	81.5	112.5	64.5	70.1	12.6	9874.2
7	RU1902026	3.0	74.5	99.8	67.7	72.1	18.6	9839.8
6	RU1902212	3.3	72.8	100.0	67.6	72.2	10.3	9825.4
14	RU1801101	3.0	78.3	105.0	69.0	72.1	11.4	9793.9
4	Jupiter	3.8	80.0	95.8	65.7	70.4	7.0	9650.2
8	PVL03	2.5	78.3	108.5	68.6	73.1	7.3	9345.1
3	Diamond	2.3	76.8	106.0	60.0	69.2	18.0	9256.7
12	RU2001129	3.3	82.5	98.3	69.5	72.5	5.7	9081.4
19	20DGL037	3.3	78.8	108.5	63.4	69.0	4.3	8790.2
11	CLHA02	3.0	76.0	98.3	68.4	71.8	11.5	8659.1
2	CLL17	2.5	75.5	98.3	66.5	70.7	13.2	8494.1
15	RU2001121	3.0	76.5	104.3	68.2	72.2	7.8	8493.9
20	DGM004	2.8	80.0	98.8	65.9	71.3	16.4	8420.5
5	RU1902207	2.8	75.0	101.0	67.8	72.4	10.2	8287.9
18	20DGL274	3.3	73.0	109.5	64.8	68.3	10.6	7072.7
9	PVL02	2.8	72.0	108.8	68.0	71.9	4.9	6180.9

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

Table 10. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Mowata, Evangeline Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	3.0	72.8	121.3	59.9	72.4	12.4	12859.1
13	RU2001093	3.3	79.5	117.8	62.1	68.9	10.8	10431.2
17	DG263L	3.5	76.3	107.5	64.2	69.2	10.9	10090.6
3	Diamond	3.0	77.0	113.5	60.6	69.1	11.8	9946.8
7	RU1902026	3.3	75.8	103.0	64.6	71.1	15.8	9917.5
14	RU1801101	3.0	78.0	109.0	67.2	71.8	11.1	9660.7
8	PVL03	3.0	77.5	109.5	63.1	71.5	7.9	9575.4
6	RU1902212	3.5	72.0	102.8	66.3	72.1	6.7	9416.0
16	RU1601010	3.0	74.8	115.3	57.3	70.2	12.0	9324.2
10	CLL16	3.0	82.3	117.0	61.4	68.8	12.1	8899.2
5	RU1902207	3.0	75.5	109.3	67.3	73.5	11.7	8662.6
20	DGM004	3.0	80.5	96.8	68.1	71.4	12.3	8644.3
4	Jupiter	4.0	81.0	91.8	65.7	70.0	10.4	8564.9
11	CLHA02	3.0	79.0	98.3	64.7	72.0	14.9	8305.6
19	20DGL037	4.0	80.3	104.8	62.4	68.6	9.4	8217.2
2	CLL17	3.0	77.3	101.3	66.2	71.4	8.8	8198.1
12	RU2001129	3.0	85.0	102.5	65.9	72.0	7.8	8086.0
15	RU2001121	3.3	78.8	106.0	66.9	72.1	8.6	7510.9
9	PVL02	3.0	73.8	116.5	68.7	73.3	4.1	7151.9
18	20DGL274	4.0	78.8	106.0	65.6	69.9	7.4	6970.6

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

Table 11. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Nutrien Rice Breeding Station, TX.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
4	Jupiter		96.3	89.7	58.0	69.0		9118.2
20	DGM004		94.0	88.1	58.0	70.0		8482.8
1	XP753		79.7	103.3	53.0	69.0		8233.3
19	20DGL037		83.7	83.8	58.0	70.0		7536.8
18	20DGL274		100.0	100.8	60.0	69.0		7497.0
15	RU2001121		79.7	86.4	56.0	69.0		7363.9
17	DG263L		79.0	79.6	58.0	69.0		7251.6
10	CLL16		82.3	89.7	57.0	69.0		7054.7
7	RU1902026		79.3	78.7	57.0	70.0		6743.0
12	RU2001129		83.3	85.5	58.0	69.0		6710.1
5	RU1902207		81.7	87.2	59.0	71.0		6595.0
3	Diamond		84.0	87.2	57.0	71.0		6500.6
11	CLHA02		86.7	85.5	59.0	68.0		6430.1
6	RU1902212		77.0	79.6	58.0	69.0		6173.4
13	RU2001093		80.0	87.2	57.0	69.0		5960.3
8	PVL03		82.7	90.6	57.0	70.0		5925.5
16	RU1601010		78.3	80.4	59.0	71.0		5590.0
14	RU1801101		78.7	87.2	58.0	70.0		5159.4
2	CLL17		84.0	88.1	59.0	69.0		4976.5
9	PVL02		79.0	95.7	57.0	70.0		4568.6

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

Table 12. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Breeding Department – Northeast Res and Ext Center – Test 1, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	4.0	92.8	111.3	59.2	69.5		13639.1
13	RU2001093	3.5	99.0	106.8	59.7	66.6		10996.8
16	RU1601010	3.8	96.3	107.0	61.9	68.3		10848.0
14	RU1801101	3.0	101.3	99.8	63.9	67.6		10365.1
17	DG263L	3.0	89.8	88.8	61.6	66.3		10299.0
7	RU1902026	3.0	95.8	92.8	64.1	68.9		10113.1
18	20DGL274	3.0	94.3	105.0	60.1	66.0		10098.6
11	CLHA02	3.0	97.3	94.5	62.3	67.5		10004.3
19	20DGL037	3.0	100.5	97.8	60.3	67.2		9765.5
10	CLL16	3.3	103.3	106.8	59.4	66.7		9750.2
8	PVL03	3.3	100.5	98.0	64.1	69.9		9689.8
5	RU1902207	3.3	97.0	95.3	64.3	69.6		9515.5
3	Diamond	4.0	100.0	107.3	60.8	67.8		9460.7
12	RU2001129	3.0	107.0	90.8	62.1	68.4		9166.9
9	PVL02	3.0	95.0	105.0	66.4	70.6		9116.0
6	RU1902212	3.3	89.8	91.3	64.4	69.5		9113.0
4	Jupiter	3.0	96.3	99.0	64.8	66.2		8967.2
15	RU2001121	3.0	99.0	94.8	64.6	69.4		8962.4
20	DGM004	3.8	98.8	98.5	64.7	66.7		8853.4
2	CLL17	3.0	97.0	94.5	62.4	67.3		8438.7

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

Table 13. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Agronomy Department – Northeast Res and Ext Center – Test 2, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		89.3	91.4	59.7	72.0		12087.8
18	20DGL274		97.5	86.4	64.3	69.3		11384.5
16	RU1601010		92.0	94.0	63.6	71.4		11016.3
17	DG263L		90.3	76.2	59.1	68.2		10864.2
14	RU1801101		97.8	83.8	67.5	71.6		10687.2
13	RU2001093		99.3	99.1	61.9	70.1		10584.2
10	CLL16		101.8	91.4	63.1	70.2		10005.3
19	20DGL037		97.5	83.8	61.1	68.7		10002.4
3	Diamond		95.3	88.9	62.6	71.3		9979.7
6	RU1902212		88.8	76.2	65.5	71.1		9782.7
7	RU1902026		92.0	73.7	65.5	71.0		9760.0
8	PVL03		96.0	81.3	65.1	72.0		9607.8
15	RU2001121		97.0	86.4	67.6	72.4		9589.2
11	CLHA02		94.3	76.2	64.8	71.0		9440.3
12	RU2001129		104.8	78.7	65.7	71.2		9319.0
5	RU1902207		94.5	81.3	65.5	72.0		9306.8
4	Jupiter		95.5	86.4	68.0	70.0		8837.6
2	CLL17		93.8	83.8	64.8	69.8		8814.4
20	DGM004		97.3	86.4	69.5	71.8		8777.5
9	PVL02		90.3	88.9	67.4	72.7		8000.1

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

Table 14. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Agronomy Department – Northeast Rice Res & Ext Center, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753			96.3	63.7	72.7		12940.7
13	RU2001093			100.0	62.0	70.0		10966.3
16	RU1601010			103.8	63.4	71.4		10849.5
3	Diamond			102.5	63.6	71.1		10735.7
19	20DGL037			90.0	58.0	68.4		10601.3
10	CLL16			103.8	65.1	71.3		10588.2
7	RU1902026			87.5	64.4	70.3		10565.0
14	RU1801101			97.5	66.8	71.6		10464.7
15	RU2001121			92.5	67.3	71.9		10341.2
6	RU1902212			87.5	64.5	70.4		10108.0
17	DG263L			88.8	63.1	69.3		10010.1
4	Jupiter			87.5	68.2	71.1		9922.2
11	CLHA02			86.3	63.8	70.4		9874.8
5	RU1902207			93.8	64.8	70.8		9506.7
8	PVL03			96.3	65.0	71.4		9305.5
18	20DGL274			94.5	61.8	68.7		9160.9
20	DGM004			91.3	67.2	71.7		9155.1
12	RU2001129			91.3	67.1	71.5		8927.4
2	CLL17			92.5	62.8	68.7		7685.0
9	PVL02			102.5	64.6	72.5		3086.0

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

Table 15. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Pine Tree Research Station – Test 1, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
4	Jupiter	3.0	93.0	100.8	61.8	64.9		12690.5
1	XP753	4.0	86.0	120.0	58.0	67.9		12432.9
16	RU1601010	3.3	86.0	108.0	57.7	65.8		11835.5
12	RU2001129	3.0	100.0	98.3	59.7	66.8		11804.3
7	RU1902026	3.0	89.0	98.8	60.4	67.3		11752.3
11	CLHA02	3.0	92.0	99.3	59.0	65.0		11737.0
10	CLL16	3.0	96.5	107.8	56.7	65.1		11663.9
18	20DGL274	3.0	91.0	101.8	56.8	63.7		11597.2
6	RU1902212	3.0	85.0	94.8	60.9	67.7		11414.1
14	RU1801101	3.0	90.0	103.0	61.1	66.7		11236.3
15	RU2001121	3.0	89.0	101.8	59.7	66.5		11231.5
5	RU1902207	3.0	93.0	101.5	60.9	67.7		11046.5
20	DGM004	3.0	90.0	96.8	60.0	64.2		11021.4
3	Diamond	3.0	91.0	111.8	58.9	67.0		10991.0
19	20DGL037	3.0	92.0	99.3	55.2	63.9		10940.3
17	DG263L	3.0	87.5	97.0	58.3	63.9		10744.4
2	CLL17	3.0	90.0	103.3	59.5	65.4		10681.0
13	RU2001093	3.3	92.0	107.8	58.4	66.7		10591.2
8	PVL03	3.0	91.5	102.8	61.6	69.0		10328.5
9	PVL02	3.0	89.0	113.0	65.3	70.3		10063.4

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

Table 16. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Pine Research Station – Test 2, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		90.5	97.5	54.6	68.8		10461.7
17	DG263L		90.5	80.8	56.9	65.3		9081.3
18	20DGL274		94.0	85.5	59.4	66.2		8956.0
11	CLHA02		93.8	81.3	59.7	67.1		8645.2
13	RU2001093		95.0	97.5	54.7	64.7		8389.1
7	RU1902026		91.0	80.3	58.7	66.7		8313.9
19	20DGL037		93.5	84.3	54.8	64.6		8209.9
16	RU1601010		90.0	96.8	55.1	67.2		8168.6
14	RU1801101		93.0	85.5	60.1	66.3		8085.7
10	CLL16		96.5	95.5	56.0	65.2		7988.8
15	RU2001121		92.5	87.5	62.6	68.9		7822.6
6	RU1902212		90.0	75.8	60.3	68.0		7761.4
2	CLL17		95.0	81.8	61.3	67.0		7492.2
3	Diamond		92.0	92.3	57.8	67.8		7467.4
20	DGM004		94.0	83.8	61.0	68.3		7186.1
8	PVL03		93.0	86.5	59.3	68.5		7185.4
5	RU1902207		92.5	82.3	61.0	69.3		7141.1
12	RU2001129		98.8	80.3	60.5	67.2		7036.4
4	Jupiter		93.8	83.8	62.3	67.1		6771.1
9	PVL02		91.0	96.5	65.6	71.1		6396.9

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

Table 17. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Breeding Department – Rice Res and Ext Center – Test 1, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	4.0	85.5	115.5	57.1	68.2		14978.6
13	RU2001093	3.0	90.0	114.3	55.5	65.3		11444.7
18	20DGL274	3.0	87.5	108.5	56.1	64.4		10994.1
14	RU1801101	3.0	90.0	107.0	62.1	68.1		10969.2
16	RU1601010	3.0	87.0	111.0	59.2	68.7		10961.6
3	Diamond	3.0	88.3	111.0	56.6	66.2		10754.3
19	20DGL037	3.0	87.3	106.3	57.5	66.1		10642.7
17	DG263L	3.0	82.3	102.5	59.0	65.8		10642.2
10	CLL16	3.0	92.8	113.3	56.0	65.8		10581.1
11	CLHA02	3.0	87.0	99.8	60.6	67.0		10399.3
7	RU1902026	3.0	86.0	96.5	60.4	66.3		10252.2
2	CLL17	3.0	85.3	106.0	59.8	65.6		9917.3
8	PVL03	3.0	90.5	104.3	59.8	67.9		9897.9
20	DGM004	3.0	87.8	103.3	64.0	67.3		9869.6
15	RU2001121	3.0	87.5	102.8	63.2	68.7		9812.6
5	RU1902207	3.0	88.3	103.5	62.2	68.3		9227.7
4	Jupiter	3.0	87.8	105.5	62.9	65.3		9211.0
6	RU1902212	3.0	84.3	100.0	53.5	67.2		8953.6
12	RU2001129	3.0	92.8	96.5	60.4	67.4		8817.8
9	PVL02	3.0	85.5	109.0	64.5	70.2		8568.5

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

Table 18. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Breeding – Rice Res and Ext Center – Test 2, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	4.0	82.0	114.3	54.3	67.9		15193.1
13	RU2001093	3.0	88.5	113.5	56.2	65.9		11484.9
16	RU1601010	3.3	83.5	111.8	58.8	67.7		11259.2
14	RU1801101	3.0	85.8	107.8	58.8	67.0		11068.7
19	20DGL037	3.0	85.5	103.3	57.6	66.1		10504.3
17	DG263L	3.0	82.5	99.8	59.2	65.6		10489.2
10	CLL16	3.0	88.8	111.0	56.6	65.9		10353.2
3	Diamond	3.0	85.3	111.0	56.9	66.9		10105.4
15	RU2001121	3.0	84.0	103.0	61.1	68.2		10095.7
7	RU1902026	3.0	83.8	95.0	58.7	66.8		9942.7
11	CLHA02	3.0	86.0	96.8	58.0	66.2		9936.8
8	PVL03	3.0	87.0	107.0	59.1	68.1		9548.6
18	20DGL274	3.5	88.8	105.3	55.9	64.3		9433.3
5	RU1902207	3.0	86.0	100.5	60.8	68.0		9037.1
6	RU1902212	3.5	82.5	97.5	60.8	67.6		8521.9
4	Jupiter	3.0	89.0	90.5	63.3	65.8		8510.4
2	CLL17	3.0	85.8	103.5	60.0	66.2		8450.7
12	RU2001129	3.0	91.0	92.0	60.3	67.3		8276.9
20	DGM004	3.0	88.3	99.8	61.5	66.1		8181.2
9	PVL02	3.0	83.5	110.0	62.4	68.9		6973.8

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

Table 19. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
UA Agronomy Department – Rice Res and Ext Center – Test 3, AR.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		101.5	92.5	55.5	69.6		11622.2
17	DG263L		102.0	82.5	56.4	65.9		10966.2
16	RU1601010		101.3	89.0	55.9	69.1		10763.6
7	RU1902026		100.3	78.0	54.4	68.2		10230.4
18	20DGL274		111.8	88.8	56.9	64.4		9972.2
3	Diamond		104.0	92.5	55.1	69.3		9965.2
13	RU2001093		104.3	91.5	54.1	66.4		9952.6
6	RU1902212		99.3	77.8	60.0	69.0		9871.2
10	CLL16		105.3	89.8	55.7	66.2		9708.0
14	RU1801101		103.3	88.5	62.8	68.8		9564.1
19	20DGL037		103.0	89.8	53.4	65.3		9527.1
8	PVL03		103.8	90.5	60.3	70.4		9472.1
11	CLHA02		102.3	79.5	59.4	68.3		9234.8
2	CLL17		100.5	85.0	60.4	66.9		9158.3
12	RU2001129		107.8	80.8	61.8	69.1		9141.3
4	Jupiter		103.8	82.0	64.2	67.7		9065.3
15	RU2001121		101.5	84.5	63.1	69.8		8860.2
20	DGM004		102.5	85.8	64.2	69.1		8804.6
5	RU1902207		102.0	85.0	59.7	69.9		8788.0
9	PVL02		100.0	94.3	63.9	71.5		6849.6

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

Table 20. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
H. Rouse Caffey Rice Research Station, Crowley, LA – Test 1.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	3.8	84.5	112.5	61.0	72.2	17.9	9763.8
2	CLL17	2.5	86.0	101.3	66.1	71.1	14.9	9589.9
7	RU1902026	5.0	88.0	98.0	67.3	71.4	15.1	9362.7
11	CLHA02	3.0	89.0	96.8	67.4	71.9	12.8	9109.4
14	RU1801101	3.0	89.5	104.3	67.0	71.5	14.0	9062.1
15	RU2001121	3.3	88.3	100.5	67.2	72.3	15.2	8943.2
10	CLL16	2.5	92.3	104.5	62.0	69.0	18.9	8915.2
5	RU1902207	4.0	89.3	102.8	65.3	71.4	16.8	8896.1
3	Diamond	3.0	86.8	104.3	61.3	69.4	14.4	8818.3
12	RU2001129	3.0	91.5	95.5	66.1	70.7	11.4	8768.1
20	DGM004	3.3	89.5	96.3	68.7	71.9	13.8	8697.6
9	PVL02	3.0	87.5	111.3	71.6	74.2	13.8	8550.7
16	RU1601010	2.8	83.5	106.3	63.1	71.0	12.5	8546.4
13	RU2001093	3.0	88.5	100.8	58.1	69.2	19.2	8475.9
8	PVL03	3.0	87.3	100.3	65.9	72.7	9.9	8430.7
6	RU1902212	4.8	81.5	96.8	67.3	71.7	13.8	8203.6
17	DG263L	3.8	86.8	103.3	62.7	67.8	14.7	8054.6
4	Jupiter	3.0	91.5	98.8	58.8	68.8	17.0	7464.0
19	20DGL037	3.8	88.8	101.5	63.3	70.6	11.9	7326.3
18	20DGL274	5.0	92.0	104.3	63.0	68.3	16.6	7215.6

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

Table 21. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
H. Rouse Caffey Rice Research Station, Crowley, LA – Test 2.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
10	CLL16		93.0	104.3				11488.1
1	XP753		89.0	109.3				11037.6
13	RU2001093		92.5	104.3				10472.7
2	CLL17		91.5	102.0				10201.2
18	20DGL274		98.0	103.0				9858.1
7	RU1902026		89.8	98.5				9614.6
19	20DGL037		96.5	97.3				9594.2
15	RU2001121		91.3	100.5				9526.4
14	RU1801101		92.0	94.0				9221.7
4	Jupiter		97.0	90.5				9133.7
20	DGM004		93.3	90.5				9007.9
17	DG263L		90.5	98.5				8954.0
11	CLHA02		92.5	92.8				8952.0
6	RU1902212		83.8	87.0				8929.6
8	PVL03		91.0	100.5				8924.2
3	Diamond		91.3	103.0				8778.6
9	PVL02		91.0	117.0				8657.3
5	RU1902207		90.5	96.5				8632.8
12	RU2001129		94.8	91.3				8555.7
16	RU1601010		85.3	97.3				8516.1

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

Table 22. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
H. Rouse Caffey Rice Research Station – South Farm Unit, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753	4.3	73.0	120.8	68.2	72.9	14.8	11733.9
14	RU1801101	2.8	77.3	112.3	65.2	69.8	14.0	9585.9
10	CLL16	2.8	83.0	119.8	57.4	66.0	13.9	9439.0
15	RU2001121	3.3	76.8	115.3	66.0	70.9	15.6	9253.4
8	PVL03	2.8	79.0	116.0	63.2	70.0	9.8	9171.3
12	RU2001129	3.0	81.3	107.8	65.7	70.7	8.6	9116.2
13	RU2001093	2.8	82.3	123.0	56.7	65.7	18.3	9070.2
17	DG263L	3.0	72.8	107.8	61.5	67.9	19.6	8988.8
5	RU1902207	3.0	75.0	113.3	63.0	69.3	13.6	8874.7
4	Jupiter	3.0	82.8	106.0	62.7	67.7	13.5	8789.7
11	CLHA02	2.8	76.5	110.5	62.7	68.5	23.4	8688.5
3	Diamond	2.8	77.3	120.8	56.9	66.4	20.5	8335.2
6	RU1902212	2.8	69.8	100.3	65.0	70.8	12.7	8281.2
7	RU1902026	2.5	73.3	107.0	63.7	70.2	19.9	8137.5
19	20DGL037	3.0	80.3	109.0	62.2	67.7	6.6	8091.5
20	DGM004	2.5	83.5	107.0	62.4	68.0	19.0	7748.3
16	RU1601010	2.8	74.3	125.3	51.8	65.6	18.0	6900.4
2	CLL17	2.8	75.0	110.3	58.5	67.5	14.7	6221.1
18	20DGL274	4.3	76.5	116.3	61.5	66.7	9.9	4547.0
9	PVL02	3.0	73.8	121.5	63.7	71.1	8.1	3778.9

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

Table 23. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
St. Joseph, St. Joseph Parish, LA – Test 1.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
13	RU2001093			108.0	64.3	71.1	18.9	10990.6
1	XP753			122.8	63.4	72.6	17.9	10944.9
10	CLL16			114.0	64.5	70.4	10.2	10588.8
19	20DGL037			108.8	64.5	70.8	6.1	10544.0
17	DG263L			104.5	63.9	69.3	10.2	10450.9
18	20DGL274			113.5	65.5	70.1	19.3	10426.4
3	Diamond			111.0	66.2	72.2	11.0	10383.3
16	RU1601010			112.3	64.6	71.9	13.4	10002.5
2	CLL17			106.0	65.8	70.6	15.1	9979.6
6	RU1902212			104.0	67.1	72.1	13.8	9908.4
20	DGM004			96.5	69.0	72.6	16.5	9463.2
11	CLHA02			105.8	68.7	72.5	12.3	9426.5
14	RU1801101			114.0	68.1	72.3	10.5	9378.4
15	RU2001121			106.8	69.4	73.3	14.9	9293.2
12	RU2001129			103.5	69.8	73.1	6.7	9221.1
4	Jupiter			102.3	64.0	71.1	12.8	8929.8
7	RU1902026			103.3	65.9	71.4	13.7	8844.6
5	RU1902207			106.8	68.1	72.9	12.3	8626.2
8	PVL03			112.8	66.1	72.4	10.0	7965.2
9	PVL02			120.0	68.5	72.9	11.7	5887.5

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

Table 24. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
St. Joseph, St. Joseph Parish, LA – Test 2.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753			111.8				10911.8
11	CLHA02			99.1				10513.0
10	CLL16			111.8				10355.0
16	RU1601010			105.4				10298.8
13	RU2001093			108.0				10088.5
17	DG263L			95.3				10041.5
14	RU1801101			102.9				9952.0
18	20DGL274			103.5				9828.3
19	20DGL037			101.6				9719.5
7	RU1902026			95.9				9634.3
5	RU1902207			104.1				9613.3
3	Diamond			104.1				9527.3
2	CLL17			98.4				9430.3
15	RU2001121			95.9				9414.8
8	PVL03			106.7				9124.0
12	RU2001129			100.3				9113.5
6	RU1902212			90.8				8809.5
20	DGM004			97.2				8509.3
4	Jupiter			102.9				8436.3
9	PVL02			114.9				7635.8

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

Table 25. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial.
Palmetto, St. Landry Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753			110.5				9184.9
19	20DGL037			106.0				8135.2
20	DGM004			100.8				7949.8
4	Jupiter			105.5				7900.8
18	20DGL274			110.5				7865.3
17	DG263L			96.8				7848.7
11	CLHA02			100.5				7751.4
16	RU1601010			103.0				7576.6
3	Diamond			104.8				7541.2
13	RU2001093			98.5				7333.7
6	RU1902212			94.5				7175.6
8	PVL03			101.8				7100.9
2	CLL17			101.8				7017.1
10	CLL16			104.3				6981.7
9	PVL02			108.5				6937.6
5	RU1902207			98.0				6759.3
14	RU1801101			102.0				6582.6
7	RU1902026			94.8				6563.7
12	RU2001129			98.5				6442.6
15	RU2001121			98.5				5349.9

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

Table 26. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
13	RU2001093				58.4	70.0	20.8	9075.1
3	Diamond				54.7	70.5	20.3	8808.7
4	Jupiter				59.5	71.0	16.0	8760.9
1	XP753				51.8	72.2	21.7	8615.6
10	CLL16				55.3	69.2	15.1	8603.8
19	20DGL037				60.0	70.0	8.4	8580.0
16	RU1601010				52.9	70.3	18.6	8556.6
15	RU2001121				61.7	72.9	13.5	8309.7
17	DG263L				60.2	69.6	24.1	8293.1
12	RU2001129				64.4	73.6	8.0	8154.1
14	RU1801101				57.8	70.9	16.7	8052.8
11	CLHA02				53.6	70.3	22.4	7969.3
18	20DGL274				62.9	70.3	14.0	7706.8
8	PVL03				55.3	71.0	12.5	7703.6
7	RU1902026				55.4	69.5	19.0	7649.6
20	DGM004				54.3	71.3	21.0	7642.1
5	RU1902207				61.4	71.7	11.5	7464.7
6	RU1902212				62.7	71.8	13.3	7458.1
2	CLL17				60.3	70.0	16.3	7190.5
9	PVL02				63.9	72.5	12.2	6081.3

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

Table 27. Grain and milling yields and agronomic performance of entries in the 2021 Pre-Commercial trial. Wintermann Rice Research Station, TX.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
1	XP753		78.8	120.0	60.2	73.6		11082.0
16	RU1601010		84.0	113.5	56.1	72.3		10125.0
3	Diamond		83.0	107.9	55.2	72.0		9760.0
15	RU2001121		83.5	110.9	65.4	74.3		9670.8
7	RU1902026		80.8	110.6	59.8	72.0		9591.0
14	RU1801101		85.8	115.0	63.7	72.4		9498.3
10	CLL16		89.0	113.3	55.5	71.6		9451.3
6	RU1902212		78.8	103.3	65.0	73.3		9191.0
19	20DGL037		85.5	103.6	56.6	71.4		9099.0
17	DG263L		82.5	101.9	55.4	71.0		9030.3
13	RU2001093		89.0	114.4	54.6	70.0		8943.8
12	RU2001129		90.5	103.3	64.5	73.2		8765.5
8	PVL03		84.5	114.3	59.3	72.4		8707.3
20	DGM004		87.0	102.1	65.9	71.6		8607.3
11	CLHA02		83.3	101.5	59.7	72.0		8563.8
4	Jupiter		86.0	100.1	66.2	70.3		8298.0
5	RU1902207		81.5	108.1	62.5	73.4		8149.5
2	CLL17		82.3	108.3	61.7	72.1		7943.5
9	PVL02		81.8	122.5	64.4	74.9		5522.0
18	20DGL274		87.0	107.0	63.1	70.9		4938.0

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

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.

Test locations in 2021 included two at the H. Rouse Caffey Rice Research Station (HRCRRS) and seven on-farm test sites in Acadia, Calcasieu, Evangeline, Franklin, St. Joseph, St. Landry, and Vermilion parishes. Planting and harvesting dates are shown in Table 1 across all locations.

Eighty entries were tested in a randomized complete block design with two replications. Varieties and hybrids were seeded at 90 and 38 lb/A, respectively. Entries are listed in Table 2. Results from these trials are shown in Tables 3-25.

Table 1. Planting and harvesting dates for the Commercial Advanced trial in 2021.

Location	Trial	Planting	Harvesting
HRCRRS	CA-CL-RRS	3/9	7/26
	CA-CN-RRS	4/6	8/16
	CA-PV-RRS	3/18	8/9
HRCRRS-South Farm	CA-CL-SF	4/12	8/18
	CA-CN-SF	4/12	8/19
	CA-PV-SF	4/12	8/20
Acadia (Mowata)	CA-PV-MW	4/29	8/26
Calcasieu (Iowa)	CA-CL-IA	3/19	8/10
	CA-CN-IA	3/19	8/10
	CA-PV-IA	3/19	8/10
Evangeline (Mamou)	CA-CL-MM	4/29	8/27
	CA-PV-MM	4/29	8/27
Franklin (Winnsboro)	CA-CL-WB	4/22	9/10
	CA-CN-WB	4/22	9/10
	CA-PV-WB	4/22	9/10
St. Joseph (SJ)	CA-CL-SJ	5/31	10/4
	CA-CN-SJ	5/31	10/4
St. Landry (SL)	CA-CL-SL	3/22	8/16
	CA-CN-SL	3/22	8/16
	CA-PV-SL	3/22	8/16
Vermilion (LA)	CA-CL-LA	3/13	8/5
	CA-CN-LA	3/13	8/6
	CA-PV-LA	3/13	8/6

Table 2. Entry number, pedigree, grain type, and source information for entries in the Commercial Advanced trial, 2021.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	1	RU1702183	TRNS//CCDR/JEFF/5/9502008A/DREW//CLR20/4/CPRS/ KBNT//9502008A	LG	LAES
CL	2	RU1902026	WLLS/CFX18//DREW/CFX18/3/CHNR//CCDR/JEFF	LG	LAES
CL	3	RU1902034	9502008/DREW//CLR20/3/CPRS/KBNT//9502008/6/KATY/ CPRS//NWBK/KATY/3/9502008/4/CLR9/5/9502008/TCRI// CLR5	LG	LAES
CL	4	RU2002114	CL153/LKST	LG	LAES
CL	5	RU2102106	1402174/CL153	LG	LAES
CL	6	RU2102090	CTHL/6/TCRI/3/CPRS//82CAY21/TBNT/4/CFX18/5/CHNR	LG	LAES
CL	7	192L1092	CLJZMN/4/JZMN/08CLR004//RU0802146/3/JZMN2	AL	LAES
CL	8	RU2102030	CL163/CL153	HI	LAES
CL	9	RU2102150	CL163/CL153	HI	LAES
CL	10	RU2102162	CL172/1502115	LG	LAES
CL	11	RU2102190	1502068//CL153/CL151	LG	LAES
CL	12	RU2102194	1502068//CL153/CL151	LG	LAES
CL	13	RU2102217	CFX18//CCDR/9770532DH2/3/CPRS/KBNT//9502008A/4/ CTHL/5/CL172/6/CL172	LG	LAES
CL	14	RU2102232	LKST/1402174	LG	LAES
CL	15	RU2102233	1602168/CL172	LG	LAES
CL	16	RU2102222	CL172/LKST	LG	LAES
CL	17	RU2102227	1402174/CL153	LG	LAES
CL	18	RU1801238	EARL/RU9902028//RU1202068	MG	AAES
CL	19	CL111	CL111	LG	LAES
CL	20	CL153	CL153	LG	LAES
CL	21	CLL15	CLL15	LG	
CL	22	CLL16	CLL16	LG	AAES
CL	23	CLL17	CLL17	LG	LAES
CL	24	RT7521FP		LG	RiceTec
CL	25	RU1902174	NPTN//BNGL/CL161/3/NPTN	MG	LAES
CL	26	RU2102110	NPTN//BNGL/CL161/3/BNGL/CL161//CFFY	MG	LAES
CL	27	RU2102114	CL153/CL261	MG	LAES
CL	28	CLM04	TRNS//CCDR/JEFF/5/9502008A/DREW//CLR20/4/CPRS/ KBNT//9502008A	MG	AAES
CN	1	RU1902207	CTHL/4/CPRS/KBNT//9502008/3/CCDR	LG	LAES
CN	2	RU1902212	TRNS//CCDR/JEFF/3/AR1188/CCDR//9502008/LGRU	LG	LAES
CN	3	RU2002126	THAD/CHTL	LG	LAES
CN	4	RU2002150	CHTL/CL153	LG	LAES
CN	5	RU2002166	JZMN2/CHTL	AL	LAES
CN	6	RU2002182	CPRS/KBNT//9502008A/3/CCDR/JEFF/4/MRMT	LG	LAES
CN	7	RU2002222	CTHL/MRMT	LG	LAES
CN	8	RU2002232	TRNS//CCDR/JEFF/4/9502008A//AR1188/CCDR/3/CCDR/ JEFF	LG	LAES
CN	9	RU2102158	THAD/CTHL	LG	LAES
CN	10	RU2102157	THAD/CTHL	LG	LAES
CN	11	191L1122	JZMN2/CTHL	AL	LAES
CN	12	RU2102034	CTHL/LKST	LG	LAES
CN	13	RU2102207	JZMN2/CTHL	AI	LAES
CN	14	RU2102122	CTHL/MRMT	LG	LAES
CN	15	RU2102154	THAD/CTHL	HI	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	16	RU2102126	PSDO/CL153	LG	LAES
CN	17	RU2102130	PSDO/CL153	LG	LAES
CN	18	RU2102037	RoyJ/CL153	LG	LAES
CN	19	RU2102134	RoyJ/CL153	LG	LAES
CN	20	RU2102138	CHTL/CL153	LG	LAES
CN	21	RU2102142	CHNR/CL111	LG	LAES
CN	22	RU2102146	CTHL/LKST	LG	LAES
CN	23	20DGL2065		LG	Nutrien
CN	24	Cheniere	Cheniere	LG	LAES
CN	25	DG263L	DG263L	HI	Nutrien
CN	26	Mermentau	Mermentau	LG	LAES
CN	27	20DGL2056		LG	Nutrien
CN	28	20DGL2051		LG	Nutrien
CN	29	20DGL2131		LG	Nutrien
CN	30	XP753	XP753	LG	RiceTec
CN	31	Thad	Thad	LG	MAES
CN	32	RU1902227	NPTN/JPTR	MG	LAES
CN	33	RU2002086	LFTE/BNGL//CFFY	MG	LAES
CN	34	RU2102066	TITN/JPTR	MG	LAES
CN	35	RU2102070	TITN/JPTR	MG	LAES
CN	36	RU2102102	TITN/1502083	MG	LAES
CN	37	RU2102074	TITN/JPTR	MG	LAES
CN	38	RU2102082	CFFY/TITN	MG	LAES
CN	39	20DGL327		LG	Nutrien
CN	40	Jupiter	Jupiter	MG	LAES
CN	41	Lynx	EARL/9902028//JPTR	MG	AAES
CN	42	Titan	Titan	MG	AAES
PV	1	RU2002066	CHNR//CCDR/JEFF/3/BASF2-22	LG	LAES
PV	2	RU2002070	PVL01/CTHL	LG	LAES
PV	3	RU2002174	PVL01/CTHL	LG	LAES
PV	4	193L1036	TRNS//CHNR/BASF1-2	LG	LAES
PV	5	193L1099	TRNS//CHNR/BASF1-2	LG	LAES
PV	6	193L2012	MRMTBCR048(5)/MRMT//MRMT	LG	LAES
PV	7	193L2052	PVL081/CL172	LG	LAES
PV	8	RU2102186	PVL01/CTHL	LG	LAES
PV	9	PVL02	PVL02	LG	LAES
PV	10	PVL03	PVL01/CTHL	LG	LAES

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelle type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Crowley; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Clearfield. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP	2.0	83.0	104.7	64.7	71.2	16.0	11610.3
23	CLL17	2.3	85.7	100.3	64.9	69.9	11.8	10173.2
13	RU2102217	2.7	83.3	84.3	64.3	72.6	15.8	9772.1
18	RU1801238	2.3	93.7	110.3	64.5	68.3	6.8	9450.3
10	RU2102162	3.0	86.0	97.3	64.5	71.3	12.0	9347.7
12	RU2102194	3.3	88.7	107.0	63.3	69.8	7.7	9238.2
3	RU1902034	2.7	86.0	95.0	65.4	71.1	13.8	8993.3
15	RU2102233	3.0	91.3	97.3	64.1	69.6	8.7	8966.4
5	RU2102106	3.0	88.7	98.7	64.1	70.5	7.7	8965.8
4	RU2002114	4.0	85.7	94.7	66.0	71.6	14.5	8924.4
22	CLL16	2.3	90.3	99.0	56.2	65.4	10.4	8759.0
2	RU1902026	3.0	86.3	91.3	64.4	70.0	14.1	8724.6
20	CL153	3.3	88.3	96.3	65.5	70.6	9.3	8580.3
26	RU2102110	3.3	89.7	100.0	68.7	72.2	15.4	8561.6
16	RU2102222	3.7	86.7	89.7	66.2	71.3	9.5	8547.7
17	RU2102227	3.0	87.0	102.0	64.8	70.7	8.7	8438.6
21	CLL15	3.0	88.3	91.0	64.7	70.3	10.2	8379.5
7	192L1092	3.0	86.7	93.3	65.6	70.7	7.6	8366.5
25	RU1902174	3.0	93.0	101.3	62.0	65.3	13.5	8363.7
11	RU2102190	3.0	88.7	99.7	67.5	71.9	7.7	8352.7
28	CLM04	3.0	91.3	108.7	61.6	64.3	13.5	8278.1
6	RU2102090	3.3	89.0	99.7	66.3	71.1	9.7	8245.7
1	RU1702183	3.0	84.0	92.7	66.4	71.0	11.1	8144.9
8	RU2102030	3.3	87.0	99.0	67.8	71.8	8.2	8025.3
27	RU2102114	3.0	85.7	91.0	67.2	69.7	11.7	7366.1
9	RU2102150	3.3	87.0	89.3	66.1	70.6	8.8	7221.9
19	CL111	3.7	84.7	93.3	67.8	72.5	10.5	7136.4
14	RU2102232	4.7	90.3	82.7	61.3	68.1	10.4	6434.8

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

Table 4. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
30	XP753	3.0	80.0	113.7	61.7	70.3	13.9	11666.9
34	RU2102066	3.3	85.0	103.7	61.8	67.3	12.9	9592.3
33	RU2002086	2.7	84.0	100.7	61.5	68.6	10.3	9483.2
39	20DGL327	2.0	81.3	115.3	53.6	67.3	20.1	9417.3
23	DGL2065	3.0	81.0	100.7	62.7	69.7	11.7	9310.4
35	RU2102070	3.3	82.3	106.7	62.7	67.1	10.9	9217.7
25	DG263L	2.0	81.0	99.3	55.7	64.8	13.3	9101.8
9	RU2102158	3.0	86.7	104.0	59.9	67.3	17.3	9038.7
37	RU2102074	3.0	83.0	105.3	62.3	67.7	13.3	9032.0
32	RU1902227	3.3	88.3	100.0	63.2	68.2	10.2	9031.3
8	RU2002232	3.0	81.0	103.7	61.3	69.3	10.9	9021.4
6	RU2002182	3.3	81.0	106.7	60.6	68.6	17.1	8958.3
38	RU2102082	2.7	82.3	108.0	59.9	68.0	9.0	8901.3
40	Jupiter	3.0	88.0	105.7	59.8	64.8	18.4	8896.3
18	RU2102037	3.0	83.0	99.3	59.2	68.0	14.6	8849.1
41	Lynx	2.3	86.3	111.0	57.4	65.0	17.1	8797.4
19	RU2102134	3.3	85.0	112.3	60.9	68.8	13.2	8745.1
31	Thad	2.3	80.7	100.0	58.1	68.2	8.4	8615.6
26	Mermentau	2.7	80.7	98.7	60.9	68.2	17.5	8608.7
22	RU2102146	4.0	80.3	95.0	54.1	69.3	17.0	8562.5
15	RU2102154	3.0	80.3	110.0	48.9	70.0	11.2	8503.4
2	RU1902212	3.0	79.0	102.3	60.6	68.4	13.3	8491.1
3	RU2002126	3.0	87.3	105.3	56.4	66.5	14.0	8469.4
36	RU2102102	2.0	82.7	114.3	59.6	66.9	10.3	8363.4
29	20DGL2131	3.0	80.3	101.3	59.7	69.4	14.1	8352.3
17	RU2102130	3.0	83.3	106.7	60.7	68.0	6.7	8348.3
7	RU2002222	3.0	80.0	105.3	61.0	69.8	13.5	8248.3
13	RU2102207	2.7	80.7	103.0	51.6	70.3	13.0	8230.5
16	RU2102126	3.0	81.3	101.7	59.2	68.6	6.9	8160.8
14	RU2102122	3.0	83.0	102.3	56.5	67.5	16.6	7927.0
4	RU2002150	3.0	81.7	109.7	54.6	67.5	16.3	7912.2
20	RU2102138	3.3	85.0	111.0	56.0	66.8	16.5	7874.5
5	RU2002166	3.3	80.3	97.7	61.6	69.1	3.5	7808.7
27	20DGL2056	3.0	83.7	108.0	57.6	67.0	14.9	7778.3
11	191L1122	3.3	81.0	101.3	59.9	69.0	6.7	7752.8
24	Cheniere	3.3	84.3	100.7	63.4	70.2	6.9	7712.0
42	Titan	2.0	81.0	106.0	57.6	66.7	12.8	7705.8
12	RU2102034	4.0	83.3	95.0	56.7	68.4	15.0	7502.4
10	RU2102157	3.3	82.0	113.0	57.4	67.0	12.5	7441.5
1	RU1902207	3.3	82.3	99.0	58.8	68.7	17.8	7423.7
28	20DGL2051	2.7	85.3	102.3	57.7	67.0	11.2	7410.0
21	RU2102142	3.3	82.3	105.7	58.7	66.5	11.8	6923.4

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

Table 5. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
9	PVL02	3.7	89.3	119.7	66.7	71.9	11.4	8969.7
4	193L1036	4.7	81.7	111.0	61.2	67.7	8.4	8718.2
8	RU2102186	5.0	88.7	110.7	58.8	69.2	14.5	8636.7
5	193L1099	5.0	81.7	105.3	61.2	68.9	6.8	8483.6
10	PVL03	4.3	85.3	106.0	59.2	68.9	9.4	7861.9
3	RU2002174	4.0	89.0	115.7	60.7	70.0	8.1	7461.3
6	193L2012	4.7	92.5	110.0	60.0	68.4	11.6	7281.4
2	RU2002070	4.0	88.7	108.0	57.1	68.0	12.1	7078.3
1	RU2002066	5.3	91.0	106.0	60.4	67.0	10.7	6979.7
7	193L2052	5.0	94.3	96.0	54.1	64.3	17.7	6612.8

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

Table 6. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Clearfield. H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
20	CL153	4.7	77.3	114.7	63.4	68.7	11.8	9566.7
4	RU2002114	3.0	72.0	105.3	66.1	70.5	16.1	9001.8
28	CLM04	2.3	83.3	116.7	63.0	67.1	14.3	8930.6
9	RU2102150	3.0	75.0	110.7	63.6	68.3	17.6	8911.3
16	RU2102222	3.0	75.0	98.3	64.2	69.5	12.0	8777.5
6	RU2102090	2.0	75.7	111.3	64.7	69.2	14.6	8693.9
22	CLL16	2.7	83.0	117.3	56.1	65.1	15.7	8693.0
11	RU2102190	2.7	76.3	119.7	63.5	68.1	10.7	8476.1
14	RU2102232	3.7	78.0	85.3	63.5	69.2	18.3	8341.3
19	CL111	6.0	76.7	113.7	62.4	68.6	15.4	8328.7
24	RT7521FP	2.7	76.0	132.0	62.9	69.0	18.2	8301.5
12	RU2102194	3.0	76.3	117.0	59.7	68.1	10.3	8244.7
27	RU2102114	2.7	73.7	113.0	66.2	69.1	15.5	8183.4
25	RU1902174	2.7	79.0	104.3	64.2	68.6	15.7	8096.6
26	RU2102110	2.3	82.7	108.0	62.8	68.2	19.6	7913.6
13	RU2102217	2.3	71.3	98.3	62.4	70.8	20.8	7910.0
21	CLL15	2.7	75.0	104.3	60.6	67.3	13.6	7795.9
18	RU1801238	2.0	82.3	107.3	60.8	68.3	9.3	7781.4
10	RU2102162	3.0	74.3	107.0	63.0	69.9	13.1	7672.7
8	RU2102030	3.0	76.7	111.0	63.0	67.3	11.6	7624.8
7	192L1092	3.0	74.3	101.3	62.7	68.2	7.8	7589.2
2	RU1902026	2.7	73.3	104.3	63.2	69.1	20.8	7366.5
15	RU2102233	3.0	78.7	105.3	60.6	67.7	11.8	6609.9
5	RU2102106	3.0	76.7	108.0	62.4	68.3	9.8	6436.6
17	RU2102227	3.0	71.7	109.7	64.1	69.4	10.1	6114.4
1	RU1702183	3.0	70.7	108.0	63.0	68.9	12.0	5564.5
23	CLL17	3.0	75.7	105.7	61.5	67.4	14.5	4803.0
3	RU1902034	2.3	73.3	106.0	62.1	69.0	20.9	3960.8

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

Table 7. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
30	XP753	3.3	72.0	126.0	67.1	72.2	17.1	12454.7
23	DGL2065	3.3	75.7	109.7	65.6	70.8	13.3	9792.0
40	Jupiter	3.7	81.3	104.3	64.5	68.8	19.5	9641.6
32	RU1902227	3.3	80.3	99.7	66.3	69.8	9.6	9608.9
6	RU2002182	3.7	75.7	111.0	60.4	67.6	18.5	9588.5
27	20DGL2056	3.7	76.0	114.3	64.7	69.9	18.5	9569.2
41	Lynx	4.0	79.7	113.0	59.5	66.5	18.8	9540.2
8	RU2002232	3.7	75.0	105.7	64.4	70.1	13.2	9517.0
18	RU2102037	3.7	76.3	107.3	65.5	69.8	17.2	9503.4
14	RU2102122	3.7	77.0	107.3	61.4	68.4	16.9	9340.3
22	RU2102146	3.3	73.7	101.7	59.8	67.5	20.5	9330.8
4	RU2002150	3.3	79.0	115.3	65.7	71.8	15.4	9313.1
16	RU2102126	3.3	74.3	98.0	65.1	70.6	9.0	9187.0
26	Mermentau	3.3	75.7	108.0	63.3	69.4	15.1	9161.5
37	RU2102074	3.7	76.3	116.0	61.3	67.6	13.6	9117.5
25	DG263L	3.3	72.7	106.3	60.8	67.5	21.9	9052.7
34	RU2102066	3.7	78.0	108.7	60.3	68.0	15.6	9027.8
12	RU2102034	3.7	76.7	98.3	59.9	68.5	15.9	8979.5
1	RU1902207	4.0	76.0	112.3	63.7	69.4	13.3	8970.7
19	RU2102134	4.0	78.7	112.3	65.1	70.0	17.0	8952.4
2	RU1902212	3.7	69.3	100.3	64.8	70.4	12.0	8913.2
21	RU2102142	3.7	77.7	110.3	61.4	67.8	9.9	8874.3
17	RU2102130	3.3	78.0	107.3	61.7	69.0	8.5	8728.5
11	191L1122	4.0	75.0	100.7	68.4	72.4	4.6	8714.8
15	RU2102154	4.0	72.0	115.0	62.1	69.9	9.9	8701.0
33	RU2002086	3.7	79.0	104.3	62.8	69.2	10.2	8652.5
20	RU2102138	3.7	77.3	109.7	61.6	68.1	19.5	8490.8
13	RU2102207	3.7	74.3	106.3	65.9	71.8	13.1	8446.4
9	RU2102158	3.7	82.7	107.3	62.2	68.0	19.2	8403.6
7	RU2002222	4.0	75.0	109.3	63.2	69.5	15.4	8402.3
42	Titan	3.7	75.7	114.7	61.0	66.8	14.6	8396.4
24	Cheniere	3.7	78.3	103.3	65.7	71.3	7.2	8370.1
35	RU2102070	3.7	75.7	116.3	61.8	67.6	14.2	8309.0
5	RU2002166	3.7	72.0	107.7	66.7	71.6	6.1	8242.8
38	RU2102082	3.3	76.3	116.3	64.0	69.1	12.3	8233.7
3	RU2002126	3.7	82.7	102.0	61.8	68.6	16.9	8162.7
39	20DGL327	4.0	74.7	117.7	57.9	68.2	20.7	7893.7
10	RU2102157	3.7	78.7	116.3	61.3	67.9	18.1	7740.2
36	RU2102102	4.0	76.0	121.7	59.8	67.3	15.1	7539.2
31	Thad	4.0	78.3	111.0	54.5	64.9	15.9	7113.8
28	20DGL2051	3.0	76.0	109.7	62.6	68.6	17.9	6970.2
29	20DGL2131	3.3	74.7	111.3	62.4	69.7	16.1	6611.9

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

Table 8. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
8	RU2102186	3.0	77.3	113.0	60.4	69.1	15.5	9366.5
3	RU2002174	2.7	81.3	122.3	61.3	69.7	11.8	8984.6
10	PVL03	2.0	78.0	114.7	62.0	70.0	11.1	8577.1
7	193L2052	2.7	80.3	99.3	58.4	66.6	17.6	8199.6
6	193L2012	3.0	79.0	110.0	62.3	70.2	13.1	8030.8
2	RU2002070	2.3	78.0	114.0	61.7	69.9	15.8	7881.7
1	RU2002066	2.0	76.0	109.0	64.4	69.7	15.3	7193.8
4	193L1036	2.7	64.3	112.3	60.5	66.7	10.0	6695.2
5	193L1099	3.7	68.0	108.7	58.7	67.8	12.5	5856.0
9	PVL02	2.3	74.0	120.7	62.7	70.7	7.3	4127.2

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

Table 9. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. Mowata, Acadia Parish, LA

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	(lb/A)
8	RU2102186	3.0	77.7	115.0	57.5	66.9	6.1	9108.9
3	RU2002174	3.0	78.3	115.3	60.6	69.7	4.6	8977.3
2	RU2002070	3.3	76.3	112.3	61.1	69.7	7.7	8922.0
10	PVL03	3.0	77.0	112.0	60.3	69.3	4.6	8708.0
1	RU2002066	3.3	78.0	106.0	60.0	67.7	6.3	8482.2
4	193L1036	3.0	65.7	111.7	59.5	67.3	2.9	8393.4
5	193L1099	3.3	66.7	102.3	60.0	68.8	3.4	8370.6
6	193L2012	3.0	81.0	108.0	63.1	69.2	4.6	8346.5
7	193L2052	4.0	82.7	97.7	58.7	65.7	12.4	7762.9
9	PVL02	3.0	73.7	113.3	66.7	71.9	4.3	6672.1

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

Table 10. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Clearfield. Iowa, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP	3.0	80.0	122.7				10181.8
16	RU2102222	3.0	80.7	98.0				8757.1
19	CL111	4.3	81.0	104.3				8549.8
14	RU2102232	4.3	83.3	82.3				8319.2
8	RU2102030	3.0	82.7	105.7				8112.2
2	RU1902026	3.0	79.7	90.7				8024.6
20	CL153	3.3	83.0	102.7				7743.8
6	RU2102090	3.0	82.0	102.7				7677.3
1	RU1702183	2.7	74.7	101.7				7524.0
4	RU2002114	2.3	78.0	89.7				7504.4
7	192L1092	2.7	79.3	91.7				7469.4
12	RU2102194	3.0	82.7	101.3				7388.3
28	CLM04	3.0	87.3	106.0				7343.5
13	RU2102217	2.3	75.0	88.3				7207.1
3	RU1902034	2.3	80.7	95.7				7203.1
9	RU2102150	3.3	82.7	98.7				7175.0
27	RU2102114	3.0	80.7	101.0				7134.9
10	RU2102162	3.0	79.0	99.7				7018.5
25	RU1902174	3.0	87.3	100.7				6862.6
11	RU2102190	2.7	83.0	102.7				6842.4
21	CLL15	3.0	81.0	94.7				6836.4
22	CLL16	2.7	87.3	108.7				6659.5
18	RU1801238	2.0	87.0	103.7				6557.9
5	RU2102106	3.7	80.3	105.7				6447.2
17	RU2102227	2.7	76.0	98.7				6188.3
23	CLL17	3.0	82.0	101.3				5811.5
26	RU2102110	2.3	86.0	101.0				5563.5
15	RU2102233	3.0	84.0	98.7				5485.1

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

Table 11. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. Iowa, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
30	XP753	3.0	78.7	102.0				9826.2
22	RU2102146	4.0	79.0	90.0				9018.2
19	RU2102134	3.0	88.0	98.3				8913.5
12	RU2102034	3.3	85.3	88.7				8579.3
7	RU2002222	3.3	80.7	98.7				8571.3
14	RU2102122	3.0	86.3	100.7				8556.2
4	RU2002150	2.7	84.3	97.3				8231.4
39	20DGL327	2.7	84.7	111.3				8152.1
40	Jupiter	3.0	88.0	89.3				8147.8
5	RU2002166	3.7	81.3	87.7				8107.4
38	RU2102082	2.7	84.0	101.0				8098.6
9	RU2102158	3.0	85.3	91.7				7958.2
29	20DGL2131	3.0	85.3	99.7				7946.2
6	RU2002182	2.7	82.3	97.0				7908.0
18	RU2102037	2.7	83.7	96.7				7902.3
15	RU2102154	3.0	83.3	98.7				7878.0
34	RU2102066	3.3	84.7	90.0				7863.2
24	Cheniere	3.3	87.0	95.3				7859.2
26	Mermentau	3.0	83.3	92.7				7732.0
33	RU2002086	2.3	86.0	88.7				7696.1
41	Lynx	3.0	89.0	101.3				7672.6
16	RU2102126	3.0	86.7	93.0				7667.2
21	RU2102142	3.0	85.0	98.0				7615.6
25	DG263L	2.7	81.7	95.7				7531.9
27	20DGL2056	3.0	84.7	97.7				7529.4
32	RU1902227	3.0	88.0	88.7				7526.1
20	RU2102138	2.7	82.7	99.0				7510.2
2	RU1902212	3.0	75.3	90.0				7422.8
3	RU2002126	3.0	85.0	94.0				7421.4
17	RU2102130	2.3	87.3	93.3				7294.8
28	20DGL2051	2.3	82.3	98.3				7283.9
13	RU2102207	3.7	83.3	88.7				7223.5
23	DGL2065	3.3	83.3	94.7				7212.3
10	RU2102157	3.0	85.0	105.0				6996.2
1	RU1902207	2.3	83.3	95.3				6974.2
42	Titan	3.0	82.3	98.3				6963.0
36	RU2102102	3.0	84.3	98.7				6765.4
11	191L1122	2.7	84.7	89.0				6230.6
37	RU2102074	3.0	84.0	99.0				5892.4
31	Thad	4.0	82.7	94.0				5565.6
8	RU2002232	3.0	81.3	88.3				5498.2
35	RU2102070	2.7	82.0	95.0				5301.6

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

Table 12. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. Iowa, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
3	RU2002174	3.7	87.0	111.7				8413.2
2	RU2002070	3.7	87.3	99.0				8144.3
8	RU2102186	2.7	83.3	103.0				8133.6
1	RU2002066	2.3	85.3	104.0				7883.9
10	PVL03	2.7	82.5	103.0				7340.3
4	193L1036	2.7	72.0	102.7				6927.6
5	193L1099	3.3	75.7	98.0				6405.4
9	PVL02	2.3	83.3	115.7				6178.4
7	193L2052	3.3	91.7	89.7				5786.9
6	193L2012	3.3	89.5	101.7				5459.1

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

Table 13. Grain and milling yields and agronomic performance of entries in the 2020 Commercial Advanced trial – Clearfield. Mamou, Evangeline Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP	3.0	77.0	120.3	64.2	69.0	18.1	11866.8
13	RU2102217	2.7	74.3	95.3	64.7	72.6	17.8	11011.4
22	CLL16	2.0	80.7	103.7	62.3	68.6	10.0	10392.4
16	RU2102222	3.0	74.0	96.7	64.7	70.4	9.4	10198.7
2	RU1902026	3.0	75.7	98.7	64.1	69.1	17.5	10057.7
19	CL111	3.7	74.0	107.0	65.1	70.9	9.2	9383.7
10	RU2102162	3.0	74.3	100.3	67.0	71.2	9.5	9362.1
1	RU1702183	3.0	72.7	102.3	64.9	70.5	11.6	9197.3
9	RU2102150	3.3	75.3	103.3	62.9	68.0	9.2	9055.2
27	RU2102114	3.3	73.0	114.7	56.3	67.2	13.3	8959.3
28	CLM04	2.7	81.0	112.3	62.9	67.7	8.8	8932.3
4	RU2002114	3.3	72.7	101.3	61.7	70.9	12.4	8919.4
25	RU1902174	3.3	79.0	98.7	63.0	69.5	12.6	8906.0
12	RU2102194	3.0	79.3	103.7	65.5	69.7	5.2	8821.3
18	RU1801238	2.3	80.7	98.7	50.8	70.2	6.1	8773.8
6	RU2102090	3.0	76.0	102.7	65.2	70.6	9.5	8734.2
5	RU2102106	3.3	78.0	107.7	66.4	69.9	5.6	8715.4
14	RU2102232	4.0	78.0	76.0	64.3	70.6	17.4	8642.9
20	CL153	3.3	77.7	101.3	67.2	70.9	8.6	8634.8
26	RU2102110	3.0	80.3	100.0	58.0	71.3	9.7	8511.0
17	RU2102227	3.3	77.0	101.7	66.9	71.5	4.9	8433.3
3	RU1902034	3.0	75.0	99.7	65.2	70.9	18.4	8282.1
21	CLL15	3.0	78.0	97.0	64.5	68.7	13.0	8269.7
23	CLL17	2.8	75.7	99.2	63.3	68.8	10.4	8213.7
8	RU2102030	3.0	78.0	104.3	64.8	69.5	5.8	8133.4
11	RU2102190	3.0	78.0	103.7	65.5	69.2	7.9	7787.6
7	192L1092	3.0	74.7	93.0	65.3	69.7	3.5	7771.7
15	RU2102233	3.0	78.7	98.0	57.0	67.7	9.5	6999.0

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

Table 14. Grain and milling yields and agronomic performance of entries in the 2020 Commercial Advanced trial – Provisia. Mamou, Evangeline Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
3	RU2002174	3.7	80.0	122.0	64.6	70.2	5.3	9980.5
8	RU2102186	3.0	79.3	104.0	63.5	69.9	5.7	9575.1
2	RU2002070	3.3	78.7	105.7	62.9	68.9	7.2	9555.9
5	193L1099	3.7	63.0	101.7	62.5	68.6	7.0	9406.0
10	PVL03	2.7	78.0	111.0	64.9	69.7	7.2	9247.2
7	193L2052	3.7	81.0	89.3	60.9	66.1	11.5	8642.3
4	193L1036	3.0	60.3	102.0	60.2	66.8	6.6	8608.9
1	RU2002066	3.7	74.3	102.3	63.0	67.1	11.7	8522.7
6	193L2012	3.0	79.3	99.7	64.6	69.0	4.3	8488.9
9	PVL02	2.7	74.3	108.7	67.9	71.0	4.8	6783.4

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

Table 15. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Clearfield. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP				58.1	70.8	23.1	10205.3
18	RU1801238				46.0	72.1	15.1	8449.7
28	CLM04				56.4	70.4	19.1	8180.4
25	RU1902174				61.4	72.1	21.9	8072.9
22	CLL16				52.6	71.0	14.3	7624.2
16	RU2102222				57.1	72.0	11.9	7554.1
1	RU1702183				54.3	70.7	13.0	7372.0
8	RU2102030				61.4	71.8	11.8	7284.5
26	RU2102110				54.7	72.2	18.6	7249.7
13	RU2102217				45.5	71.4	21.5	7012.7
9	RU2102150				58.5	70.9	19.8	6940.5
10	RU2102162				55.9	71.1	13.7	6916.6
15	RU2102233				60.4	72.7	17.4	6850.6
21	CLL15				53.2	69.7	12.9	6533.1
14	RU2102232				49.4	69.4	18.9	6532.8
4	RU2002114				54.1	72.0	19.5	6517.9
27	RU2102114				52.4	71.3	18.6	6391.3
20	CL153				59.1	71.0	12.2	6374.9
2	RU1902026				51.4	69.5	17.9	6373.1
19	CL111				53.1	71.4	13.5	6351.2
7	192L1092				55.4	70.7	8.2	6303.6
3	RU1902034				55.8	70.5	19.0	6221.6
5	RU2102106				55.8	70.2	9.8	5905.0
17	RU2102227				59.9	71.2	10.6	5717.0
12	RU2102194				59.9	71.7	11.3	5594.9
6	RU2102090				55.0	70.6	13.7	5322.0
23	CLL17				53.6	68.8	13.7	4905.9
11	RU2102190				57.9	70.0	9.9	3789.8

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

Table 16. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
40	Jupiter				64.1	71.3	16.2	8593.8
31	Thad				53.1	70.5	10.6	8268.6
18	RU2102037				55.1	71.0	14.1	7901.3
25	DG263L				58.6	69.4	21.3	7891.1
19	RU2102134				56.9	71.5	14.3	7888.7
7	RU2002222				60.5	71.5	11.7	7832.2
32	RU1902227				55.9	70.9	12.3	7759.4
30	XP753				47.0	72.6	22.1	7757.5
14	RU2102122				54.5	70.6	12.6	7682.5
34	RU2102066				59.0	69.5	17.5	7665.7
39	20DGL327				47.2	70.2	17.9	7554.5
42	Titan				45.7	70.5	12.5	7498.2
38	RU2102082				45.6	71.3	11.3	7473.9
35	RU2102070				54.8	70.5	15.0	7422.0
41	Lynx				55.3	70.7	16.5	7364.2
4	RU2002150				52.8	70.3	16.3	7315.6
2	RU1902212				58.0	70.8	16.1	7308.5
21	RU2102142				61.2	71.1	9.9	7191.6
24	Cheniere				58.5	72.1	9.3	7189.6
9	RU2102158				58.9	70.6	15.9	7164.1
8	RU2002232				60.0	71.6	9.1	7153.6
3	RU2002126				60.9	71.0	12.3	7143.4
33	RU2002086				54.2	72.3	14.5	6956.1
37	RU2102074				50.7	69.4	12.3	6946.4
27	20DGL2056				52.6	69.9	13.4	6745.1
12	RU2102034				49.0	71.3	14.1	6729.8
6	RU2002182				58.5	69.7	14.6	6542.8
22	RU2102146				39.7	70.6	19.3	6491.5
28	20DGL2051				54.3	69.1	12.6	6472.3
36	RU2102102				50.8	69.5	19.6	6453.3
26	Mermentau				59.1	70.7	16.3	6431.4
1	RU1902207				59.0	71.5	9.4	6381.5
17	RU2102130				55.7	69.7	9.1	6376.4
10	RU2102157				50.4	70.3	14.5	6216.1
20	RU2102138				46.0	69.4	15.5	6112.4
16	RU2102126				51.4	71.5	8.7	6083.3
15	RU2102154				39.8	70.5	13.2	5995.6
5	RU2002166				56.2	69.7	3.9	5825.8
29	20DGL2131				54.0	70.8	11.1	5655.8
23	DGL2065				56.4	70.3	11.7	5215.5
13	RU2102207				37.0	65.9	15.1	4857.7
11	191L1122				50.0	70.8	4.3	4791.2

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

Table 17. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial - Provisia. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
2	RU2002070				55.2	69.3	10.3	8883.3
10	PVL03				53.4	66.9	12.6	8511.4
3	RU2002174				50.4	68.3	11.1	8484.4
8	RU2102186				55.6	68.2	15.3	7950.3
5	193L1099				59.8	70.7	11.4	7876.0
7	193L2052				54.3	68.4	14.8	7828.7
6	193L2012				54.5	66.9	12.6	7447.3
1	RU2002066				53.9	67.1	11.4	6951.2
4	193L1036				55.4	68.5	12.8	6425.3
9	PVL02				51.1	66.8	11.4	5009.6

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

Table 18. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial - Clearfield. St. Joseph, St. Joseph Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP			133.7	63.8	70.6	18.2	9246.8
14	RU2102232			81.7	62.6	70.6	20.5	9164.6
18	RU1801238			106.0	66.2	72.4	5.6	9149.1
25	RU1902174			104.3	68.4	71.8	12.4	9092.6
26	RU2102110			105.3	65.3	72.2	12.7	8808.3
13	RU2102217			100.3	59.7	71.3	18.2	8399.7
16	RU2102222			100.0	66.0	71.9	9.4	8373.6
22	CLL16			117.0	60.9	69.6	13.1	8177.8
23	CLL17			104.7	63.8	69.2	16.4	7669.8
28	CLM04			114.7	65.8	69.8	11.4	7461.8
15	RU2102233			108.0	63.9	70.5	11.6	7014.7
2	RU1902026			106.7	63.2	69.8	17.0	6815.4
3	RU1902034			106.7	64.3	71.0	17.4	6605.6
10	RU2102162			111.3	63.9	70.9	12.4	6011.9
12	RU2102194			116.7	64.3	70.8	7.6	5980.6
21	CLL15			108.3	63.0	69.9	12.6	5932.6
7	192L1092			108.0	64.5	69.9	7.0	5904.4
8	RU2102030			114.3	65.8	70.5	9.3	5902.6
9	RU2102150			114.7	66.0	70.5	11.4	5709.8
20	CL153			115.7	65.3	70.7	11.8	5599.0
17	RU2102227			115.0	66.4	70.8	9.2	5558.8
1	RU1702183			117.7	64.4	70.1	12.3	5513.2
4	RU2002114			109.3	62.3	70.3	14.5	5434.6
11	RU2102190			122.3	66.1	70.2	10.9	5320.0
5	RU2102106			116.3	65.6	70.8	5.7	5270.6
6	RU2102090			108.0	65.4	70.9	14.3	5203.1
27	RU2102114			117.7	65.6	69.5	16.3	4869.0
19	CL111			116.7	65.5	71.4	14.1	4730.0

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

Table 19. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. St. Joseph, St. Joseph Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
34	RU2102066			104.7	60.0	71.2	14.2	9970.8
30	XP753			118.3	58.7	72.9	17.7	9922.9
41	Lynx			103.7	67.6	72.9	7.8	9844.1
35	RU2102070			101.7	66.6	71.3	10.4	9788.2
37	RU2102074			98.3	65.1	71.9	11.8	9784.2
25	DG263L			103.7	63.4	69.2	9.0	9293.1
42	Titan			100.0	63.8	71.5	13.8	9289.6
32	RU1902227			91.7	64.3	70.6	9.2	9254.3
31	Thad			101.3	67.0	71.6	6.8	9130.5
40	Jupiter			101.7	61.4	70.4	8.6	9052.0
38	RU2102082			105.7	61.1	71.8	7.9	8847.6
9	RU2102158			102.0	68.1	71.8	10.8	8648.8
14	RU2102122			109.7	68.5	73.2	14.0	8646.3
6	RU2002182			102.3	65.8	71.2	14.8	8528.3
23	DGL2065			104.0	68.8	73.6	11.2	8504.1
19	RU2102134			101.7	63.2	71.6	14.0	8466.7
26	Mermentau			100.3	67.0	72.2	12.6	8466.4
36	RU2102102			100.7	67.4	71.9	9.1	8407.4
39	20DGL327			111.0	62.0	71.0	15.2	8394.3
33	RU2002086			99.7	61.4	72.0	9.8	8304.4
8	RU2002232			93.0	66.9	72.6	7.9	8290.6
12	RU2102034			93.0	63.3	71.5	13.2	8200.3
3	RU2002126			96.3	68.0	72.3	6.7	8107.9
24	Cheniere			103.8	69.6	73.9	6.8	8030.6
2	RU1902212			97.7	65.3	71.5	13.7	7869.5
22	RU2102146			98.7	60.0	72.7	22.9	7835.9
21	RU2102142			109.7	65.3	70.5	10.8	7646.3
7	RU2002222			105.3	66.7	72.4	9.4	7478.2
18	RU2102037			99.7	62.8	71.0	10.9	7358.3
5	RU2002166			99.7	68.2	72.3	3.3	7281.9
28	20DGL2051			104.7	68.1	72.5	11.7	7062.0
27	20DGL2056			111.7	63.7	70.8	16.0	6977.4
1	RU1902207			106.3	67.3	73.4	11.1	6917.4
4	RU2002150			110.7	65.6	72.0	14.3	6822.4
29	20DGL2131			109.3	68.7	73.3	9.7	6425.8
17	RU2102130			101.0	64.0	70.5	4.9	6363.6
20	RU2102138			109.0	65.0	71.6	16.7	6321.1
13	RU2102207			93.7	61.3	72.3	12.1	5918.1
15	RU2102154			103.3	58.0	71.3	8.6	5424.1
16	RU2102126			103.0	60.6	70.6	7.8	5244.5
10	RU2102157			110.7	64.5	70.7	9.6	4932.1
11	191L1122			98.3	64.9	71.2	5.5	4923.0

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

Table 20. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Clearfield. Palmetto, St. Landry Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP			137.2				8288.2
13	RU2102217			88.9				7055.4
18	RU1801238			109.2				6633.3
27	RU2102114			106.7				6399.8
25	RU1902174			100.3				6301.9
16	RU2102222			96.5				6254.9
20	CL153			106.7				6234.9
15	RU2102233			99.1				6140.4
14	RU2102232			85.1				6087.0
28	CLM04			106.7				6014.6
12	RU2102194			99.1				5742.7
8	RU2102030			104.1				5663.3
19	CL111			104.1				5642.0
4	RU2002114			99.1				5518.8
10	RU2102162			99.1				5453.1
11	RU2102190			106.7				5436.0
5	RU2102106			99.1				5251.1
7	192L1092			96.5				5226.9
23	CLL17			97.2				5197.4
22	CLL16			100.3				5165.3
6	RU2102090			91.4				4979.7
3	RU1902034			96.5				4809.1
21	CLL15			91.4				4785.8
2	RU1902026			88.9				4574.6
17	RU2102227			90.2				4531.6
1	RU1702183			94.0				4528.9
26	RU2102110			106.7				4390.2
9	RU2102150			99.1				4177.6

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

Table 21. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. Palmetto, St. Landry Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
30	XP753			106.7				9230.6
35	RU2102070			94.0				7829.2
37	RU2102074			106.7				7702.7
42	Titan			104.1				7632.7
34	RU2102066			104.1				7447.9
12	RU2102034			101.6				7374.1
38	RU2102082			104.1				7291.6
36	RU2102102			108.0				7275.4
25	DG263L			96.5				7260.3
31	Thad			106.7				7236.2
3	RU2002126			104.1				7234.5
40	Jupiter			96.5				7183.0
18	RU2102037			101.6				7078.5
9	RU2102158			108.0				7051.6
39	20DGL327			105.4				7022.3
6	RU2002182			99.1				6997.3
32	RU1902227			99.1				6909.3
23	DGL2065			102.9				6908.6
13	RU2102207			94.0				6543.9
2	RU1902212			101.6				6456.2
20	RU2102138			102.9				6399.6
4	RU2002150			101.6				6351.6
1	RU1902207			99.1				6176.7
8	RU2002232			96.5				6173.0
22	RU2102146			86.4				6086.5
19	RU2102134			104.1				6040.7
41	Lynx			106.7				6018.2
26	Mermentau			99.1				5984.3
7	RU2002222			96.5				5967.4
24	Cheniere			96.8				5964.2
10	RU2102157			111.8				5918.2
29	20DGL2131			105.4				5841.6
11	191L1122			96.5				5837.5
15	RU2102154			119.4				5676.4
14	RU2102122			99.1				5524.5
21	RU2102142			97.8				5447.8
28	20DGL2051			91.4				5251.4
27	20DGL2056			101.6				5057.4
5	RU2002166			92.7				4968.0
33	RU2002086			86.4				4920.4
17	RU2102130			90.2				4361.1
16	RU2102126			96.5				3787.2

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

Table 22. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. Palmetto, St. Landry Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
8	RU2102186			104.1				7100.0
4	193L1036			110.5				7090.8
10	PVL03			104.1				6752.1
1	RU2002066			106.7				6631.0
2	RU2002070			99.1				6546.3
3	RU2002174			113.0				6545.9
9	PVL02			108.2				6424.6
5	193L1099			91.4				6238.9
7	193L2052			91.4				5979.3
6	193L2012			105.4				5862.6

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

Table 23. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial - Clearfield. Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
24	RT7521FP	4.7	87.7	126.0	62.8	70.1	28.9	13874.5
22	CLL16	2.3	93.3	107.7	59.3	68.6	20.7	11386.9
28	CLM04	3.7	96.0	109.3	65.3	68.9	19.2	11178.4
13	RU2102217	3.3	82.7	88.0	65.7	73.0	22.1	10723.0
18	RU1801238	2.3	96.7	97.7	68.4	72.0	12.1	10584.5
2	RU1902026	4.7	87.7	95.0	66.8	71.6	27.2	10544.3
3	RU1902034	3.7	89.0	94.3	65.8	70.9	22.3	10427.5
25	RU1902174	4.0	95.0	98.3	68.3	71.7	20.7	10384.7
5	RU2102106	3.3	89.3	101.7	65.7	71.1	13.6	10119.0
16	RU2102222	2.3	85.0	95.0	67.5	72.9	14.1	10095.3
20	CL153	3.7	89.3	103.7	66.8	71.8	14.0	10065.5
10	RU2102162	2.7	86.3	97.0	63.4	71.1	20.2	9960.9
4	RU2002114	3.3	86.0	98.7	67.8	72.5	21.1	9883.6
23	CLL17	2.3	89.0	95.7	66.5	71.2	18.1	9875.0
12	RU2102194	3.3	91.0	105.7	63.2	70.9	15.4	9835.9
11	RU2102190	3.0	90.3	111.0	68.5	72.3	14.3	9808.1
9	RU2102150	4.0	90.7	97.7	64.7	69.9	17.5	9610.1
27	RU2102114	4.3	89.3	103.0	67.1	70.5	18.4	9484.3
1	RU1702183	3.0	84.3	99.7	66.0	71.3	21.2	9327.9
17	RU2102227	3.0	84.3	92.7	66.2	71.8	15.6	9319.3
8	RU2102030	3.3	91.7	99.3	66.1	71.1	13.1	9305.7
26	RU2102110	4.0	91.0	98.7	67.3	71.3	15.5	9200.4
19	CL111	5.7	85.7	94.3	66.3	71.8	16.8	8965.8
15	RU2102233	4.0	94.0	96.3	65.9	71.5	23.0	8917.3
14	RU2102232	5.0	89.3	77.7	65.7	70.6	18.6	8668.3
6	RU2102090	3.3	91.3	96.3	66.3	71.3	16.4	8431.8
21	CLL15	3.0	86.3	89.0	64.9	70.2	17.7	8149.7
7	192L1092	4.3	90.3	93.7	62.7	70.1	12.1	7813.0

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

Table 24. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Conventional. Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
30	XP753	4.0	85.0	104.0	61.3	71.4	20.6	12843.3
25	DG263L	4.3	88.0	92.0	60.8	67.4	19.0	11155.3
8	RU2002232	3.7	87.3	96.7	66.2	71.8	14.7	10967.5
36	RU2102102	3.3	90.7	107.3	66.9	70.3	9.8	10841.0
41	Lynx	3.0	94.0	104.3	64.8	68.8	15.6	10749.2
35	RU2102070	4.3	92.3	100.3	66.1	68.9	13.1	10659.2
34	RU2102066	4.7	92.7	90.7	66.5	69.3	16.4	10643.5
14	RU2102122	3.0	89.0	98.0	64.2	70.9	12.6	10526.1
29	20DGL2131	2.7	87.3	100.0	66.7	72.6	17.6	10494.9
6	RU2002182	3.3	88.7	98.0	63.0	69.9	20.9	10467.4
4	RU2002150	3.3	87.7	99.7	63.8	71.4	16.3	10465.4
38	RU2102082	3.0	89.7	106.7	67.3	72.1	13.0	10407.1
39	20DGL327	2.0	84.3	107.0	57.2	70.2	16.5	10334.5
42	Titan	3.7	90.0	94.7	66.2	69.7	17.3	10275.6
19	RU2102134	3.7	91.0	98.7	63.0	70.0	18.0	10122.4
33	RU2002086	3.0	92.3	91.3	66.6	71.2	13.2	9993.6
20	RU2102138	3.7	88.3	100.3	62.9	69.7	17.8	9983.1
18	RU2102037	3.7	91.0	93.7	63.2	69.3	17.0	9927.1
40	Jupiter	4.0	97.3	94.3	63.5	67.4	22.7	9884.1
27	20DGL2056	3.3	89.0	102.7	64.6	70.8	17.0	9833.4
7	RU2002222	3.0	84.3	96.0	62.0	69.7	17.4	9823.7
26	Mermentau	3.0	87.7	93.0	62.9	70.1	15.5	9800.3
37	RU2102074	4.7	93.7	97.0	64.6	69.1	15.1	9743.3
1	RU1902207	4.3	90.3	94.7	64.8	71.3	18.9	9659.8
9	RU2102158	3.7	89.0	90.3	63.0	70.7	13.2	9556.2
23	DGL2065	12.7	89.3	89.3	66.3	71.6	15.1	9538.3
5	RU2002166	4.3	89.0	89.0	64.6	71.3	7.9	9445.2
24	Cheniere	4.3	91.0	92.0	65.5	72.6	9.0	9392.5
2	RU1902212	5.3	81.3	93.7	66.8	71.5	14.8	9309.8
17	RU2102130	3.7	89.3	98.0	64.6	70.6	8.0	9307.7
3	RU2002126	3.3	89.0	94.0	59.9	70.5	15.6	9166.6
13	RU2102207	3.7	88.3	91.3	62.1	72.5	17.3	9141.3
15	RU2102154	3.0	80.7	95.0	57.1	69.6	13.8	9100.9
31	Thad	2.3	83.3	94.7	58.7	69.8	12.5	8969.8
22	RU2102146	5.0	84.3	92.0	58.5	70.0	18.2	8837.6
32	RU1902227	4.3	97.0	94.3	66.9	70.4	13.1	8784.4
12	RU2102034	4.7	92.3	87.7	60.7	70.0	16.3	8769.8
28	20DGL2051	3.3	82.7	90.0	65.1	71.2	15.9	8763.9
11	191L1122	3.0	89.0	94.0	68.2	72.9	4.6	8710.8
21	RU2102142	4.7	94.0	94.0	61.9	69.1	13.7	8705.8
16	RU2102126	3.7	88.7	87.3	62.4	71.1	9.8	8693.9
10	RU2102157	4.0	86.0	101.7	63.0	70.3	11.5	8606.5

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

Table 25. Grain and milling yields and agronomic performance of entries in the 2021 Commercial Advanced trial – Provisia. Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
5	193L1099	3.3	79.7	97.3	64.4	69.8	11.5	9849.9
8	RU2102186	3.7	88.0	102.3	62.9	71.3	15.2	9669.9
1	RU2002066	3.3	89.3	105.7	63.7	69.3	12.0	9092.2
4	193L1036	3.3	77.0	98.0	64.5	69.1	11.6	9005.3
6	193L2012	3.7	92.0	103.7	64.7	71.2	13.1	8941.3
3	RU2002174	3.0	87.0	103.7	61.8	70.1	14.7	8656.9
10	PVL03	2.3	85.3	99.7	62.0	70.8	14.8	8577.4
7	193L2052	3.3	95.3	89.0	60.2	67.8	18.0	8480.6
2	RU2002070	4.3	89.3	102.3	61.7	70.0	12.5	8207.1
9	PVL02	2.3	84.7	114.7	68.9	73.8	14.0	8134.4

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

REGIONAL YIELD TEST

Regional Yield test locations in 2021 included the H. Rouse Caffey Rice Research Station (HRCRRS) and six on-farm test sites in Acadia, Calcasieu, Evangeline, Franklin, St. Joseph, and Vermilion parishes. Planting and harvesting dates are shown in Table 1 across all locations.

One hundred sixty-six entries were tested in a randomized complete block design with two replications. Varieties were seeded at 90 lb/A. Entries are listed in Table 2. Results from these trials are shown in Tables 3-17.

Table 1. Planting and harvesting dates for the Regional Yield test in 2021.

Location	Trial	Planting	Harvesting
HRCRRS	RYT-CL-RRS	3/9	7/27
	RYT-CN-RRS	3/10	7/31
	RYT-PV-RRS	3/10	7/29
HRCRRS-South Farm	RYT-CL-SF	4/12	8/19
	RYT-CN-SF	4/12	8/19
	RYT-PV-SF	4/12	8/20
Calcasieu (Iowa)	RYT-CL-IA	3/19	8/10
	RYT-CN-IA	3/19	8/10
Evangeline (Mamou)	RYT-PV-MM	4/29	8/27
Franklin (Winnsboro)	RYT-CL-WB	4/22	9/10
	RYT-CN-WB	4/22	9/10
	RYT-PV-WB	4/22	9/10
St. Joseph (SJ)	RYT-CN-SJ	5/31	10/4
Vermilion (LA)	RYT-CL-LA	3/13	8/5
	RYT-PV-LA	3/13	8/6

Table 2. Entry number, pedigree, and grain type for entries in the Regional Yield test, 2021.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]
CL	1	202L1032	CL153/CL172	LG
CL	2	202L1070	1502068/CHNR	LG
CL	3	202L1111	1602168/CL172	LG
CL	4	202L1115	1602189/LKST	LG
CL	5	202L1120	CL172/CHTL	LG
CL	6	202L1125	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF/6/TACAURI /3/CPRS//82CAY21/TBNT/4/ CFX 18/5/CHENIERE	LG
CL	7	202L1154	CTHL/4/CCDR/3/CPRS/KBNT//WELLS/CFX18	LG
CL	8	202L1165	CL172/CHTL	LG
CL	9	202L1171	CL151/1402174	LG
CL	10	202L1182	KATY/CPRS//NWBK/KATY/3/9502008/4/CLR 9/5/KATY/CPRS// NWBK/KATY/6/CL111/4/CPRS/9502008-A//AR 1188/CCDR	LG
CL	11	202L1212	1602168/CL172	LG
CL	12	202L1214	1602195/CL172	LG
CL	13	202L1223	172L1137/CHNR	LG
CL	14	202L1240	1602097/CL111	LG
CL	15	202L1292	LKST/CL151	LG
CL	16	202L1294	1402174/PSDO	LG
CL	17	202L1305	CL172/LKST	LG
CL	18	202L1312	CL151/1702140	LG
CL	19	202L1336	CL153/CL172	LG
CL	20	202L1357	CL172/1402091	LG
CL	21	202L1361	CTHL/4/CCDR/3/CPRS/KBNT//WELLS/CFX18	LG
CL	22	202L1381	CL153/CL172	LG
CL	23	202L1405	1602168/CHNR	LG
CL	24	202L1413	CL153/CL172	LG
CL	25	202L1421	CL153/172L1155	LG
CL	26	202L1480	CL153/CL172	LG
CL	27	202L1500	CL172/LKST	LG
CL	28	202L1513	CTHL/4/CCDR/3/CPRS/KBNT//WELLS/CFX18	LG
CL	29	202L1515	CTHL/4/CCDR/3/CPRS/KBNT//WELLS/CFX18	LG
CL	30	202L1534	9502008-A/DREW//CLR 20/3/TRNS//CCDR/JEFF/6/TACAURI/3/ CPRS//82CAY21/TBNT/4/CFX 18/5/CHENIERE	LG
CL	31	202L1563	CL172/CHTL	LG
CL	32	202L1567	PSDO/CL151	LG
CL	33	202L1568	CL153/CL172	LG
CL	34	202L1573	RoyJ/CL153	LG
CL	35	202L1577	1502085/PSDO	LG
CL	36	202L1591	CL111/1502068	LG
CL	37	202L1653	1502115/CL151	LG
CL	38	202L1665	PSDO/CL151	LG
CL	39	202L1669	CL172/1502115	LG
CL	40	202L1682	CTHL/6/TCRI/3/CPRS//82CAY21/TBNT/4/CFX18/5/CHNR	LG
CL	41	201L1115	CL153/4/CL153/3/ZHE733/MRMT//MRMT	LG
CL	42	201L1328	CL153/3/CL272//CL272/IR9660	LG
CL	43	MPA_277	CL111/ROYJ	LG
CL	44	MPB_279	CL153/LKST	LG
CL	45	MPB_289	CL153/LKST	LG
CL	46	202A1735	CLJZMN/4/JZMN/08CLR004//RU0802146/3/JZMN2	AL
CL	47	202A1739	CLJ01/CPRS	AL

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type[†]
CL	48	202L1719	CL163/CL153	HI
CL	49	CL111	CL111	LG
CL	50	CL151	CL151	LG
CL	51	CL153	CL153	LG
CL	52	CLL15	RU1302048/RU1302045	LG
CL	53	CLL17	CL131/TRNS	LG
CL	54	CLM04	CLM04	MG
CL	55	202M1025	NPTN//BNGL/CL161/3/BNGL/CL161//CFFY	MG
CL	56	202M1033	JPTR/CL272	MG
CL	57	202M1036	SSKI/CL272	MG
CL	58	202M1046	JPTR/CL272	MG
CL	59	202M1074	CL261/JPTR	MG
CL	60	202M1082	JPTR/CL272	MG
CL	61	202M1107	JPTR/1702162	MG
CL	62	202M1123	172M1646/TITN	MG
CL	63	202M1127	SSKI/CL272	MG
CL	64	202M1131	CL261/JPTR	MG
CL	65	202M1133	172M1646/TITN	MG
CL	66	202M1143	JPTR/CL272	MG
CN	1	201L1002	CL153/LKST	LG
CN	2	201L1027	MRMT/CHNR	LG
CN	3	201L1031	CPRS/1602189	LG
CN	4	201L1033	MRMT/CTHL	LG
CN	5	201L1037	PSDO/CHNR	LG
CN	6	201L1043	1502085/CTHL	LG
CN	7	201L1046	CPRS/1602189	LG
CN	8	201L1049	CTHL/CHNR	LG
CN	9	201L1065	RoyJ/CL153	LG
CN	10	201L1074	CHTL/CL153	LG
CN	11	201L1075	CHNR/PSDO	LG
CN	12	201L1093	CHNR/1502115	LG
CN	13	201L1097	1402174/CHNR	LG
CN	14	201L1124	172L1137/171L1629	LG
CN	15	201L1129	CHNR/ROYJ	LG
CN	16	201L1148	172L1137/171L1629	LG
CN	17	201L1156	1402174/CL153	LG
CN	18	201L1159	171L1772/172L1137	LG
CN	19	201L1167	CL111/MRMT	LG
CN	20	201L1204	1402174/CHNR	LG
CN	21	201L1219	1402174/CHNR	LG
CN	22	201L1251	CTHL/LKST	LG
CN	23	201L1254	PSDO/CHNR	LG
CN	24	201L1264	CTHL/LKST	LG
CN	25	201L1278	CPRS/1602189	LG

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]
CN	26	201L1286	MRMT/CTHL	LG
CN	27	201L1288	CTHL/LKST	LG
CN	28	201L1295	CHTL/CL153	LG
CN	29	201L1300	TRNS/CTHL	LG
CN	30	201L1304	CL153/LKST	LG
CN	31	201L1324	KATY/CPRS/4/CTHL/3/TRNS//9502008A/DREW	LG
CN	32	MPB_274	CL153/LKST	LG
CN	33	MPB_165	CL153/LKST	LG
CN	34	MPD_152	PSDO/CTHL	LG
CN	35	201A1203	JZMN2/CTHL	AL
CN	36	201A1117	JZMN2/CTHL	Aro seg
CN	37	201A1168	JZMN2/CTHL	Aro seg
CN	38	201L1051	JZMN2/CTHL	LG
CN	39	201L1008	THAD/1402174	HI
CN	40	201L1048	THAD/CTHL	HI
CN	41	201L1088	THAD/CTHL	HI
CN	42	201L1114	THAD/CTHL	HI
CN	43	201L1260	THAD/CTHL	HI
CN	44	201L1261	THAD/CTHL	HI
CN	45	Cheniere	Cheniere	LG
CN	46	DG263L	DG263L	HI
CN	47	Diamond	Diamond	LG
CN	48	Mermentau	Mermentau	LG
CN	49	Thad	Thad	LG
CN	50	XP753	XP754	LG
CN	51	RT7301	RT7302	LG
CN	52	Jupiter	Jupiter	MG
CN	53	Lynx	EARL/9902028//JPTR	MG
CN	54	Titan	Titan	MG
CN	55	BBC35-19-71535	CL272/4/CL272/3/CL272//ZHE733/CL272	MG
CN	56	BBC48-19-71618	JPTR/4/CL272/3/CL272//ZHE733/CL272	MG
CN	57	201M1002	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/ BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG
CN	58	201M1004	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/ BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG
CN	59	201M1012	TITN/JPTR	MG
CN	60	201M1022	1702143/M206	MG
CN	61	201M1029	TITN/JPTR	MG
CN	62	201M1038	TITN/1502083	MG
CN	63	201M1054	1701124/KOSH	MG
CN	64	201M1064	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/ BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG
CN	65	201M1065	TITN/JPTR	MG
CN	66	201M1087	1702143/TITN	MG

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]
CN	67	201M1090	1502183/TITN	MG
CN	68	201M1106	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG
CN	69	201M1114	TITN/JPTR	MG
CN	70	201M1115	1702143/TITN	MG
CN	71	201M1122	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/ BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG
CN	72	201M1129	TITN/JPTR	MG
CN	73	201M1141	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/NPTN	MG
CN	74	JN(X)	Jupiter/Nonaadvbc[MG
CN	75	Sweet92		SG
CN	76	191M1160	SSKI/CL272	SG
PV	1	PVL02	PVL02	LG
PV	2	PVL03	PVL01/CTHL	LG
PV	3	203L1001	1502115/PVL01	LG
PV	4	203L1007	1402091/PV17TA75	LG
PV	5	203L1011	1502115/PVL01	LG
PV	6	203L1019	PVL24B/MRMT	LG
PV	7	203L1050	1402091/PV17TA75	LG
PV	8	203L1057	CPRS/PVL01	LG
PV	9	203L1058	PVL01/CTHL	LG
PV	10	203L1068	TRNS/BASF1-10//PSDO/BASF1-12	LG
PV	11	203L1086	1402091/PV17TA75	LG
PV	12	203L1095	1502115/PVL01	LG
PV	13	203L1103	PVL081/CL172	LG
PV	14	203L1104	1502115/PVL01	LG
PV	15	203L1117	PVL081/CL172	LG
PV	16	203L1125	1402091/PV17TA75	LG
PV	17	203L1136	1402091/PV17TA75	LG
PV	18	203L1141	1702103/PVL01	LG
PV	19	203L1142	PVL01/CTHL	LG
PV	20	203L1144	1402091/PV17TA75	LG
PV	21	203L1161	Unknown	LG
PV	22	203L1167	1402091/PV17TA75	LG
PV	23	203L1177	1702103/PVL01	LG
PV	24	PVL01	PVL01	LG

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelle type

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test - Clearfield.
H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
53	CLL17	3.0	88.0	100.5	65.2	70.0	12.9	9978.7
26	202L1480	3.5	86.0	103.0	66.5	71.6	8.1	9533.5
14	202L1240	3.5	88.0	99.5	65.2	71.5	10.6	9457.2
33	202L1568	4.0	86.0	101.5	66.6	71.4	9.5	9454.2
30	202L1534	3.0	89.5	93.5	67.4	72.2	10.1	9405.1
19	202L1336	3.5	87.5	90.0	67.8	72.4	7.3	9392.6
58	202M1046	3.5	89.5	97.5	65.6	69.2	5.5	9340.5
62	202M1123	3.0	92.0	100.0	62.3	65.6	12.8	9325.0
9	202L1171	3.5	85.5	99.0	66.2	71.3	12.2	9319.1
39	202L1669	3.0	87.0	89.0	68.8	73.7	15.7	9318.2
23	202L1405	3.5	84.5	101.5	69.4	73.5	7.7	9117.6
3	202L1111	3.5	92.0	102.0	66.4	72.0	11.1	9050.9
32	202L1567	3.0	88.5	99.5	67.6	72.2	3.9	9021.0
35	202L1577	3.0	85.0	96.0	68.1	71.8	7.5	9019.3
18	202L1312	4.0	89.5	102.0	65.4	71.4	6.1	9005.3
21	202L1361	3.0	84.0	96.0	67.7	73.9	6.8	8987.5
11	202L1212	5.0	89.5	99.0	65.2	71.8	8.5	8951.5
37	202L1653	3.0	87.5	90.5	70.1	73.5	8.6	8916.1
22	202L1381	3.0	84.5	97.0	67.0	71.7	11.5	8909.7
10	202L1182	3.0	89.0	92.5	66.1	71.5	11.1	8877.5
48	202L1719	2.5	88.0	107.0	68.9	71.7	4.1	8873.8
38	202L1665	3.0	85.0	107.0	65.8	71.4	4.5	8860.1
45	MPB_289	2.0	89.5	96.0	66.3	71.6	7.7	8846.8
20	202L1357	3.0	87.0	87.0	67.1	71.8	10.0	8845.8
2	202L1070	3.0	88.5	96.5	67.1	71.2	10.8	8823.6
61	202M1107	2.5	88.5	101.0	67.5	70.7	5.7	8747.6
24	202L1413	3.5	90.0	95.0	64.4	70.3	11.8	8735.1
50	CL151	3.0	87.5	103.0	66.2	71.7	18.1	8705.5
56	202M1033	3.0	92.0	96.0	65.2	68.6	9.5	8631.3
34	202L1573	3.5	89.0	98.5	68.5	72.5	5.8	8598.1
65	202M1133	3.5	93.5	102.0	65.3	68.3	8.3	8590.0
5	202L1120	3.0	87.0	102.0	65.1	72.9	12.1	8587.6
59	202M1074	3.5	90.5	95.0	62.0	66.3	6.7	8524.2
25	202L1421	3.0	89.5	99.0	66.1	71.1	11.7	8500.3
43	MPA_277	2.5	83.5	102.5	64.7	71.8	4.4	8462.2
64	202M1131	4.0	92.0	94.5	63.0	66.7	6.1	8458.1
52	CLL15	3.0	88.0	97.5	64.6	70.7	12.0	8442.4
42	201L1328	4.0	91.5	90.5	64.5	70.8	8.2	8394.2
16	202L1294	2.5	83.5	95.0	66.6	72.3	8.3	8370.2
29	202L1515	3.0	87.0	100.5	67.0	72.9	9.5	8363.3
44	MPB_279	3.5	89.0	90.5	62.2	71.2	10.7	8350.3
51	CL153	3.5	89.5	97.5	68.5	72.6	8.1	8338.4

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
49	CL111	3.0	86.5	109.5	68.2	73.2	7.5	8312.0
40	202L1682	3.5	88.5	98.0	59.6	70.6	5.8	8296.2
54	CLM04	3.0	91.5	100.5	63.9	66.6	13.1	8281.2
8	202L1165	3.0	88.0	98.5	68.7	73.9	8.0	8276.6
66	202M1143	4.0	93.5	92.5	65.4	68.8	13.8	8274.9
17	202L1305	3.5	91.0	87.0	59.3	69.4	8.4	8260.9
7	202L1154	3.0	88.0	95.5	68.5	73.0	9.3	8185.4
13	202L1223	3.0	91.0	98.5	65.5	72.5	5.7	8165.0
55	202M1025	3.5	92.5	88.0	67.3	70.4	7.5	8129.0
4	202L1115	2.5	85.0	102.5	68.3	72.3	6.6	8128.8
41	201L1115	3.0	84.0	96.5	65.5	70.8	6.2	8116.1
1	202L1032	3.5	86.0	92.5	65.2	70.9	9.2	8114.2
47	202A1739	3.0	90.0	100.5	66.9	72.6	6.4	8098.3
46	202A1735	4.0	94.5	94.5	60.6	68.4	14.1	8057.2
28	202L1513	3.5	85.0	96.0	65.2	73.6	11.5	7956.6
31	202L1563	3.0	88.5	96.5	68.8	73.4	7.7	7943.5
15	202L1292	3.0	90.5	97.5	66.4	72.4	6.5	7867.3
36	202L1591	3.5	89.5	97.5	70.2	73.7	11.9	7824.2
12	202L1214	3.0	85.0	86.0	67.6	72.3	9.0	7606.9
63	202M1127	3.5	86.5	92.5	61.6	70.1	9.3	7505.1
60	202M1082	3.0	94.0	95.5	63.5	69.3	10.1	7420.7
6	202L1125	3.5	87.0	90.0	69.9	73.8	6.0	7415.5
27	202L1500	4.0	89.5	87.0	66.2	72.1	11.6	7122.6
57	202M1036	3.5	85.5	92.0	64.6	69.7	6.6	6714.0

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

Table 4. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Conventional. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
51	RT7301	3.0	85.0	105.0	60.3	71.2	21.8	10351.5
1	201L1002	2.5	87.0	97.5	65.0	70.5	15.2	9753.3
66	201M1087	3.0	91.0	97.0	66.7	70.9	13.7	9517.3
53	Lynx	3.0	91.0	101.0	63.8	67.6	16.3	9313.6
50	XP753	2.5	83.0	107.0	58.6	71.9	18.6	9290.2
2	201L1027	3.0	89.5	102.5	65.2	70.5	12.9	9256.7
56	BBC48-19-71618	3.5	91.0	101.5	65.5	68.9	19.0	9142.2
64	201M1064	3.0	91.0	94.5	68.6	71.4	16.7	9086.5
22	201L1251	3.5	89.5	99.5	62.3	69.8	13.8	9080.5
55	BBC35-19-71535	3.0	90.0	92.5	67.2	70.5	14.5	8977.1
20	201L1204	3.5	89.0	101.5	64.8	70.8	12.1	8963.2
59	201M1012	4.0	91.5	98.5	66.5	69.6	15.4	8895.5
61	201M1029	4.5	89.0	97.5	67.6	69.6	17.3	8842.7
75	Sweet92	4.0	94.5	132.0	65.7	67.7	57.4	8835.9
70	201M1115	4.0	90.0	98.0	64.8	68.9	22.0	8832.5
71	201M1122	3.0	91.0	94.5	68.5	72.4	15.4	8769.4
8	201L1049	3.0	86.0	98.5	65.9	72.0	14.5	8725.5
74	JN(X)	3.5	91.5	96.0	64.2	67.9	21.6	8716.6
6	201L1043	3.5	89.0	94.5	63.1	70.7	15.0	8695.8
16	201L1148	2.0	89.5	95.0	62.6	70.0	20.2	8652.0
38	201L1051	2.5	92.5	100.0	65.6	71.0	15.6	8637.3
9	201L1065	3.0	92.5	102.5	64.0	70.3	18.1	8622.8
30	201L1304	3.0	83.0	97.0	60.5	70.8	11.9	8619.1
58	201M1004	3.0	89.0	92.5	66.3	70.3	11.9	8619.0
49	Thad	3.0	83.0	91.0	61.7	70.5	12.8	8554.8
18	201L1159	3.0	95.0	89.0	64.5	69.8	12.2	8533.4
57	201M1002	3.0	90.5	94.0	67.6	70.4	13.0	8473.1
31	201L1324	3.0	88.5	100.5	62.9	70.1	14.3	8445.3
32	MPB_274	3.5	88.0	99.5	64.9	70.7	15.8	8442.8
68	201M1106	3.0	90.0	96.0	68.1	71.7	16.1	8425.2
48	Mermentau	3.0	86.5	99.0	67.0	72.7	12.6	8370.7
46	DG263L	4.0	89.5	105.0	61.2	67.0	17.3	8329.8
27	201L1288	3.0	88.5	97.5	62.2	70.7	15.8	8252.3
29	201L1300	3.0	84.5	96.0	60.4	70.8	17.7	8083.1
52	Jupiter	3.5	93.0	93.5	64.8	67.6	23.1	8059.3
13	201L1097	3.5	92.5	98.5	65.5	72.0	9.0	8049.1
36	201A1117	3.5	89.5	102.0	62.9	70.2	14.3	8048.8
54	Titan	2.5	84.5	92.5	66.4	71.1	14.2	8046.2
15	201L1129	4.5	86.0	90.5	67.0	71.8	12.7	8029.7
35	201A1203	3.0	89.0	98.0	63.5	71.2	11.3	8027.4
60	201M1022	3.5	94.0	95.5	66.3	69.3	18.1	8003.4
72	201M1129	4.0	91.0	93.5	65.7	68.1	16.9	8001.9

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
17	201L1156	2.5	85.5	97.5	56.2	68.9	11.2	7979.7
3	201L1031	3.0	86.5	103.5	67.0	71.5	13.8	7965.1
39	201L1008	2.5	87.5	108.5	60.1	70.2	12.7	7964.1
45	Cheniere	3.0	89.0	93.8	66.1	72.1	12.4	7931.6
14	201L1124	2.0	89.0	89.0	62.8	70.3	14.2	7930.5
37	201A1168	3.0	87.5	95.5	62.9	72.9	13.5	7922.8
47	Diamond	2.0	87.5	102.0	57.0	68.4	15.9	7922.6
63	201M1054	4.5	93.5	91.5	66.4	69.2	16.6	7915.3
12	201L1093	3.0	85.5	96.5	63.1	70.9	14.4	7907.3
33	MPB_165	3.5	87.0	98.0	65.4	70.8	13.0	7883.0
7	201L1046	4.0	88.0	98.5	66.8	71.7	12.3	7872.8
10	201L1074	4.0	89.5	104.0	64.5	70.8	16.4	7848.1
65	201M1065	3.5	94.0	99.0	65.3	67.9	20.2	7817.4
4	201L1033	3.0	90.0	100.0	63.1	69.9	14.4	7792.2
24	201L1264	3.0	91.5	95.0	61.4	70.1	12.5	7773.4
67	201M1090	3.0	87.5	97.0	67.7	70.2	17.3	7736.9
26	201L1286	3.0	88.0	96.0	63.7	70.7	16.2	7704.6
28	201L1295	3.5	90.5	97.0	64.9	72.2	11.7	7642.7
25	201L1278	3.5	87.0	95.5	65.4	71.6	13.6	7601.3
69	201M1114	4.0	92.0	97.0	67.0	70.1	20.7	7579.6
19	201L1167	3.0	85.0	94.5	62.7	69.8	12.1	7562.8
73	201M1141	3.0	90.0	86.5	67.7	70.5	13.9	7509.0
5	201L1037	3.0	90.0	86.5	66.0	71.2	8.8	7458.1
23	201L1254	3.5	90.0	98.5	68.5	72.7	8.8	7438.3
40	201L1048	3.0	84.0	102.0	61.2	70.1	12.8	7374.8
44	201L1261	3.0	84.5	96.5	62.4	71.4	8.1	7323.2
21	201L1219	3.0	89.5	101.0	64.0	70.6	7.8	7277.9
11	201L1075	4.0	87.5	94.5	66.6	71.2	9.6	7272.2
76	191M1160	5.5	87.5	86.0	55.6	70.1	11.5	7213.6
42	201L1114	3.0	82.0	104.0	54.2	70.8	8.7	7000.2
62	201M1038	3.0	88.5	94.5	66.4	70.0	7.4	6956.5
34	MPD_152	3.0	84.5	91.5	58.4	72.1	6.0	6719.0
43	201L1260	2.0	84.0	96.0	60.1	71.1	8.2	6372.5
41	201L1088	4.0	89.5	91.5	66.5	71.2	11.2	6310.6

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

Table 5. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test - Provisia.
H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
4	203L1007	4.0	84.0	101.5	67.6	72.7	10.5	9107.3
11	203L1086	3.5	84.0	93.5	63.5	72.1	15.7	9004.9
10	203L1068	3.0	84.5	106.5	67.5	72.4	10.7	8738.6
14	203L1104	3.5	93.5	98.0	65.8	72.9	14.0	8527.7
16	203L1125	3.0	81.5	97.5	63.0	72.1	16.7	8446.6
5	203L1011	4.0	90.0	101.0	66.5	72.2	7.5	8403.4
23	203L1177	3.0	84.0	107.5	64.8	72.3	13.3	8307.1
8	203L1057	3.0	88.0	106.0	64.7	72.1	12.9	8276.9
3	203L1001	3.0	92.0	98.0	64.5	72.5	6.7	8250.8
7	203L1050	3.5	84.5	100.5	64.1	72.4	9.4	8239.5
13	203L1103	3.0	84.0	98.0	64.3	71.6	5.6	8217.8
19	203L1142	4.0	92.5	101.0	66.9	72.6	8.2	8206.4
15	203L1117	3.5	89.5	106.5	65.0	71.6	11.4	8175.6
17	203L1136	3.5	87.0	105.0	65.0	72.8	10.6	8172.2
6	203L1019	4.5	92.0	103.0	66.6	72.1	10.8	8119.4
21	203L1161	4.5	87.5	96.0	65.1	72.2	12.2	7754.3
22	203L1167	3.5	86.5	97.0	63.4	72.2	14.5	7580.8
12	203L1095	3.5	94.0	99.5	65.9	72.3	8.5	7506.5
2	PVL03	2.5	84.5	102.5	65.1	73.2	9.5	7491.4
1	PVL02	2.5	85.5	104.5	69.0	73.5	10.2	7428.4
9	203L1058	3.0	90.0	95.0	66.1	72.3	5.5	7331.0
24	PVL01	3.0	95.0	101.5	62.7	71.6	9.7	7307.9
20	203L1144	2.5	82.5	98.0	56.4	72.6	11.5	7275.1
18	203L1141	4.0	86.0	104.5	66.7	71.7	10.9	7251.7

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

Table 6. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test - Clearfield.
H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
65	202M1133	3.0	81.0	116.0	63.7	70.2	8.4	10169.9
30	202L1534	3.0	75.5	104.5	66.4	72.3	11.6	9573.8
66	202M1143	3.5	82.0	103.5	64.2	70.3	12.5	9573.3
54	CLM04	3.0	84.0	119.5	62.0	68.0	11.1	9557.5
62	202M1123	2.0	77.5	115.0	62.1	69.1	13.2	9419.0
28	202L1513	3.5	73.5	109.5	64.1	70.7	16.5	9406.5
44	MPB_279	3.5	75.5	99.5	64.0	71.3	16.6	9393.1
26	202L1480	4.0	71.0	113.0	63.9	70.4	8.2	9334.9
43	MPA_277	3.0	71.5	108.0	63.0	70.8	10.2	9313.6
21	202L1361	3.0	74.0	118.0	65.7	71.8	13.7	9300.5
5	202L1120	3.0	76.0	108.0	64.8	71.7	15.3	9257.3
64	202M1131	3.0	78.0	107.5	62.3	69.5	8.6	9202.3
49	CL111	6.0	76.0	112.5	65.3	70.7	13.1	9062.2
37	202L1653	2.5	76.0	99.5	66.9	72.2	11.4	9026.6
20	202L1357	3.0	76.0	104.0	66.9	71.7	16.0	8947.7
58	202M1046	3.0	76.0	114.0	62.0	68.9	10.1	8934.3
17	202L1305	4.0	76.5	95.0	61.0	70.3	13.9	8905.7
8	202L1165	2.5	76.0	104.0	67.7	72.6	10.3	8892.3
59	202M1074	3.0	78.5	110.0	59.8	68.3	9.9	8846.2
56	202M1033	2.5	83.0	108.5	62.5	68.6	9.8	8786.9
60	202M1082	3.0	84.5	107.0	61.3	69.2	13.5	8780.9
19	202L1336	3.5	73.5	106.0	62.9	69.6	8.0	8774.6
6	202L1125	3.0	75.0	103.0	65.2	72.3	11.1	8744.4
9	202L1171	3.0	71.5	114.5	64.3	71.1	13.8	8601.6
12	202L1214	3.0	75.5	107.5	65.4	71.5	8.7	8543.0
38	202L1665	3.0	73.0	113.5	64.4	70.8	11.0	8438.8
10	202L1182	3.0	76.0	107.5	65.2	70.9	11.5	8423.3
36	202L1591	3.5	74.5	112.0	66.8	72.3	15.1	8344.1
15	202L1292	3.0	77.5	109.5	63.7	70.7	11.8	8335.6
39	202L1669	3.0	75.0	101.0	64.0	71.0	17.4	8288.1
14	202L1240	3.0	71.5	112.0	64.8	71.1	14.2	8269.4
61	202M1107	2.0	78.0	114.5	57.1	70.7	7.8	8237.0
1	202L1032	3.0	74.0	105.5	63.5	70.2	11.0	8221.6
45	MPB_289	2.0	77.0	103.0	59.0	68.5	13.4	8218.9
29	202L1515	3.0	74.5	117.5	65.1	71.2	9.6	8142.2
25	202L1421	3.0	73.5	108.0	64.2	69.0	13.8	8076.5
4	202L1115	3.0	69.5	111.0	64.5	70.9	12.2	8006.0
32	202L1567	3.0	74.0	110.5	65.4	71.3	8.9	8002.9
51	CL153	3.5	77.0	112.0	63.2	70.1	12.3	7962.6
46	202A1735	4.0	80.5	98.0	63.8	69.9	12.2	7934.8
7	202L1154	3.0	72.0	112.5	60.9	69.3	14.4	7841.3
41	201L1115	2.5	70.5	101.5	64.5	70.7	10.9	7824.5

Continued.

Table 6. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
31	202L1563	3.0	76.0	110.0	66.1	72.1	6.7	7804.7
34	202L1573	3.0	76.5	102.5	64.7	70.1	7.9	7715.4
13	202L1223	3.0	80.5	110.0	63.8	71.2	10.8	7628.2
55	202M1025	3.0	84.0	99.5	64.2	70.4	7.5	7579.7
22	202L1381	3.0	69.5	105.5	62.0	69.9	14.9	7573.0
27	202L1500	3.5	76.0	101.0	65.5	72.6	18.4	7519.6
2	202L1070	3.0	75.5	110.0	64.4	69.8	13.5	7513.0
52	CLL15	3.0	75.5	106.5	58.1	67.5	19.3	7152.4
24	202L1413	3.0	75.5	105.0	66.2	72.5	11.6	6730.7
3	202L1111	3.5	78.5	115.0	60.9	68.9	13.9	6692.0
35	202L1577	3.0	71.5	108.0	62.7	70.1	14.7	6215.6
57	202M1036	2.5	70.0	101.5	57.3	70.6	11.4	6158.9
42	201L1328	3.0	75.0	105.5	59.3	69.0	12.2	5848.6
40	202L1682	3.0	75.0	112.0	59.7	71.3	11.0	5797.2
63	202M1127	3.0	73.0	101.0	49.1	67.1	10.3	5724.0
33	202L1568	3.5	73.5	116.0	62.1	69.8	9.9	5593.4
23	202L1405	3.0	71.0	113.5	64.9	72.2	12.9	5487.0
50	CL151	4.0	75.0	114.0	61.9	70.5	17.5	5411.9
48	202L1719	3.0	75.5	119.5	63.0	69.2	11.8	5112.6
16	202L1294	3.0	72.0	109.5	61.1	70.9	16.0	4680.5
53	CLL17	2.9	74.9	108.7	60.5	68.6	12.8	4575.9
18	202L1312	3.0	74.0	113.0	62.9	70.2	9.0	4188.0
47	202A1739	2.5	75.0	114.0	63.7	71.8	9.3	3237.7
11	202L1212	4.5	73.0	111.0	62.9	70.8	16.5	2893.7

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

Table 7. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Conventional. H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
65	201M1065	4.0	82.0	109.5	62.3	66.9	14.2	13006.6
50	XP753	3.5	72.5	125.0	65.3	71.1	18.4	12933.9
51	RT7301	3.5	73.0	115.0	67.2	71.3	18.5	11879.0
2	201L1027	3.0	76.0	109.0	60.4	67.8	12.5	10880.8
9	201L1065	3.5	81.0	111.5	59.8	67.0	21.8	10629.4
33	MPB_165	3.5	73.0	105.5	64.3	69.7	14.9	10169.9
38	201L1051	4.0	79.5	111.5	64.3	69.2	14.7	10028.8
69	201M1114	4.0	79.5	116.0	62.9	67.7	14.2	9966.8
29	201L1300	4.0	72.5	106.5	62.1	69.9	20.2	9914.2
57	201M1002	3.5	81.5	105.5	62.6	67.4	11.3	9791.6
22	201L1251	3.5	77.5	106.0	62.5	68.8	16.5	9775.0
71	201M1122	4.0	80.5	107.5	65.5	70.0	13.2	9716.1
64	201M1064	3.5	81.0	110.5	65.3	69.7	17.5	9701.8
32	MPB_274	3.0	75.5	110.5	63.5	69.7	14.1	9694.7
14	201L1124	3.5	79.0	113.0	61.9	68.9	14.8	9616.8
16	201L1148	3.0	77.5	106.5	61.9	68.5	17.9	9495.2
24	201L1264	3.5	77.5	110.5	60.5	68.5	17.4	9486.1
26	201L1286	3.0	76.5	107.0	61.6	68.6	17.0	9481.7
70	201M1115	4.0	77.5	106.5	63.7	67.5	13.2	9323.2
27	201L1288	3.5	74.5	108.5	61.1	68.3	20.4	9285.2
30	201L1304	4.0	70.5	99.5	58.6	67.8	14.9	9251.2
4	201L1033	3.0	75.5	108.0	63.6	69.1	17.2	9211.8
28	201L1295	3.5	80.0	109.5	64.4	69.8	11.2	9154.6
31	201L1324	3.5	77.5	108.5	63.7	69.3	17.3	9065.5
59	201M1012	3.5	77.5	107.0	64.0	67.2	11.1	9050.6
21	201L1219	3.5	78.0	113.0	63.7	69.4	8.9	9015.6
52	Jupiter	3.0	81.0	108.0	63.4	68.1	14.6	8943.4
6	201L1043	3.0	78.5	104.5	62.1	70.0	11.6	8888.5
62	201M1038	3.5	75.5	118.0	64.7	68.4	6.5	8857.2
19	201L1167	3.5	75.0	113.5	59.8	67.4	13.1	8830.6
10	201L1074	4.0	79.0	119.0	59.7	67.3	19.0	8828.2
73	201M1141	3.5	80.5	104.5	62.1	67.5	15.6	8820.1
74	JN(X)	3.5	77.5	110.5	62.6	66.9	13.5	8786.9
8	201L1049	3.5	75.5	105.5	66.7	71.4	7.3	8784.4
46	DG263L	3.5	73.5	109.0	59.5	66.3	20.4	8758.3
56	BBC48-19-71618	4.0	77.0	118.5	61.1	66.5	14.9	8756.1
60	201M1022	3.5	80.5	105.0	63.3	67.9	12.4	8729.0
20	201L1204	3.0	76.5	115.0	61.7	69.1	10.8	8726.3
67	201M1090	3.0	76.5	114.5	62.6	67.7	16.3	8710.7
40	201L1048	3.0	76.0	109.0	65.4	70.8	14.0	8695.5
55	BBC35-19-71535	3.5	75.0	107.0	60.7	65.6	11.7	8664.2
63	201M1054	3.0	81.5	102.5	65.0	69.2	10.0	8639.5

Continued.

Table 7. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
35	201A1203	3.5	74.5	108.0	64.9	70.9	9.8	8635.8
34	MPD_152	3.5	75.0	106.5	64.2	70.5	10.5	8597.2
48	Mermentau	4.0	76.0	109.5	60.2	67.1	14.0	8585.5
37	201A1168	3.5	74.5	103.5	65.5	71.4	13.0	8492.5
68	201M1106	4.0	80.5	108.5	63.3	68.5	15.4	8451.9
11	201L1075	3.0	74.0	107.0	63.4	68.7	14.8	8447.4
7	201L1046	3.5	74.5	111.5	64.5	70.0	14.6	8438.9
42	201L1114	3.5	75.5	110.0	63.6	68.9	13.0	8386.7
47	Diamond	3.5	76.5	121.0	53.9	64.9	18.2	8355.5
58	201M1004	3.0	76.0	106.5	60.0	66.7	13.2	8301.1
44	201L1261	3.0	79.5	114.0	62.1	68.4	13.4	8251.6
45	Cheniere	3.5	78.7	107.3	65.6	71.1	8.8	8235.2
15	201L1129	4.0	71.5	98.0	62.6	68.4	14.4	8148.5
1	201L1002	3.5	77.0	110.5	61.0	68.0	14.6	8136.6
61	201M1029	3.5	76.0	114.0	60.4	65.7	16.4	8128.1
72	201M1129	3.5	79.0	109.0	63.5	67.9	11.1	8119.0
13	201L1097	4.0	78.0	112.5	63.8	70.2	10.6	8107.2
23	201L1254	4.0	79.5	112.0	64.2	69.2	12.3	7931.8
5	201L1037	3.0	77.5	97.0	66.4	71.4	7.8	7926.1
43	201L1260	3.5	77.5	111.0	65.0	69.5	8.3	7867.5
18	201L1159	4.0	83.0	102.0	64.7	69.7	9.1	7789.0
53	Lynx	3.5	79.5	114.5	55.9	63.8	20.8	7767.3
17	201L1156	3.5	74.5	111.5	60.4	67.5	12.3	7595.1
54	Titan	3.0	76.0	114.0	58.5	65.3	15.3	7501.0
39	201L1008	3.5	78.5	120.0	55.0	65.1	20.7	7138.6
76	191M1160	3.0	70.5	100.5	57.8	66.4	12.7	6861.4
49	Thad	3.5	79.0	105.5	54.5	64.8	12.0	6610.8
36	201A1117	4.0	73.5	112.5	59.5	67.9	17.2	6193.9
3	201L1031	3.0	76.0	116.5	63.5	69.6	14.1	5936.7
41	201L1088	3.5	79.5	99.0	63.0	68.2	8.9	5927.1
25	201L1278	4.0	75.0	106.0	63.0	69.9	15.4	5833.5
12	201L1093	3.5	75.5	108.5	60.3	68.7	13.2	5738.8
66	201M1087	3.5	-	100.0	48.4	60.8	35.1	5631.4
75	Sweet92	3.5	79.0	128.5	61.3	65.1	62.3	5591.4

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

Table 8. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Provisia.
H. Rouse Caffey Rice Research Station – South Farm, Crowley, LA

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
14	203L1104	3.0	82.0	107.0	60.6	68.6	14.4	9983.7
11	203L1086	3.5	76.0	108.0	60.9	70.3	23.8	9441.8
9	203L1058	3.0	78.0	108.5	57.7	68.1	14.4	8922.9
12	203L1095	2.5	81.5	106.0	60.5	68.5	10.3	8829.9
10	203L1068	2.5	75.0	115.5	62.0	68.4	10.3	8714.8
2	PVL03	2.5	77.5	118.0	58.8	68.6	14.3	8698.7
18	203L1141	3.5	76.0	119.5	60.6	68.4	15.0	8689.3
3	203L1001	2.5	78.5	105.0	58.4	68.3	12.4	8479.3
13	203L1103	3.5	74.0	105.5	58.4	67.4	16.5	8281.8
15	203L1117	3.0	78.5	112.5	51.5	65.4	15.2	8099.1
23	203L1177	3.0	73.5	125.0	59.4	69.2	20.7	8063.9
21	203L1161	3.0	75.5	114.5	58.9	66.9	9.1	7890.4
17	203L1136	3.0	78.5	118.5	60.7	70.7	15.9	7639.4
5	203L1011	2.5	77.5	113.5	58.5	67.3	17.4	7638.9
6	203L1019	3.0	81.0	111.5	55.8	65.2	13.8	7461.0
8	203L1057	2.5	76.5	113.0	56.8	67.3	14.6	7455.4
19	203L1142	3.0	80.0	105.0	54.1	65.7	16.9	7417.2
24	PVL01	3.0	84.0	115.5	47.0	63.3	13.9	7247.0
22	203L1167	3.0	75.5	115.0	58.4	70.0	18.2	6522.4
20	203L1144	3.0	75.5	117.0	54.9	68.8	18.0	6280.2
4	203L1007	2.5	72.5	113.0	59.0	68.1	14.9	6013.1
7	203L1050	3.0	76.5	123.0	63.7	69.9	16.2	5866.7
16	203L1125	2.5	73.0	109.0	58.8	68.4	16.6	5704.5
1	PVL02	2.5	74.0	122.5	57.9	69.2	10.8	4570.7

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

Table 9. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Clearfield.
Iowa, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
44	MPB_279	4.0	83.0	97.0				9657.9
21	202L1361	3.5	80.5	102.5				9401.8
54	CLM04	2.5	86.5	114.5				8721.9
18	202L1312	3.0	83.5	96.5				8712.0
1	202L1032	3.0	82.5	96.5				8670.0
17	202L1305	4.0	84.0	90.5				8662.6
26	202L1480	3.5	78.5	101.0				8651.1
5	202L1120	3.0	83.0	101.0				8644.5
7	202L1154	2.0	80.5	107.5				8628.9
8	202L1165	3.0	83.5	98.0				8625.0
31	202L1563	2.5	83.0	95.0				8565.2
48	202L1719	3.5	83.5	100.5				8556.3
45	MPB_289	3.0	83.5	97.5				8524.3
65	202M1133	2.5	87.0	100.5				8425.7
28	202L1513	3.0	80.5	98.0				8418.6
43	MPA_277	3.0	79.5	104.5				8366.3
59	202M1074	3.0	85.5	101.5				8180.8
24	202L1413	3.5	83.5	95.0				8178.9
34	202L1573	3.5	83.5	99.5				8132.4
27	202L1500	4.0	83.5	89.5				8131.4
51	CL153	3.5	85.0	102.0				8056.2
23	202L1405	3.0	78.5	105.5				8038.4
37	202L1653	3.0	82.5	91.5				7944.5
30	202L1534	3.5	83.5	93.5				7908.9
12	202L1214	3.0	82.5	96.5				7845.3
11	202L1212	3.5	81.0	102.5				7835.7
49	CL111	4.0	81.0	100.0				7819.2
33	202L1568	3.0	80.5	96.5				7686.2
2	202L1070	3.0	83.0	97.5				7667.6
36	202L1591	3.5	81.5	106.0				7641.7
19	202L1336	3.0	79.5	94.0				7566.9
22	202L1381	3.5	78.0	94.5				7562.2
13	202L1223	3.0	84.5	102.5				7560.4
29	202L1515	3.5	82.0	104.0				7557.5
10	202L1182	3.0	83.5	96.5				7438.4
16	202L1294	3.0	77.5	98.5				7437.6
64	202M1131	3.0	85.0	101.0				7402.1
6	202L1125	3.5	82.0	95.5				7391.7
20	202L1357	3.0	81.0	89.0				7369.1
4	202L1115	3.0	78.5	100.5				7359.1
39	202L1669	3.0	83.5	90.5				7314.4
58	202M1046	2.5	84.0	104.0				7274.4

Continued.

Table 9. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
14	202L1240	4.0	82.5	104.5				7272.1
40	202L1682	2.5	82.5	98.0				7250.0
9	202L1171	2.5	79.0	95.0				7240.8
25	202L1421	2.0	79.5	98.0				7237.1
66	202M1143	3.5	87.0	98.5				7004.7
47	202A1739	3.0	83.5	98.5				6980.1
32	202L1567	2.0	82.5	101.0				6957.2
3	202L1111	3.5	83.0	105.5				6955.3
50	CL151	3.0	83.0	101.5				6950.2
56	202M1033	2.5	87.0	98.5				6864.1
42	201L1328	4.5	85.5	102.5				6862.0
55	202M1025	3.0	88.5	93.0				6856.4
15	202L1292	3.0	83.0	102.5				6856.1
62	202M1123	2.5	85.0	107.0				6765.9
46	202A1735	4.0	85.5	86.0				6687.1
35	202L1577	2.5	79.0	99.0				6679.9
61	202M1107	2.0	84.0	108.0				6619.7
41	201L1115	3.5	82.5	93.0				6532.8
57	202M1036	3.5	79.0	90.5				6514.6
52	CLL15	3.0	82.0	96.0				6500.4
38	202L1665	2.0	79.5	95.5				6499.6
60	202M1082	2.0	88.0	95.5				5921.0
53	CLL17	3.0	83.0	99.5				5574.7

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

Table 10. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Conventional. Iowa, Calcasieu Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
50	XP753	3.0	75.0	97.5				10251.3
51	RT7301	4.0	75.0	102.0				9559.6
75	Sweet92	4.0	88.5	129.5				9389.5
27	201L1288	3.0	82.5	99.5				9324.1
33	MPB_165	3.0	77.0	93.5				9010.6
31	201L1324	4.0	85.0	99.5				8947.5
13	201L1097	4.0	84.0	96.0				8939.8
2	201L1027	2.5	82.5	94.0				8792.5
72	201M1129	4.0	84.0	100.0				8733.6
34	MPD_152	3.5	83.0	97.0				8710.4
24	201L1264	3.5	83.0	94.5				8584.4
29	201L1300	3.5	78.0	86.0				8567.0
69	201M1114	3.0	85.0	105.5				8538.9
6	201L1043	3.5	82.5	94.5				8534.4
63	201M1054	3.5	88.5	92.5				8476.5
70	201M1115	3.0	84.5	96.5				8468.6
64	201M1064	2.5	87.0	96.5				8412.3
48	Mermentau	2.5	81.0	90.5				8343.0
71	201M1122	2.5	86.0	97.0				8312.1
38	201L1051	3.0	85.5	100.0				8270.1
35	201A1203	3.0	80.5	97.5				8269.8
59	201M1012	3.0	86.0	98.0				8218.9
28	201L1295	3.5	87.0	99.0				8153.0
22	201L1251	3.0	82.5	95.5				8084.5
25	201L1278	2.5	77.5	96.5				8062.2
62	201M1038	3.0	83.0	102.5				8008.6
14	201L1124	3.0	85.0	102.5				7953.9
20	201L1204	4.5	82.0	97.5				7938.6
32	MPB_274	2.5	78.5	98.0				7906.4
16	201L1148	2.0	83.0	96.0				7855.9
8	201L1049	3.0	80.0	86.5				7825.3
19	201L1167	2.5	77.0	89.0				7806.2
57	201M1002	2.5	86.5	100.5				7787.2
61	201M1029	3.0	84.0	92.5				7758.7
3	201L1031	3.0	82.0	104.5				7735.7
60	201M1022	3.0	88.5	95.5				7733.4
65	201M1065	3.5	89.0	96.0				7720.9
68	201M1106	3.0	89.0	94.5				7678.0
39	201L1008	2.5	86.0	103.5				7667.2
67	201M1090	3.0	81.0	102.0				7613.4
58	201M1004	3.0	85.5	93.5				7566.1
23	201L1254	3.5	84.5	96.5				7515.0

Continued.

Table 10. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
42	201L1114	3.0	78.5	98.0				7498.7
47	Diamond	2.5	81.5	99.5				7472.9
7	201L1046	4.0	80.0	101.5				7458.4
52	Jupiter	3.0	89.5	93.5				7446.2
73	201M1141	2.5	87.0	90.0				7440.8
4	201L1033	1.5	84.0	94.0				7370.2
1	201L1002	2.0	81.5	90.0				7305.3
45	Cheniere	4.0	86.0	95.8				7275.6
37	201A1168	3.0	83.5	91.5				7272.0
44	201L1261	3.0	81.5	103.0				7235.9
15	201L1129	3.5	78.0	93.5				7233.5
40	201L1048	3.0	76.0	102.0				7161.2
46	DG263L	3.5	82.0	91.5				7134.5
21	201L1219	4.5	83.0	102.5				7087.5
26	201L1286	4.5	84.0	100.5				7050.0
5	201L1037	3.0	86.0	87.0				7042.2
56	BBC48-19-71618	2.5	84.0	99.5				6908.5
12	201L1093	3.0	81.0	96.0				6906.8
11	201L1075	2.5	77.5	92.0				6827.0
30	201L1304	3.0	73.5	86.5				6613.1
53	Lynx	2.5	86.5	101.0				6561.9
36	201A1117	3.0	83.0	101.5				6500.2
10	201L1074	3.0	86.0	100.5				6477.9
74	JN(X)	4.5	86.5	101.5				6427.8
43	201L1260	3.5	77.5	100.0				6425.8
76	191M1160	3.0	81.0	88.5				6383.7
18	201L1159	2.5	84.5	91.0				6155.7
17	201L1156	2.5	76.0	100.5				6022.6
55	BBC35-19-71535	2.5	84.5	87.5				5967.7
41	201L1088	3.5	86.0	90.0				5951.0
54	Titan	3.0	81.5	99.0				5803.9
9	201L1065	3.0	85.5	95.0				5714.6
66	201M1087	2.5	88.0	93.0				5581.1
49	Thad	3.5	79.0	97.0				5497.9

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

Table 11. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Provisia, Mamou, Evangeline Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
14	203L1104	3.0	79.5	102.0	64.5	69.8	9.8	9806.7
16	203L1125	3.0	71.0	102.0	60.7	69.9	18.2	9766.0
15	203L1117	3.5	77.5	105.5	57.5	68.2	12.9	9759.2
17	203L1136	3.0	76.5	103.5	60.9	71.8	12.1	9703.4
19	203L1142	3.0	79.5	100.5	63.5	68.7	8.2	9199.3
2	PVL03	3.0	78.5	106.5	65.2	70.3	5.3	9145.3
13	203L1103	3.0	77.0	94.5	61.4	69.6	5.3	9049.3
20	203L1144	2.5	74.0	102.0	54.6	70.7	13.0	9037.8
4	203L1007	2.5	73.0	103.5	62.2	69.0	11.2	9009.7
5	203L1011	3.0	77.5	108.0	65.5	70.1	9.5	8987.3
8	203L1057	3.0	75.0	105.5	63.6	70.2	8.3	8932.0
22	203L1167	3.0	73.0	106.5	59.6	70.4	16.1	8875.0
23	203L1177	3.0	72.0	115.5	58.1	70.8	18.1	8863.1
21	203L1161	3.5	72.5	103.0	60.3	70.1	7.9	8854.7
12	203L1095	3.0	79.5	94.5	64.9	69.9	5.1	8770.3
6	203L1019	3.5	79.0	106.0	64.4	69.1	7.8	8702.8
10	203L1068	3.0	75.0	103.0	64.6	69.6	7.4	8466.2
3	203L1001	2.5	77.5	97.5	62.1	69.5	5.2	8439.1
9	203L1058	3.0	76.0	102.5	64.7	70.8	7.3	8403.7
18	203L1141	3.0	74.0	105.5	60.3	69.5	13.3	8362.3
11	203L1086	2.5	73.5	93.5	58.0	70.9	20.0	7956.1
24	PVL01	3.5	83.5	105.0	58.9	67.2	5.2	7796.4
7	203L1050	2.5	73.5	109.0	59.0	69.6	11.3	7676.5
1	PVL02	2.5	72.5	107.5	65.0	71.1	4.0	6495.3

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

Table 12. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Clearfield.
Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
66	202M1143				54.4	72.6	18.8	9239.5
54	CLM04				57.6	71.4	15.0	9180.2
65	202M1133				55.4	71.3	12.1	8714.0
3	202L1111				60.6	72.0	11.9	8615.1
62	202M1123				56.6	72.2	15.7	8588.3
58	202M1046				51.2	71.9	11.1	8165.7
56	202M1033				56.9	71.9	15.8	8120.6
59	202M1074				56.4	70.2	11.4	7960.2
50	CL151				56.1	72.7	14.0	7801.5
34	202L1573				59.5	72.9	5.6	7755.2
55	202M1025				59.3	73.0	9.6	7750.0
5	202L1120				46.8	72.2	18.6	7704.1
15	202L1292				50.8	72.3	14.7	7643.6
26	202L1480				53.1	72.0	13.4	7629.8
64	202M1131				54.6	71.0	13.4	7571.7
31	202L1563				53.0	73.0	11.9	7543.2
61	202M1107				49.8	71.0	16.8	7463.9
6	202L1125				54.6	73.5	11.7	7435.2
17	202L1305				51.6	71.2	14.6	7426.3
27	202L1500				51.7	72.9	16.2	7375.4
13	202L1223				57.2	72.4	11.0	7373.4
19	202L1336				54.4	72.6	8.0	7366.7
60	202M1082				39.5	70.6	16.9	7323.7
18	202L1312				57.0	71.0	8.9	7270.8
8	202L1165				50.2	73.3	12.4	7220.3
52	CLL15				47.0	69.0	16.2	7151.4
37	202L1653				51.5	72.7	9.7	7126.6
38	202L1665				48.3	72.4	10.2	7120.1
23	202L1405				50.5	73.3	12.1	7111.1
53	CLL17				53.8	69.7	12.2	7091.5
44	MPB_279				50.6	71.7	19.9	7049.6
48	202L1719				58.1	71.3	9.4	7029.2
12	202L1214				53.0	72.3	11.4	7020.5
49	CL111				51.3	72.8	13.7	7009.1
24	202L1413				57.5	72.1	14.8	7003.5
2	202L1070				54.8	71.0	13.8	6998.7
39	202L1669				49.1	71.3	13.7	6970.2
33	202L1568				56.0	72.0	9.1	6903.9
45	MPB_289				49.4	70.3	16.5	6898.5
9	202L1171				55.1	72.1	11.2	6879.9
21	202L1361				52.7	72.4	16.6	6845.6
1	202L1032				53.2	71.2	11.6	6828.6

Continued.

Table 12. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
4	202L1115				52.4	72.0	10.2	6807.7
30	202L1534				53.6	72.7	9.9	6785.2
20	202L1357				56.4	72.4	11.7	6781.6
25	202L1421				53.8	71.8	14.2	6607.3
7	202L1154				50.2	72.7	13.7	6584.2
51	CL153				55.1	72.6	7.9	6577.5
42	201L1328				46.7	71.4	14.7	6571.6
22	202L1381				50.1	71.3	11.6	6533.9
40	202L1682				46.2	70.8	10.6	6470.3
35	202L1577				49.6	71.8	14.2	6469.1
47	202A1739				49.4	72.7	5.4	6459.0
41	201L1115				58.0	70.4	11.7	6377.3
10	202L1182				55.1	71.7	11.9	6314.1
14	202L1240				54.3	72.9	10.0	6227.4
16	202L1294				44.7	72.6	14.7	6201.3
32	202L1567				52.1	71.6	10.8	6115.5
46	202A1735				58.9	71.4	7.7	6055.7
43	MPA_277				48.5	72.1	8.2	5991.0
11	202L1212				50.0	71.3	15.6	5806.8
36	202L1591				49.7	74.1	12.9	5717.4
28	202L1513				37.4	71.6	13.1	5332.2
57	202M1036				27.4	69.5	16.8	5307.6
29	202L1515				47.8	72.4	9.3	4753.2
63	202M1127				25.9	70.1	11.8	4532.5

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

Table 13. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Conventional. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
65	201M1065				62.0	69.6	16.0	9561.1
51	RT7301				50.6	71.5	27.3	9210.0
61	201M1029				58.6	70.7	12.3	9112.0
50	XP753				52.1	72.2	24.0	9052.7
74	JN(X)				60.2	69.7	18.4	9008.1
6	201L1043				51.6	70.3	19.1	8996.4
38	201L1051				56.4	70.7	19.8	8869.3
49	Thad				51.0	69.9	13.8	8747.9
71	201M1122				57.1	71.8	21.5	8663.1
68	201M1106				57.0	71.3	20.9	8626.7
47	Diamond				52.0	68.8	20.0	8579.0
58	201M1004				59.3	71.3	16.3	8533.0
9	201L1065				54.7	70.1	15.5	8478.8
45	Cheniere				62.2	72.5	9.9	8477.4
27	201L1288				50.6	71.5	20.1	8462.5
16	201L1148				58.9	70.8	20.5	8416.7
72	201M1129				56.2	70.0	15.5	8415.5
66	201M1087				55.6	70.3	23.0	8358.6
13	201L1097				56.9	71.2	9.8	8357.3
31	201L1324				58.4	70.7	17.4	8342.3
54	Titan				49.6	70.3	14.1	8299.5
46	DG263L				55.0	68.2	23.7	8271.2
53	Lynx				51.9	69.2	20.7	8260.2
22	201L1251				49.5	70.2	17.7	8220.3
28	201L1295				57.3	71.1	18.8	8198.1
52	Jupiter				62.8	70.8	16.5	8148.0
70	201M1115				53.4	69.4	18.3	8133.9
18	201L1159				56.5	69.9	9.4	8030.7
67	201M1090				52.1	69.8	18.8	8017.3
59	201M1012				57.8	69.5	10.9	8005.4
43	201L1260				56.1	70.7	10.8	7920.8
73	201M1141				55.1	70.2	18.5	7920.7
1	201L1002				52.9	69.4	16.2	7898.1
44	201L1261				55.9	71.0	14.4	7895.6
56	BBC48-19-71618				54.1	68.6	17.5	7884.8
20	201L1204				54.4	70.5	11.4	7819.2
63	201M1054				58.8	69.9	15.9	7752.9
21	201L1219				53.1	69.1	9.3	7732.3
64	201M1064				55.2	70.7	24.1	7718.6
42	201L1114				54.3	70.6	14.6	7679.4
40	201L1048				58.3	70.9	14.0	7611.9
26	201L1286				59.2	70.5	18.2	7510.8

Continued.

Table 13. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
33	MPB_165				51.8	69.8	16.0	7431.6
57	201M1002				53.6	70.2	22.1	7424.0
69	201M1114				56.7	70.1	15.0	7421.7
15	201L1129				57.1	69.8	11.6	7359.8
5	201L1037				55.2	71.7	10.4	7292.9
62	201M1038				43.0	70.6	12.2	7282.7
29	201L1300				49.8	68.6	22.7	7267.2
10	201L1074				51.3	70.0	17.4	7254.9
48	Mermentau				58.6	69.7	16.0	7221.9
2	201L1027				54.3	68.6	10.2	7215.0
8	201L1049				55.1	71.4	10.3	7122.2
60	201M1022				53.5	68.8	18.7	7089.4
3	201L1031				43.6	68.0	18.3	6925.5
7	201L1046				50.3	70.5	18.4	6767.7
30	201L1304				50.0	68.6	14.6	6646.6
14	201L1124				52.4	67.7	19.6	6578.7
17	201L1156				53.8	68.6	9.7	6557.8
24	201L1264				47.3	68.9	17.2	6503.0
11	201L1075				54.0	71.0	13.8	6484.6
55	BBC35-19-71535				42.3	66.8	19.4	6475.5
19	201L1167				59.0	69.7	9.3	6453.5
23	201L1254				46.3	69.5	11.2	6445.7
32	MPB_274				49.0	69.6	13.9	6302.9
4	201L1033				53.0	68.1	16.8	6235.4
34	MPD_152				48.0	71.3	9.4	6193.4
35	201A1203				42.5	69.6	13.5	6170.8
25	201L1278				43.3	69.0	17.9	6155.4
37	201A1168				41.5	69.6	10.9	6143.8
39	201L1008				45.7	66.8	21.1	6112.1
75	Sweet92				54.8	69.0	61.4	6109.1
12	201L1093				55.9	70.3	15.9	6067.3
36	201A1117				39.6	68.2	17.5	5960.2
76	191M1160				35.1	68.3	18.6	5685.5
41	201L1088				54.4	69.9	12.0	4860.1

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

Table 14. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Provisia. Winnsboro, Franklin Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
17	203L1136				53.7	68.6	14.5	8758.7
19	203L1142				52.5	70.5	17.4	8707.6
5	203L1011				62.0	71.1	15.0	8349.9
22	203L1167				56.2	70.4	15.7	8288.0
11	203L1086				59.0	70.3	17.1	8186.2
10	203L1068				56.7	69.3	12.8	8096.2
9	203L1058				57.0	69.9	12.4	8095.8
20	203L1144				57.2	71.5	16.4	7954.4
2	PVL03				54.1	70.4	11.6	7914.5
12	203L1095				51.6	70.6	15.8	7906.0
14	203L1104				51.3	68.3	16.1	7864.3
4	203L1007				52.7	70.2	13.8	7754.2
21	203L1161				54.5	69.8	10.6	7684.8
6	203L1019				53.8	67.7	18.0	7631.5
13	203L1103				57.2	71.9	13.9	7616.9
24	PVL01				57.6	69.8	18.4	7541.3
7	203L1050				52.6	68.1	13.6	7368.6
16	203L1125				51.8	71.3	17.9	7347.6
8	203L1057				51.9	70.2	22.4	7217.0
15	203L1117				59.3	71.4	13.6	7101.3
3	203L1001				52.5	71.3	16.4	6858.5
23	203L1177				62.1	70.9	9.0	6799.8
1	PVL02				61.7	71.1	11.9	6771.4
18	203L1141				56.4	69.2	10.4	6523.8

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

Table 15. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Conventional. St. Joseph, St. Joseph Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
57	201M1002			102.5	66.0	71.2	18.0	10706.4
64	201M1064			100.5	68.1	72.5	15.3	10320.7
65	201M1065			109.5	67.2	70.2	12.1	10167.8
53	Lynx			111.5	65.8	70.0	11.6	10086.7
9	201L1065			109.5	63.3	69.8	17.9	9995.5
73	201M1141			95.0	68.3	71.9	10.9	9958.9
72	201M1129			108.5	66.8	70.7	13.2	9929.3
58	201M1004			97.5	67.5	71.3	17.8	9888.0
54	Titan			103.5	66.3	70.8	14.1	9858.7
71	201M1122			96.5	67.3	71.6	15.6	9778.2
50	XP753			122.0	56.0	71.3	17.8	9702.5
63	201M1054			97.0	66.3	70.6	10.5	9652.6
61	201M1029			99.0	66.5	70.1	14.3	9590.0
67	201M1090			108.0	66.1	70.7	15.8	9570.3
47	Diamond			114.0	62.5	70.9	14.2	9485.0
69	201M1114			108.0	67.2	71.0	12.9	9423.3
59	201M1012			106.5	67.9	71.1	10.1	9416.0
51	RT7301			114.5	59.7	71.2	21.3	9396.1
66	201M1087			102.5	69.1	72.6	12.9	9366.4
56	BBC48-19-71618			111.5	64.2	70.4	19.2	9352.6
68	201M1106			102.0	68.7	72.5	14.3	9313.6
60	201M1022			100.5	65.9	70.9	11.8	9294.4
52	Jupiter			104.5	67.0	70.6	13.2	9244.0
70	201M1115			106.0	65.9	70.6	11.9	9212.8
74	JN(X)			109.5	66.9	70.6	14.6	9080.1
49	Thad			103.5	64.2	70.2	5.6	8991.4
46	DG263L			105.0	61.7	68.2	14.2	8953.1
38	201L1051			105.5	66.2	72.2	14.0	8947.7
31	201L1324			102.5	67.2	72.1	20.1	8891.9
22	201L1251			101.5	63.4	71.0	16.2	8801.9
75	Sweet92			140.0	64.3	69.1	43.3	8767.2
55	BBC35-19-71535			97.5	64.0	69.2	14.5	8696.3
44	201L1261			107.5	64.2	70.5	11.0	8659.8
62	201M1038			108.0	61.2	70.8	9.4	8657.6
5	201L1037			99.0	66.3	71.7	7.9	8619.8
26	201L1286			106.0	64.6	70.5	19.8	8517.1
6	201L1043			103.0	65.4	72.0	14.4	8383.2
27	201L1288			108.0	63.9	71.9	18.2	8340.3
18	201L1159			98.0	66.3	71.2	6.6	8252.6
30	201L1304			107.5	60.1	68.9	13.1	8179.7
1	201L1002			109.5	63.2	69.8	13.2	8153.9
13	201L1097			104.0	67.3	72.8	11.3	8052.5

Continued.

Table 15. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
32	MPB_274				63.0	71.3	13.5	7998.7
15	201L1129			103.0	65.0	70.9	14.0	7908.6
29	201L1300			101.0	59.8	70.3	20.6	7852.6
39	201L1008			113.0	61.3	68.8	11.4	7812.8
16	201L1148			107.0	62.7	68.4	20.0	7728.5
14	201L1124			108.0	65.0	70.4	13.8	7712.8
45	Cheniere			103.8	67.7	72.8	9.9	7677.3
24	201L1264			108.0	60.5	70.7	15.9	7654.5
76	191M1160			95.5	58.2	69.0	16.3	7654.0
33	MPB_165			106.0	64.1	70.7	14.6	7542.1
48	Mermentau			107.0	64.8	70.2	17.6	7473.4
2	201L1027			107.0	62.8	70.3	9.3	7349.4
40	201L1048			111.5	64.3	70.7	10.0	7224.0
7	201L1046			105.5	66.7	72.1	14.2	6992.9
43	201L1260			104.0	64.7	70.8	7.5	6980.5
11	201L1075			110.0	66.1	71.1	8.0	6976.6
23	201L1254			102.0	63.6	70.0	10.9	6904.2
19	201L1167			107.0	65.2	70.3	12.3	6888.8
10	201L1074			113.5	64.8	71.4	19.1	6845.9
4	201L1033			105.0	64.8	70.4	14.5	6738.2
25	201L1278			111.5	60.3	70.5	17.2	6705.3
42	201L1114			116.0	61.3	70.2	10.9	6668.4
36	201A1117			116.5	56.5	70.0	17.8	6554.7
35	201A1203			105.5	55.3	70.2	14.2	6528.1
21	201L1219			107.0	65.3	70.2	7.6	6421.7
8	201L1049			104.5	63.8	71.3	8.2	6263.0
3	201L1031			108.0	64.4	70.6	13.6	6096.2
41	201L1088			103.0	65.2	69.7	6.4	5629.1
12	201L1093			106.0	65.6	71.3	9.7	5627.4
28	201L1295			109.5	64.1	70.4	13.0	5613.6
34	MPD_152			101.0	60.5	71.2	7.6	5608.9
20	201L1204			107.5	64.8	71.2	8.4	5569.4
37	201A1168			94.0	60.4	71.2	11.6	5468.1
17	201L1156			110.5	65.1	69.8	9.3	5274.2

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

Table 16. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Clearfield.
Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
65	CL151	2.5	87.5	102.0	63.7	71.2	21.3	10724.9
18	202M1143	4.5	94.0	93.5	63.7	68.3	14.6	10627.9
5	202M1133	3.0	91.5	101.5	65.6	68.8	11.8	10591.5
3	202L1312	4.0	91.0	101.0	59.8	69.0	9.6	10325.2
53	202L1120	3.5	88.0	100.0	64.1	70.1	12.8	10296.9
11	202L1111	4.5	92.5	97.5	59.3	68.9	11.2	10060.9
45	CLL17	2.0	92.5	94.5	63.0	69.6	15.6	9846.5
17	202L1212	5.0	86.5	94.5	58.6	69.0	13.7	9839.1
26	MPB_289	2.5	88.0	92.5	62.6	69.6	14.2	9764.3
56	202L1305	3.5	92.0	89.0	54.5	68.4	10.4	9753.8
51	202L1480	3.5	87.0	101.0	64.1	70.8	9.5	9736.6
19	202M1033	4.0	94.0	98.5	66.1	69.3	11.9	9730.1
23	CL153	3.5	90.5	100.5	63.9	69.9	7.5	9720.6
59	202L1336	2.0	83.0	91.5	63.2	69.9	8.4	9691.9
54	202L1405	3.5	84.5	101.0	60.8	70.0	8.8	9674.1
2	202M1074	3.5	93.5	100.5	62.5	67.0	7.9	9659.9
25	CLM04	3.5	96.0	108.0	63.7	67.2	11.4	9643.2
39	202L1070	3.0	90.5	98.0	63.6	69.2	14.3	9629.3
30	202L1421	2.0	87.0	96.5	62.9	70.8	11.1	9611.6
10	202L1669	3.0	93.0	86.0	64.2	70.1	18.6	9600.6
64	202L1534	3.5	90.0	87.0	64.6	70.3	12.3	9585.5
1	202L1182	2.5	94.0	90.5	58.6	68.0	12.8	9569.7
58	202M1131	5.0	94.5	95.0	63.3	67.2	14.6	9495.7
9	202L1032	3.5	88.5	93.0	61.3	70.5	11.9	9412.4
24	202M1046	3.5	89.0	95.0	65.9	68.8	13.1	9388.2
62	202L1171	2.5	83.0	97.0	62.9	69.6	13.2	9289.9
32	202L1413	3.0	88.5	96.5	59.8	68.0	11.2	9268.0
38	202M1123	3.0	93.0	105.0	64.7	68.0	19.2	9253.1
31	202L1567	2.5	88.0	104.0	64.1	71.2	7.0	9218.5
28	202L1665	3.5	87.0	101.5	62.8	69.8	9.3	9190.5
44	202L1563	3.0	91.0	91.0	64.1	71.4	12.6	9184.3
13	202L1513	3.0	87.0	96.0	62.3	70.3	15.4	9178.5
21	MPB_279	2.0	84.5	88.5	57.7	70.0	14.5	9168.3
43	202L1223	4.5	96.5	104.0	54.3	67.9	10.1	9148.3
60	202L1361	2.5	85.0	94.5	63.2	71.5	10.2	9144.2
35	MPA_277	2.5	84.0	96.5	61.9	71.2	6.4	9096.5
37	202M1082	2.0	97.0	93.5	65.2	69.3	13.3	9059.3
57	202L1577	3.0	85.0	93.0	62.3	70.2	8.6	9058.9
12	202L1653	3.0	87.5	93.5	65.5	71.1	9.9	8980.2
34	202M1036	3.5	87.0	91.5	63.6	69.4	9.8	8976.7
65	202L1214	3.0	85.5	95.5	63.4	70.2	11.5	8959.0
18	202L1573	3.0	86.5	96.0	62.7	69.7	8.2	8953.7

Continued.

Table 16. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
48	202L1719	3.0	92.0	105.5	60.3	68.2	7.9	8821.1
15	202L1292	4.5	93.5	103.5	61.1	67.9	12.9	8795.3
20	202L1357	3.5	89.5	84.5	64.4	70.1	15.0	8793.1
33	202L1568	3.5	87.0	102.5	61.0	68.2	11.7	8769.1
8	202L1165	2.5	88.5	94.5	64.1	71.0	11.4	8729.6
61	202M1107	3.0	87.5	95.0	65.4	69.3	9.6	8714.0
22	202L1381	2.5	82.5	92.0	62.3	69.7	9.7	8660.7
6	202L1125	4.0	86.5	91.0	65.6	70.7	9.3	8627.2
14	202L1240	4.5	87.5	95.5	60.2	68.6	11.8	8496.7
7	202L1154	3.0	85.5	98.5	62.9	70.9	9.9	8444.3
49	CL111	5.0	85.0	97.0	61.4	69.1	12.1	8442.6
41	201L1115	2.5	85.0	92.0	60.7	69.0	11.0	8441.0
16	202L1294	3.0	86.0	92.5	62.4	69.5	10.2	8368.4
36	202L1591	4.0	92.0	90.5	64.4	70.2	11.7	8315.5
29	202L1515	2.0	85.5	96.5	61.9	70.7	8.7	7966.0
42	201L1328	2.5	90.5	90.0	58.0	68.7	10.4	7815.3
47	202A1739	3.5	93.0	93.0	63.6	71.4	6.4	7647.4
4	202L1115	3.0	83.0	94.0	60.8	69.2	8.5	7636.5
63	202M1127	5.0	89.5	92.5	62.8	68.1	13.3	7608.4
55	202M1025	5.5	93.5	90.5	65.8	69.5	11.7	7581.3
27	202L1500	3.0	87.5	85.0	60.6	69.2	12.1	7561.5
46	202A1735	5.5	96.5	91.5	57.3	66.6	11.4	7459.5
52	CLL15	3.0	88.5	86.5	57.0	65.6	11.3	7266.4
40	202L1682	3.5	94.5	95.5	49.9	65.9	8.3	6753.6

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

Table 17. Grain and milling yields and agronomic performance of entries in the 2021 Regional Yield test – Provisia. Lake Arthur, Vermilion Parish, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
10	203L1068	3.0	89.5	108.0	66.0	71.6	11.0	10509.2
17	203L1136	3.0	88.5	100.5	62.6	72.9	17.0	9888.7
15	203L1117	4.0	93.5	104.5	58.1	71.4	21.3	9830.5
23	203L1177	3.0	89.0	108.5	65.7	72.6	13.7	9804.8
4	203L1007	4.0	84.5	91.0	65.0	72.1	16.3	9732.6
13	203L1103	3.5	89.5	100.0	63.7	71.9	15.0	9715.7
16	203L1125	3.5	84.5	91.5	64.3	72.0	16.7	9713.0
9	203L1058	2.5	92.5	96.0	64.1	72.5	9.2	9702.6
14	203L1104	3.5	97.0	95.5	66.0	71.8	17.7	9603.3
5	203L1011	2.0	93.0	100.5	66.4	73.6	12.9	9566.5
22	203L1167	3.0	86.5	101.0	59.9	72.2	18.6	9506.6
6	203L1019	2.5	94.5	101.0	64.7	72.0	14.3	9208.1
19	203L1142	3.5	94.5	96.0	63.0	72.6	13.7	9199.7
7	203L1050	3.5	90.0	109.5	62.7	72.5	16.4	9017.7
11	203L1086	2.5	89.0	91.5	62.6	73.4	14.8	8986.3
3	203L1001	3.0	96.5	103.5	63.5	72.5	9.0	8938.3
8	203L1057	2.0	89.0	104.5	66.2	74.5	11.2	8920.6
24	PVL01	3.0	99.0	106.5	61.7	71.5	8.5	8915.2
18	203L1141	3.5	89.5	104.5	62.7	71.1	15.1	8809.5
1	PVL02	2.5	89.5	109.5	66.6	73.6	10.4	8765.6
2	PVL03	3.5	90.0	102.0	64.5	72.6	12.7	8459.1
20	203L1144	3.0	85.5	98.5	60.8	75.2	13.6	8446.4
21	203L1161	3.0	89.5	101.5	66.6	72.0	6.9	8407.1
12	203L1095	4.5	97.5	98.5	64.6	71.4	8.9	8002.0

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

CONVENTIONAL PRELIMINARY YIELD TRIALS

Conventional 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 fungicides were not applied) at the H. Rouse Caffey Rice Research Station (HRCRRS) at Crowley, LA. 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. Planting and harvesting dates are shown in Table 1 across all locations. Entries are listed in Table 2. Results from these trials are shown in Tables 3-4.

Table 1. Planting and harvesting dates for the 2021 Conventional Preliminary Yield trials.

Location	Trial	Planting	Harvesting
HRCRRS	PYL	3/10	7/31
	PYM	3/11	8/2

Table 2. Entry number, pedigree, grain type, and source information for entries in the 2021 Conventional Preliminary Yield trials.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	1	211L1001	1902186/1902207	LG	LAES
CN	2	211L1002	1801169/1902212	LG	LAES
CN	3	211L1003	1702140/1902207	LG	LAES
CN	4	211L1004	2002150/CL111	LG	LAES
CN	5	211L1005	1902122/2002150	LG	LAES
CN	6	211L1006	1902186/1902207	LG	LAES
CN	7	211L1007	1702140/CTHL	LG	LAES
CN	8	211L1008	1702183/1902212	LG	LAES
CN	9	211L1009	CTHL/1902207	LG	LAES
CN	10	211L1010	1902186/181L2002	LG	LAES
CN	11	211L1011	CTHL/1902207	LG	LAES
CN	12	211L1012	CTHL/1902207	LG	LAES
CN	13	211L1013	181L2002/1804067	LG	LAES
CN	14	211L1014	1902186/2002114	LG	LAES
CN	15	211L1015	MRMT/CTHL	LG	LAES
CN	16	211L1016	181L2002/1804067	LG	LAES
CN	17	211L1017	1702140/1902207	LG	LAES
CN	18	211L1018	1702140/1902186	LG	LAES
CN	19	211L1019	1902207/1804187	LG	LAES
CN	20	211L1020	1902186/1902207	LG	LAES
CN	21	211L1021	CL131/1702140	LG	LAES
CN	22	211L1022	CL131/LKST	LG	LAES
CN	23	211L1023	CL172/PSDO	LG	LAES
CN	24	211L1024	PSDO/CHNR	LG	LAES
CN	25	211L1025	MRMT/CTHL	LG	LAES
CN	26	211L1026	1902186/CL153	LG	LAES
CN	27	211L1027	CTHL/1902207	LG	LAES
CN	28	211L1028	INIA6/1902194	LG	LAES
CN	29	211L1029	DREW/12:1258SBLINE	LG	LAES
CN	30	211L1030	1702140/1902207	LG	LAES
CN	31	211L1031	CL131/LKST	LG	LAES
CN	32	211L1032	1801169/1902212	LG	LAES
CN	33	211L1033	CTHL/1902212	LG	LAES
CN	34	211L1034	1702183/1902212	LG	LAES
CN	35	211L1035	1702140/1902186	LG	LAES
CN	36	211L1036	RoyJ/182L2166	LG	LAES
CN	37	211L1037	182L2195/2002150	LG	LAES
CN	38	211L1038	182L2195/2002150	LG	LAES
CN	39	211L1039	INIA6/1902194	LG	LAES
CN	40	211L1040	2002150/1602097	LG	LAES
CN	41	211L1041	1702140/1902186	LG	LAES
CN	42	211L1042	CL131/1702140	LG	LAES
CN	43	211L1043	PSDO/CHNR	LG	LAES
CN	44	211L1044	TITN/1502082	LG	LAES
CN	45	211L1045	MRMT/LKST	LG	LAES
CN	46	211L1046	CTHL/LKST	LG	LAES
CN	47	211L1047	1902212/CL111	LG	LAES
CN	48	211L1048	1902186/181L2002	LG	LAES
CN	49	211L1049	TITN/1502082	LG	LAES

Continued.

Table 2. Continued.

Herbicide					Grain	
Type	Entry	Line	Pedigree		Type[†]	Source[‡]
CN	50	211L1050	1902186/181L2002		LG	LAES
CN	51	211L1051	INIA6/1902194		LG	LAES
CN	52	211L1052	RoyJ/CL153		LG	LAES
CN	53	211L1053	PSDO/CHNR		LG	LAES
CN	54	211L1054	CTHL/1902207		LG	LAES
CN	55	211L1055	RoyJ/182L2166		LG	LAES
CN	56	211L1056	182L2195/2002150		LG	LAES
CN	57	211L1057	RoyJ/182L2166		LG	LAES
CN	58	211L1058	1902186/181L2002		LG	LAES
CN	59	211L1059	CTHL/1902207		LG	LAES
CN	60	211L1060	1902186/181L2002		LG	LAES
CN	61	211L1061	182L1278/2002150		LG	LAES
CN	62	211L1062	PSDO/CHNR		LG	LAES
CN	63	211L1063	1702140/1902186		LG	LAES
CN	64	211L1064	1902186/1902207		LG	LAES
CN	65	211L1065	CTHL/1902212		LG	LAES
CN	66	211L1066	2002150/1902186		LG	LAES
CN	67	211L1067	CTHL/TRNS		LG	LAES
CN	68	211L1068	182L2195/2002150		LG	LAES
CN	69	211L1069	172A1739/1702140		LG	LAES
CN	70	211L1070	1702140/1902207		LG	LAES
CN	71	211L1071	1902186/1902207		LG	LAES
CN	72	211L1072	CL131/1702140		LG	LAES
CN	73	211L1073	1902207/1804187		LG	LAES
CN	74	211L1074	1702183/1902212		LG	LAES
CN	75	211L1075	CTHL/1902212		LG	LAES
CN	76	211L1076	1702140/1902207		LG	LAES
CN	77	211L1077	CL153/LKST		LG	LAES
CN	78	211L1078	2002150/1902186		LG	LAES
CN	79	211L1079	CTHL/1902212		LG	LAES
CN	80	211L1080	2002150/1902186		LG	LAES
CN	81	211L1081	1902207/1804187		LG	LAES
CN	82	211L1082	CTHL/TRNS		LG	LAES
CN	83	211L1083	1702140/1902207		LG	LAES
CN	84	211L1084	1902186/181L2002		LG	LAES
CN	85	211L1085	CL131/1702140		LG	LAES
CN	86	211L1086	171L1772/1601133		LG	LAES
CN	87	211L1087	182L2195/2002150		LG	LAES
CN	88	211L1088	MRMT/LKST		LG	LAES
CN	89	211L1089	1902186/1902207		LG	LAES
CN	90	211L1090	CL131/1702140		LG	LAES
CN	91	211L1091	1702140/1902207		LG	LAES
CN	92	211L1092	171L1772/1601133		LG	LAES
CN	93	211L1093	1902194/181L2002		LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	94	211L1094	1702140/1902186	LG	LAES
CN	95	211L1095	182L2195/2002150	LG	LAES
CN	96	211L1096	2002150/1602097	LG	LAES
CN	97	211L1097	1902186/181L2002	LG	LAES
CN	98	211L1098	1902186/181L2002	LG	LAES
CN	99	211L1099	CTHL/1902207	LG	LAES
CN	100	211L1100	RoyJ/182L2166	LG	LAES
CN	101	211L1101	PSDO/CHNR	LG	LAES
CN	102	211L1102	CL272/PSDO	LG	LAES
CN	103	211L1103	1902207/1804187	LG	LAES
CN	104	211L1104	CTHL/TRNS	LG	LAES
CN	105	211L1105	MRMT/CTHL	LG	LAES
CN	106	211L1106	CTHL/1902212	LG	LAES
CN	107	211L1107	181L2002/1804067	LG	LAES
CN	108	211L1108	1702140/1902186	LG	LAES
CN	109	211L1109	CTHL/1902207	LG	LAES
CN	110	211L1110	CTHL/LKST	LG	LAES
CN	111	211L1111	CL131/1702140	LG	LAES
CN	112	211L1112	1702140/1902186	LG	LAES
CN	113	211L1113	DREW/12:1258SBLINE	LG	LAES
CN	114	211L1114	2002150/CL111	LG	LAES
CN	115	211L1115	181L2002/1804067	LG	LAES
CN	116	211L1116	CTHL/1902207	LG	LAES
CN	117	211L1117	1902207/1804187	LG	LAES
CN	118	211L1118	1702140/1902186	LG	LAES
CN	119	211L1119	CTHL/1902207	LG	LAES
CN	120	211L1120	CL153/LKST	LG	LAES
CN	121	211L1121	PSDO/CHNR	LG	LAES
CN	122	211L1122	171L1772/1601133	LG	LAES
CN	123	211L1123	2002150/1902186	LG	LAES
CN	124	211L1124	1902186/182L2166	LG	LAES
CN	125	211L1125	1702183/1902212	LG	LAES
CN	126	211L1126	CTHL/1902207	LG	LAES
CN	127	211L1127	1902122/2002150	LG	LAES
CN	128	211L1128	1702140/1902186	LG	LAES
CN	129	211L1129	CTHL/1902212	LG	LAES
CN	130	211L1130	1702140/DMND	LG	LAES
CN	131	211L1131	RoyJ/CL153	LG	LAES
CN	132	211L1132	1502183/PSDO	LG	LAES
CN	133	211L1133	PSDO/CHNR	LG	LAES
CN	134	211L1134	1902122/1902186	LG	LAES
CN	135	211L1135	181L2002/1804067	LG	LAES
CN	136	211L1136	1702140/1902186	LG	LAES
CN	137	211L1137	1702140/1902207	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	138	211L1138	CL131/1702140	LG	LAES
CN	139	211L1139	CTHL/1902207	LG	LAES
CN	140	211L1140	CTHL/CL153	LG	LAES
CN	141	211L1141	CTHL/1902212	LG	LAES
CN	142	211L1142	2002150/1902186	LG	LAES
CN	143	211L1143	RoyJ/CL153	LG	LAES
CN	144	211L1144	1902186/1902194	LG	LAES
CN	145	211L1145	1902194/181L2002	LG	LAES
CN	146	211L1146	RoyJ/182L2166	LG	LAES
CN	147	211L1147	181L2002/1804067	LG	LAES
CN	148	211L1148	1702140/1902186	LG	LAES
CN	149	211L1149	CL131/1702140	LG	LAES
CN	150	211L1150	171L1772/1601133	LG	LAES
CN	151	211L1151	181L2002/1804067	LG	LAES
CN	152	211L1152	CL131/1702140	LG	LAES
CN	153	211L1153	1902186/1902207	LG	LAES
CN	154	211L1154	1702140/1902207	LG	LAES
CN	155	211L1155	2002150/1902186	LG	LAES
CN	156	211L1156	181L2002/1804067	LG	LAES
CN	157	211L1157	RoyJ/CL153	LG	LAES
CN	158	211L1158	2002150/1602097	LG	LAES
CN	159	211L1159	2002150/1902186	LG	LAES
CN	160	211L1160	RoyJ/CL153	LG	LAES
CN	161	211L1161	1902212/DMND	LG	LAES
CN	162	211L1162	RoyJ/182L2166	LG	LAES
CN	163	211L1163	1702140/DMND	LG	LAES
CN	164	211L1164	CTHL/1902212	LG	LAES
CN	165	211L1165	CTHL/1902146	LG	LAES
CN	166	211L1166	1902186/1902207	LG	LAES
CN	167	211L1167	1502183/PSDO	LG	LAES
CN	168	211L1168	CL153/LKST	LG	LAES
CN	169	211L1169	1902122/2002150	LG	LAES
CN	170	211L1170	PSDO/CHNR	LG	LAES
CN	171	211L1171	CTHL/1902207	LG	LAES
CN	172	211L1172	1902194/181L2002	LG	LAES
CN	173	211L1173	CL131/LKST	LG	LAES
CN	174	211L1174	CTHL/1902212	LG	LAES
CN	175	211L1175	1702140/1902207	LG	LAES
CN	176	211L1176	PSDO/CHNR	LG	LAES
CN	177	211L1177	1702140/CTHL	LG	LAES
CN	178	211L1178	1902194/181L2002	LG	LAES
CN	179	211L1179	1902212/DMND	LG	LAES
CN	180	211L1180	MRMT/CHNR	LG	LAES
CN	181	211L1181	171L1772/1601133	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	182	211L1182	CL131/1702140	LG	LAES
CN	183	211L1183	1902186/181L2002	LG	LAES
CN	184	211L1184	CL131/LKST	LG	LAES
CN	185	211L1185	CL131/1702140	LG	LAES
CN	186	211L1186	CTHL/LKST	LG	LAES
CN	187	211L1187	RoyJ/182L2166	LG	LAES
CN	188	211L1188	1702140/1902207	LG	LAES
CN	189	211L1189	1902194/181L2002	LG	LAES
CN	190	211L1190	RoyJ/182L2166	LG	LAES
CN	191	211L1191	CTHL/CLL15	LG	LAES
CN	192	211L1192	1801169/1902212	LG	LAES
CN	193	211L1193	CTHL/CHNR	LG	LAES
CN	194	211L1194	CTHL/CHNR	LG	LAES
CN	195	211L1195	1902122/1902186	LG	LAES
CN	196	211L1196	181L2002/1804067	LG	LAES
CN	197	211L1197	CHNR/PSDO	LG	LAES
CN	198	211L1198	171L1772/1601133	LG	LAES
CN	199	211L1199	CTHL/1902207	LG	LAES
CN	200	211L1200	CTHL/1902207	LG	LAES
CN	201	211L1201	1702140/1902186	LG	LAES
CN	202	211L1202	PSDO/CHNR	LG	LAES
CN	203	211L1203	1702140/1902186	LG	LAES
CN	204	211L1204	CTHL/1902207	LG	LAES
CN	205	211L1205	1702183/1902212	LG	LAES
CN	206	211L1206	CHNR/PSDO	LG	LAES
CN	207	211L1207	INIA6/1902194	LG	LAES
CN	208	211L1208	1702140/1902207	LG	LAES
CN	209	211L1209	1702140/1902186	LG	LAES
CN	210	211L1210	1801169/1902212	LG	LAES
CN	211	211L1211	1902186/CL153	LG	LAES
CN	212	211L1212	2002150/1902186	LG	LAES
CN	213	211L1213	181L2002/1804067	LG	LAES
CN	214	211L1214	CTHL/1902212	LG	LAES
CN	215	211L1215	181L2002/1804067	LG	LAES
CN	216	211L1216	CTHL/CHNR	LG	LAES
CN	217	211L1217	CL153/LKST	LG	LAES
CN	218	211L1218	2002150/CL111	LG	LAES
CN	219	211L1219	1702140/1902186	LG	LAES
CN	220	211L1220	RoyJ/182L2166	LG	LAES
CN	221	211L1221	1902194/181L2002	LG	LAES
CN	222	211L1222	RoyJ/CL153	LG	LAES
CN	223	211L1223	2002150/1602097	LG	LAES
CN	224	211L1224	MRMT/CHNR	LG	LAES
CN	225	211L1225	1902186/CL153	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	226	211L1226	171L1772/1601133	LG	LAES
CN	227	211L1227	1702140/1902207	LG	LAES
CN	228	211L1228	1801169/1902212	LG	LAES
CN	229	211L1229	CTHL/1902207	LG	LAES
CN	230	211L1230	171L1772/1601133	LG	LAES
CN	231	211L1231	MRMT/CTHL	LG	LAES
CN	232	211L1232	CL153/LKST	LG	LAES
CN	233	211L1233	1902194/181L2002	LG	LAES
CN	234	211L1234	CTHL/1902207	LG	LAES
CN	235	211L1235	2002150/1902186	LG	LAES
CN	236	211L1236	1902186/181L2002	LG	LAES
CN	237	211L1237	1702140/1902186	LG	LAES
CN	238	211L1238	RoyJ/CL153	LG	LAES
CN	239	211L1239	CTHL/LKST	LG	LAES
CN	240	211L1240	1902122/1902186	LG	LAES
CN	241	211L1241	RoyJ/182L2166	LG	LAES
CN	242	211L1242	PSDO/CHNR	LG	LAES
CN	243	211L1243	1902186/181L2002	LG	LAES
CN	244	211L1244	CTHL/1902207	LG	LAES
CN	245	211L1245	1702140/1902186	LG	LAES
CN	246	211L1246	CHNR/PSDO	LG	LAES
CN	247	211L1247	1702140/1902186	LG	LAES
CN	248	211L1248	CL131/LKST	LG	LAES
CN	249	211L1249	181L2002/1804067	LG	LAES
CN	250	211L1250	CTHL/1902212	LG	LAES
CN	251	211L1251	1902186/181L2002	LG	LAES
CN	252	211L1252	1801169/1902212	LG	LAES
CN	253	211L1253	CL153/LKST	LG	LAES
CN	254	211L1254	1801169/1902212	LG	LAES
CN	255	211L1255	RoyJ/CL153	LG	LAES
CN	256	211L1256	1702140/1902207	LG	LAES
CN	257	211L1257	CTHL/1902212	LG	LAES
CN	258	211L1258	1702183/1902212	LG	LAES
CN	259	211L1259	171L1772/1601133	LG	LAES
CN	260	211L1260	1702140/1902207	LG	LAES
CN	261	211L1261	CL131/1702140	LG	LAES
CN	262	211L1262	181L2002/1804067	LG	LAES
CN	263	211L1263	CL131/LKST	LG	LAES
CN	264	211L1264	INIA6/1902194	LG	LAES
CN	265	211L1265	CTHL/1902212	LG	LAES
CN	266	211L1266	CTHL/1902212	LG	LAES
CN	267	211L1267	1902186/CL153	LG	LAES
CN	268	211L1268	1902186/1902207	LG	LAES
CN	269	211L1269	1902146/1902212	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	270	211L1270	1902186/CL153	LG	LAES
CN	271	211L1271	1702140/1902207	LG	LAES
CN	272	211L1272	1902212/CL111	LG	LAES
CN	273	211L1273	1801169/1902212	LG	LAES
CN	274	211L1274	1702140/1902186	LG	LAES
CN	275	211L1275	CHNR/PSDO	LG	LAES
CN	276	211L1276	1902186/181L2002	LG	LAES
CN	277	211L1277	1902186/181L2002	LG	LAES
CN	278	211L1278	INIA6/1902194	LG	LAES
CN	279	211L1279	1801169/1902212	LG	LAES
CN	280	211L1280	1902207/1804187	LG	LAES
CN	281	211L1281	1702140/1902207	LG	LAES
CN	282	211L1282	2002150/1902186	LG	LAES
CN	283	211L1283	2002150/1902186	LG	LAES
CN	284	211L1284	RoyJ/CL153	LG	LAES
CN	285	211L1285	CTHL/LKST	LG	LAES
CN	286	211L1286	INIA6/1902194	LG	LAES
CN	287	211L1287	1702140/1902186	LG	LAES
CN	288	211L1288	1902186/181L2002	LG	LAES
CN	289	211L1289	1702140/1902186	LG	LAES
CN	290	211L1290	1902186/1902194	LG	LAES
CN	291	211L1291	171L1772/1601133	LG	LAES
CN	292	211L1292	CL153/LKST	LG	LAES
CN	293	211L1293	CTHL/CL153	LG	LAES
CN	294	211L1294	1902186/181L2002	LG	LAES
CN	295	211L1295	RoyJ/182L2166	LG	LAES
CN	296	211L1296	1702140/1902207	LG	LAES
CN	297	211L1297	INIA6/1902194	LG	LAES
CN	298	211L1298	CTHL/TRNS	LG	LAES
CN	299	211L1299	RoyJ/182L2166	LG	LAES
CN	300	211L1300	171L1772/1601133	LG	LAES
CN	301	211L1301	CL153/LKST	LG	LAES
CN	302	211L1302	TRNS/MBLE	LG	LAES
CN	303	211L1303	2002150/CL111	LG	LAES
CN	304	211L1304	TRNS/MBLE	LG	LAES
CN	305	211L1305	1801169/1902212	LG	LAES
CN	306	211L1306	CTHL/1902207	LG	LAES
CN	307	211L1307	2002150/1602097	LG	LAES
CN	308	211L1308	RoyJ/182L2166	LG	LAES
CN	309	211L1309	DREW/12:1258SBLINE	LG	LAES
CN	310	211L1310	JZMN2/CTHL	Aro	LAES
CN	311	211L1311	CPRS/DLLA2	Aro	LAES
CN	312	211L1312	DLLA2/LKST	Aro	LAES
CN	313	211L1313	DLLA2/LKST	Aro	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	314	211L1314	CPRS/DLLA2	Aro	LAES
CN	315	211L1315	DLLA2/LKST	Aro	LAES
CN	316	211L1316	JZMN2/CTHL	Aro	LAES
CN	317	211L1317	1602195/DLLA2	Aro	LAES
CN	318	211L1318	JZMN2/CTHL	Aro	LAES
CN	319	211L1319	JZMN2/CTHL	Aro	LAES
CN	320	211L1320	JZMN2/CTHL	Aro	LAES
CN	321	BBC-12-1	MRMT/4/MRMT/3/MRMT//ZHE/MRMT	LG	LAES
CN	322	211L1322	JZMN2/CTHL	Aro	LAES
CN	323	211L1323	JZMN2/CTHL	Aro	LAES
CN	324	211L1324	JZMN2/CTHL	Aro	LAES
CN	325	211L1325	DLLA2/LKST	Aro	LAES
CN	326	211L1326	JZMN2/CTHL	Aro	LAES
CN	327	211L1327	JZMN2/CTHL	Aro	LAES
CN	328	211L1328	DLLA2/LKST	Aro	LAES
CN	329	211L1329	JZMN2/CTHL	Aro	LAES
CN	330	211L1330	DLLA2/LKST	Aro	LAES
CN	331	211L1331	1602195/DLLA2	Aro	LAES
CN	332	211L1332	THAD/CTHL	LG	LAES
CN	333	211L1333	2002122/1702140	LG	LAES
CN	334	211L1334	2002122/1902194	LG	LAES
CN	335	211L1335	2002122/1902194	LG	LAES
CN	336	211L1336	THAD/CTHL	LG	LAES
CN	337	211L1337	2002122/1702140	LG	LAES
CN	338	211L1338	CLL15/INIA6	LG	LAES
CN	339	211L1339	THAD/CTHL	LG	LAES
CN	340	BBC-14-2	MRMT/4/MRMT/3/MRMT//ZHE/MRMT	LG	LAES
CN	341	211L1341	2002122/1902194	LG	LAES
CN	342	211L1342	2002122/1902194	LG	LAES
CN	343	211L1343	2002122/1702140	LG	LAES
CN	344	211L1344	2002122/1902194	LG	LAES
CN	345	211L1345	2002122/1702140	LG	LAES
CN	346	211L1346	THAD/CTHL	LG	LAES
CN	347	211L1347	2002122/1902194	LG	LAES
CN	348	211L1348	2002122/1702140	LG	LAES
CN	349	211L1349	2002122/1702140	LG	LAES
CN	350	211L1350	INIA8/2002150	LG	LAES
CN	351	211L1351	CLL15/INIA6	LG	LAES
CN	352	211L1352	2002122/1902194	LG	LAES
CN	353	211L1353	CLL15/INIA6	LG	LAES
CN	354	211L1354	CLL15/INIA6	LG	LAES
CN	355	211L1355	2002122/1902194	LG	LAES
CN	356	211L1356	2002122/1902194	LG	LAES
CN	357	211L1357	INIA8/2002150	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	358	211L1358	2002122/1702140	LG	LAES
CN	359	211L1359	THAD/CTHL	LG	LAES
CN	360	211L1360	THAD/CTHL	LG	LAES
CN	361	211L1361	CLL15/INIA6	LG	LAES
CN	362	211L1362	2002122/1902194	LG	LAES
CN	363	211L1363	THAD/CTHL	LG	LAES
CN	364	211L1364	THAD/CTHL	LG	LAES
CN	365	211L1365	THAD/CTHL	LG	LAES
CN	366	211L1366	2002122/1902194	LG	LAES
CN	367	CHENIERE	CHENIERE	LG	LAES
CN	368	DG263L	DG263L	LG	Nutrien
CN	369	THAD	THAD	LG	MAES
CN	370	CLL17	CLL17	LG	LAES
CN	371	RU1902207	RU1902207	LG	LAES
CN	372	RU1902212	RU1902212	LG	LAES
CN	373	RU2002126	RU2002126	LG	LAES
CN	374	RU2002166	RU2002166	LG	LAES
CN	375	MERMENTAU	MERMENTAU	LG	LAES
CN	376	211L1376	CL153/1902207	LG	LAES
CN	377	211L1377	2002150/CL111	LG	LAES
CN	378	211L1378	1902122/2002150	LG	LAES
CN	379	211L1379	1902207/1902014	LG	LAES
CN	1	211M1001	1702165/M206	MG	LAES
CN	2	211M1002	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5 /CFFY	MG	LAES
CN	3	211M1003	1702165/M206	MG	LAES
CN	4	211M1004	1701121/1801211	MG	LAES
CN	5	211M1005	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/ NPTN	MG	LAES
CN	6	211M1006	CL272/1801211	MG	LAES
CN	7	211M1007	1702165/M206	MG	LAES
CN	8	BBC-18-2	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	9	211M1009	1702165/M206	MG	LAES
CN	10	211M1010	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/NPTN	MG	LAES
CN	11	BBC-21-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	12	BBC-46-1	JPTR/3/CL272//CL272/IR9660	MG	LAES
CN	13	211M1013	CL272/M206	MG	LAES
CN	14	211M1014	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/ MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	15	BBC-45-1	JPTR/3/CL272//CL272/IR9660	MG	LAES
CN	16	211M1016	MRMT/TITN	MG	LAES
CN	17	211M1017	TITN/1502083	MG	LAES
CN	18	211M1018	TITN/1502083	MG	LAES
CN	19	211M1019	1702165/M206	MG	LAES
CN	20	211M1020	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MAR S/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	21	211M1021	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	22	211M1022	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/ BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	23	211M1023	1702165/M206	MG	LAES
CN	24	BBC-15-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	25	211M1025	TITN/1502082	MG	LAES
CN	26	211M1026	1702165/M206	MG	LAES
CN	27	211M1027	CL272/TITN	MG	LAES
CN	28	211M1028	M206/1702165	MG	LAES
CN	29	211M1029	1702165/M206	MG	LAES
CN	30	211M1030	TITN/1801211	MG	LAES
CN	31	211M1031	1702165/M206	MG	LAES
CN	32	211M1032	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL /5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	33	211M1033	1701121/1801211	MG	LAES
CN	34	211M1034	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MA RS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	35	211M1035	1702165/M206	MG	LAES
CN	36	BBC-33-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	37	211M1037	1902174/M206	MG	LAES
CN	38	211M1038	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/CFFY	MG	LAES
CN	39	211M1039	1702165/M206	MG	LAES
CN	40	211M1040	CL272/M206	MG	LAES
CN	41	211M1041	CL272/1801211	MG	LAES
CN	42	211M1042	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	43	211M1043	1502183/PSDO	MG	LAES
CN	44	211M1044	MRMT/TITN	MG	LAES
CN	45	211M1045	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/NPTN	MG	LAES
CN	46	BBC-17-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	47	BBC-41-2	JPTR/3/CL272//CL272/IR9660	MG	LAES
CN	48	211M1048	CFFY/CL111	MG	LAES
CN	49	211M1049	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL /5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	50	BBC-29-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	51	BBC-49-2	JPTR/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	52	211M1052	1902178/1701121	MG	LAES
CN	53	211M1053	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/CFFY	MG	LAES
CN	54	211M1054	1701121/1801211	MG	LAES
CN	55	211M1055	CL272/TITN	MG	LAES
CN	56	211M1056	CFFY/JPTR	MG	LAES
CN	57	211M1057	1702165/M206	MG	LAES
CN	58	211M1058	1701121/1801211	MG	LAES
CN	59	211M1059	TITN/1502083	MG	LAES
CN	60	211M1060	1902174/1801211	MG	LAES
CN	61	211M1061	M206/1801211	MG	LAES
CN	62	211M1062	CL272/TITN	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	63	211M1063	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MAR S/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	64	211M1064	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MAR S/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	65	211M1065	TITN/1502082	MG	LAES
CN	66	211M1066	CL272/M206	MG	LAES
CN	67	211M1067	CL272/PSDO	MG	LAES
CN	68	211M1068	CL272/M206	MG	LAES
CN	69	211M1069	CL272/M206	MG	LAES
CN	70	211M1070	TITN/M105	MG	LAES
CN	71	BBC-36-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	72	BBC-27-1	CL272/4/CL272/3/CL153//ZHE/CL153	MG	LAES
CN	73	211M1073	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	74	211M1074	1502183/PSDO	MG	LAES
CN	75	211M1075	1701121/1801211	MG	LAES
CN	76	211M1076	CL272/M206	MG	LAES
CN	77	211M1077	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL /5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	78	211M1078	1502183/TITN	MG	LAES
CN	79	211M1079	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	80	211M1080	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MA RS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	81	211M1081	CL272/TITN	MG	LAES
CN	82	211M1082	TITN/1502082	MG	LAES
CN	83	211M1083	TITN/PSDO	MG	LAES
CN	84	211M1084	1502183/CL151	MG	LAES
CN	85	211M1085	M206/TITN	MG	LAES
CN	86	BBC-33-2	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	87	211M1087	1701121/1801211	MG	LAES
CN	88	211M1088	CL272/M206	MG	LAES
CN	89	211M1089	TITN/1502082	MG	LAES
CN	90	211M1090	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/NPTN	MG	LAES
CN	91	211M1091	TITN/PSDO	MG	LAES
CN	92	211M1092	CL272/TITN	MG	LAES
CN	93	211M1093	1701121/1801211	MG	LAES
CN	94	BBC-31-2	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	95	211M1095	CL272/M206	MG	LAES
CN	96	BBC-16-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	97	BBC-28-2	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	98	211M1098	1702165/M206	MG	LAES
CN	99	211M1099	1902174/M206	MG	LAES
CN	100	211M1100	CL272/M206	MG	LAES
CN	101	211M1101	TITN/1502083	MG	LAES
CN	102	211M1102	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	103	211M1103	1701121/1801211	MG	LAES
CN	104	211M1104	TITN/PSDO	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	105	BBC-53-2	M201/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	106	211M1106	CPRS/TITN	MG	LAES
CN	107	BBC-22-2	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	108	211M1108	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	109	211M1109	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/NPTN	MG	LAES
CN	110	211M1110	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/CFFY	MG	LAES
CN	111	211M1111	1502085/TITN	MG	LAES
CN	112	211M1112	1502183/PSDO	MG	LAES
CN	113	211M1113	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	114	211M1114	CFFY/CL111	MG	LAES
CN	115	211M1115	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	116	211M1116	CFFY/JPTR	MG	LAES
CN	117	BBC-47-2	JPTR/3/CL272//CL272/IR9660	MG	LAES
CN	118	211M1118	M206/1801211	MG	LAES
CN	119	211M1119	1701121/1801211	MG	LAES
CN	120	211M1120	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	121	211M1121	CL272/1801211	MG	LAES
CN	122	BBC-20-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	123	211M1123	1702165/M206	MG	LAES
CN	124	211M1124	TITN/1502083	MG	LAES
CN	125	211M1125	TITN/PSDO	MG	LAES
CN	126	211M1126	CL272/TITN	MG	LAES
CN	127	211M1127	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	128	211M1128	1902178/M105	MG	LAES
CN	129	211M1129	1701121/1801211	MG	LAES
CN	130	211M1130	CFFY/JPTR	MG	LAES
CN	131	211M1131	CL272/M206	MG	LAES
CN	132	211M1132	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	133	211M1133	M206/1801211	MG	LAES
CN	134	211M1134	TITN/PSDO	MG	LAES
CN	135	211M1135	1502085/TITN	MG	LAES
CN	136	211M1136	TITN/PSDO	MG	LAES
CN	137	211M1137	CFFY/CL111	MG	LAES
CN	138	211M1138	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	139	BBC-54-2	M201/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	140	211M1140	BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/5/CFFY	MG	LAES
CN	141	211M1141	1702165/M206	MG	LAES
CN	142	211M1142	TITN/1502082	MG	LAES
CN	143	211M1143	1701121/1801211	MG	LAES
CN	144	211M1144	1702165/M206	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CN	145	211M1145	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MAR S/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	146	BBC-27-2	CL272/4/CL272/3/CL153//ZHE/CL153	MG	LAES
CN	147	211M1147	CPRS/TITN	MG	LAES
CN	148	211M1148	CL272/PSDO	MG	LAES
CN	149	BBC-35-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	150	211M1150	CPRS/TITN	MG	LAES
CN	151	211M1151	NEPTUNE/4/BNGL//MERC/RICO/3/MERC/RICO//BNGL /5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	152	211M1152	CL272/TITN	MG	LAES
CN	153	211M1153	CFFY/CL111	MG	LAES
CN	154	211M1154	1502183/TITN	MG	LAES
CN	155	BBC-30-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	156	211M1156	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MAR S/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	157	BBC-52-2	M201/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	158	211M1158	CL272/TITN	MG	LAES
CN	159	211M1159	TITN/M402	MG	LAES
CN	160	211M1160	1702165/M206	MG	LAES
CN	161	211M1161	CPRS/TITN	MG	LAES
CN	162	211M1162	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MA RS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	163	211M1163	CFFY/CL111	MG	LAES
CN	164	211M1164	1701121/1801211	MG	LAES
CN	165	211M1165	1701121/1801211	MG	LAES
CN	166	211M1166	1701121/1801211	MG	LAES
CN	167	211M1167	M206/TITN	MG	LAES
CN	168	211M1168	1502183/TITN	MG	LAES
CN	169	211M1169	1702165/M206	MG	LAES
CN	170	211M1170	CFFY/NPTN	MG	LAES
CN	171	211M1171	1702165/M206	MG	LAES
CN	172	211M1172	M206/1801211	MG	LAES
CN	173	211M1173	1701121/1801211	MG	LAES
CN	174	211M1174	M206/1801211	MG	LAES
CN	175	211M1175	TITN/PSDO	MG	LAES
CN	176	211M1176	1702165/TITN	MG	LAES
CN	177	211M1177	1701121/1801211	MG	LAES
CN	178	211M1178	1702165/M206	MG	LAES
CN	179	211M1179	1702165/M206	MG	LAES
CN	180	211M1180	1502183/CL151	MG	LAES
CN	181	BBC-23-2	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	182	211M1182	CL272/M206	MG	LAES
CN	183	BBC-52-1	M201/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	184	211M1184	1702165/M206	MG	LAES
CN	185	211M1185	CL272/1801211	MG	LAES
CN	186	211M1186	TITN/PSDO	MG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CN	187	211M1187	1702165/M206	MG	LAES
CN	188	211M1188	1502183/CL151	MG	LAES
CN	189	BBC-48-2	JPTR/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	190	211M1190	1702165/M206	MG	LAES
CN	191	BBC-50-1	JPTR/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	192	211M1192	CFFY/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	193	211M1193	1502085/TITN	MG	LAES
CN	194	BBC-24-1	CL272/3/CL272//CL272/IR9660	MG	LAES
CN	195	211M1195	TITN/PSDO	MG	LAES
CN	196	211M1196	CL272/1801211	MG	LAES
CN	197	BBC-32-1	CL272/4/CL272/3/CL272//ZHE/CL272	MG	LAES
CN	198	211M1198	CL272/TITN	MG	LAES
CN	199	211M1199	NPTN/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	200	211M1200	NEPTUNE/5/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS/6/BNGL//MERC/RICO/3/MERC/RICO//BNGL/4/MARS	MG	LAES
CN	201	JPTR	JUPITER	MG	LAES
CN	202	TITN	TITAN	MG	AAES
CN	203	LYNX	LYNX	MG	AAES

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelle type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Crowley; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Conventional Preliminary Yield Long-Grain trial. H. Rouse Caffey Rice Research Station, Rayne, LA

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
154	211L1154	3.5	88.5	105.0	69.3	73.6		11088.6
368	DG263L	5.0	87.5	94.5	61.2	67.6		10988.9
30	211L1030	3.5	87.5	98.0	62.9	72.3		10580.8
83	211L1083	4.0	88.0	101.5	65.4	73.4		10527.5
243	211L1243	3.5	84.5	100.5	63.4	72.6		10518.4
137	211L1137	4.0	88.0	96.5	63.1	71.2		10503.5
56	211L1056	3.5	88.5	90.5	62.8	70.8		10422.5
267	211L1267	4.0	89.0	105.0	66.5	71.3		10388.3
222	211L1222	4.0	91.5	95.5	65.8	72.2		10384.3
186	211L1186	5.0	90.0	94.0	61.2	70.1		10337.4
124	211L1124	3.5	86.5	107.0	67.9	72.7		10322.4
93	211L1093	3.5	89.0	99.5	69.8	74.6		10281.7
165	211L1165	4.0	89.0	103.0	64.2	70.1		10243.2
143	211L1143	3.5	88.0	97.5	64.8	70.8		10240.7
296	211L1296	4.0	87.5	103.5	65.7	72.1		10233.7
8	211L1008	4.0	85.0	94.5	64.5	70.7		10208.2
293	211L1293	3.5	89.0	93.5	61.6	71.9		10170.9
31	211L1031	3.5	88.0	91.0	63.1	70.1		10167.0
281	211L1281	3.5	89.0	94.0	65.3	71.8		10096.3
344	211L1344	3.5	85.5	100.0	61.3	70.1		10072.6
149	211L1149	4.5	89.5	99.5	65.5	72.4		10068.6
252	211L1252	4.0	87.5	99.0	64.6	71.2		10042.3
227	211L1227	3.5	86.0	101.5	64.0	71.3		9998.3
251	211L1251	4.0	84.5	103.0	63.2	72.0		9981.3
286	211L1286	4.0	86.5	99.0	61.2	68.9		9965.1
150	211L1150	3.5	87.0	98.0	64.7	71.1		9940.6
103	211L1103	5.0	87.0	105.5	62.0	70.3		9940.5
268	211L1268	4.0	86.5	97.0	66.2	71.9		9893.1
229	211L1229	4.0	85.0	95.5	63.8	72.3		9887.2
70	211L1070	3.5	88.0	94.0	61.7	70.6		9881.1
208	211L1208	4.0	87.5	96.5	61.4	70.7		9878.2
271	211L1271	3.0	87.5	96.0	64.7	73.7		9875.6
181	211L1181	3.5	89.5	90.5	66.1	73.0		9865.2
232	211L1232	4.0	87.0	88.0	61.4	70.4		9855.4
94	211L1094	3.5	86.5	95.0	67.3	73.4		9848.5
11	211L1011	3.5	87.0	100.5	65.8	72.1		9844.7
18	211L1018	3.5	86.5	93.0	63.9	72.7		9844.1
157	211L1157	4.5	92.0	91.5	63.6	71.5		9836.1
305	211L1305	4.5	87.5	97.5	64.2	70.6		9835.9
348	211L1348	4.5	89.0	100.5	66.1	72.7		9834.1
61	211L1061	4.0	91.0	101.5	63.2	70.5		9814.4
159	211L1159	3.5	87.0	106.5	64.8	72.1		9809.9
21	211L1021	4.5	91.5	90.0	57.3	70.3		9772.4

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
372	RU1902212	4.0	83.5	87.5	68.4	72.7		9764.8
225	211L1225	4.5	89.0	100.5	67.8	72.5		9760.5
40	211L1040	4.5	92.5	101.0	63.8	70.7		9747.1
260	211L1260	4.0	88.5	100.0	61.8	72.0		9730.9
148	211L1148	4.0	88.5	96.5	60.2	69.4		9727.1
228	211L1228	4.5	88.5	99.0	63.1	69.7		9715.3
78	211L1078	4.0	89.5	95.0	63.6	71.4		9694.7
358	211L1358	4.5	90.0	102.0	61.4	70.6		9692.4
237	211L1237	4.5	89.0	102.0	60.8	71.4		9676.2
234	211L1234	4.0	87.0	101.0	63.5	73.3		9675.8
196	211L1196	3.5	86.0	95.0	63.0	69.8		9662.5
2	211L1002	5.0	84.0	101.0	66.7	71.4		9658.2
64	211L1064	4.0	87.0	98.5	63.5	71.2		9655.0
347	211L1347	3.5	83.5	104.5	66.8	72.0		9651.8
90	211L1090	4.0	89.5	95.5	64.4	70.8		9651.3
58	211L1058	4.0	89.0	96.5	61.7	70.1		9634.6
128	211L1128	4.0	88.0	104.0	67.0	73.1		9631.4
87	211L1087	4.5	92.0	90.0	65.9	72.6		9629.1
291	211L1291	3.5	89.0	100.5	65.7	71.4		9626.5
91	211L1091	4.5	86.0	101.5	63.5	71.9		9626.2
32	211L1032	4.5	88.0	96.0	65.1	70.8		9618.8
35	211L1035	4.0	87.5	102.5	66.0	73.1		9611.5
41	211L1041	4.0	89.0	108.0	64.1	70.1		9601.3
17	211L1017	4.0	87.5	97.0	67.0	73.5		9591.3
65	211L1065	3.5	87.5	94.5	63.4	70.9		9587.6
238	211L1238	3.5	89.5	93.5	62.0	70.9		9579.6
112	211L1112	4.0	89.0	98.0	65.5	72.4		9575.3
253	211L1253	3.5	87.5	92.0	60.3	69.4		9565.7
244	211L1244	4.0	89.0	96.0	64.0	71.3		9561.7
254	211L1254	4.0	86.0	96.0	67.3	72.0		9556.0
178	211L1178	3.5	88.5	104.0	61.2	70.2		9548.3
79	211L1079	3.5	86.5	87.5	63.1	70.5		9546.5
27	211L1027	4.0	87.5	101.5	64.1	72.5		9543.3
205	211L1205	4.0	84.5	91.5	64.9	70.5		9540.2
111	211L1111	4.0	88.5	96.5	62.1	71.5		9526.9
279	211L1279	4.0	85.0	89.0	66.5	72.6		9525.1
160	211L1160	3.5	91.5	95.0				9519.4
80	211L1080	4.0	89.0	101.0	63.0	71.2		9508.4
209	211L1209	4.0	88.0	98.5	66.2	72.9		9503.1
282	211L1282	3.5	88.5	101.0	63.8	70.8		9496.0
259	211L1259	4.5	91.0	100.5	61.6	69.4		9494.7
261	211L1261	4.5	89.0	95.5	61.7	70.4		9473.9
155	211L1155	4.0	87.0	104.5	70.0	74.9		9466.0

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
174	211L1174	3.5	88.5	91.5	62.3	70.8		9466.0
98	211L1098	3.5	86.5	91.0	66.2	73.6		9459.3
333	211L1333	5.0	86.0	104.0	63.1	69.9		9459.0
140	211L1140	4.0	88.5	100.0	65.7	71.6		9449.5
28	211L1028	4.0	87.0	96.5	62.0	69.0		9448.4
307	211L1307	4.0	89.0	92.0	61.3	71.5		9444.8
182	211L1182	4.0	88.0	102.0	62.2	70.9		9439.9
352	211L1352	3.5	83.0	94.5	65.3	72.9		9438.6
194	211L1194	4.0	88.0	97.0	66.1	73.0		9433.8
60	211L1060	4.0	88.5	101.5	62.2	71.7		9418.5
97	211L1097	3.5	86.5	96.0	65.2	71.3		9404.3
376	211L1376	4.5	89.0	99.0	65.8	71.0		9403.3
258	211L1258	3.5	83.5	92.0	63.0	72.1		9393.6
189	211L1189	4.0	85.0	96.5	66.7	73.3		9387.0
139	211L1139	3.5	88.0	94.0	59.9	73.3		9386.7
300	211L1300	3.5	88.0	95.0	68.9	73.9		9381.3
108	211L1108	4.0	88.0	97.0	68.1	74.2		9372.8
62	211L1062	3.5	87.5	88.5	61.6	72.6		9364.3
200	211L1200	4.0	88.5	102.0	65.5	72.4		9351.7
171	211L1171	3.5	88.0	95.5	65.3	72.5		9349.3
185	211L1185	4.0	89.0	99.0	61.3	72.2		9346.3
144	211L1144	4.0	88.0	103.5	65.4	72.7		9329.5
276	211L1276	4.0	86.0	95.5	63.0	71.1		9323.8
342	211L1342	4.0	86.0	94.5	65.6	72.5		9312.5
294	211L1294	4.5	85.5	101.5	68.8	74.2		9308.8
44	211L1044	3.5	86.5	88.0	63.0	70.0		9305.7
118	211L1118	3.5	87.0	105.0	62.8	70.3		9300.7
378	211L1378	4.0	89.0	94.0	64.3	71.4		9279.3
362	211L1362	3.5	85.0	94.0	58.2	70.1		9273.0
105	211L1105	3.0	89.0	98.0	64.5	70.9		9268.4
338	211L1338	3.0	89.0	109.0	64.8	70.4		9267.8
85	211L1085	4.0	91.0	98.0	62.9	71.6		9265.7
230	211L1230	3.5	90.0	99.5	61.4	69.6		9263.5
73	211L1073	3.0	83.0	101.5	62.7	72.5		9250.7
367	Cheniere	4.0	90.0	93.0	66.7	72.2		9248.4
201	211L1201	3.0	87.5	100.5	59.7	69.8		9245.8
99	211L1099	3.0	86.5	95.5	60.4	75.7		9237.7
141	211L1141	4.0	84.0	81.5	63.8	72.0		9234.8
127	211L1127	4.5	89.5	97.5	64.4	70.9		9225.7
255	211L1255	3.5	88.5	97.5	66.7	72.3		9217.1
136	211L1136	4.0	86.5	96.0	64.1	71.9		9210.6
297	211L1297	4.0	87.0	104.5	61.9	69.8		9210.1
212	211L1212	5.5	89.0	101.0	65.4	70.9		9188.1

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
156	211L1156	4.0	88.0	89.5	64.2	70.8		9173.4
152	211L1152	4.0	90.0	94.0	66.8	72.1		9171.5
76	211L1076	3.5	87.5	98.5	65.7	73.7		9170.9
138	211L1138	4.5	89.0	98.5	60.5	71.2		9168.3
277	211L1277	4.0	85.0	102.5	64.1	72.2		9167.6
66	211L1066	4.0	88.0	100.0	67.3	72.2		9157.2
247	211L1247	4.0	88.0	102.5	65.0	71.4		9150.9
379	211L1379	4.5	89.5	97.0	66.1	72.2		9145.3
134	211L1134	4.5	89.5	99.5	63.3	70.8		9139.4
86	211L1086	3.5	89.5	94.5	66.7	72.3		9135.1
49	211L1049	4.0	86.5	93.0	63.7	69.6		9133.3
371	RU1902207	4.5	88.5	100.5	64.5	73.4		9132.5
223	211L1223	4.5	91.5	109.5	61.6	71.6		9130.0
306	211L1306	3.5	86.0	97.0	62.3	73.1		9122.7
250	211L1250	3.5	84.5	87.5	68.1	73.1		9116.4
175	211L1175	4.0	88.5	96.0	62.8	70.4		9101.8
214	211L1214	4.0	83.5	92.0	57.1	71.3		9099.2
57	211L1057	4.5	90.5	94.0	66.7	72.3		9096.2
48	211L1048	4.0	88.5	103.0	63.5	71.9		9093.8
217	211L1217	5.0	89.5	91.0	62.4	69.7		9081.4
71	211L1071	4.0	86.5	102.0	64.9	71.6		9077.1
203	211L1203	4.0	87.5	94.0	65.6	73.3		9077.0
100	211L1100	4.5	92.0	84.0	63.9	71.1		9072.9
69	211L1069	3.5	88.0	90.5	67.2	73.1		9072.4
224	211L1224	4.0	89.5	97.5	67.4	72.8		9068.2
336	211L1336	3.5	83.0	96.0	62.5	70.7		9054.4
3	211L1003	3.5	89.0	99.5	65.1	71.4		9054.4
120	211L1120	4.5	93.0	89.0	65.0	70.0		9044.2
290	211L1290	4.0	88.0	100.0	64.5	70.8		9027.2
63	211L1063	3.5	86.5	97.5	63.0	70.6		9024.4
129	211L1129	4.0	84.0	91.0	61.0	70.8		9006.7
326	211L1326	4.0	89.0	96.0	54.1	72.2		9005.1
322	211L1322	4.0	88.0	96.0	54.9	73.1		9003.9
210	211L1210	4.5	86.0	102.0	65.9	72.7		8996.9
52	211L1052	4.5	89.0	92.5	63.2	69.6		8992.8
177	211L1177	4.0	89.0	94.5	61.5	72.1		8991.4
233	211L1233	3.5	86.5	103.5	60.7	71.5		8987.7
125	211L1125	4.0	82.5	101.0	62.9	70.1		8984.6
84	211L1084	3.5	84.5	101.5	63.4	70.8		8984.2
377	211L1377	4.0	89.5	94.5	67.0	72.6		8978.9
22	211L1022	4.0	89.5	93.0	60.6	72.9		8975.4
215	211L1215	3.5	88.0	104.0	63.0	70.6		8968.0
81	211L1081	4.5	87.5	106.5	64.7	71.0		8954.8

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
19	211L1019	4.0	87.0	99.5	66.3	72.8		8939.3
20	211L1020	3.5	89.0	100.0	60.7	70.4		8938.9
231	211L1231	4.5	86.5	92.5	63.3	69.8		8922.6
38	211L1038	3.5	91.0	92.0	65.4	70.5		8919.3
211	211L1211	4.0	89.0	101.0	68.9	73.6		8918.1
6	211L1006	3.0	88.0	98.0	66.6	72.4		8907.7
239	211L1239	4.0	90.0	94.5	66.2	72.6		8903.9
204	211L1204	3.0	87.0	92.5	61.4	73.9		8891.8
123	211L1123	4.0	85.5	96.5	65.5	71.9		8881.9
289	211L1289	4.0	86.5	97.5	61.0	70.1		8879.1
115	211L1115	3.5	88.0	107.0	59.3	70.6		8872.6
337	211L1337	4.5	85.5	94.5	70.3	74.9		8860.2
245	211L1245	3.5	84.0	98.5	63.5	72.6		8858.7
287	211L1287	3.5	88.5	101.5	67.6	76.9		8854.8
188	211L1188	4.0	86.0	94.0	63.8	71.9		8853.3
126	211L1126	3.5	88.0	98.0	63.8	72.3		8830.1
51	211L1051	3.5	88.0	98.5	64.9	71.3		8827.6
42	211L1042	4.0	92.0	88.0	64.6	72.4		8826.8
331	211L1331	4.0	92.0	101.0	61.3	71.0		8823.9
334	211L1334	4.0	83.0	97.5	62.9	70.3		8814.3
172	211L1172	4.0	88.5	94.0	62.2	72.6		8808.3
187	211L1187	5.0	90.0	85.0	65.1	72.4		8805.8
218	211L1218	5.0	88.5	93.5	65.5	72.8		8801.7
274	211L1274	4.0	85.5	92.5	63.6	73.5		8786.4
145	211L1145	4.5	87.0	93.0	66.5	72.6		8775.9
199	211L1199	3.5	86.0	95.5	55.3	74.0		8775.8
256	211L1256	3.5	87.0	88.5	65.5	71.7		8762.2
329	211L1329	4.5	89.0	100.0	61.3	72.9		8757.8
266	211L1266	4.0	88.0	91.0	64.1	71.7		8757.0
241	211L1241	4.5	89.5	88.5	61.1	70.2		8756.6
169	211L1169	4.0	89.5	93.0	62.6	71.3		8752.7
59	211L1059	4.0	89.0	100.0	65.1	73.7		8738.8
219	211L1219	4.0	87.5	99.0	61.1	70.3		8729.0
240	211L1240	5.0	91.0	96.5	63.3	70.0		8721.1
318	211L1318	4.0	90.5	96.5	67.0	73.1		8718.0
313	211L1313	3.5	88.5	106.5	49.7	69.1		8708.5
92	211L1092	3.5	84.5	99.0	62.3	70.1		8706.6
1	211L1001	4.0	86.0	94.0	64.9	71.0		8704.6
173	211L1173	4.0	90.5	94.5	67.9	73.3		8695.9
164	211L1164	3.5	84.5	92.0	55.7	70.9		8691.7
375	Mermentau	3.5	89.0	95.5	71.4	74.3		8680.7
193	211L1193	4.0	88.0	94.0	67.6	73.8		8679.6
380	211L1380	4.0	94.0	91.0	58.8	71.6		8674.6

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
33	211L1033	4.0	86.0	92.5	64.2	72.4		8658.3
283	211L1283	4.0	85.0	99.0	64.4	73.1		8656.1
68	211L1068	4.0	90.5	93.0	65.1	71.2		8648.0
95	211L1095	4.5	89.0	95.5	67.0	72.7		8639.2
249	211L1249	3.5	84.5	103.0	63.2	73.2		8631.7
74	211L1074	4.0	83.5	92.0	65.6	72.7		8624.2
119	211L1119	4.0	88.0	91.0	66.0	74.3		8618.0
37	211L1037	3.5	90.0	91.0	65.2	72.7		8602.5
50	211L1050	4.0	87.0	91.5	69.1	73.7		8599.8
122	211L1122	4.0	87.5	102.0	66.8	72.1		8596.3
310	211L1310	4.0	88.0	96.5	51.9	74.9		8596.1
121	211L1121	3.0	89.5	90.0	68.0	72.4		8593.6
363	211L1363	3.0	82.5	106.0	67.0	72.0		8585.6
77	211L1077	3.5	89.0	98.0	65.9	70.7		8585.2
278	211L1278	4.0	89.0	103.5	59.8	68.2		8579.7
15	211L1015	4.5	88.0	96.0	64.9	72.4		8579.4
153	211L1153	4.0	91.0	95.0	66.9	72.8		8575.3
328	211L1328	3.5	87.0	102.5	50.2	70.1		8574.0
163	211L1163	4.5	93.0	91.0	67.9	72.9		8572.5
280	211L1280	4.5	88.0	106.5	60.9	70.7		8571.7
162	211L1162	5.0	91.0	87.0	62.7	72.3		8566.2
96	211L1096	4.5	92.0	96.5	63.3	71.3		8560.2
319	211L1319	4.0	87.0	100.5	65.0	73.1		8556.3
323	211L1323	3.5	88.5	93.0	49.8	71.4		8544.2
369	Thad	3.0	82.5	89.5	59.3	71.5		8539.2
374	RU2002166	4.0	89.0	97.0	65.5	70.6		8532.2
183	211L1183	5.0	86.5	96.5	63.7	71.8		8522.3
351	211L1351	5.0	92.0	105.0	61.0	68.6		8519.5
321	BBC12-1	4.5	89.5	100.0	63.0	71.3		8513.4
114	211L1114	5.0	89.0	95.0	64.7	70.8		8510.4
299	211L1299	5.0	91.5	88.0	65.5	71.9		8500.6
4	211L1004	5.0	89.0	95.0	61.7	70.0		8498.9
180	211L1180	5.0	91.5	97.5	63.4	70.9		8479.5
12	211L1012	3.5	85.0	97.0	65.5	72.2		8473.0
146	211L1146	5.0	94.0	83.5	62.8	69.5		8465.9
53	211L1053	4.0	90.0	102.0	68.7	72.8		8458.0
272	211L1272	4.0	82.5	98.0	64.2	71.3		8453.3
109	211L1109	4.5	85.5	95.5	63.1	72.4		8445.9
67	211L1067	5.0	90.0	103.0	64.0	70.7		8432.6
9	211L1009	4.5	88.5	99.5	56.5	73.5		8424.8
340	BBC14-2	4.5	88.0	92.5	61.9	70.2		8422.2
142	211L1142	4.0	87.5	95.0	65.1	72.7		8418.7
236	211L1236	4.0	85.5	94.5	65.1	71.7		8416.6

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
207	211L1207	4.0	89.0	98.5	67.9	72.4		8415.0
349	211L1349	4.5	86.5	101.0	60.4	69.7		8412.3
147	211L1147	3.5	83.5	97.5	63.9	71.8		8397.1
110	211L1110	3.5	89.5	101.5	65.3	70.7		8389.9
235	211L1235	4.0	87.0	92.0	66.7	74.8		8378.5
26	211L1026	4.0	89.0	105.0	67.9	71.5		8376.5
202	211L1202	4.0	87.5	97.0	62.5	70.4		8374.5
158	211L1158	5.5	95.5	96.5	64.8	71.5		8372.3
360	211L1360	4.0	91.0	93.0	63.0	69.8		8364.5
257	211L1257	3.5	84.0	97.0	65.1	73.1		8363.2
335	211L1335	4.0	87.5	100.5	63.3	69.8		8361.8
168	211L1168	4.0	87.5	83.5	65.7	72.5		8361.0
275	211L1275	4.0	90.5	103.0	65.5	71.3		8360.3
131	211L1131	3.5	86.5	86.0	62.0	72.0		8353.8
320	211L1320	4.0	89.0	88.5	61.7	72.8		8349.1
47	211L1047	4.0	83.5	90.0	65.8	72.8		8347.3
89	211L1089	5.0	89.0	98.5	70.9	75.3		8345.0
264	211L1264	4.0	86.5	98.0	66.3	71.8		8342.9
339	211L1339	3.0	83.0	100.0	58.3	70.4		8330.6
39	211L1039	4.0	88.5	98.0	65.9	72.9		8317.6
308	211L1308	5.0	90.5	82.0	65.3	72.2		8301.7
130	211L1130	4.0	91.5	100.0	65.2	71.5		8298.7
221	211L1221	4.0	88.0	90.0	66.0	72.8		8293.7
246	211L1246	4.0	89.5	98.5	64.2	71.2		8292.7
135	211L1135	3.0	84.5	100.5	59.3	70.7		8292.6
226	211L1226	4.0	85.5	100.5	61.9	71.8		8285.0
213	211L1213	3.5	83.5	100.5	60.1	70.6		8283.8
325	211L1325	3.5	90.0	92.0	63.2	71.2		8251.0
295	211L1295	4.5	91.0	92.0	65.0	70.3		8232.0
191	211L1191	4.5	87.5	94.5	64.0	73.2		8229.1
14	211L1014	4.5	87.5	106.5	62.8	71.0		8228.9
24	211L1024	4.0	88.5	91.0	68.7	72.8		8228.6
25	211L1025	4.0	89.0	90.5	67.9	72.2		8227.1
304	211L1304	3.0	78.5	98.5	51.4	71.7		8224.5
248	211L1248	3.0	87.5	107.5	62.8	71.1		8205.3
288	211L1288	4.0	84.0	99.0	65.4	72.6		8195.9
312	211L1312	3.5	85.0	106.5	64.7	72.1		8191.5
270	211L1270	4.0	91.5	99.5	67.6	71.8		8191.5
192	211L1192	4.0	86.5	88.0	66.1	70.9		8189.6
184	211L1184	4.5	90.0	92.0	63.4	71.5		8189.4
72	211L1072	4.5	91.0	87.0	66.3	73.3		8186.4
46	211L1046	5.0	90.0	94.0	61.2	71.3		8185.7
365	211L1365	3.5	88.0	94.5	57.1	72.8		8171.0

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
220	211L1220	5.0	91.5	91.5	64.6	69.9		8157.3
341	211L1341	3.5	88.0	104.0	60.4	69.4		8149.5
345	211L1345	5.0	93.5	99.5	65.1	71.3		8139.8
324	211L1324	4.0	86.5	91.5	65.0	70.9		8124.2
309	211L1309	5.5	86.5	94.0	61.4	70.5		8121.2
198	211L1198	4.5	85.5	97.5	63.8	71.0		8119.6
311	211L1311	4.0	92.5	96.5	65.1	71.2		8090.7
195	211L1195	4.5	89.5	96.5	65.2	71.3		8071.0
176	211L1176	3.5	84.5	93.5	64.3	71.7		8065.5
23	211L1023	3.0	86.5	94.5	55.2	71.3		8051.1
273	211L1273	4.0	85.0	94.0	65.0	70.5		8032.0
36	211L1036	5.0	90.0	95.0	65.7	71.5		8031.9
301	211L1301	4.0	90.0	80.5	66.8	72.6		8022.4
132	211L1132	4.0	93.5	95.0	62.3	70.9		8000.5
327	211L1327	4.0	87.0	100.0	54.1	70.0		7985.3
170	211L1170	4.5	87.5	93.0	63.0	73.4		7968.6
167	211L1167	5.0	90.0	100.0	64.4	71.6		7957.3
5	211L1005	4.5	91.0	89.5	69.7	75.2		7948.7
316	211L1316	4.5	89.0	94.5	56.9	72.1		7944.7
269	211L1269	4.0	83.5	88.5	65.6	71.4		7942.1
317	211L1317	3.0	88.5	100.5	58.6	69.7		7935.2
45	211L1045	5.0	86.5	95.5	56.8	71.1		7923.7
117	211L1117	4.5	83.5	100.5	62.2	71.0		7915.5
366	211L1366	4.0	82.0	98.0	66.9	71.2		7914.3
373	RU2002126	3.0	85.0	90.5	62.5	72.5		7900.5
298	211L1298	4.5	86.5	88.5	61.5	69.5		7896.9
355	211L1355	3.0	86.5	93.0	61.3	72.8		7889.8
303	211L1303	5.0	89.5	97.5	67.1	73.4		7880.9
332	211L1332	4.0	86.5	117.0	58.8	72.4		7879.5
116	211L1116	4.0	86.0	98.5	64.1	73.1		7876.8
133	211L1133	4.0	88.0	107.5	66.4	72.4		7844.0
359	211L1359	4.5	87.5	96.0	66.2	72.7		7834.0
88	211L1088	4.0	87.5	93.0	55.9	73.5		7830.5
343	211L1343	5.0	86.0	99.5	69.9	75.2		7815.0
190	211L1190	4.0	88.5	86.5	63.8	71.5		7812.8
263	211L1263	4.5	89.5	89.5	64.0	72.7		7805.9
285	211L1285	4.0	89.0	89.5	65.6	71.1		7804.8
54	211L1054	3.5	88.0	92.5	57.3	70.7		7738.8
10	211L1010	4.5	88.0	91.5	59.9	71.8		7734.6
7	211L1007	4.0	88.0	95.0	61.4	70.0		7728.0
101	211L1101	4.0	89.5	94.5	64.4	71.3		7723.8
161	211L1161	5.5	91.0	95.5	63.9	71.1		7722.4
113	211L1113	4.0	86.5	90.0	61.1	71.0		7715.8

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
179	211L1179	4.0	88.0	100.5	67.2	72.5		7683.4
364	211L1364	4.5	88.5	96.5	62.6	70.2		7682.5
216	211L1216	4.5	88.5	98.5	65.7	72.9		7657.9
350	211L1350	5.0	90.5	113.0	61.8	70.2		7624.8
354	211L1354	5.0	91.5	93.5	62.7	71.6		7618.9
107	211L1107	4.5	88.0	101.5	62.3	70.3		7601.9
353	211L1353	4.0	89.5	97.0	61.7	72.4		7586.7
166	211L1166	4.0	89.5	95.5	63.2	71.2		7574.4
43	211L1043	3.0	86.5	91.0	65.0	71.5		7526.1
197	211L1197	3.5	89.0	92.0	61.0	69.9		7499.7
13	211L1013	3.0	84.0	101.5	66.9	72.8		7477.3
75	211L1075	4.0	84.0	90.0	62.6	72.6		7473.2
16	211L1016	4.5	82.5	93.0	67.4	74.6		7455.6
106	211L1106	4.5	86.0	98.0	65.2	72.0		7436.8
262	211L1262	3.0	84.0	102.5	65.7	71.8		7403.0
346	211L1346	4.0	88.0	94.0	67.8	72.4		7346.3
242	211L1242	4.0	88.5	92.5	63.7	70.5		7334.8
55	211L1055	5.0	90.5	89.0	64.7	71.9		7319.5
315	211L1315	5.0	88.5	92.0	52.5	70.7		7285.4
206	211L1206	5.0	91.0	98.5	69.7	74.2		7228.9
29	211L1029	3.5	84.5	103.0	58.6	70.6		7225.7
284	211L1284	4.5	91.0	80.5	60.3	71.3		7153.9
356	211L1356	3.0	84.0	91.0	60.4	71.4		7151.9
34	211L1034	3.5	84.5	88.5	62.3	71.1		7113.2
314	211L1314	4.0	92.0	96.0	64.8	70.0		7107.9
330	211L1330	4.5	91.5	95.0	61.6	69.5		6996.0
265	211L1265	4.0	85.5	93.5	64.4	72.3		6832.8
102	211L1102	4.5	87.0	91.0	66.2	73.2		6776.8
370	CLL17	3.5	86.5	96.0	62.4	69.6		6720.2
151	211L1151	3.0	82.0	102.0	57.0	70.7		6640.6
82	211L1082	5.0	86.0	92.5	61.0	71.4		6623.4
361	211L1361	5.0	90.5	85.5	67.0	72.9		6345.7
292	211L1292	5.0	95.5	85.5	62.5	68.9		6215.1
302	211L1302	3.0	73.5	106.0	61.4	72.6		6006.3
104	211L1104	5.0	89.5	91.0	63.5	72.5		5952.4
357	211L1357	4.0	89.0	110.5	64.6	72.1		5639.1

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

Table 4. Grain and milling yields and agronomic performance of entries in the 2020 Conventional Preliminary Yield Medium-Grain trial. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
119	211M1119	2.5	87.5	121.0	69.4	73.0		12727.8
87	211M1087	3.0	88.5	117.5	69.9	72.5		12669.8
155	BBC-30-1	4.0	90.0	95.0	69.0	71.8		12662.2
166	211M1166	2.5	89.0	112.0	68.6	72.4		12644.5
54	211M1054	3.0	88.5	110.5	69.3	72.5		12588.9
164	211M1164	3.5	87.5	117.5	70.0	72.7		12579.7
130	211M1130	2.0	89.0	108.5	68.8	73.1		12550.1
162	211M1162	3.0	89.0	102.0	67.9	71.9		12393.0
101	211M1101	2.5	88.0	102.5	69.5	72.9		12356.7
173	211M1173	2.5	88.0	114.5	69.4	73.3		12350.4
124	211M1124	2.5	86.5	104.0	68.3	71.9		12278.9
103	211M1103	3.0	88.5	113.5	70.9	73.6		12277.1
138	211M1138	3.0	89.5	98.0	69.4	72.5		12263.3
97	BBC-28-2	3.5	88.0	97.5	70.3	73.3		12240.9
203	Lynx	2.5	88.0	104.5	69.7	73.1		12153.0
58	211M1058	3.0	88.0	117.0	68.7	72.5		12144.0
143	211M1143	3.0	88.0	113.0	68.9	72.2		12087.2
93	211M1093	3.0	88.0	110.0	69.8	73.0		12077.3
33	211M1033	3.0	88.0	110.5	70.1	72.9		12058.8
50	BBC-29-1	1.5	89.5	96.0	68.8	72.0		12039.2
189	BBC-48-2	3.5	89.5	102.0	70.2	72.7		11982.5
154	211M1154	3.0	88.0	102.5	69.7	72.7		11936.0
34	211M1034	3.5	90.0	97.0	68.3	72.3		11920.4
51	BBC-49-2	3.5	90.0	112.5	70.2	72.4		11868.6
75	211M1075	3.5	88.5	108.0	68.7	72.6		11833.3
115	211M1115	2.0	89.0	97.5	69.6	72.4		11799.4
111	211M1111	4.0	87.5	109.0	67.6	70.0		11784.0
78	211M1078	3.0	87.0	112.0	68.6	71.9		11674.2
126	211M1126	3.5	85.5	112.0	67.7	72.3		11671.4
49	211M1049	2.5	90.0	97.5	68.7	72.3		11669.0
18	211M1018	2.5	88.0	108.0	69.4	72.4		11663.7
52	211M1052	3.5	89.5	113.0	69.2	72.1		11640.7
77	211M1077	3.0	90.0	96.5	68.8	71.7		11612.2
32	211M1032	2.5	91.0	98.5	69.1	72.2		11609.6
64	211M1064	3.0	89.5	100.0	69.7	72.8		11564.4
156	211M1156	3.5	89.5	103.0	69.3	72.3		11555.9
165	211M1165	4.0	88.5	110.0	67.3	72.2		11498.3
59	211M1059	2.0	87.5	115.5	70.6	73.0		11480.9
92	211M1092	3.0	86.5	105.0	69.3	72.2		11432.0
177	211M1177	2.5	88.0	116.5	64.3	68.9		11387.8
129	211M1129	4.0	88.5	104.5	67.9	71.3		11378.9
116	211M1116	3.0	88.5	98.5	68.9	72.8		11324.7
56	211M1056	3.0	88.5	105.0	68.1	70.9		11314.9

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
63	211M1063	3.5	89.5	100.0	70.3	73.5		11304.3
149	BBC-35-1	3.5	90.0	101.0	67.0	70.8		11263.7
202	Titan	2.5	84.5	105.5	69.2	73.6		11248.5
108	211M1108	3.5	90.0	97.0	70.1	73.7		11246.3
117	BBC-47-2	3.5	91.0	130.0	64.3	69.0		11241.1
71	BBC-36-1	3.0	84.5	100.0	70.1	72.1		11228.4
158	211M1158	3.0	88.5	114.0	69.3	71.7		11224.2
132	211M1132	3.0	88.5	97.0	69.2	72.9		11211.1
146	BBC-27-2	3.5	88.0	107.5	68.2	71.8		11178.3
27	211M1027	2.5	88.5	107.0	70.7	72.6		11155.2
72	BBC-27-1	3.0	84.0	102.5	66.9	71.6		11154.6
140	211M1140	3.5	89.5	123.5	68.4	72.2		11132.3
170	211M1170	2.5	90.0	122.0	66.2	71.5		11121.8
201	Jupiter	4.0	91.5	100.0	65.4	69.1		11098.3
151	211M1151	3.5	89.5	98.5	69.8	72.6		11065.0
86	BBC-33-2	3.5	86.5	91.5	68.1	72.6		10956.0
11	BBC-21-1	3.5	93.5	105.5	68.4	71.6		10929.2
107	BBC-22-2	3.5	93.5	107.0	69.5	72.4		10920.1
135	211M1135	4.0	85.0	96.0	68.7	72.8		10907.1
193	211M1193	3.5	83.5	107.5	68.7	72.1		10883.9
114	211M1114	3.0	79.5	97.5	67.0	72.9		10852.1
14	211M1014	4.0	89.5	109.0	68.8	72.2		10845.6
197	BBC-32-1	4.0	88.0	97.5	66.7	71.3		10822.9
5	211M1005	3.5	84.0	107.5	67.8	72.7		10805.9
145	211M1145	3.0	88.5	108.0	67.6	71.8		10790.1
121	211M1121	4.0	89.0	104.0	69.1	73.3		10779.9
60	211M1060	3.5	89.0	112.0	68.8	71.8		10770.0
94	BBC-31-2	3.5	89.0	93.0	70.6	72.5		10739.7
22	211M1022	3.0	88.0	92.5	68.1	71.8		10696.0
6	211M1006	3.5	89.0	106.5	66.8	71.0		10692.6
161	211M1161	3.0	80.5	101.0	69.8	72.0		10689.3
44	211M1044	4.0	90.0	92.0	71.2	73.1		10675.2
163	211M1163	2.5	87.5	109.5	67.2	70.6		10674.9
200	211M1200	3.0	88.5	93.0	69.2	73.7		10656.3
185	211M1185	4.0	88.5	100.0	69.4	72.7		10605.7
168	211M1168	3.5	89.0	108.0	70.8	73.2		10587.8
30	211M1030	4.0	87.0	111.5	68.2	72.1		10521.5
55	211M1055	3.0	87.0	104.5	69.2	71.9		10484.4
167	211M1167	3.0	82.0	118.5	68.8	71.6		10448.9
82	211M1082	4.0	84.5	110.5	68.2	71.1		10445.4
194	BBC-24	3.5	93.0	102.5	66.8	71.1		10405.1
81	211M1081	3.0	88.0	108.5	69.4	72.7		10360.1
192	211M1192	3.5	83.0	117.0	69.0	71.8		10358.6

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
41	211M1041	3.5	88.5	101.5	68.8	73.2		10328.5
152	211M1152	3.5	87.5	102.5	68.2	71.6		10301.1
38	211M1038	2.5	88.5	122.5	69.2	73.4		10254.0
80	211M1080	3.0	82.0	101.0	69.2	72.3		10246.5
106	211M1106	3.5	85.0	98.0	69.5	71.9		10245.6
84	211M1084	3.0	84.5	102.0	70.3	73.4		10197.0
73	211M1073	3.0	91.5	122.0	69.4	71.6		10196.8
85	211M1085	3.5	80.0	122.5	68.1	72.0		10167.7
198	211M1198	3.0	85.0	108.5	69.5	72.2		10142.5
110	211M1110	2.5	87.0	126.5	70.2	72.7		10133.1
196	211M1196	3.5	89.0	104.5	68.1	71.6		10104.1
159	211M1159	2.5	82.5	103.5	68.1	71.7		10090.1
53	211M1053	2.5	87.5	120.0	70.0	72.9		10089.8
120	211M1120	3.0	88.5	96.5	64.4	70.3		10074.1
131	211M1131	3.5	84.0	111.5	68.9	71.9		10071.2
172	211M1172	4.0	84.5	113.0	66.9	71.3		10032.1
66	211M1066	4.0	83.5	108.0	68.8	72.0		10028.2
191	BBC-50-1	4.0	93.0	94.5	69.1	73.1		10018.6
45	211M1045	3.0	83.5	110.5	68.9	72.7		9897.7
76	211M1076	4.0	85.5	103.5	67.8	72.3		9884.8
68	211M1068	3.0	85.0	114.0				9879.0
62	211M1062	3.0	86.5	98.0	66.0	72.2		9878.2
118	211M1118	3.0	84.0	118.0	68.4	72.1		9873.3
69	211M1069	3.5	83.5	109.5	66.9	71.0		9873.3
13	211M1013	2.5	82.0	117.5	64.9	69.8		9873.1
181	BBC-23-2	3.0	88.0	96.5	70.5	74.8		9839.2
153	211M1153	3.0	83.0	108.5	69.8	73.7		9819.4
36	BBC-33-1	4.5	89.0	90.0	69.0	73.6		9815.4
105	BBC-53-2	3.5	89.0	100.0	66.9	70.6		9813.4
70	211M1070	3.5	80.5	101.5	68.2	72.4		9788.9
20	211M1020	3.0	85.5	97.0	70.2	72.7		9759.0
188	211M1188	3.5	86.0	102.0	65.5	71.9		9750.4
99	211M1099	3.5	85.0	100.0	68.5	71.6		9741.6
25	211M1025	3.5	83.0	111.0	67.9	71.6		9713.7
176	211M1176	3.5	88.5	110.0	68.9	71.2		9631.5
43	211M1043	2.0	83.5	100.0	69.7	72.7		9619.1
40	211M1040	3.5	83.0	107.0	66.4	70.6		9609.5
187	211M1187	3.0	79.0	106.5	67.3	73.2		9590.7
141	211M1141	3.5	82.0	103.0	69.5	73.8		9576.7
88	211M1088	3.5	83.0	112.0	69.7	73.0		9504.9
19	211M1019	3.5	83.5	113.5	67.9	74.6		9504.2
48	211M1048	2.5	83.5	113.5	68.6	73.5		9504.2
157	BBC-52-2	4.0	82.5	100.5	65.3	70.6		9494.7

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
17	211M1017	2.5	88.0	104.5	69.8	71.9		9492.6
147	211M1147	4.5	85.0	89.5	70.1	72.8		9469.6
179	211M1179	3.0	82.5	108.0	67.8	72.2		9452.8
137	211M1137	3.0	82.0	108.0	70.8	73.4		9447.6
2	211M1002	4.0	91.5	87.0	67.2	72.1		9436.7
122	BBC-20-1	3.5	93.5	106.0	66.8	70.8		9426.7
142	211M1142	4.0	87.5	106.0	68.8	72.1		9413.2
10	211M1010	3.0	84.0	117.0	69.9	71.9		9405.1
89	211M1089	3.0	82.0	107.0	67.1	71.9		9388.6
150	211M1150	3.5	82.5	97.5	65.9	71.9		9371.8
8	BBC-18-2	3.0	92.5	97.0				9356.2
37	211M1037	3.0	84.0	103.0	68.5	72.6		9343.2
1	211M1001	2.0	82.0	113.0	66.3	71.6		9250.9
57	211M1057	2.0	79.0	116.0	65.1	71.7		9226.7
148	211M1148	3.5	85.0	106.5	70.0	72.7		9181.7
65	211M1065	4.0	84.5	103.0	69.7	72.8		9180.3
133	211M1133	3.0	82.0	109.0	67.1	71.7		9139.3
9	211M1009	3.5	79.5	100.5	65.5	71.7		9096.8
3	211M1003	3.0	79.5	102.5	67.2	71.7		9096.5
127	211M1127	3.5	81.5	105.5	68.8	73.1		9076.0
174	211M1174	3.0	82.0	105.5	68.7	71.8		9075.9
123	211M1123	3.0	80.0	99.5	67.4	72.8		9061.3
183	BBC-52-1	4.0	88.5	103.0	62.9	68.6		9037.8
61	211M1061	3.5	82.0	112.5	68.6	72.5		9018.5
90	211M1090	2.5	81.0	106.0	63.7	73.0		9003.1
95	211M1095	3.5	87.5	99.0	64.6	69.0		8990.4
74	211M1074	3.0	86.5	104.5	69.1	71.6		8976.9
67	211M1067	2.5	83.0	96.0	71.2	74.6		8964.6
21	211M1021	4.0	84.0	103.0	70.8	72.1		8952.1
190	211M1190	3.5	80.5	101.0	68.5	72.1		8951.2
113	211M1113	3.0	82.5	114.5	70.7	72.7		8932.1
195	211M1195	3.5	86.0	106.5	68.3	72.3		8919.2
171	211M1171	3.0	77.0	104.5	68.5	73.0		8899.4
180	211M1180	3.0	86.0	91.5	69.7	73.0		8890.4
100	211M1100	3.0	82.5	106.0	67.4	72.9		8874.1
125	211M1125	3.5	81.0	104.5	68.7	72.0		8797.5
23	211M1023	2.0	80.0	119.5	69.2	72.8		8792.9
31	211M1031	3.0	82.0	114.5	67.1	70.0		8774.2
178	211M1178	2.5	79.0	99.0	65.7	70.5		8766.7
15	BBC-45-1	4.5	91.0	89.0	66.7	70.9		8756.7
186	211M1186	4.0	85.5	110.5	67.3	71.5		8749.9
42	211M1042	3.0	83.5	102.5	69.1	73.1		8719.2
29	211M1029	3.0	80.0	101.5	66.5	70.8		8706.8

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
39	211M1039	3.5	81.5	109.0	68.1	71.4		8686.0
16	211M1016	3.0	80.5	103.0	66.7	71.8		8623.8
26	211M1026	3.5	79.5	98.0	69.1	72.6		8617.3
102	211M1102	2.5	84.5	101.0	60.4	70.2		8614.9
139	BBC-54-2	5.0	91.0	94.5	68.9	73.4		8516.8
184	211M1184	3.0	82.0	108.0	68.9	73.3		8483.3
199	211M1199	2.5	83.0	109.0	70.0	73.5		8476.7
109	211M1109	3.5	89.5	109.0	69.9	72.8		8396.4
160	211M1160	3.0	79.0	107.5	67.0	70.2		8361.2
35	211M1035	2.5	81.5	117.5	66.6	71.6		8358.1
175	211M1175	3.5	87.5	107.0	68.9	71.3		8338.0
24	BBC-15-1	2.0	86.5	95.5	67.7	71.8		8195.2
96	BBC-16-1	3.0	89.5	99.5	69.5	71.8		8184.9
182	211M1182	2.5	87.0	112.5	64.9	70.9		8176.6
128	211M1128	3.5	84.5	107.5	69.8	73.3		8104.7
98	211M1098	2.5	79.0	104.0	67.7	71.8		8098.6
12	BBC-46-1	3.5	91.0	113.5	65.9	72.2		8038.9
134	211M1134	3.0	86.0	105.5	69.1	72.7		8034.3
91	211M1091	3.0	83.5	103.0	66.1	69.7		7900.3
144	211M1144	4.0	80.5	102.0				7896.4
28	211M1028	3.0	80.0	103.0	65.6	71.4		7834.7
7	211M1007	3.0	79.5	105.0	67.0	71.5		7748.8
112	211M1112	2.5	81.5	102.0	69.7	72.9		7743.6
79	211M1079	3.0	81.5	101.0	68.8	72.9		7526.9
104	211M1104	3.5	85.5	113.0	68.9	73.0		7419.8
47	BBC-41-2	4.0	90.5	101.0	67.0	70.8		7335.0
169	211M1169	3.5	78.5	98.5	65.2	71.8		7317.8
83	211M1083	3.5	85.5	108.5	66.1	71.5		7050.2
46	BBC-17-1-20	3.5	88.5	93.0	65.4	71.8		6946.1
4	211M1004	3.5	79.0	104.5	61.3	71.6		6737.4
136	211M1136	4.0	87.0	104.5	68.2	71.7		6159.9

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

CONVENTIONAL PRELIMINARY YIELD TRIALS

Conventional 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 fungicides were not applied) at the H. Rouse Caffey Rice Research Station (HRCRRS) at Crowley, LA. 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. Planting and harvesting dates are shown in Table 1 across all locations. Entries are listed in Table 2. Results from these trials are shown in Tables 3-4.

Table 1. Planting and harvesting dates for the 2021 Conventional Preliminary Yield trials.

Location	Trial	Planting	Harvesting
HRCRRS	PYL	3/10	7/31
	PYM	3/11	8/2

Table 2. Entry number, pedigree, grain type, and source information for entries in the 2021 Conventional Preliminary Yield trials.

Herbicide Type	Entry	Line	Pedigree	Grain	
				Type [†]	Source [‡]
CN	1	211L1001	1902186/1902207	LG	LAES
CN	2	211L1002	1801169/1902212	LG	LAES
CN	3	211L1003	1702140/1902207	LG	LAES
CN	4	211L1004	2002150/CL111	LG	LAES
CN	5	211L1005	1902122/2002150	LG	LAES
CN	6	211L1006	1902186/1902207	LG	LAES
CN	7	211L1007	1702140/CTHL	LG	LAES
CN	8	211L1008	1702183/1902212	LG	LAES
CN	9	211L1009	CTHL/1902207	LG	LAES
CN	10	211L1010	1902186/181L2002	LG	LAES
CN	11	211L1011	CTHL/1902207	LG	LAES
CN	12	211L1012	CTHL/1902207	LG	LAES
CN	13	211L1013	181L2002/1804067	LG	LAES
CN	14	211L1014	1902186/2002114	LG	LAES
CN	15	211L1015	MRMT/CTHL	LG	LAES
CN	16	211L1016	181L2002/1804067	LG	LAES
CN	17	211L1017	1702140/1902207	LG	LAES
CN	18	211L1018	1702140/1902186	LG	LAES
CN	19	211L1019	1902207/1804187	LG	LAES
CN	20	211L1020	1902186/1902207	LG	LAES
CN	21	211L1021	CL131/1702140	LG	LAES
CN	22	211L1022	CL131/LKST	LG	LAES
CN	23	211L1023	CL172/PSDO	LG	LAES
CN	24	211L1024	PSDO/CHNR	LG	LAES
CN	25	211L1025	MRMT/CTHL	LG	LAES
CN	26	211L1026	1902186/CL153	LG	LAES
CN	27	211L1027	CTHL/1902207	LG	LAES
CN	28	211L1028	INIA6/1902194	LG	LAES
CN	29	211L1029	DREW/12:1258SBLINE	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	30	212L1030	CL153/1902138	LG	LAES
CL	31	212L1031	1902126/CL153	LG	LAES
CL	32	212L1032	1902162/182L2166	LG	LAES
CL	33	212L1033	CL153/1902138	LG	LAES
CL	34	212L1034	CL153/CL172	LG	LAES
CL	35	212L1035	CL172/LKST	LG	LAES
CL	36	212L1036	CL153/1602097	LG	LAES
CL	37	212L1037	CL153/DLLA2	Aro	LAES
CL	38	212L1038	1902138/1902126	LG	LAES
CL	39	212L1039	RoyJ/182L2195	LG	LAES
CL	40	212L1040	1502115/CPRS	LG	LAES
CL	41	212L1041	DMND/1902162	LG	LAES
CL	42	212L1042	1602097/CL111	LG	LAES
CL	43	212L1043	CL153/1602195	LG	LAES
CL	44	212L1044	1502115/CL153	LG	LAES
CL	45	212L1045	CL153/CL172	LG	LAES
CL	46	212L1046	CL153/1902138	LG	LAES
CL	47	212L1047	RU1002146/3/JZMN2//07PY824/08CLR003/4/TRNS	Aro	LAES
CL	48	212L1048	CL153/DLLA2	Aro	LAES
CL	49	212L1049	1602195/172L1264	LG	LAES
CL	50	212L1050	CHNR/CL111	LG	LAES
CL	51	212L1051	1902142/182L1278	LG	LAES
CL	52	212L1052	CL153/1602195	LG	LAES
CL	53	212L1053	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU0802146/3/RU0802146	Aro	LAES
CL	54	212L1054	DMND/CL153	LG	LAES
CL	55	212L1055	1602195/172L1264	LG	LAES
CL	56	212L1056	CL111/1502068	LG	LAES
CL	57	212L1057	CL153/LKST	LG	LAES
CL	58	212L1058	172L2058/1702097	LG	LAES
CL	59	212L1059	1902162/182L2166	LG	LAES
CL	60	212L1060	1502115/CL111	LG	LAES
CL	61	212L1061	CL172/CHTL	LG	LAES
CL	62	212L1062	CL153/1602195	LG	LAES
CL	63	212L1063	RoyJ/182L2195	LG	LAES
CL	64	212L1064	LKST/172L1264	LG	LAES
CL	65	212L1065	CL172/LKST	LG	LAES
CL	66	212L1066	171L1786/CL153	LG	LAES
CL	67	212L1067	CL172/CHTL	LG	LAES
CL	68	212L1068	RoyJ/182L2195	LG	LAES
CL	69	212L1069	1902126/1604191	LG	LAES
CL	70	212L1070	DMND/1902162	LG	LAES
CL	71	212L1071	CL153/1602195	LG	LAES
CL	72	212L1072	CHTL/CLJ01	LG	LAES
CL	73	212L1073	LKST/1402174	LG	LAES
CL	74	212L1074	1502085/PSDO	LG	LAES
CL	75	212L1075	LKST/172L1264	LG	LAES
CL	76	212L1076	CL131/CL153	LG	LAES
CL	77	212L1077	DMND/1902162	LG	LAES
CL	78	212L1078	CL153/LKST	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	79	212L1079	RoyJ/182L2195	LG	LAES
CL	80	212L1080	1602097/CL111	LG	LAES
CL	81	212L1081	CL153/CL172	LG	LAES
CL	82	212L1082	RoyJ/182L2195	LG	LAES
CL	83	212L1083	CL153/LKST	LG	LAES
CL	84	212L1084	CL153/1602195	LG	LAES
CL	85	212L1085	RoyJ/182L2195	LG	LAES
CL	86	212L1086	CL272/MRMT	LG	LAES
CL	87	212L1087	171L1772/1602131	LG	LAES
CL	88	212L1088	CL151/1702140	LG	LAES
CL	89	212L1089	CHTL/CLJ01	LG	LAES
CL	90	212L1090	LKST/1402174	LG	LAES
CL	91	212L1091	MRMT/PSDO	LG	LAES
CL	92	212L1092	1902162/182L2166	LG	LAES
CL	93	212L1093	172L1264/1602131	LG	LAES
CL	94	212L1094	1902126/CL153	LG	LAES
CL	95	212L1095	1502085/CHTL	LG	LAES
CL	96	212L1096	LKST/CLJ01	LG	LAES
CL	97	212L1097	CL153/DLLA2	Aro	LAES
CL	98	212L1098	1902142/182L1278	LG	LAES
CL	99	212L1099	CL272/5/LGRU/LCSN/3/CFX18//CCDR/9770532DH2/4/ CCDR/JEFF/3/CFX18//CCDR/9770532DH2/5/LGRU/LCSN/ 3/CFX18//CCDR/9770532DH2/4/CCDR/JEFF/3/CFX18// CCDR/9770532DH2	LG	LAES
CL	100	212L1100	RoyJ/182L2195	LG	LAES
CL	101	212L1101	CL151/1702140	LG	LAES
CL	102	212L1102	CL172/3/JZMN/08CLR004//RU1002146*2/4/JZMN/ 08CLR004//RU1002146*2	Aro	LAES
CL	103	212L1103	LKST/172L1264	LG	LAES
CL	104	212L1104	CL151/CL131	LG	LAES
CL	105	212L1105	DMND/1902162	LG	LAES
CL	106	212L1106	DMND/CL153	LG	LAES
CL	107	212L1107	CL153/1602195	LG	LAES
CL	108	212L1108	CL151/1702140	LG	LAES
CL	109	212L1109	1602097/DMND	LG	LAES
CL	110	212L1110	1502115/CL153	LG	LAES
CL	111	212L1111	LKST/172L1264	LG	LAES
CL	112	212L1112	DMND/1902162	LG	LAES
CL	113	212L1113	RoyJ/182L2195	LG	LAES
CL	114	212L1114	LKST/1602168	LG	LAES
CL	115	212L1115	1602195/CL172	LG	LAES
CL	116	212L1116	DMND/1902162	LG	LAES
CL	117	212L1117	CHTL/CLJ01	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	118	212L1118	1902126/CL153	LG	LAES
CL	119	212L1119	DMND/1902162	LG	LAES
CL	120	212L1120	1502115/CPRS	LG	LAES
CL	121	212L1121	1602168/CL172	LG	LAES
CL	122	212L1122	1902142/182L1278	LG	LAES
CL	123	212L1123	CL153/CL172	LG	LAES
CL	124	212L1124	CL153/1602195	LG	LAES
CL	125	212L1125	RoyJ/182L2195	LG	LAES
CL	126	212L1126	CL131/CL153	LG	LAES
CL	127	212L1127	1602195/CL172	LG	LAES
CL	128	212L1128	1502085/CHTL	LG	LAES
CL	129	212L1129	1602168/CL172	LG	LAES
CL	130	212L1130	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	LG	LAES
CL	131	212L1131	1902126/CL153	LG	LAES
CL	132	212L1132	CL153/1602097	LG	LAES
CL	133	212L1133	CCDR//JZMN*3/08CLR004	Aro	LAES
CL	134	212L1134	RoyJ/CL153	LG	LAES
CL	135	212L1135	LKST/172L1264	LG	LAES
CL	136	212L1136	1402174/MRMT	LG	LAES
CL	137	212L1137	CL111/CHENIERE/6/CPRS/KBNT//WELLS CFX 18/5/ TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/CFX18	LG	LAES
CL	138	212L1138	CL151/1702140	LG	LAES
CL	139	212L1139	1602051/CL172	LG	LAES
CL	140	212L1140	CL111/CHENIERE/6/CPRS/KBNT//WELLS CFX 18/5/ TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/CFX18	LG	LAES
CL	141	212L1141	1602112/DMND	LG	LAES
CL	142	212L1142	CL153/1602195	LG	LAES
CL	143	212L1143	1602112/DMND	LG	LAES
CL	144	212L1144	1602112/DMND	LG	LAES
CL	145	212L1145	1602195/1602112	LG	LAES
CL	146	212L1146	1602097/DMND	LG	LAES
CL	147	212L1147	CL272/5/LGRU/LCSN/3/CFX18//CCDR/9770532DH2/4/ CCDR/JEFF/3/CFX18//CCDR/9770532DH2/5/LGRU/LCSN/ 3/CFX18//CCDR/9770532DH2/4/CCDR/JEFF/3/CFX18// CCDR/9770532DH2	LG	LAES
CL	148	212L1148	1602097/DMND	LG	LAES
CL	149	212L1149	1902114/1902126	LG	LAES
CL	150	212L1150	1602112/DMND	LG	LAES
CL	151	212L1151	CFX18//CCDR/9770532DH2/3/CPRS/KBNT//9502008A/4/ PSDO	LG	LAES
CL	152	212L1152	172L2058/1702097	LG	LAES
CL	153	212L1153	CL151/1702140	LG	LAES
CL	154	212L1154	1902162/182L2166	LG	LAES
CL	155	212L1155	CL153/1602195	LG	LAES
CL	156	212L1156	CL153/LKST	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	157	212L1157	CL172/3/JZMN/08CLR004//RU1002146*2/4/JZMN/ 08CLR004//RU1002146*2	Aro	LAES
CL	158	212L1158	CL153/LKST	LG	LAES
CL	159	212L1159	CL153/1602097	LG	LAES
CL	160	212L1160	1902138/1902126	LG	LAES
CL	161	212L1161	LKST/CLJ01	LG	LAES
CL	162	212L1162	DMND/1902162	LG	LAES
CL	163	212L1163	1502115/CL153	LG	LAES
CL	164	212L1164	172L1264/CL151	LG	LAES
CL	165	212L1165	1602097/DMND	LG	LAES
CL	166	212L1166	RoyJ/182L2195	LG	LAES
CL	167	212L1167	1602195/172L1264	LG	LAES
CL	168	212L1168	RoyJ/182L2195	LG	LAES
CL	169	212L1169	CFX18//CCDR/9770532DH2/3/CPRS/KBNT//9502008A/4/ PSDO	LG	LAES
CL	170	212L1170	1502115/CL153	LG	LAES
CL	171	212L1171	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	LG	LAES
CL	172	212L1172	1602097/CL111	LG	LAES
CL	173	212L1173	1502115/CL111	LG	LAES
CL	174	212L1174	CL111/CL153	LG	LAES
CL	175	212L1175	PSDO/3/RU1002146*4//JZMN/08CLR004	Aro	LAES
CL	176	212L1176	CLJ01/CPRS	Aro	LAES
CL	177	212L1177	1902162/182L2166	LG	LAES
CL	178	212L1178	CL111/LKST	LG	LAES
CL	179	212L1179	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	LG	LAES
CL	180	212L1180	JZMN/08CLR004//RU1002146*3/3/JZMN*3/08CLR004	Aro	LAES
CL	181	212L1181	CL131/CL153	LG	LAES
CL	182	212L1182	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU0802146/3/RU0802146	Aro	LAES
CL	183	212L1183	1902126/CL153	LG	LAES
CL	184	212L1184	1602195/1602112	LG	LAES
CL	185	212L1185	RoyJ/182L2195	LG	LAES
CL	186	212L1186	CL172/CHTL	LG	LAES
CL	187	212L1187	1902114/1902126	LG	LAES
CL	188	212L1188	1602195/1602112	LG	LAES
CL	189	212L1189	1602112/DMND	LG	LAES
CL	190	212L1190	1602195/1602112	LG	LAES
CL	191	212L1191	CL272/4/CPRS/KBNT//WELLS/CFX18/3/AR1188/CCDR// 9502008/LGRU/5/CPRS/KBNT//WELLSCFX18/3/AR1188/ CCDR//9502008/LGRU	LG	LAES
CL	192	212L1192	1902126/172L1264	LG	LAES
CL	193	212L1193	DMND/1902162	LG	LAES
CL	194	212L1194	172L1264/CL151	LG	LAES
CL	195	212L1195	1902126/172L1264	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	196	212L1196	1902126/1604191	LG	LAES
CL	197	212L1197	172L2058/1702097	LG	LAES
CL	198	212L1198	LKST/172L1264	LG	LAES
CL	199	212L1199	1602097/DMND	LG	LAES
CL	200	212L1200	CL153/1602097	LG	LAES
CL	201	212L1201	1902162/182L2166	LG	LAES
CL	202	212L1202	CL172/CHTL	LG	LAES
CL	203	212L1203	1502115/CL111	LG	LAES
CL	204	212L1204	DMND/1902162	LG	LAES
CL	205	212L1205	1602195/1602112	LG	LAES
CL	206	212L1206	LKST/CLJ01	LG	LAES
CL	207	212L1207	CL153/1602195	LG	LAES
CL	208	212L1208	RoyJ/CL153	LG	LAES
CL	209	212L1209	RoyJ/182L2195	LG	LAES
CL	210	212L1210	LKST/1602168	LG	LAES
CL	211	212L1211	CL153/1602195	LG	LAES
CL	212	212L1212	CL111/LKST	LG	LAES
CL	213	212L1213	CL151/1702140	LG	LAES
CL	214	212L1214	CL131/CL153	LG	LAES
CL	215	212L1215	172L1264/1602131	LG	LAES
CL	216	212L1216	172L1264/CL151	LG	LAES
CL	217	212L1217	1602097/DMND	LG	LAES
CL	218	212L1218	CL151/1702140	LG	LAES
CL	219	212L1219	PSDO//JZMN*3/08CLR004	Aro	LAES
CL	220	212L1220	CL172/LKST	LG	LAES
CL	221	212L1221	CL153/LKST	LG	LAES
CL	222	212L1222	CHTL/CLJ01	LG	LAES
CL	223	212L1223	1902162/182L2166	LG	LAES
CL	224	212L1224	CL172/LKST	LG	LAES
CL	225	212L1225	RoyJ/182L2195	LG	LAES
CL	226	212L1226	CL153/DLLA2	Aro	LAES
CL	227	212L1227	RoyJ/182L2195	LG	LAES
CL	228	212L1228	PSDO//JZMN*3/08CLR004	Aro	LAES
CL	229	212L1229	DMND/1902162	LG	LAES
CL	230	212L1230	CL172/CHTL	LG	LAES
CL	231	212L1231	PSDO/3/RU1002146*4//JZMN/08CLR004	Aro	LAES
CL	232	212L1232	CL153/1602097	LG	LAES
CL	233	212L1233	CL153/1602097	LG	LAES
CL	234	212L1234	1902126/CL153	LG	LAES
CL	235	212L1235	CL151/1702140	LG	LAES
CL	236	212L1236	1602168/CL172	LG	LAES
CL	237	212L1237	1902162/182L2166	LG	LAES
CL	238	212L1238	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU1002146*2	Aro	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	239	212L1239	CL172/CHTL	LG	LAES
CL	240	212L1240	RoyJ/182L2195	LG	LAES
CL	241	212L1241	CL131/CL153	LG	LAES
CL	242	212L1242	172L2058/1702097	LG	LAES
CL	243	212L1243	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU0802146/3/RU0802146	Aro	LAES
CL	244	212L1244	1902126/CL153	LG	LAES
CL	245	212L1245	1602112/DMND	LG	LAES
CL	246	212L1246	CL153/1602195	LG	LAES
CL	247	212L1247	1602195/172L1264	LG	LAES
CL	248	212L1248	CL153/1602195	LG	LAES
CL	249	212L1249	RoyJ/182L2195	LG	LAES
CL	250	212L1250	172L2058/1702097	LG	LAES
CL	251	212L1251	RoyJ/182L2195	LG	LAES
CL	252	212L1252	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU0802146/3/RU0802146	Aro	LAES
CL	253	212L1253	DMND/CL153	LG	LAES
CL	254	212L1254	1602195/172L1264	LG	LAES
CL	255	212L1255	RoyJ/182L2195	LG	LAES
CL	256	212L1256	1502085/PSDO	LG	LAES
CL	257	212L1257	CL153/1902138	LG	LAES
CL	258	212L1258	LKST/1602195	LG	LAES
CL	259	212L1259	MRMT/PSDO	LG	LAES
CL	260	212L1260	1502085/PSDO	LG	LAES
CL	261	212L1261	1602195/CL172	LG	LAES
CL	262	212L1262	CL172/CHTL	LG	LAES
CL	263	212L1263	DMND/1902162	LG	LAES
CL	264	212L1264	1602112/DMND	LG	LAES
CL	265	212L1265	CL153/LKST	LG	LAES
CL	266	212L1266	CL153/LKST	LG	LAES
CL	267	212L1267	1602195/1602112	LG	LAES
CL	268	212L1268	1902126/CL153	LG	LAES
CL	269	212L1269	CL153/1902138	LG	LAES
CL	270	212L1270	CL111/CL153	LG	LAES
CL	271	212L1271	1602097/CL151	LG	LAES
CL	272	212L1272	RoyJ/182L2195	LG	LAES
CL	273	212L1273	1902126/172L1264	LG	LAES
CL	274	212L1274	RoyJ/182L2195	LG	LAES
CL	275	212L1275	CL111/MRMT	LG	LAES
CL	276	212L1276	1602195/CL172	LG	LAES
CL	277	212L1277	RoyJ/CL153	LG	LAES
CL	278	212L1278	CL172/3/JZMN/08CLR004//RU1002146*2/4/ JZMN/ 08CLR004//RU1002146*2		
CL	279	212L1279	RoyJ/182L2195	LG	LAES
CL	280	212L1280	CL111/CHENIERE/6/CPRS/KBNT//WELLS CFX 18/5/ TACAURI/3/CPRS//82CAY21/TBNT/4/WELLS/CFX18	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	281	212L1281	1902162/182L2166	LG	LAES
CL	282	212L1282	1602195/CL172	LG	LAES
CL	283	212L1283	CL172/CHTL	LG	LAES
CL	284	212L1284	CL151/1702140	LG	LAES
CL	285	212L1285	172L1264/1602131	LG	LAES
CL	286	212L1286	1902138/1902126	LG	LAES
CL	287	212L1287	CL153/1602097	LG	LAES
CL	288	212L1288	CL172/CHTL	LG	LAES
CL	289	212L1289	1902162/182L2166	LG	LAES
CL	290	212L1290	DMND/1902162	LG	LAES
CL	291	212L1291	LKST/172L1264	LG	LAES
CL	292	212L1292	CL151/1702140	LG	LAES
CL	293	212L1293	CL153/1602195	LG	LAES
CL	294	212L1294	1902126/172L1264	LG	LAES
CL	295	212L1295	1902126/CL153	LG	LAES
CL	296	212L1296	1902162/182L2166	LG	LAES
CL	297	212L1297	CHTL/CLJ01	LG	LAES
CL	298	212L1298	172L2058/1702097	LG	LAES
CL	299	212L1299	1502115/CL111	LG	LAES
CL	300	212L1300	1502085/CHTL	LG	LAES
CL	301	212L1301	1602097/CL111	LG	LAES
CL	302	212L1302	RoyJ/182L2195	LG	LAES
CL	303	212L1303	RoyJ/CL153	LG	LAES
CL	304	212L1304	CL153/CL172	LG	LAES
CL	305	212L1305	1602097/DMND	LG	LAES
CL	306	212L1306	PSDO//JZMN*3/08CLR004	Aro	LAES
CL	307	212L1307	CL151/1702140	LG	LAES
CL	308	212L1308	1902162/182L2166	LG	LAES
CL	309	212L1309	1502085/CHTL	LG	LAES
CL	310	212L1310	1902114/1902126	LG	LAES
CL	311	212L1311	CL172/CHTL	LG	LAES
CL	312	212L1312	1602097/DMND	LG	LAES
CL	313	212L1313	CL172/CHTL	LG	LAES
CL	314	212L1314	CL153/1902138	LG	LAES
CL	315	212L1315	172L2058/1702097	LG	LAES
CL	316	212L1316	CL172/CPRS	LG	LAES
CL	317	212L1317	1902162/182L2166	LG	LAES
CL	318	212L1318	172L1264/CL151	LG	LAES
CL	319	212L1319	172L1264/CL151	LG	LAES
CL	320	212L1320	CL153/LKST	LG	LAES
CL	321	212L1321	MRMT/PSDO	LG	LAES
CL	322	212L1322	CL151/1702140	LG	LAES
CL	323	212L1323	CL151/1702140	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	324	212L1324	CL131/CL153	LG	LAES
CL	325	212L1325	172L1264/1602131	LG	LAES
CL	326	212L1326	JPTR/CPRS	LG	LAES
CL	327	212L1327	RoyJ/182L2195	LG	LAES
CL	328	212L1328	CL172/CHTL	LG	LAES
CL	329	212L1329	RU1002146*4//JZMN/08CLR004/5/TRNS/4/9502008A/ DREW/CLR20/3/CPRS/KBNT//WELLS/CFX18	Aro	LAES
CL	330	212L1330	CL153/LKST	LG	LAES
CL	331	212L1331	CL153/CL172	LG	LAES
CL	332	212L1332	LKST/172L1264	LG	LAES
CL	333	212L1333	1602097/DMND	LG	LAES
CL	334	212L1334	1902162/182L2166	LG	LAES
CL	335	212L1335	DMND/1902162	LG	LAES
CL	336	212L1336	CL153/1602097	LG	LAES
CL	337	212L1337	CFX18//CCDR/9770532DH2/3/CPRS/KBNT//9502008A/4/ PSDO	LG	LAES
CL	338	212L1338	1602097/DMND	LG	LAES
CL	339	212L1339	1902126/172L1264	LG	LAES
CL	340	212L1340	PSDO/3/RU1002146*4//JZMN/08CLR004	Aro	LAES
CL	341	212L1341	1602097/DMND	LG	LAES
CL	342	212L1342	LKST/1602195	LG	LAES
CL	343	212L1343	CL111/LKST	LG	LAES
CL	344	212L1344	RoyJ/182L2195	LG	LAES
CL	345	212L1345	RoyJ/182L2195	LG	LAES
CL	346	212L1346	1602195/1602112	LG	LAES
CL	347	212L1347	CL172/CHTL	LG	LAES
CL	348	212L1348	LKST/172L1264	LG	LAES
CL	349	212L1349	1602195/1602112	LG	LAES
CL	350	212L1350	CFX18//CCDR/9770532DH2/3/CPRS/KBNT//9502008A/4/ CTHL/5/CL152/DREW/6/CL152/DREW	LG	LAES
CL	351	212L1351	PSDO/3/RU1002146*4//JZMN/08CLR004	Aro	LAES
CL	352	212L1352	1602195/172L1264	LG	LAES
CL	353	212L1353	RU1002146/3/JZMN2//07PY824/08CLR003/4/JZMN/ 08CLR004//RU0802146/3/RU0802146	Aro	LAES
CL	354	212L1354	CL172/CHTL	LG	LAES
CL	355	BBC-10-2	CL153/4/CL153/3/ZHE/MRMT//MRMT	LG	LAES
CL	356	BBC-1-2	CL153/3/CL272//CL272/IR9660	LG	LAES
CL	357	212L1357	CL153/CL172	LG	LAES
CL	358	212L1358	LKST/1602195	LG	LAES
CL	359	BBC-2-1	CL153/3/CL272//CL272/IR9660	LG	LAES
CL	360	BBC-3-1	CL153/3/CL272//CL272/IR9660	LG	LAES
CL	361	BBC-4-1	CL153/3/CL272//CL272/IR9660	LG	LAES
CL	362	BBC-6-1	CL153/3/CL272//CL272/IR9660	LG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	363	BBC-7-1	CL153/4/CL153/3/ZHE/MRMT//MRMT	LG	LAES
CL	364	BBC-8-1	CL153/4/CL153/3/ZHE/MRMT//MRMT	LG	LAES
CL	365	BBC-8-2	CL153/4/CL153/3/ZHE/MRMT//MRMT	LG	LAES
CL	366	BBC-9-2	CL153/4/CL153/3/ZHE/MRMT//MRMT	LG	LAES
CL	367	CLL17	CLL17	LG	LAES
CL	368	CL153	CL153	LG	LAES
CL	369	CL111	CL111	LG	LAES
CL	370	CLL15	CLL15	LG	AAES
CL	371	CLL16	CLL16	LG	AAES
CL	372	RU1702183		LG	LAES
CL	373	RU1902026		LG	LAES
CL	374	RU1902034		LG	LAES
CL	375	RT7521FP	RT7521FP	LG	RiceTec
CL	1	212M1001	1702143/1702165	MG	LAES
CL	2	212M1002	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	MG	LAES
CL	3	212M1003	TITN/172M1600	MG	LAES
CL	4	212M1004	JPTR/1702162	MG	LAES
CL	5	212M1005	CL271/CL261	MG	LAES
CL	6	212M1006	172M1646/TITN	MG	LAES
CL	7	212M1007	CL272/CL261	MG	LAES
CL	8	212M1008	CL272/CCDR/5/CPRS/3/9502008//AR1188/CCDR/4/CPRS/ 9502008/3/CFX29//AR1142/LA2031	MG	LAES
CL	9	212M1009	TITN/CL272	MG	LAES
CL	10	212M1010	1902174/TITN	MG	LAES
CL	11	212M1011	1702165/1902174	MG	LAES
CL	12	212M1012	TITN/1702165	MG	LAES
CL	13	212M1013	CL272/172M1600	MG	LAES
CL	14	212M1014	172M1646/TITN	MG	LAES
CL	15	212M1015	1902182/1802174	MG	LAES
CL	16	212M1016	CL272/1801211	MG	LAES
CL	17	212M1017	SSKI/CL272	MG	LAES
CL	18	212M1018	1702143/1702165	MG	LAES
CL	19	212M1019	CL272/1801211	MG	LAES
CL	20	212M1020	CL271/CL261	MG	LAES
CL	21	212M1021	CL271/CL261	MG	LAES
CL	22	212M1022	1702162/1702180	MG	LAES
CL	23	212M1023	CL272/4/CPRS/KBNT//WELLS/CFX18/3/CHNR/5/CPRS /KBNT//WELLS/CFX18/3/CHNR	MG	LAES
CL	24	212M1024	171M1843/172M1646	MG	LAES
CL	25	212M1025	CL272/1902182	MG	LAES
CL	26	212M1026	1702125/1702165	MG	LAES
CL	27	212M1027	1702162/1702180	MG	LAES
CL	28	212M1028	SSKI/CL272	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	29	212M1029	RICO/3/NPTN//BNGL/CL161	MG	LAES
CL	30	212M1030	SSKI/CL272	MG	LAES
CL	31	212M1031	1702143/1702165	MG	LAES
CL	32	212M1032	TITN/CL272	MG	LAES
CL	33	212M1033	JPTR/CL272	MG	LAES
CL	34	212M1034	TITN/CL272	MG	LAES
CL	35	212M1035	1902174/TITN	MG	LAES
CL	36	212M1036	1702162/1702180	MG	LAES
CL	37	212M1037	NPTN//BNGL/CL161/3/NPTN	MG	LAES
CL	38	212M1038	1902174/1801211	MG	LAES
CL	39	212M1039	1702165/1902174	MG	LAES
CL	40	212M1040	NPTN//BNGL/CL161/3/NPTN	MG	LAES
CL	41	212M1041	1702162/1702180	MG	LAES
CL	42	212M1042	1702125/1702165	MG	LAES
CL	43	212M1043	1702125/1702165	MG	LAES
CL	44	212M1044	CL271/CL261	MG	LAES
CL	45	212M1045	TITN/1702165	MG	LAES
CL	46	212M1046	1702165/NPTN	MG	LAES
CL	47	212M1047	1702125/1702165	MG	LAES
CL	48	212M1048	172M1646/TITN	MG	LAES
CL	49	212M1049	1702165/NPTN	MG	LAES
CL	50	212M1050	1702143/1702165	MG	LAES
CL	51	212M1051	CL272/172M1600	MG	LAES
CL	52	212M1052	1702143/1702165	MG	LAES
CL	53	212M1053	1702162/1702180	MG	LAES
CL	54	212M1054	1902182/1802174	MG	LAES
CL	55	212M1055	1902182/1802174	MG	LAES
CL	56	212M1056	SSKI/CL272	MG	LAES
CL	57	212M1057	1702125/1702165	MG	LAES
CL	58	212M1058	1702165/1902174	MG	LAES
CL	59	212M1059	RICO/3/NPTN//BNGL/CL161	MG	LAES
CL	60	212M1060	JPTR/1702162	MG	LAES
CL	61	212M1061	1702162/1702180	MG	LAES
CL	62	212M1062	1702165/NPTN	MG	LAES
CL	63	212M1063	171M1843/172M1646	MG	LAES
CL	64	212M1064	1702125/1702165	MG	LAES
CL	65	212M1065	TITN/CL272	MG	LAES
CL	66	212M1066	1702125/1702165	MG	LAES
CL	67	212M1067	171M1843/172M1646	MG	LAES
CL	68	212M1068	CL272/CFFY	MG	LAES
CL	69	212M1069	JPTR/CL272	MG	LAES
CL	70	212M1070	CL272/1902182	MG	LAES
CL	71	212M1071	CL272/MRMT	MG	LAES
CL	72	212M1072	CL272/1502183	MG	LAES
CL	73	212M1073	CL272/CL261	MG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	74	212M1074	172M1646/TITN	MG	LAES
CL	75	212M1075	TITN/172M1600	MG	LAES
CL	76	212M1076	1702162/1702180	MG	LAES
CL	77	212M1077	CL272/1902182	MG	LAES
CL	78	212M1078	TITN/1702165	MG	LAES
CL	79	212M1079	CL272/CFFY	MG	LAES
CL	80	212M1080	1702165/1902174	MG	LAES
CL	81	212M1081	172M1646/TITN	MG	LAES
CL	82	212M1082	CL272/1902182	MG	LAES
CL	83	212M1083	1902182/1802174	MG	LAES
CL	84	212M1084	CL272/4/CPRS/KBNT//WELLS/CFX18/3/CHNR/5/CPRS/ KBNT//WELLS/CFX18/3/CHNR	MG	LAES
CL	85	212M1085	1702162/1702180	MG	LAES
CL	86	212M1086	CL271/CL261	MG	LAES
CL	87	212M1087	CL272/CCDR/5/CPRS/3/9502008//AR1188/CCDR/4/CPRS/ 9502008/3/CFX29//AR1142/LA2031	MG	LAES
CL	88	212M1088	CL272/5/LGRU/LCSN/3/CFX18//CCDR/9770532DH2/4/ CCDR/JEFF/3/CFX18//CCDR/9770532DH2/5/LGRU/LCSN/ 3/CFX18//CCDR/9770532DH2/4/CCDR/JEFF/3/CFX18// CCDR/9770532DH2	MG	LAES
CL	89	212M1089	CL272/1801211	MG	LAES
CL	90	212M1090	1702165/NPTN	MG	LAES
CL	91	212M1091	CL272/1902182	MG	LAES
CL	92	212M1092	1902182/1701121	MG	LAES
CL	93	212M1093	1902182/1802174	MG	LAES
CL	94	212M1094	1902174/TITN	MG	LAES
CL	95	212M1095	1702125/1702165	MG	LAES
CL	96	212M1096	1702165/1902174	MG	LAES
CL	97	212M1097	1702143/1702165	MG	LAES
CL	98	212M1098	CL272/CFFY	MG	LAES
CL	99	212M1099	172M1646/TITN	MG	LAES
CL	100	212M1100	CL272/172M1600	MG	LAES
CL	101	212M1101	CL271/3/NPTN//BNGL/CL161	MG	LAES
CL	102	212M1102	1902174/TITN	MG	LAES
CL	103	212M1103	CL272/1902182	MG	LAES
CL	104	212M1104	JPTR/1702162	MG	LAES
CL	105	212M1105	CL271/CL261	MG	LAES
CL	106	212M1106	1702143/1702165	MG	LAES
CL	107	212M1107	1902178/TITN	MG	LAES
CL	108	212M1108	CL271/CL261	MG	LAES
CL	109	212M1109	1902174/1801211	MG	LAES
CL	110	212M1110	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	MG	LAES
CL	111	212M1111	1902182/1802174	MG	LAES

Continued.

Table 2. Continued.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	112	212M1112	1702165/1902174	MG	LAES
CL	113	212M1113	CL272/5/LGRU/LCSN/3/CFX18//CCDR/9770532DH2/4/ CCDR/JEFF/3/CFX18//CCDR/9770532DH2/5/LGRU/LCSN/ 3/CFX18//CCDR/9770532DH2/4/CCDR/JEFF/3/CFX18// CCDR/9770532DH2	MG	LAES
CL	114	212M1114	1902174/TITN	MG	LAES
CL	115	212M1115	TITN/CL272	MG	LAES
CL	116	212M1116	171M1843/172M1646	MG	LAES
CL	117	212M1117	CL272/1902182	MG	LAES
CL	118	212M1118	1902174/TITN	MG	LAES
CL	119	212M1119	1902182/1802174	MG	LAES
CL	120	212M1120	CL272/CFFY	MG	LAES
CL	121	212M1121	CL271/3/NPTN//BNGL/CL161	MG	LAES
CL	122	212M1122	TITN/1702165	MG	LAES
CL	123	212M1123	CL272/CFFY	MG	LAES
CL	124	212M1124	171M1843/172M1646	MG	LAES
CL	125	212M1125	CL272/4/CPRS/KBNT//WELLS/CFX18/3/CHNR/5/CPRS/K BNT//WELLS/CFX18/3/CHNR	MG	LAES
CL	126	212M1126	1702162/1702180	MG	LAES
CL	127	212M1127	172M1646/TITN	MG	LAES
CL	128	212M1128	CL272/1502183	MG	LAES
CL	129	212M1129	1702143/1702165	MG	LAES
CL	130	212M1130	CL272/CFFY	MG	LAES
CL	131	212M1131	SSKI/CL272	MG	LAES
CL	132	212M1132	1702165/NPTN	MG	LAES
CL	133	212M1133	1702162/1702180	MG	LAES
CL	134	212M1134	CL272/CFFY	MG	LAES
CL	135	212M1135	CL272/4/9502008/DREW//CLR20/3/TRNS//CCDR/JEFF	MG	LAES
CL	136	212M1136	1702165/1902174	MG	LAES
CL	137	212M1137	CL272/MRMT	MG	LAES
CL	138	212M1138	CL272/1801211	MG	LAES
CL	139	212M1139	1702143/1702165	MG	LAES
CL	140	212M1140	1702143/1702165	MG	LAES
CL	141	212M1141	1702162/1702180	MG	LAES
CL	142	212M1142	CL272/MRMT	MG	LAES
CL	143	212M1143	CL272/CFFY	MG	LAES
CL	144	212M1144	1902182/1701121	MG	LAES
CL	145	212M1145	CL272/5/LGRU/LCSN/3/CFX18//CCDR/9770532DH2/4/ CCDR/JEFF/3/CFX18//CCDR/9770532DH2/5/LGRU/LCSN/ 3/CFX18//CCDR/9770532DH2/4/CCDR/JEFF/3/CFX18// CCDR/9770532DH2	MG	LAES
CL	146	212M1146	TITN/172M1600	MG	LAES
CL	147	212M1147	JPTR/CL272	MG	LAES
CL	148	212M1148	JPTR/1702162	MG	LAES
CL	149	212M1149	1702162/1702180	MG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type[†]	Source[‡]
CL	150	212M1150	TITN/CL272	MG	LAES
CL	151	212M1151	JPTR/CL272	MG	LAES
CL	152	212M1152	1702143/1702165	MG	LAES
CL	153	212M1153	1702162/1702180	MG	LAES
CL	154	212M1154	NPTN//BNGL/CL161/3/NPTN	MG	LAES
CL	155	CLM04	CLM04	MG	AAES
CL	156	CL272	CL272	MG	LAES

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelle type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Rayne; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Clearfield Preliminary Yield Long-Grain trial. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
375	RT7521FP	2.0	84.0	103.5	58.2	68.6	19.8	11848.6
36	212L1036	4.5	89.0	99.0	63.5	71.6	12.0	10155.9
371	CLL16	3.0	91.0	96.5	59.1	68.6	18.5	9985.2
305	212L1305	4.0	87.0	95.0	62.7	72.2	20.5	9914.5
6	212L1006	4.0	89.5	92.5	60.4	71.9	16.0	9731.1
294	212L1294	3.5	86.0	93.5	60.8	70.0	17.1	9612.0
159	212L1159	4.0	90.0	93.5	66.8	73.0	14.8	9531.3
254	212L1254	4.0	89.5	101.5	60.0	68.5	9.1	9530.3
195	212L1195	3.5	86.5	93.5	67.1	73.3	12.8	9464.2
121	212L1121	4.5	87.5	98.0	61.2	71.5	6.3	9451.0
118	212L1118	3.5	88.5	93.5	65.9	73.0	18.8	9412.2
51	212L1051	3.5	86.0	88.0	59.3	71.0	12.3	9386.8
235	212L1235	3.5	87.5	106.0	67.2	73.6	21.9	9352.4
160	212L1160	4.0	88.0	93.5	65.6	72.6	10.6	9335.9
88	212L1088	4.0	92.0	96.5	63.6	71.9	12.1	9330.4
138	212L1138	4.0	90.5	101.0	64.5	71.7	11.2	9313.5
93	212L1093	4.0	83.5	87.0	68.9	73.8	19.2	9300.0
354	212L1354	4.0	88.0	93.5	64.1	73.0	14.4	9283.2
367	CLL17	3.5	89.0	93.0	63.7	70.3	16.3	9281.8
336	212L1336	3.5	85.0	94.5	64.8	71.8	13.9	9280.3
250	212L1250	4.0	90.0	95.5	65.0	73.2	12.8	9242.2
109	212L1109	4.0	85.0	91.0	56.3	68.5	11.8	9210.5
197	212L1197	3.5	86.5	83.0	60.6	72.3	15.0	9178.3
101	212L1101	4.0	92.0	99.0	68.1	73.5	13.1	9165.4
153	212L1153	4.0	92.5	94.5	67.2	72.8	18.3	9150.2
34	212L1034	3.5	86.5	95.0	66.9	73.0	10.9	9142.5
310	212L1310	4.0	91.5	92.5	65.9	73.3	18.8	9135.8
276	212L1276	3.5	89.5	92.0	65.1	73.8	7.4	9131.8
23	212L1023	4.0	91.0	93.0	64.0	72.7	7.8	9131.2
33	212L1033	3.5	88.5	100.5	67.5	73.8	13.1	9131.1
131	212L1131	4.0	89.0	95.5	60.4	71.5	10.9	9072.2
84	212L1084	4.0	90.5	96.0	65.1	71.4	11.7	9068.9
232	212L1232	3.5	88.0	104.5	62.1	70.9	10.8	9036.1
246	212L1246	4.0	89.5	92.0	65.9	72.0	11.9	8986.5
286	212L1286	4.0	91.5	95.0	64.0	71.9	14.5	8972.7
76	212L1076	4.0	89.5	92.5	64.8	71.6	13.5	8943.6
128	212L1128	4.0	89.0	90.5	61.5	71.8	12.3	8942.6
292	212L1292	3.0	91.0	91.0	63.3	69.6	13.3	8894.6
2	212L1002	4.0	89.0	94.0	65.1	73.1	9.1	8883.4
369	CL111	4.0	88.0	95.5	67.3	74.2	17.4	8879.6
42	212L1042	4.0	90.0	94.5	64.7	72.5	21.1	8867.3
287	212L1287	4.0	89.5	96.5	61.6	71.5	12.0	8850.5
228	212L1228	3.5	86.0	95.5	64.1	71.6	9.7	8830.9

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
192	212L1192	3.5	89.5	94.0	63.7	71.2	11.4	8802.0
129	212L1129	4.0	89.0	93.5	61.9	71.6	15.2	8790.3
273	212L1273	4.0	87.0	88.5	65.7	72.6	8.9	8775.3
123	212L1123	3.5	87.0	90.5	66.5	72.0	17.9	8769.4
374	RU1902034	4.0	88.5	96.5	64.8	72.6	23.4	8769.2
108	212L1108	4.0	92.5	97.0	66.5	73.4	13.5	8700.7
357	212L1357	4.0	89.5	90.5	63.2	71.5	10.7	8698.6
234	212L1234	4.0	89.0	92.5	65.3	73.6	11.7	8692.1
269	212L1269	4.0	89.5	97.0	62.7	72.1	6.5	8690.9
111	212L1111	4.0	84.5	94.0	67.7	74.5	19.2	8677.3
52	212L1052	4.0	88.5	96.0	66.4	71.8	15.7	8661.1
332	212L1332	3.0	87.0	91.5	59.1	70.1	8.7	8658.1
314	212L1314	3.0	92.0	94.5	62.5	70.4	12.0	8655.5
325	212L1325	3.0	84.0	90.0	64.6	71.6	17.3	8644.1
339	212L1339	4.0	90.5	92.5	64.1	71.3	13.4	8638.5
27	212L1027	3.5	86.5	89.5	63.8	71.2	16.5	8628.7
81	212L1081	4.0	89.0	91.5	66.2	71.7	11.3	8608.3
270	212L1270	4.0	89.0	98.5	63.8	72.3	13.5	8591.5
157	212L1157	3.5	89.5	88.0	61.2	69.7	9.3	8590.2
90	212L1090	3.5	85.5	97.5	64.9	72.1	13.6	8587.4
3	212L1003	4.0	86.0	101.5	67.3	73.5	20.6	8577.9
47	212L1047	4.0	86.0	95.0	64.1	73.1	9.3	8565.9
284	212L1284	3.5	88.0	98.5	68.0	73.2	16.8	8558.6
279	212L1279	4.5	89.0	95.0	62.0	71.7	14.5	8557.0
69	212L1069	3.5	93.0	91.5	66.6	72.9	10.7	8551.6
218	212L1218	4.0	91.5	93.0	60.9	71.9	10.6	8546.4
281	212L1281	4.0	85.0	99.0	56.4	73.5	9.2	8532.4
207	212L1207	4.0	90.5	94.0	65.6	72.5	13.6	8526.6
103	212L1103	4.0	84.5	96.5	60.1	70.6	10.9	8522.9
223	212L1223	3.5	88.0	97.0	58.2	72.6	8.9	8509.1
82	212L1082	4.0	91.0	96.0	63.4	71.5	15.7	8490.9
133	212L1133	4.0	85.0	102.5	65.8	73.6	8.7	8451.9
53	212L1053	3.0	85.0	89.5	67.5	74.5	13.3	8430.9
202	212L1202	3.5	86.5	93.0	68.0	73.4	9.8	8429.3
209	212L1209	4.5	90.0	103.0	65.9	72.5	10.5	8419.1
85	212L1085	3.5	89.0	94.5	64.0	72.2	13.9	8408.1
78	212L1078	3.0	88.0	95.5	64.4	71.1	9.8	8358.4
151	212L1151	3.0	82.0	89.0	68.9	72.9	10.0	8351.7
242	212L1242	3.5	88.0	92.0	63.8	72.8	12.8	8349.9
146	212L1146	4.0	93.0	93.0	63.3	70.4	16.4	8347.1
21	212L1021	3.0	89.0	92.0	61.9	68.9	12.4	8343.9
252	212L1252	3.5	88.5	93.5	70.8	74.4	6.6	8334.3
49	212L1049	3.5	90.5	98.5	63.8	69.5	11.5	8332.8

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
75	212L1075	3.0	86.5	91.5	65.9	71.2	14.1	8332.3
309	212L1309	4.0	91.0	92.5	66.0	71.9	14.2	8327.2
104	212L1104	4.0	86.0	97.0	65.3	71.9	16.1	8324.4
177	212L1177	3.5	87.5	93.5	64.7	73.0	12.5	8315.5
236	212L1236	4.5	90.5	92.5	58.0	68.5	8.1	8313.8
174	212L1174	3.5	90.0	100.0	64.6	72.4	14.2	8312.2
312	212L1312	4.5	88.5	90.5	64.0	71.8	16.2	8311.1
216	212L1216	4.0	85.5	97.5	63.2	70.8	16.9	8304.3
352	212L1352	3.5	89.0	94.5	61.4	71.9	15.3	8290.7
247	212L1247	3.5	85.5	90.5	65.5	70.6	21.1	8290.6
148	212L1148	4.5	93.0	95.0	62.3	70.4	15.6	8289.9
315	212L1315	4.0	90.0	92.5	63.9	72.8	9.2	8289.6
25	212L1025	3.0	88.0	90.5	62.8	72.2	8.4	8286.2
169	212L1169	3.0	84.0	95.0	69.0	73.7	14.7	8273.1
55	212L1055	3.5	90.5	95.5	54.7	69.6	13.2	8272.5
31	212L1031	4.0	91.0	89.5	62.6	70.8	7.7	8269.5
22	212L1022	4.0	90.5	95.5	66.6	71.7	12.9	8269.2
170	212L1170	4.0	90.0	90.0	67.1	72.4	14.4	8246.4
66	212L1066	3.0	88.0	94.0	62.7	69.8	14.9	8243.2
300	212L1300	4.0	91.0	101.0	64.5	72.9	13.8	8240.6
30	212L1030	3.5	89.0	91.5	70.0	74.5	10.9	8219.0
344	212L1344	4.0	88.5	99.0	61.3	71.2	13.0	8217.0
327	212L1327	4.0	92.0	92.0	66.0	72.9	17.7	8203.3
79	212L1079	4.5	93.0	98.5	62.3	70.4	11.0	8200.7
43	212L1043	4.0	89.0	89.5	68.7	74.1	11.4	8183.1
201	212L1201	3.5	85.5	100.0	64.9	73.7	10.0	8178.1
291	212L1291	4.5	91.5	98.0	61.0	70.3	9.1	8171.3
110	212L1110	3.5	92.0	94.0	65.4	71.3	14.3	8162.2
127	212L1127	4.0	88.0	95.5	66.1	70.6	10.2	8147.0
94	212L1094	4.0	88.5	98.5	59.7	70.8	10.3	8133.0
172	212L1172	4.0	88.0	100.5	66.7	72.2	15.1	8126.6
15	212L1015	3.5	94.0	98.0	62.6	72.0	6.4	8119.8
265	212L1265	4.0	89.0	87.0	56.6	68.5	16.7	8119.7
244	212L1244	3.5	85.5	92.5	66.5	72.5	17.3	8097.3
226	212L1226	3.5	93.0	101.0	65.3	71.4	13.4	8080.4
293	212L1293	3.5	90.5	91.0	66.7	72.6	15.1	8076.6
154	212L1154	3.0	90.0	95.0	64.8	72.6	13.4	8073.8
285	212L1285	4.0	88.0	89.0	63.3	70.5	17.6	8065.3
275	212L1275	4.0	87.0	85.5	63.4	72.6	11.9	8064.5
213	212L1213	3.5	89.5	88.5	63.1	70.6	9.6	8059.1
19	212L1019	4.0	95.0	90.0	61.3	71.3	11.4	8058.7
370	CLL15	4.5	89.5	90.5	64.3	71.0	14.4	8058.0
211	212L1211	4.0	89.5	92.5	66.3	72.7	14.0	8055.9

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
212	212L1212	4.0	92.5	88.0	66.8	72.2	14.7	8053.6
59	212L1059	3.0	89.0	97.5	65.5	73.0	8.1	8049.5
87	212L1087	3.5	89.5	89.0	66.3	72.8	19.0	8039.4
130	212L1130	4.0	87.0	96.5	66.5	73.5	20.9	8034.8
132	212L1132	4.0	89.5	97.5	63.0	72.2	17.2	8029.5
298	212L1298	4.0	88.0	95.5	65.5	72.2	12.6	8003.2
183	212L1183	3.5	91.0	98.0	65.8	73.1	11.8	8000.7
102	212L1102	4.0	92.0	104.5	57.1	71.8	15.3	7999.1
56	212L1056	4.0	86.5	92.0	63.4	71.3	6.3	7977.1
317	212L1317	3.0	87.0	87.5	63.6	72.4	8.6	7969.8
334	212L1334	3.5	92.0	97.0	65.7	72.3	7.0	7966.0
343	212L1343	3.5	87.0	97.0	70.5	75.6	17.0	7959.4
46	212L1046	3.5	89.0	94.5	66.3	72.6	14.6	7954.2
257	212L1257	4.0	91.5	100.5	70.5	74.9	8.6	7928.4
136	212L1136	4.0	85.5	90.0	66.4	72.6	15.2	7902.8
268	212L1268	4.0	91.0	89.0	66.0	71.8	9.6	7890.9
10	212L1010	3.5	88.0	94.5	68.0	73.6	10.6	7889.4
155	212L1155	3.5	89.5	93.0	64.6	72.9	10.5	7886.4
373	RU1902026	4.5	90.0	95.5	64.7	70.8	19.6	7868.9
150	212L1150	4.0	92.0	95.5	61.3	70.3	21.0	7868.5
206	212L1206	3.5	90.5	92.5	68.9	72.3	4.7	7867.5
278	212L1278	3.0	88.5	103.0	63.8	73.2	10.6	7854.8
12	212L1012	4.0	88.0	89.0	66.5	72.2	6.0	7854.2
307	212L1307	4.0	93.5	94.0	65.3	71.9	19.8	7847.4
372	RU1702183	4.0	87.5	100.5	66.0	71.8	12.0	7813.6
304	212L1304	4.0	84.5	85.0	56.9	72.3	13.4	7804.8
74	212L1074	4.0	88.0	92.5	58.0	69.4	4.9	7801.1
97	212L1097	3.0	88.0	99.0	52.1	70.5	11.1	7801.0
86	212L1086	3.5	87.0	90.5	62.7	70.8	21.4	7800.3
296	212L1296	4.0	89.5	95.0	63.8	70.4	13.0	7799.7
187	212L1187	4.0	91.5	94.5	64.7	71.2	13.3	7786.9
117	212L1117	3.5	87.5	100.0	61.1	71.7	11.1	7779.3
238	212L1238	3.5	87.5	97.5	70.0	72.9	4.8	7774.5
16	212L1016	3.5	86.5	94.0	66.4	72.7	9.0	7773.9
92	212L1092	2.5	85.5	93.5	61.1	72.2	12.8	7773.5
295	212L1295	3.0	83.5	89.5	65.1	71.7	15.9	7767.1
289	212L1289	3.5	86.5	94.5	56.6	72.9	10.9	7764.4
258	212L1258	4.0	86.0	86.5	69.4	74.3	22.4	7747.3
179	212L1179	4.0	91.5	99.0	63.0	71.1	15.3	7746.1
95	212L1095	3.5	88.5	100.5	56.1	70.3	9.9	7739.4
91	212L1091	3.0	84.5	96.0	60.7	71.8	9.5	7738.5
237	212L1237	4.0	89.0	96.0	67.0	72.4	7.9	7733.2
39	212L1039	4.0	91.0	90.5	63.1	72.0	12.2	7728.6

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
115	212L1115	3.5	87.0	91.5	66.2	70.8	8.4	7728.1
245	212L1245	4.0	92.0	94.5	66.7	73.2	13.3	7727.5
215	212L1215	4.0	86.0	87.0	59.7	69.8	19.4	7723.3
96	212L1096	4.0	88.5	97.0	64.6	73.2	9.2	7718.7
200	212L1200	4.0	88.0	91.5	61.2	72.1	13.0	7685.9
363	BBC-7-1	3.5	85.5	92.5	65.7	71.3	15.1	7682.3
4	212L1004	3.5	83.5	89.5	65.7	71.0	13.4	7677.8
113	212L1113	4.5	92.5	88.5	63.1	71.1	12.3	7677.7
288	212L1288	3.5	89.0	91.5	63.0	72.8	11.2	7675.3
243	212L1243	3.5	88.0	97.5	67.5	72.9	5.0	7673.6
26	212L1026	3.0	88.5	96.0	66.7	72.4	8.4	7662.8
167	212L1167	3.5	90.5	80.0	69.5	73.8	18.5	7648.3
319	212L1319	4.0	88.0	100.5	62.7	72.1	17.9	7644.0
14	212L1014	4.0	91.5	90.5	64.9	71.6	15.3	7617.3
18	212L1018	4.5	84.5	85.5	64.6	73.6	15.1	7615.9
194	212L1194	4.0	87.0	92.0	64.5	72.0	13.8	7615.1
306	212L1306	3.0	86.0	96.0	69.5	73.3	4.3	7611.4
225	212L1225	5.0	89.5	96.5	59.4	71.3	12.5	7603.9
9	212L1009	3.5	92.5	96.5	64.2	71.8	9.0	7599.3
266	212L1266	4.0	87.0	91.5	65.0	70.7	11.1	7598.4
349	212L1349	3.5	89.5	90.0	66.1	72.7	14.3	7595.8
313	212L1313	4.0	91.0	88.5	69.1	74.8	6.2	7581.3
271	212L1271	3.0	89.5	98.0	62.1	69.8	16.8	7577.4
290	212L1290	5.5	88.0	93.0	67.2	72.5	16.9	7565.8
73	212L1073	4.0	89.0	89.0	63.5	73.0	14.6	7562.2
61	212L1061	4.5	90.0	98.5	67.2	74.1	11.4	7559.9
40	212L1040	3.5	92.0	91.0	64.0	69.2	9.4	7559.0
152	212L1152	3.5	88.5	92.5	61.4	72.8	14.9	7554.5
329	212L1329	3.5	92.5	87.5	68.6	73.7	9.0	7553.1
20	212L1020	4.0	90.0	90.5	65.4	71.3	13.6	7551.5
353	212L1353	3.0	84.5	85.5	61.3	73.5	10.3	7549.8
233	212L1233	4.0	87.0	98.0	69.9	74.3	20.8	7549.2
322	212L1322	4.0	93.0	94.0	66.0	72.8	10.5	7524.3
161	212L1161	4.0	91.5	91.5	62.7	69.6	11.7	7518.9
342	212L1342	3.5	87.5	81.0	63.4	73.3	16.4	7507.0
267	212L1267	3.5	91.5	95.5	63.1	69.6	13.4	7483.8
208	212L1208	4.0	92.0	95.5	69.2	74.2	13.4	7482.6
163	212L1163	4.0	91.5	88.0	62.9	70.4	12.3	7482.2
7	212L1007	5.0	89.5	91.0	66.2	72.5	7.9	7468.3
173	212L1173	4.0	91.0	89.0	67.9	73.8	16.5	7463.1
143	212L1143	4.0	94.0	90.5	70.0	74.6	8.3	7461.5
45	212L1045	3.5	87.0	91.0	64.3	70.0	8.7	7461.0
328	212L1328	4.0	88.0	88.0	69.7	74.1	8.1	7459.4

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
249	212L1249	5.0	91.0	91.0	65.7	72.7	10.3	7440.6
345	212L1345	4.5	93.5	84.5	69.0	74.0	7.6	7440.0
350	212L1350	4.5	93.0	93.0	65.6	72.0	16.3	7415.1
360	BBC-3-1	4.5	90.5	97.5	61.5	70.7	10.0	7400.5
50	212L1050	4.0	85.5	89.0	68.0	72.2	12.4	7396.5
32	212L1032	3.0	89.5	89.5	61.8	72.6	11.8	7392.9
98	212L1098	3.5	89.0	87.0	64.4	71.6	11.1	7388.1
214	212L1214	4.0	90.0	86.5	64.2	70.9	10.3	7382.4
38	212L1038	3.5	91.0	94.5	63.3	70.7	9.9	7376.8
191	212L1191	4.5	89.0	92.5	70.4	72.8	3.3	7368.8
164	212L1164	3.5	90.0	102.0	67.7	72.7	16.0	7361.7
264	212L1264	3.5	91.0	90.5	63.7	72.6	10.2	7355.1
181	212L1181	4.0	90.5	89.5	67.3	73.4	13.8	7317.2
210	212L1210	5.0	92.0	88.0	65.1	72.6	5.2	7311.6
48	212L1048	4.0	91.5	94.0	63.6	70.8	11.9	7297.8
241	212L1241	4.0	88.5	88.0	62.3	70.3	11.1	7277.6
355	BBC-10-2	4.0	92.0	96.0	64.4	69.9	10.7	7239.1
297	212L1297	4.0	92.0	92.5	62.4	71.6	13.0	7233.2
324	212L1324	3.0	89.5	94.5	65.0	71.1	11.8	7216.3
124	212L1124	4.0	89.5	93.5	65.8	72.5	16.3	7214.2
182	212L1182	3.5	86.0	97.5	68.7	73.1	3.1	7198.2
171	212L1171	3.5	90.0	96.5	59.8	70.5	13.0	7193.3
176	212L1176	4.5	94.0	93.5	70.1	73.4	12.9	7189.3
368	CL153	4.0	92.0	91.5	70.1	74.0	18.3	7188.1
71	212L1071	4.0	90.5	94.5	69.0	74.5	13.7	7182.1
261	212L1261	3.0	86.5	82.5	60.9	69.4	12.2	7181.0
299	212L1299	3.5	89.5	86.5	63.4	70.1	12.8	7171.9
135	212L1135	4.0	87.5	90.5	61.0	69.9	11.4	7170.3
106	212L1106	3.5	89.5	91.0	66.9	74.0	15.8	7168.9
277	212L1277	3.5	89.0	86.5	64.9	72.1	7.3	7164.8
64	212L1064	5.0	91.0	94.0	61.7	70.7	11.0	7160.7
323	212L1323	4.0	91.0	94.0	63.7	71.0	8.8	7156.0
308	212L1308	3.0	85.0	95.5	61.4	72.1	7.2	7154.5
28	212L1028	4.5	92.0	94.5	61.8	71.9	12.7	7153.7
188	212L1188	3.5	89.5	89.5	60.7	71.5	11.4	7149.4
80	212L1080	3.5	85.0	89.5	62.6	71.9	16.5	7146.8
364	BBC-8-1	5.0	90.0	88.5	61.4	71.6	9.6	7143.1
1	212L1001	4.5	87.0	86.0	62.7	72.8	12.8	7112.6
248	212L1248	4.0	89.5	90.5	64.0	72.5	12.3	7111.3
198	212L1198	3.5	84.0	87.5	61.8	71.0	13.2	7105.5
320	212L1320	4.0	89.0	92.0	62.4	72.7	13.0	7103.3
341	212L1341	4.0	94.0	96.0	62.0	70.7	15.7	7096.9
120	212L1120	3.5	92.0	98.0	63.9	70.9	14.2	7073.1

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
347	212L1347	4.0	87.0	96.0	68.8	74.6	13.0	7055.2
311	212L1311	3.5	90.0	85.5	62.0	70.2	5.4	7044.6
199	212L1199	4.0	91.0	86.5	60.8	71.1	18.9	7044.2
190	212L1190	3.5	90.0	89.5	62.9	70.7	18.4	7042.7
58	212L1058	3.5	83.0	90.0	52.4	68.7	13.1	7032.4
147	212L1147	4.0	88.5	96.5	63.4	71.4	21.6	7019.1
262	212L1262	4.0	87.5	85.5	69.3	75.7	15.3	7004.7
180	212L1180	3.0	86.0	92.0	68.6	72.8	6.6	6991.6
89	212L1089	4.0	92.0	103.0	61.4	70.8	14.6	6977.8
126	212L1126	3.0	90.5	88.5	65.4	71.6	14.3	6954.8
259	212L1259	4.0	89.5	98.5	67.7	72.5	8.2	6946.8
330	212L1330	3.0	91.5	86.0	65.3	71.0	13.1	6944.4
365	BBC-8-2	4.5	92.0	95.0	62.1	71.6	13.2	6938.6
62	212L1062	3.5	90.0	87.5	64.7	71.9	13.5	6936.5
186	212L1186	3.0	85.0	87.5	63.4	73.1	12.7	6931.4
346	212L1346	3.5	87.5	89.0	67.4	74.0	14.9	6925.4
149	212L1149	4.0	95.0	98.0	63.5	71.1	11.1	6917.6
100	212L1100	4.0	91.0	83.0	66.6	73.3	12.0	6903.7
105	212L1105	4.0	88.5	90.0	63.2	71.7	16.2	6899.9
184	212L1184	3.5	88.0	93.0	60.8	70.1	13.8	6896.7
145	212L1145	3.5	92.0	98.5	63.1	69.4	16.0	6877.0
280	212L1280	4.0	88.0	87.0	67.6	72.5	13.1	6876.4
107	212L1107	3.0	87.5	92.0	67.6	72.1	16.1	6874.3
168	212L1168	4.5	90.5	87.0	64.5	71.8	13.4	6865.3
256	212L1256	4.0	90.0	81.0	61.9	69.3	5.5	6859.5
239	212L1239	3.5	88.5	85.0	66.7	73.0	7.8	6834.4
141	212L1141	3.5	91.0	86.5	63.2	71.8	12.9	6831.8
24	212L1024	3.0	84.5	83.0	63.9	72.1	12.2	6829.7
340	212L1340	3.0	85.0	84.5	62.3	73.3	5.9	6822.2
137	212L1137	3.5	86.5	83.5	58.4	72.4	14.0	6819.5
217	212L1217	4.5	94.0	92.0	61.3	69.5	11.1	6809.4
316	212L1316	4.0	94.0	94.5	66.6	71.6	4.6	6802.7
282	212L1282	3.5	87.0	83.5	67.0	73.1	10.0	6799.0
219	212L1219	3.5	87.5	97.5	65.4	71.1	9.5	6786.8
60	212L1060	4.5	89.0	91.0	68.0	73.6	14.9	6785.9
72	212L1072	4.0	87.5	88.5	66.7	71.0	7.8	6762.3
99	212L1099	5.0	86.0	84.0	64.3	73.9	13.7	6740.7
333	212L1333	4.0	89.5	95.0	66.0	72.4	17.5	6725.3
193	212L1193	4.0	87.5	90.0	67.4	73.8	19.9	6723.6
44	212L1044	4.0	90.5	87.5	64.9	71.6	13.2	6705.3
142	212L1142	4.0	90.5	93.0	64.1	71.1	14.4	6700.2
231	212L1231	3.0	84.0	85.5	62.4	71.4	9.9	6698.9
114	212L1114	5.0	93.5	85.5	64.1	72.4	16.2	6685.2

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
67	212L1067	4.0	92.5	90.0	67.4	73.1	12.8	6679.9
29	212L1029	3.5	89.0	88.0	62.5	70.2	17.5	6679.7
348	212L1348	4.0	85.5	82.0	60.0	71.5	7.4	6672.4
255	212L1255	4.5	92.5	89.5	63.9	72.1	15.9	6661.9
204	212L1204	5.5	91.0	88.5	63.2	72.2	13.5	6653.1
165	212L1165	4.0	92.5	84.5	58.5	66.7	16.6	6621.9
303	212L1303	4.0	92.0	82.0	64.4	72.2	13.8	6607.7
205	212L1205	4.0	92.5	96.0	65.9	71.8	15.9	6606.0
230	212L1230	4.5	89.0	86.5	65.3	72.3	16.3	6595.1
359	BBC-2-1	7.5	91.0	105.0	51.9	70.9	18.8	6593.8
166	212L1166	4.0	92.0	93.5	62.3	72.2	7.5	6587.8
178	212L1178	4.0	89.0	90.0	68.8	74.4	11.2	6579.6
260	212L1260	4.0	88.5	86.5	63.5	70.5	5.8	6567.3
331	212L1331	4.0	91.5	91.0	64.5	71.9	20.1	6559.8
326	212L1326	4.0	94.0	89.0	57.5	71.3	9.0	6550.4
366	BBC-9-2	5.5	87.5	88.5	61.7	70.4	11.2	6531.1
196	212L1196	4.0	92.0	87.0	62.7	72.0	14.3	6519.8
8	212L1008	5.0	91.0	79.5	63.7	73.1	12.7	6512.1
156	212L1156	4.5	94.0	86.5	65.1	71.2	20.3	6491.3
222	212L1222	4.0	93.5	102.0	62.5	71.0	9.6	6470.0
337	212L1337	2.5	85.5	99.5	62.9	71.9	12.3	6466.8
229	212L1229	4.0	87.5	88.5	51.7	70.6	8.8	6450.5
272	212L1272	4.5	91.5	92.5	65.5	72.2	13.8	6450.0
54	212L1054	4.0	95.5	86.5	63.3	71.0	15.1	6339.1
338	212L1338	3.5	93.5	87.0	64.1	71.2	14.6	6332.5
175	212L1175	3.0	85.5	89.0	71.6	74.3	2.4	6303.3
125	212L1125	4.5	91.5	83.5	63.0	72.4	13.4	6236.0
240	212L1240	5.0	92.5	92.5	65.2	72.0	8.7	6232.8
140	212L1140	5.0	85.0	83.5	62.0	72.4	11.8	6192.9
283	212L1283	4.0	89.5	88.0	54.0	69.8	14.7	6184.3
221	212L1221	4.0	94.5	80.5	58.0	67.2	8.1	6164.2
358	212L1358	4.5	91.0	91.0	66.1	71.4	17.8	6143.5
356	BBC-1-2	4.5	80.0	89.5	64.0	73.2	8.6	6141.7
351	212L1351	4.0	87.0	86.0	57.0	72.1	6.7	6122.2
122	212L1122	4.0	92.5	89.0	65.5	70.0	12.1	6115.1
220	212L1220	4.0	92.5	90.0	61.0	70.3	11.3	6095.1
57	212L1057	4.0	84.5	92.0	67.3	71.6	8.2	6073.3
144	212L1144	4.0	90.0	91.0	60.9	70.3	8.7	6064.7
70	212L1070	5.0	89.0	94.0	63.6	72.5	13.1	6051.9
189	212L1189	4.0	91.0	89.0	60.7	71.6	12.9	6008.3
318	212L1318	4.0	89.0	97.0	65.8	72.2	8.8	5989.9
116	212L1116	5.0	90.0	95.0	63.5	73.4	15.1	5961.4
65	212L1065	4.0	93.0	81.0	63.0	72.6	11.1	5959.4

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
263	212L1263	4.0	88.5	87.0	61.6	72.0	9.0	5951.0
139	212L1139	4.0	87.0	87.5	66.6	72.5	23.9	5933.3
203	212L1203	4.0	90.0	89.0	64.4	71.8	16.4	5925.9
17	212L1017	3.5	88.5	94.0	61.2	71.2	16.3	5914.8
13	212L1013	5.0	90.0	82.5	62.9	70.4	11.2	5898.7
321	212L1321	3.0	83.5	85.5	52.2	70.8	8.6	5862.3
158	212L1158	4.5	93.5	91.5	62.6	70.1	21.2	5771.5
361	BBC-4-1	5.0	92.5	99.0	67.6	72.4	9.0	5741.8
119	212L1119	4.5	88.5	89.5	64.8	72.3	17.2	5707.3
35	212L1035	4.0	94.0	91.5	61.8	69.8	8.4	5554.3
362	BBC-6-1	5.5	83.5	82.5	59.4	70.2	12.9	5541.0
37	212L1037	4.0	96.0	100.5	64.0	70.2	15.4	5530.4
112	212L1112	5.0	89.5	91.0	66.6	73.8	16.9	5501.8
227	212L1227	4.5	92.0	84.0	62.7	70.7	14.9	5482.3
77	212L1077	5.0	95.5	91.0	65.1	73.1	21.8	5460.6
301	212L1301	4.0	88.5	90.0	67.9	72.4	21.5	5432.7
83	212L1083	4.5	93.0	88.5	64.9	72.2	18.8	5386.8
274	212L1274	5.0	92.5	90.0	63.1	71.0	21.3	5293.2
335	212L1335	5.0	89.5	91.0	61.8	71.4	20.7	5287.3
162	212L1162	5.0	89.0	90.5	66.7	73.8	12.9	5271.8
68	212L1068	5.5	92.5	89.5	58.7	69.1	17.1	5120.2
302	212L1302	4.5	92.0	84.5	59.1	67.6	17.2	4926.1
41	212L1041	5.0	94.5	86.0	53.0	65.3	13.8	4849.6
253	212L1253	4.5	92.0	81.0	68.0	73.1	17.8	4840.3
251	212L1251	5.0	93.5	79.0	61.1	69.9	13.4	4758.0
11	212L1011	5.0	92.0	86.5	60.4	69.1	19.7	4711.1
134	212L1134	4.0	95.5	91.0	59.2	69.4	14.9	4686.3
63	212L1063	5.0	92.5	90.0	60.8	70.8	19.0	4611.1
185	212L1185	5.0	94.0	91.5	62.7	71.3	12.0	4335.8
5	212L1005	4.5	93.5	90.0	59.0	70.1	15.0	4302.0
224	212L1224	5.0	95.5	87.5	58.1	70.8	7.8	3729.8

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

Table 4. Grain and milling yields and agronomic performance of entries in the 2021 Clearfield Preliminary Yield Medium-Grain trial. H. Rouse Caffey Rice Research Station, Rayne, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
147	212M1147	3.5	92.0	102.5	71.1	74.4	7.4	9761.4
139	212M1139	3.0	85.5	94.5	66.2	73.4	4.7	9294.8
71	212M1071	3.0	89.5	104.0	71.0	74.0	8.4	9272.6
40	212M1040	3.0	91.0	99.0	64.4	73.2	7.1	9191.6
13	212M1013	3.5	90.0	97.5	70.7	74.1	6.8	9170.3
135	212M1135	3.5	90.0	95.5	70.3	73.2	11.6	9020.6
61	212M1061	3.0	92.0	100.0	72.6	75.1	6.3	8959.8
106	212M1106	3.0	89.0	96.0	68.5	73.8	4.8	8770.6
31	212M1031	3.5	91.0	98.0	67.3	72.3	6.6	8747.3
132	212M1132	3.5	91.5	88.0	70.0	74.5	6.7	8746.0
96	212M1096	4.0	94.0	94.5	71.3	74.0	5.4	8741.0
76	212M1076	4.0	92.0	91.5	69.9	74.6	6.9	8592.5
67	212M1067	3.5	92.0	89.5	66.8	74.3	9.1	8569.3
128	212M1128	4.0	93.5	93.0	68.0	73.4	4.0	8559.4
154	212M1154	3.5	90.0	96.0	69.1	72.9	3.2	8444.3
149	212M1149	3.0	94.5	93.5	70.9	74.1	5.8	8373.5
70	212M1070	4.0	93.5	91.0	69.5	73.4	7.5	8362.3
140	212M1140	3.0	86.0	91.5	65.7	72.6	8.3	8355.9
23	212M1023	3.0	89.0	94.5	70.2	73.9	4.9	8334.8
136	212M1136	4.0	92.5	96.0	69.1	73.3	3.1	8323.9
46	212M1046	4.0	91.0	96.5	70.7	74.7	4.2	8313.1
137	212M1137	3.0	89.5	95.5	71.9	74.2	5.4	8298.9
153	212M1153	3.0	89.5	94.5	67.9	74.8	6.3	8271.2
29	212M1029	3.0	88.5	97.5	67.3	73.6	4.6	8193.5
39	212M1039	3.5	92.0	92.5	71.6	74.4	3.4	8192.5
7	212M1007	3.5	91.0	98.0	70.2	74.4	8.2	8190.1
52	212M1052	3.5	90.0	84.5	69.2	73.5	5.1	8188.6
152	212M1152	3.0	88.0	99.5	67.9	72.9	6.1	8179.8
1	212M1001	3.0	90.0	96.5	66.9	73.9	5.9	8167.8
144	212M1144	3.5	91.5	92.5	70.1	73.3	7.8	8150.6
155	CLM04	4.0	93.5	100.0	70.4	72.8	7.3	8127.7
14	212M1014	3.5	92.0	97.0	68.1	72.5	8.1	8126.7
59	212M1059	3.5	91.5	90.5	67.0	72.9	8.5	8105.3
26	212M1026	4.0	87.5	95.0	68.8	74.2	8.4	8100.3
11	212M1011	4.0	93.5	90.5	72.0	75.3	4.2	8015.1
54	212M1054	3.5	93.0	92.5	71.8	74.0	5.5	8013.6
51	212M1051	3.5	93.0	90.5	70.1	73.9	5.0	7965.4
53	212M1053	3.5	91.5	93.0	69.0	75.0	7.5	7953.5
133	212M1133	4.0	90.0	94.0	70.7	74.6	6.7	7951.0
102	212M1102	4.0	94.0	87.0	65.5	72.8	7.5	7903.9
129	212M1129	3.0	85.0	86.5	66.9	73.0	6.0	7899.2
93	212M1093	5.0	91.5	94.0	70.7	73.1	6.3	7894.1
20	212M1020	3.0	93.0	89.0	69.2	72.8	6.2	7886.7

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
63	212M1063	3.5	90.0	90.0	69.2	74.2	6.5	7877.2
37	212M1037	4.0	86.5	96.5	65.9	75.5	9.9	7865.0
62	212M1062	3.5	90.5	91.0	68.7	73.3	7.3	7796.9
18	212M1018	4.0	89.0	94.5	68.8	73.4	3.5	7789.4
12	212M1012	3.0	87.0	106.5	70.6	73.6	5.8	7783.6
100	212M1100	3.5	90.5	96.5	71.7	75.2	6.3	7747.2
44	212M1044	4.0	93.5	98.5	69.9	73.5	5.9	7739.7
22	212M1022	3.0	91.0	96.0	68.0	74.3	6.5	7710.6
138	212M1138	4.0	90.0	97.0	65.7	72.5	3.0	7692.2
38	212M1038	4.0	92.0	92.0	69.1	72.6	8.2	7678.1
25	212M1025	4.0	93.5	90.5	70.2	73.7	7.8	7670.2
141	212M1141	3.0	90.5	89.0	70.6	74.0	6.3	7663.4
57	212M1057	4.0	87.0	96.0	66.7	72.8	4.8	7660.8
49	212M1049	4.0	91.5	94.0	72.3	75.5	6.1	7638.5
33	212M1033	4.0	89.5	99.0	70.9	74.5	2.6	7638.2
72	212M1072	4.0	93.0	87.0	71.3	75.4	5.3	7596.9
66	212M1066	3.5	90.5	85.5	65.5	74.4	5.2	7588.3
58	212M1058	4.0	93.0	85.5	69.9	74.3	4.6	7506.2
109	212M1109	4.5	90.0	93.0	70.4	73.4	6.4	7503.5
86	212M1086	3.5	95.5	87.5	70.7	73.5	2.9	7483.9
103	212M1103	4.0	94.0	85.0	70.4	73.8	6.4	7478.1
81	212M1081	4.0	93.5	95.0	69.0	72.8	4.0	7462.4
80	212M1080	4.5	91.5	90.0	70.3	73.8	4.7	7453.7
97	212M1097	4.0	92.0	89.0	69.0	74.1	8.0	7450.4
36	212M1036	3.0	93.0	95.0	70.0	74.2	5.4	7445.8
112	212M1112	4.0	89.5	86.0	70.1	74.1	3.3	7437.8
84	212M1084	3.0	90.0	95.0	71.5	75.3	4.5	7436.2
88	212M1088	3.0	85.0	85.5	62.4	74.3	6.6	7435.6
41	212M1041	3.5	92.5	94.0	72.1	76.5	6.8	7429.0
4	212M1004	3.0	92.0	89.5	69.0	73.7	4.5	7385.0
19	212M1019	4.0	91.5	101.0	63.2	73.7	6.4	7371.6
117	212M1117	3.5	92.5	85.0	69.8	74.4	7.7	7367.1
50	212M1050	3.5	89.5	94.5	67.3	74.3	6.2	7355.1
43	212M1043	3.5	90.0	90.5	68.3	73.2	4.7	7354.9
2	212M1002	4.0	87.5	85.0	64.7	74.3	4.1	7338.4
115	212M1115	4.0	90.5	90.0	70.0	72.7	6.2	7335.7
119	212M1119	4.5	93.5	97.5	67.7	71.9	6.2	7330.9
75	212M1075	3.5	90.5	100.0	70.4	73.6	3.4	7318.9
17	212M1017	4.0	87.0	91.0	70.4	73.1	4.9	7298.6
122	212M1122	3.5	89.0	98.5	68.5	72.3	4.0	7294.9
6	212M1006	4.0	93.5	93.5	69.8	72.6	6.6	7287.8
101	212M1101	4.0	96.0	85.5	71.5	74.3	7.4	7287.0
24	212M1024	4.0	91.0	83.0	62.3	73.7	6.5	7274.1
16	212M1016	4.5	91.0	91.5	64.0	72.7	7.1	7253.2

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
9	212M1009	4.0	91.0	89.5	64.9	72.9	7.2	7201.8
60	212M1060	3.5	90.0	92.0	64.3	73.1	3.5	7195.7
47	212M1047	3.5	91.0	85.5	65.2	72.8	3.1	7180.5
5	212M1005	3.0	93.5	89.5	72.4	74.7	6.0	7178.2
107	212M1107	4.5	95.5	99.0	69.1	72.3	7.3	7161.2
124	212M1124	4.0	91.0	90.0	70.8	73.9	3.0	7127.5
105	212M1105	4.0	94.0	90.0	70.3	73.4	4.3	7097.4
21	212M1021	3.5	92.5	86.5	70.4	73.0	5.6	7078.5
99	212M1099	3.5	92.0	87.5	69.3	71.9	6.4	7067.1
35	212M1035	4.0	90.0	91.0	69.4	73.3	6.5	7052.1
85	212M1085	3.0	90.5	88.0	68.4	74.0	4.9	7047.0
125	212M1125	3.5	88.0	88.0	67.3	74.5	2.7	7034.3
156	CL272	3.0	91.5	85.0	69.7	74.7	8.6	7030.6
148	212M1148	4.0	89.0	94.5	71.9	74.1	4.6	7027.8
78	212M1078	4.0	89.5	96.5	69.5	72.3	2.1	7010.7
130	212M1130	3.0	90.0	82.0	66.9	73.2	4.8	7009.8
82	212M1082	3.5	93.5	89.5	69.0	73.9	7.5	7001.6
126	212M1126	4.0	93.0	88.5	68.2	73.1	5.1	6984.0
32	212M1032	4.0	92.5	89.0	69.1	73.5	2.7	6940.3
150	212M1150	4.0	93.0	85.0	67.2	72.2	6.7	6936.5
55	212M1055	4.5	90.0	99.0	68.0	72.1	6.5	6887.7
87	212M1087	3.0	90.5	84.5	68.7	73.7	8.7	6777.7
116	212M1116	4.0	92.5	77.0	68.5	74.7	4.9	6768.9
10	212M1010	4.0	90.5	90.5	70.5	73.7	6.3	6762.8
110	212M1110	3.5	85.5	83.0	63.3	74.3	10.4	6759.4
28	212M1028	4.0	96.0	93.0	66.5	72.3	4.3	6749.0
108	212M1108	3.5	91.5	87.5	69.7	72.8	5.3	6714.4
121	212M1121	4.0	93.5	86.5	69.1	73.4	2.4	6693.6
91	212M1091	3.5	91.0	85.0	72.8	76.1	6.8	6687.2
92	212M1092	5.0	93.0	93.0	70.5	73.4	8.9	6659.4
74	212M1074	4.0	93.5	91.0	66.5	73.1	6.0	6634.6
27	212M1027	3.0	91.0	90.5	68.3	74.0	3.7	6618.0
90	212M1090	4.0	93.0	90.5	71.4	74.4	9.1	6591.1
143	212M1143	4.0	90.0	88.0	70.6	75.4	4.8	6588.2
127	212M1127	3.5	92.0	92.5	68.7	72.3	3.4	6557.9
15	212M1015	4.0	91.0	84.0	69.4	73.0	7.1	6521.8
64	212M1064	4.0	91.0	88.0	69.4	73.5	3.5	6498.2
65	212M1065	3.5	91.5	89.0	69.6	73.6	9.1	6493.7
151	212M1151	3.5	92.5	89.5	64.8	72.7	2.9	6492.8
104	212M1104	4.0	92.0	93.0	66.8	73.3	3.4	6482.9
68	212M1068	4.0	94.5	79.5	69.0	72.4	4.7	6476.2
95	212M1095	4.0	91.0	83.5	66.1	73.6	3.0	6445.5
145	212M1145	3.0	85.0	82.5	59.0	75.6	5.7	6442.8
73	212M1073	4.0	94.0	93.5	66.7	72.8	6.6	6409.1

Continued.

Table 4. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
42	212M1042	4.0	90.0	95.0	65.1	74.0	6.5	6392.7
89	212M1089	4.5	92.5	94.0	61.5	72.7	6.9	6386.8
142	212M1142	3.0	87.0	87.0	70.7	74.0	1.7	6345.4
94	212M1094	4.0	90.5	85.0	69.9	74.2	4.0	6320.2
146	212M1146	4.0	90.0	96.0	69.4	73.5	3.6	6303.0
8	212M1008	3.5	90.0	89.0	70.9	74.7	7.0	6247.6
34	212M1034	3.5	92.5	85.0	66.8	73.0	4.8	6225.3
134	212M1134	4.0	90.0	82.0	69.6	74.4	3.7	6123.8
120	212M1120	4.0	95.0	81.0	68.7	72.7	9.0	6114.2
48	212M1048	3.5	93.5	100.0	68.4	71.9	3.9	6090.8
98	212M1098	3.5	90.0	80.5	62.5	73.1	5.2	6068.0
114	212M1114	4.5	95.5	87.5	71.8	73.7	5.4	5976.4
123	212M1123	4.0	94.0	78.5	68.4	73.9	8.5	5892.9
83	212M1083	4.5	91.5	90.0	71.3	74.0	5.2	5878.1
113	212M1113	3.0	86.5	87.5	58.5	74.7	8.4	5861.5
118	212M1118	4.0	90.0	87.0	68.5	73.1	5.8	5816.8
79	212M1079	4.0	90.0	81.0	55.3	73.3	6.2	5680.3
3	212M1003	4.0	93.0	93.0	67.3	72.5	5.1	5561.4
69	212M1069	4.0	93.5	87.0	66.5	72.0	4.0	5542.9
56	212M1056	4.0	85.0	86.0	65.0	73.7	3.4	5452.9
45	212M1045	4.0	85.5	90.0	67.6	71.3	3.9	5213.8
111	212M1111	4.5	94.0	88.0	69.9	72.0	5.8	5183.6
77	212M1077	4.0	95.0	83.5	71.1	73.9	7.6	5059.7
131	212M1131	3.5	87.5	101.0	64.1	74.3	8.3	4786.9
30	212M1030	4.0	89.5	87.5	35.8	73.0	7.4	4015.5

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

PROVISIA PRELIMINARY YIELD TRIAL

The Provisia Preliminary Yield trial consists primarily of promising breeding nursery material that is ready to be tested in replicated yield trials. The material in this trial 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.

The trial was conducted using standard agronomic practices (except that no fungicides were applied) at the H. Rouse Caffey Rice Research Station (HRCRRS). Provisia herbicide was applied at 31 oz (2x rate) on April 28. 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. Data is presented in Table 3.

Table 1. Planting and harvesting dates for the 2021 Provisia Preliminary Yield trial.

Location	Trial	Planting	Harvesting
HRCRRS	PVPY	3/18	8/11

Table 2. Entry number, pedigree, grain type, and source information for entries in the 2021 Provisia Preliminary Yield trial.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	1	213L1001	PV17TA75/1702140	LG	LAES
PV	2	213L1002	2002074/1902194	LG	LAES
PV	3	213L1003	PVL01/1902186	LG	LAES
PV	4	213L1004	CTHL/2002074	LG	LAES
PV	5	213L1005	183L2070/1902186	LG	LAES
PV	6	213L1006	CHTL//CPRS/BASF1-13	LG	LAES
PV	7	213L1007	CTHL/2002074	LG	LAES
PV	8	213L1008	PV17TA75/RoyJ	LG	LAES
PV	9	213L1009	PV17TA75/LKST	LG	LAES
PV	10	213L1010	183L2070/1902186	LG	LAES
PV	11	213L1011	PVL01/MRMT	LG	LAES
PV	12	213L1012	2002074/DMND	LG	LAES
PV	13	213L1013	2002074/1804067	LG	LAES
PV	14	213L1014	183L2070/CHNR	LG	LAES
PV	15	213L1015	183L2070/CHNR	LG	LAES
PV	16	213L1016	CTHL/2002074	LG	LAES
PV	17	213L1017	PVL01/LKST	LG	LAES
PV	18	213L1018	CTHL/2002074	LG	LAES
PV	19	213L1019	CPRS/PVL24B	LG	LAES
PV	20	213L1020	PVL01/CHNR	LG	LAES
PV	21	213L1021	CTHL/2002074	LG	LAES
PV	22	213L1022	PV17TA75/RoyJ	LG	LAES
PV	23	213L1023	183L2070/CHNR	LG	LAES
PV	24	213L1024	PVL01/LKST	LG	LAES
PV	25	213L1025	1702140/PVL01	LG	LAES
PV	26	213L1026	CTHL/2002074	LG	LAES
PV	27	213L1027	PVL01/1902186	LG	LAES
PV	28	213L1028	PVL01/1902186	LG	LAES
PV	29	213L1029	PV17TA76/PVL01	LG	LAES
PV	30	213L1030	PVL01/1902186	LG	LAES
PV	31	213L1031	2002074/DMND	LG	LAES
PV	32	213L1032	183L2070/CHNR	LG	LAES
PV	33	213L1033	CTHL/2002074	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	34	213L1034	1902212/183L1227	LG	LAES
PV	35	213L1035	183L2070/1902186	LG	LAES
PV	36	213L1036	183L2070/1902186	LG	LAES
PV	37	213L1037	183L2070/CHNR	LG	LAES
PV	38	213L1038	2002074/DMND	LG	LAES
PV	39	213L1039	CTHL//CPRS/BASF1-13	LG	LAES
PV	40	213L1040	2002074/1902194	LG	LAES
PV	41	213L1041	2002074/1902194	LG	LAES
PV	42	213L1042	CTHL/2002074	LG	LAES
PV	43	213L1043	PVL01/1902186	LG	LAES
PV	44	213L1044	CTHL/2002074	LG	LAES
PV	45	213L1045	CCDR/MRMTBCR048(5)	LG	LAES
PV	46	213L1046	183L2070/1902186	LG	LAES
PV	47	213L1047	PVL01/1902186	LG	LAES
PV	48	213L1048	CTHL//CPRS/BASF1-13	LG	LAES
PV	49	213L1049	INIA6/2002074	LG	LAES
PV	50	213L1050	1702140/PVL01	LG	LAES
PV	51	213L1051	183L2070/CHNR	LG	LAES
PV	52	213L1052	2002074/1804067	LG	LAES
PV	53	213L1053	182L1278/PVL02	LG	LAES
PV	54	213L1054	2002122/PVL01	LG	LAES
PV	55	213L1055	CCDR/MRMTBCR048(5)	LG	LAES
PV	56	213L1056	2002074/1902194	LG	LAES
PV	57	213L1057	CTHL/2002074	LG	LAES
PV	58	213L1058	CTHL/2002074	LG	LAES
PV	59	213L1059	CTHL/2002074	LG	LAES
PV	60	213L1060	CCDR//CPRS/BASF1-13	LG	LAES
PV	61	213L1061	2002074/DMND	LG	LAES
PV	62	213L1062	183L2070/182L1278	LG	LAES
PV	63	213L1063	2002074/1804067	LG	LAES
PV	64	213L1064	INIA6/183L1227	LG	LAES
PV	65	213L1065	CTHL/2002074	LG	LAES
PV	66	213L1066	2002074/DMND	LG	LAES
PV	67	213L1067	CTHL/2002074	LG	LAES
PV	68	213L1068	183L2070/CHNR	LG	LAES
PV	69	213L1069	2002122/PVL01	LG	LAES
PV	70	213L1070	INIA6/2002074	LG	LAES
PV	71	213L1071	2002074/1902194	LG	LAES
PV	72	213L1072	183L2070/CHNR	LG	LAES
PV	73	213L1073	CTHL//PSDO/BASF1-12	LG	LAES
PV	74	213L1074	2002074/1902194	LG	LAES
PV	75	213L1075	CTHL/2002074	LG	LAES
PV	76	213L1076	2002074/DMND	LG	LAES
PV	77	213L1077	PVL01/1902186	LG	LAES
PV	78	213L1078	PVL01/1902186	LG	LAES
PV	79	213L1079	2002122/PVL01	LG	LAES
PV	80	213L1080	INIA6/2002074	LG	LAES
PV	81	213L1081	1702140/PVL01	LG	LAES
PV	82	213L1082	CTHL/2002074	LG	LAES
PV	83	213L1083	1702140/PVL01	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	84	213L1084	2002074/1902194	LG	LAES
PV	85	213L1085	CTHL//CPRS/BASF1-13	LG	LAES
PV	86	213L1086	CTHL/2002074	LG	LAES
PV	87	213L1087	PVL01/LKST	LG	LAES
PV	88	213L1088	PVL01/1902186	LG	LAES
PV	89	213L1089	183L2070/CHNR	LG	LAES
PV	90	213L1090	CTHL/2002074	LG	LAES
PV	91	213L1091	2002074/1902194	LG	LAES
PV	92	213L1092	PVL01/1902186	LG	LAES
PV	93	213L1093	CTHL/2002074	LG	LAES
PV	94	213L1094	183L2070/1902186	LG	LAES
PV	95	213L1095	2002074/1804067	LG	LAES
PV	96	213L1096	1702103/PVL01	LG	LAES
PV	97	213L1097	2002122/PVL01	LG	LAES
PV	98	213L1098	1402091/PV17TA75	LG	LAES
PV	99	213L1099	183L2070/1902186	LG	LAES
PV	100	213L1100	CTHL/2002074	LG	LAES
PV	101	213L1101	183L2070/CHNR	LG	LAES
PV	102	213L1102	1702140/PVL01	LG	LAES
PV	103	213L1103	2002122/PVL01	LG	LAES
PV	104	213L1104	183L2070/1902186	LG	LAES
PV	105	213L1105	PVL01/1902186	LG	LAES
PV	106	213L1106	183L2070/1902186	LG	LAES
PV	107	213L1107	1402091/PV17TA75	LG	LAES
PV	108	213L1108	1402091/PV17TA75	LG	LAES
PV	109	213L1109	2002074/RoyJ	LG	LAES
PV	110	213L1110	CTHL/183L1227	LG	LAES
PV	111	213L1111	PV17TA75/1702140	LG	LAES
PV	112	213L1112	183L2070/CHNR	LG	LAES
PV	113	213L1113	2002074/1902194	LG	LAES
PV	114	213L1114	CTHL/2002074	LG	LAES
PV	115	213L1115	1702140/PVL01	LG	LAES
PV	116	213L1116	CTHL/2002074	LG	LAES
PV	117	213L1117	1702140/PVL01	LG	LAES
PV	118	213L1118	INIA6/2002074	LG	LAES
PV	119	213L1119	1402091/PV17TA75	LG	LAES
PV	120	213L1120	PVL01/LKST	LG	LAES
PV	121	213L1121	183L2070/CHNR	LG	LAES
PV	122	213L1122	1702103/PVL01	LG	LAES
PV	123	213L1123	PV17TA75/LKST	LG	LAES
PV	124	213L1124	2002074/1902194	LG	LAES
PV	125	213L1125	2002122/PVL01	LG	LAES
PV	126	213L1126	CTHL/2002074	LG	LAES
PV	127	213L1127	CPRS/PVL081	LG	LAES
PV	128	213L1128	CTHL/2002074	LG	LAES
PV	129	213L1129	2002074/1902194	LG	LAES
PV	130	213L1130	PVL01/CTHL	LG	LAES
PV	131	213L1131	183L2070/CHNR	LG	LAES
PV	132	213L1132	183L2070/CHNR	LG	LAES
PV	133	213L1133	CTHL/2002074	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	134	213L1134	CTHL/2002074	LG	LAES
PV	135	213L1135	CTHL/2002074	LG	LAES
PV	136	213L1136	2002074/1902194	LG	LAES
PV	137	213L1137	183L2070/CHNR	LG	LAES
PV	138	213L1138	2002074/1804067	LG	LAES
PV	139	213L1139	183L2070/CHNR	LG	LAES
PV	140	213L1140	PVL01/CTHL	LG	LAES
PV	141	213L1141	CTHL/2002074	LG	LAES
PV	142	213L1142	1902126/PVL01	LG	LAES
PV	143	213L1143	2002074/RoyJ	LG	LAES
PV	144	213L1144	183L2070/2002150	LG	LAES
PV	145	213L1145	2002122/PVL01	LG	LAES
PV	146	213L1146	2002122/PVL01	LG	LAES
PV	147	213L1147	CTHL/2002074	LG	LAES
PV	148	213L1148	2002074/1902194	LG	LAES
PV	149	213L1149	183L2070/1902186	LG	LAES
PV	150	213L1150	2002074/1902194	LG	LAES
PV	151	213L1151	183L2070/182L1278	LG	LAES
PV	152	213L1152	183L1227/1902194	LG	LAES
PV	153	213L1153	INIA6/2002074	LG	LAES
PV	154	213L1154	PVL01/1902186	LG	LAES
PV	155	213L1155	CTHL/2002074	LG	LAES
PV	156	213L1156	PVL01/1902186	LG	LAES
PV	157	213L1157	CPRS/PVL01	LG	LAES
PV	158	213L1158	CPRS/PVL01	LG	LAES
PV	159	213L1159	2002074/1804067	LG	LAES
PV	160	213L1160	PVL01/1804187	LG	LAES
PV	161	213L1161	CTHL/2002074	LG	LAES
PV	162	213L1162	CTHL//PSDO/BASF1-12	LG	LAES
PV	163	213L1163	PVL01/LKST	LG	LAES
PV	164	213L1164	1902126/PVL01	LG	LAES
PV	165	213L1165	2002074/CHNR	LG	LAES
PV	166	213L1166	183L2070/1902186	LG	LAES
PV	167	213L1167	183L2070/CHNR	LG	LAES
PV	168	213L1168	PVL01/1902186	LG	LAES
PV	169	213L1169	PVL01/MRMT	LG	LAES
PV	170	213L1170	183L1227/1902194	LG	LAES
PV	171	213L1171	PSDO//MRMTBCR048-7/PSDO	LG	LAES
PV	172	213L1172	PV17TA75/1702140	LG	LAES
PV	173	213L1173	1702103/PVL01	LG	LAES
PV	174	213L1174	183L2070/1902186	LG	LAES
PV	175	213L1175	2002074/CHNR	LG	LAES
PV	176	213L1176	183L2070/2002150	LG	LAES
PV	177	213L1177	CTHL/2002074	LG	LAES
PV	178	213L1178	2002122/PVL01	LG	LAES
PV	179	213L1179	CTHL/2002074	LG	LAES
PV	180	213L1180	CTHL/2002074	LG	LAES
PV	181	213L1181	CTHL/2002074	LG	LAES
PV	182	213L1182	183L2070/CHNR	LG	LAES
PV	183	213L1183	CTHL/2002074	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	184	213L1184	CTHL/2002074	LG	LAES
PV	185	213L1185	2002074/1902194	LG	LAES
PV	186	213L1186	2002074/CHNR	LG	LAES
PV	187	213L1187	CTHL/2002074	LG	LAES
PV	188	213L1188	PVL01/1902186	LG	LAES
PV	189	213L1189	CTHL/2002074	LG	LAES
PV	190	213L1190	1702140/PVL01	LG	LAES
PV	191	213L1191	CTHL/2002074	LG	LAES
PV	192	213L1192	INIA6/2002074	LG	LAES
PV	193	213L1193	INIA6/2002074	LG	LAES
PV	194	213L1194	183L2070/1902186	LG	LAES
PV	195	213L1195	CTHL/2002074	LG	LAES
PV	196	213L1196	CTHL/183L1227	LG	LAES
PV	197	213L1197	2002122/PVL01	LG	LAES
PV	198	213L1198	MRMTBCR048-6F2/LKST	LG	LAES
PV	199	213L1199	CTHL/2002074	LG	LAES
PV	200	213L1200	2002122/PVL01	LG	LAES
PV	201	213L1201	1702140/PVL01	LG	LAES
PV	202	213L1202	PV17TA75/RoyJ	LG	LAES
PV	203	213L1203	PVL24B/MRMT	LG	LAES
PV	204	213L1204	CTHL/2002074	LG	LAES
PV	205	213L1205	2002122/PVL01	LG	LAES
PV	206	213L1206	PV17TA75/RoyJ	LG	LAES
PV	207	213L1207	PV17TA74/TRNS	LG	LAES
PV	208	213L1208	CTHL/2002074	LG	LAES
PV	209	213L1209	PVL01/1902186	LG	LAES
PV	210	213L1210	183L2070/CHNR	LG	LAES
PV	211	213L1211	PVL01/1902186	LG	LAES
PV	212	213L1212	CTHL//PSDO/BASF1-12	LG	LAES
PV	213	213L1213	CTHL/2002074	LG	LAES
PV	214	213L1214	PVL01/1804187	LG	LAES
PV	215	213L1215	2002122/PVL01	LG	LAES
PV	216	213L1216	183L2070/1902186	LG	LAES
PV	217	213L1217	INIA6/183L1227	LG	LAES
PV	218	213L1218	2002122/PVL01	LG	LAES
PV	219	213L1219	2002074/1902194	LG	LAES
PV	220	213L1220	PVL01/1902186	LG	LAES
PV	221	213L1221	CTHL//PSDO/BASF1-12	LG	LAES
PV	222	213L1222	183L1227/1902194	LG	LAES
PV	223	213L1223	2002122/PVL01	LG	LAES
PV	224	213L1224	CTHL/2002074	LG	LAES
PV	225	213L1225	183L2070/CHNR	LG	LAES
PV	226	213L1226	PVL01/1902186	LG	LAES
PV	227	213L1227	2002122/PVL01	LG	LAES
PV	228	213L1228	183L2070/CHNR	LG	LAES
PV	229	213L1229	1702140/PVL01	LG	LAES
PV	230	213L1230	CPRS/PVL24B	LG	LAES
PV	231	213L1231	CTHL/2002074	LG	LAES
PV	232	213L1232	1702140/PVL01	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	233	213L1233	PV17TA75/RoyJ	LG	LAES
PV	234	213L1234	CTHL/183L1227	LG	LAES
PV	235	213L1235	183L2070/CHNR	LG	LAES
PV	236	213L1236	TRNS/5/CHNR/3/NWBT/KATY//9902207X2/4/BASF2-21	LG	LAES
PV	237	213L1237	CTHL/2002074	LG	LAES
PV	238	213L1238	183L2070/CHNR	LG	LAES
PV	239	213L1239	183L2070/1902186	LG	LAES
PV	240	213L1240	PVL01/1902186	LG	LAES
PV	241	213L1241	1702140/PVL01	LG	LAES
PV	242	213L1242	PVL01/1902186	LG	LAES
PV	243	213L1243	2002074/1804067	LG	LAES
PV	244	213L1244	INIA6/2002074	LG	LAES
PV	245	213L1245	PVL01/1902186	LG	LAES
PV	246	213L1246	183L2070/CHNR	LG	LAES
PV	247	213L1247	2002074/CHNR	LG	LAES
PV	248	213L1248	183L2070/CHNR	LG	LAES
PV	249	213L1249	183L2070/CHNR	LG	LAES
PV	250	213L1250	1902126/PVL01	LG	LAES
PV	251	213L1251	183L2070/CHNR	LG	LAES
PV	252	213L1252	1702140/PVL01	LG	LAES
PV	253	213L1253	PV17TA75/RoyJ	LG	LAES
PV	254	213L1254	2002122/PVL01	LG	LAES
PV	255	213L1255	1702103/PVL01	LG	LAES
PV	256	213L1256	PVL01/1902186	LG	LAES
PV	257	213L1257	183L2070/CHNR	LG	LAES
PV	258	213L1258	CTHL/2002074	LG	LAES
PV	259	213L1259	CTHL/2002074	LG	LAES
PV	260	213L1260	2002074/DMND	LG	LAES
PV	261	213L1261	1702140/PVL01	LG	LAES
PV	262	213L1262	CTHL/2002074	LG	LAES
PV	263	213L1263	CTHL/2002074	LG	LAES
PV	264	213L1264	CTHL/PVL038	LG	LAES
PV	265	213L1265	183L2070/CHNR	LG	LAES
PV	266	213L1266	183L2070/CHNR	LG	LAES
PV	267	213L1267	CTHL/2002074	LG	LAES
PV	268	213L1268	CTHL/2002074	LG	LAES
PV	269	213L1269	PVL01/1902186	LG	LAES
PV	270	213L1270	183L2070/2002150	LG	LAES
PV	271	213L1271	183L2070/1902186	LG	LAES
PV	272	213L1272	CPRS/PVL24B	LG	LAES
PV	273	213L1273	183L2070/2002150	LG	LAES
PV	274	213L1274	2002074/1804067	LG	LAES
PV	275	213L1275	PV17TA76/PVL01	LG	LAES
PV	276	213L1276	INIA6/2002074	LG	LAES
PV	277	213L1277	183L2070/CHNR	LG	LAES
PV	278	213L1278	CPRS/PVL24B	LG	LAES
PV	279	213L1279	2002074/1902194	LG	LAES

Continued.

Table 2. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
PV	280	213L1280	183L2070/CHNR	LG	LAES
PV	281	213L1281	183L2070/CHNR	LG	LAES
PV	282	213L1282	183L2070/CHNR	LG	LAES
PV	283	213L1283	183L2070/CHNR	LG	LAES
PV	284	213L1284	INIA6/2002074	LG	LAES
PV	285	213L1285	CTHL/2002074	LG	LAES
PV	286	213L1286	2002122/PVL01	LG	LAES
PV	287	213L1287	CTHL/2002074	LG	LAES
PV	288	213L1288	CTHL/2002074	LG	LAES
PV	289	213L1289	CTHL//PSDO/BASF1-12	LG	LAES
PV	290	213L1290	1902122/183L1227	LG	LAES
PV	291	RU2002066	CHNR//CCDR/JEFF/3/BASF2-22	LG	LAES
PV	292	RU2002070	PVL01/CTHL	LG	LAES
PV	293	RU2002174	PVL01/CTHL	LG	LAES
PV	294	193L1036	TRNS//CHNR/BASF1-2	LG	LAES
PV	295	193L1099	TRNS//CHNR/BASF1-2	LG	LAES
PV	296	193L2012	MRMTBCR048(5)/MRMT//MRMT	LG	LAES
PV	297	193L2052	PVL081/CL172	LG	LAES
PV	298	193L2086	PVL01/CTHL	LG	LAES
PV	299	PVL02	PVL02	LG	LAES
PV	300	PVL01/CTHL	PVL01/CTHL	LG	LAES

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixie Belle type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Crowley; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 3. Grain and milling yields and agronomic performance of entries in the 2021 Provisia Preliminary Yield trial.
H. Rouse Caffey Rice Research Station, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
101	213L1101	4.5	89.5	110.5	55.9	68.0		10427.0
124	213L1124	4.5	80.5	107.0	61.1	70.0		10107.1
129	213L1129	4.0	82.5	114.5	62.2	69.9		10092.3
295	193L1099	6.0	77.5	104.5	61.8	68.9		10028.3
49	213L1049	4.0	85.0	108.5	61.2	69.8		9955.1
221	213L1221	5.0	85.0	102.5	61.8	68.3		9943.5
209	213L1209	4.0	94.0	106.5	60.0	67.1		9862.1
91	213L1091	4.5	83.0	104.0	61.2	70.3		9761.2
46	213L1046	4.5	87.5	112.5	58.2	65.9		9735.0
281	213L1281	4.5	91.0	107.0	61.3	69.5		9665.4
238	213L1238	5.0	90.5	103.0	60.8	69.8		9634.0
239	213L1239	4.5	86.5	111.5	58.2	68.0		9596.5
98	213L1098	4.0	83.0	98.5	56.5	67.9		9576.6
20	213L1020	5.5	84.5	104.5	66.0	71.9		9575.1
72	213L1072	5.0	87.5	109.5	61.3	70.2		9559.6
196	213L1196	3.5	83.5	115.5	58.1	67.9		9540.6
247	213L1247	4.5	84.0	110.0	57.9	68.5		9533.8
184	213L1184	3.5	84.5	107.5	58.2	68.3		9482.9
70	213L1070	4.0	86.0	112.5	57.4	67.8		9462.3
32	213L1032	4.5	88.5	112.0	60.9	69.1		9440.0
71	213L1071	4.0	83.5	105.0	58.8	67.7		9432.6
189	213L1189	3.5	84.0	102.5	62.2	69.5		9424.2
225	213L1225	4.0	90.0	110.5	55.8	67.2		9402.2
298	RU2102186	5.0	90.5	111.0	59.1	68.4		9373.3
140	213L1140	4.5	88.5	107.0	55.2	68.8		9363.5
137	213L1137	5.5	88.5	109.5	58.6	69.5		9338.0
259	213L1259	4.0	83.5	105.5	53.2	67.1		9316.2
237	213L1237	4.5	86.0	107.0	62.1	70.9		9316.0
23	213L1023	6.0	88.5	108.5	59.6	68.2		9303.1
192	213L1192	6.0	84.5	106.0	60.9	70.3		9282.8
133	213L1133	4.5	85.5	108.0	59.0	69.2		9277.3
177	213L1177	4.5	86.0	109.0	60.5	68.8		9254.3
10	213L1010	4.5	89.0	112.0	58.5	69.3		9210.4
14	213L1014	4.5	94.5	107.0	52.6	65.9		9184.5
279	213L1279	4.5	84.0	114.5	62.7	69.8		9184.5
41	213L1041	4.0	86.5	114.0	61.0	70.2		9175.0
183	213L1183	3.5	84.5	103.5	60.1	68.5		9168.9
210	213L1210	5.5	89.5	115.0	57.8	68.2		9164.1
287	213L1287	4.5	85.5	104.0	63.5	70.7		9091.1
285	213L1285	4.5	86.0	112.5	60.6	69.5		9083.5
148	213L1148	5.0	87.0	116.0	61.2	70.2		9067.0
284	213L1284	5.0	88.5	108.0	57.6	67.6		9061.4
185	213L1185	4.5	87.0	109.5	59.7	68.3		9055.5

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
130	213L1130	4.5	89.5	109.0	59.9	68.1		9053.2
231	213L1231	3.5	83.5	102.0	60.0	69.5		9036.2
40	213L1040	3.5	86.0	108.0	62.0	69.6		9024.6
4	213L1004	5.0	87.0	107.0	60.4	67.5		9009.6
84	213L1084	4.0	83.5	113.0	57.4	68.5		9003.9
228	213L1228	5.0	94.0	109.5	59.0	67.9		8946.6
22	213L1022	4.0	88.5	113.5	58.2	67.6		8945.9
153	213L1153	4.0	87.0	116.5	59.6	67.8		8912.9
90	213L1090	4.5	88.0	105.5	63.4	70.6		8902.8
15	213L1015	5.0	91.5	107.0	60.8	68.6		8895.0
24	213L1024	4.5	87.5	120.5	59.5	67.5		8860.9
2	213L1002	4.0	81.5	111.0	53.5	66.7		8858.1
246	213L1246	5.0	92.0	109.5	58.4	68.8		8855.6
244	213L1244	4.5	88.5	115.0	60.3	67.9		8844.2
135	213L1135	4.5	89.0	106.0	62.3	70.1		8838.0
100	213L1100	4.0	88.0	109.0	57.5	67.5		8827.5
212	213L1212	4.0	81.0	107.0	62.0	70.0		8804.7
268	213L1268	5.0	85.0	104.5	61.4	69.3		8791.7
147	213L1147	4.5	87.0	100.5	61.0	69.1		8788.9
258	213L1258	3.5	86.5	102.5	58.3	69.1		8787.1
13	213L1013	4.0	86.5	100.0	58.7	68.1		8774.5
155	213L1155	5.5	86.0	109.0	61.2	70.0		8760.1
181	213L1181	4.0	86.0	110.5	57.3	68.7		8759.4
166	213L1166	4.0	91.5	113.0	59.4	67.9		8754.9
107	213L1107	5.0	85.5	101.5	55.1	66.8		8754.3
16	213L1016	4.5	86.5	104.5	61.9	69.5		8732.3
119	213L1119	4.0	89.0	104.5	57.7	69.0		8718.6
173	213L1173	4.5	83.5	112.5	58.7	68.0		8710.8
265	213L1265	5.5	91.0	115.0	56.9	67.6		8694.9
96	213L1096	4.0	91.5	114.0	58.5	67.4		8693.7
264	213L1264	4.5	81.5	106.0	62.9	70.6		8690.5
170	213L1170	4.5	86.0	108.5	60.8	68.4		8675.3
131	213L1131	5.5	89.5	105.0	59.5	68.1		8675.0
257	213L1257	4.5	87.5	111.0	59.6	69.0		8673.7
159	213L1159	5.0	89.5	107.0	57.0	67.4		8666.1
80	213L1080	5.5	87.5	105.0	56.6	67.3		8623.5
93	213L1093	4.5	85.5	102.0	62.2	70.3		8587.3
75	213L1075	4.5	86.0	105.5	62.9	69.7		8581.1
180	213L1180	4.5	86.5	106.0	61.8	70.1		8579.4
204	213L1204	5.0	87.5	105.0	62.6	70.3		8551.7
271	213L1271	4.5	91.0	110.0	56.4	67.3		8528.3
110	213L1110	5.0	84.5	110.0	56.8	67.2		8509.5
191	213L1191	4.5	86.0	103.0	62.8	69.0		8504.5
199	213L1199	4.0	86.0	95.0	61.4	69.7		8500.9

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
224	213L1224	5.5	86.0	106.0	61.7	69.8		8489.6
86	213L1086	5.5	86.0	101.5	63.0	70.0		8485.0
127	213L1127	5.0	85.0	117.0	56.6	67.5		8484.6
76	213L1076	5.0	87.5	111.0	61.4	68.4		8468.0
122	213L1122	3.5	92.5	104.5	59.8	66.3		8465.1
288	213L1288	5.0	88.0	107.5	57.4	68.0		8453.3
290	213L1290	4.5	86.0	113.5	50.9	63.2		8451.5
39	213L1039	5.0	90.0	109.5	53.6	65.8		8443.5
280	213L1280	5.0	91.0	108.5	61.2	69.4		8442.0
83	213L1083	5.0	91.5	107.0	56.2	65.9		8438.2
126	213L1126	4.0	89.5	113.0	62.4	69.6		8433.3
194	213L1194	4.0	88.0	112.0	55.5	65.6		8421.7
113	213L1113	4.0	88.5	110.5	58.8	67.7		8421.7
116	213L1116	5.5	85.5	102.5	59.8	67.8		8421.1
143	213L1143	4.5	87.5	103.5	58.4	68.0		8399.4
195	213L1195	4.5	85.5	112.5	61.4	70.2		8393.5
217	213L1217	5.0	84.5	109.5	58.9	65.9		8391.2
276	213L1276	4.5	87.0	108.0	54.1	65.5		8382.2
255	213L1255	5.0	86.0	112.5	59.6	68.5		8350.1
1	213L1001	4.5	87.5	112.0	61.5	70.3		8339.4
157	213L1157	4.5	92.5	106.0	61.9	68.9		8323.5
208	213L1208	4.5	85.0	107.0	62.7	69.9		8321.0
112	213L1112	5.5	91.0	110.0	55.8	66.1		8317.1
31	213L1031	4.5	88.5	129.0	58.8	66.6		8311.8
162	213L1162	3.0	81.0	99.5	53.0	65.5		8303.6
152	213L1152	4.0	85.5	123.0	60.3	66.8		8302.2
161	213L1161	5.5	86.0	105.5	57.6	67.5		8297.1
64	213L1064	4.5	84.5	108.5	58.1	67.2		8291.8
261	213L1261	5.0	93.5	112.5	55.3	65.6		8283.3
128	213L1128	4.5	86.0	106.5	63.0	69.4		8270.3
74	213L1074	5.5	86.0	101.0	57.2	67.5		8268.9
175	213L1175	5.5	84.5	102.5	63.8	71.2		8240.2
21	213L1021	5.0	87.0	110.0	60.0	68.2		8238.7
243	213L1243	5.0	87.0	111.0	54.1	66.0		8223.8
294	193L1036	6.0	83.0	109.0	56.5	65.0		8209.9
187	213L1187	4.0	84.0	105.0	54.9	67.1		8202.0
95	213L1095	5.5	87.5	113.0	58.5	67.0		8201.4
186	213L1186	4.5	85.5	99.5	59.5	68.7		8198.8
11	213L1011	5.0	92.0	104.0	58.1	67.0		8183.0
202	213L1202	4.5	92.5	109.5	57.3	67.4		8183.0
150	213L1150	4.5	81.5	103.5	61.7	69.0		8175.7
277	213L1277	5.0	89.0	107.0	63.4	70.7		8173.0
61	213L1061	4.5	87.0	118.5	59.0	67.2		8167.4
68	213L1068	5.0	93.5	103.0	58.4	68.9		8161.9

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
136	213L1136	6.0	83.5	104.0	58.9	68.7		8159.8
291	RU2002066	5.0	89.0	105.0	60.9	67.3		8153.0
34	213L1034	4.5	77.0	113.0	62.0	68.4		8146.1
283	213L1283	4.0	91.0	112.5	59.9	68.6		8144.3
82	213L1082	4.5	86.5	103.5	60.9	69.6		8139.3
6	213L1006	5.0	84.5	112.5	51.3	66.4		8134.1
270	213L1270	4.5	90.0	98.0	60.1	67.9		8128.0
58	213L1058	5.0	85.5	102.0	59.7	70.0		8120.0
182	213L1182	5.5	87.5	114.5				8110.6
94	213L1094	4.0	88.0	115.0	60.7	68.5		8105.5
44	213L1044	4.0	86.5	105.0	59.8	68.4		8102.5
7	213L1007	5.0	87.0	102.0	60.1	68.5		8097.1
56	213L1056	4.5	87.0	107.0	58.4	67.4		8090.5
66	213L1066	5.0	86.5	109.5	60.5	67.4		8086.5
300	PVL03	5.5	89.0	110.0	56.9	68.7		8085.9
114	213L1114	4.5	85.5	102.5	62.8	70.6		8066.1
234	213L1234	4.5	84.5	107.5	59.8	68.0		8061.1
67	213L1067	5.0	88.0	109.5	59.9	68.3		8041.2
167	213L1167	5.5	92.0	106.0	59.5	67.2		8030.4
5	213L1005	5.0	88.0	108.0	60.6	68.2		8014.0
193	213L1193	4.0	89.5	113.0	57.3	65.3		7986.1
172	213L1172	4.0	87.5	106.0	57.2	66.8		7982.2
213	213L1213	5.0	87.5	106.0	57.5	67.6		7971.7
111	213L1111	4.5	86.0	113.5	59.3	67.7		7959.4
35	213L1035	4.5	92.0	114.0	54.1	66.2		7957.6
33	213L1033	4.5	88.0	103.5	63.4	70.5		7956.8
42	213L1042	4.5	85.0	103.0	61.3	69.9		7955.4
142	213L1142	4.0	93.0	104.5	52.7	66.9		7937.6
179	213L1179	4.5	87.5	102.5	59.2	69.1		7892.7
57	213L1057	6.0	89.0	107.5	61.6	69.0		7891.3
99	213L1099	5.5	91.5	105.0	53.7	63.8		7880.0
251	213L1251	5.0	90.0	101.5	54.4	66.7		7875.7
120	213L1120	5.0	91.5	100.5	57.9	67.6		7867.8
104	213L1104	4.5	92.0	110.5	52.8	64.7		7864.7
52	213L1052	5.0	87.0	100.5	58.1	67.2		7851.0
215	213L1215	4.5	92.0	104.5	57.3	67.9		7850.9
248	213L1248	4.5	95.5	102.5	55.0	67.8		7848.9
205	213L1205	6.0	89.0	108.0	59.2	68.2		7847.6
53	213L1053	4.5	90.0	110.5	60.3	67.9		7840.5
249	213L1249	5.0	93.0	103.5	59.9	69.3		7839.5
203	213L1203	5.0	88.0	112.0	61.6	68.3		7817.0
121	213L1121	4.5	93.0	111.0	55.8	65.5		7808.2
269	213L1269	4.0	93.0	112.5	59.1	67.6		7808.1
108	213L1108	3.5	84.0	98.0	52.5	65.8		7805.8

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
60	213L1060	4.5	83.5	113.5	56.5	67.3		7800.3
115	213L1115	4.5	94.0	113.0	53.9	65.3		7766.1
293	RU2002174	5.0	87.0	115.5	58.9	68.6		7760.4
275	213L1275	5.0	88.0	111.0	59.3	68.2		7714.9
176	213L1176	5.0	97.5	105.5	55.7	65.2		7712.8
254	213L1254	4.0	95.5	114.5	60.0	67.7		7700.5
236	213L1236	4.0	83.0	100.5	60.9	67.8		7692.3
30	213L1030	4.0	93.0	106.5	56.3	66.7		7673.0
262	213L1262	4.5	86.0	106.0	58.6	68.2		7663.6
178	213L1178	4.5	89.5	108.5	57.1	67.3		7661.4
87	213L1087	5.5	92.0	97.5	50.1	64.1		7660.5
9	213L1009	5.5	93.0	108.5	50.1	66.6		7656.9
12	213L1012	4.5	87.5	103.5	56.0	65.7		7648.3
158	213L1158	5.0	92.0	105.0	57.8	65.5		7638.5
263	213L1263	5.0	90.0	101.5	60.7	68.2		7615.6
282	213L1282	5.0	92.0	112.0	58.2	67.4		7609.8
149	213L1149	4.5	93.5	108.0	55.7	66.1		7597.7
18	213L1018	5.5	86.5	99.5	58.7	68.3		7593.2
216	213L1216	4.0	94.0	115.5	60.0	67.9		7582.5
73	213L1073	3.5	86.0	92.0	58.2	68.2		7563.9
292	RU2002070	4.0	89.5	109.0	60.4	69.0		7562.7
207	213L1207	6.0	86.0	98.0	55.0	67.8		7555.1
141	213L1141	5.0	86.0	102.5	60.3	68.0		7551.3
289	213L1289	4.5	86.5	94.5	56.3	67.0		7550.7
260	213L1260	5.0	86.0	115.0	60.4	67.8		7542.1
240	213L1240	4.5	94.0	118.0	55.9	66.3		7532.8
235	213L1235	5.0	95.0	113.0	62.1	68.7		7527.0
274	213L1274	6.0	87.0	107.5	54.7	66.5		7517.3
132	213L1132	6.0	91.5	108.0	54.8	66.9		7499.0
123	213L1123	4.5	90.5	122.5	46.0	61.6		7490.1
118	213L1118	4.5	90.5	106.5	53.1	65.9		7475.0
89	213L1089	4.5	94.5	105.5	52.4	65.2		7468.6
139	213L1139	5.0	93.0	110.0	57.2	67.0		7442.8
156	213L1156	4.5	91.5	111.5	57.0	67.1		7420.1
25	213L1025	4.5	91.5	111.0	54.1	65.0		7377.1
198	213L1198	5.0	88.0	97.5	50.9	66.9		7375.0
63	213L1063	5.0	88.0	104.0	56.7	66.0		7352.3
297	193L2052	5.0	93.0	95.0	56.5	65.6		7337.6
134	213L1134	5.5	89.5	99.0	61.3	69.1		7313.6
59	213L1059	5.5	85.5	104.0	57.9	67.9		7303.2
26	213L1026	4.5	88.0	106.0	60.4	69.5		7300.8
117	213L1117	5.0	92.0	108.5	59.0	67.2		7280.8
47	213L1047	5.5	91.5	115.0	53.7	65.2		7254.7
266	213L1266	5.0	94.0	108.0	56.2	65.5		7237.7

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
50	213L1050	4.5	92.5	111.5	50.4	63.7		7235.3
256	213L1256	4.0	96.5	115.5	56.5	66.9		7199.2
211	213L1211	4.5	90.5	98.5	52.7	65.3		7189.4
267	213L1267	5.5	87.0	105.0	61.7	68.7		7175.8
250	213L1250	5.0	94.0	117.5	47.8	62.0		7167.3
169	213L1169	5.0	93.5	102.0	59.7	67.8		7154.4
219	213L1219	5.0	85.5	109.0	56.4	65.9		7146.2
37	213L1037	6.0	92.5	111.5	50.5	65.0		7114.0
214	213L1214	6.0	93.5	105.0	47.8	61.3		7089.7
8	213L1008	4.5	92.5	97.5	55.8	66.6		7088.0
190	213L1190	4.5	94.0	111.0	54.9	65.3		7067.1
286	213L1286	4.5	92.5	103.0	51.4	64.8		7017.5
222	213L1222	5.5	90.5	111.5	60.3	68.6		6996.1
278	213L1278	4.5	84.5	101.0	54.9	65.7		6959.2
220	213L1220	5.5	97.0	109.5	53.3	65.6		6946.7
28	213L1028	5.0	93.5	113.0	50.0	63.3		6937.7
51	213L1051	4.5	97.5	101.0	56.5	67.4		6930.1
200	213L1200	4.0	91.0	112.0	55.3	67.2		6920.8
79	213L1079	4.0	94.0	114.5	57.1	67.2		6912.7
19	213L1019	5.0	85.5	102.5	60.7	66.9		6896.0
242	213L1242	5.0	95.0	114.0	42.7	63.0		6893.6
201	213L1201	4.0	94.5	109.0	57.9	66.4		6890.9
54	213L1054	4.5	92.0	108.5	48.5	64.6		6833.5
62	213L1062	5.0	92.5	117.5	48.6	63.6		6814.3
125	213L1125	4.5	92.0	107.5	54.1	63.2		6813.4
226	213L1226	4.5	97.5	117.5	54.1	66.4		6778.6
146	213L1146	4.5	90.0	108.0	54.8	65.8		6777.5
230	213L1230	5.5	89.0	102.5	62.8	69.7		6754.5
43	213L1043	4.5	89.0	113.0	47.7	62.6		6751.3
17	213L1017	6.0	91.0	126.0	51.7	64.6		6742.2
188	213L1188	3.5	94.5	110.5	55.9	66.3		6716.7
138	213L1138	5.5	90.0	108.5	52.2	65.8		6698.4
223	213L1223	4.5	94.5	110.0	52.1	64.0		6642.8
144	213L1144	6.5	99.0	105.0	59.1	67.6		6633.8
3	213L1003	5.0	96.5	106.5	54.7	66.0		6624.7
299	PVL02	3.0	85.0	118.5	60.4	69.3		6607.6
38	213L1038	5.5	90.0	96.0	54.4	65.9		6600.2
81	213L1081	4.0	92.5	108.5	58.4	67.6		6595.8
85	213L1085	5.0	88.0	106.0	58.1	66.6		6576.0
65	213L1065	6.5	90.5	105.5	60.2	67.7		6570.6
163	213L1163	5.5	94.5	113.5	59.0	67.3		6520.2
109	213L1109	6.0	88.0	102.0	57.5	68.8		6511.6
106	213L1106	5.0	91.5	105.5	52.2	64.5		6509.5
253	213L1253	5.0	94.0	97.0	54.8	67.0		6481.3

Continued.

Table 3. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
227	213L1227	4.0	93.0	107.5	55.3	64.6		6460.9
174	213L1174	5.0	96.0	110.5	54.3	65.3		6451.0
160	213L1160	6.0	97.0	100.0	57.2	66.2		6445.8
88	213L1088	4.5	94.5	111.0	52.2	64.2		6417.3
171	213L1171	5.5	90.0	104.5	53.3	65.1		6415.2
145	213L1145	4.5	95.0	111.0	48.6	62.4		6377.1
92	213L1092	4.0	91.0	116.5	51.7	63.2		6365.2
29	213L1029	5.5	90.5	107.5	57.2	67.0		6358.1
48	213L1048	5.0	86.0	89.0	56.8	66.4		6347.4
165	213L1165	5.0	87.5	100.0	61.0	68.8		6345.6
232	213L1232	5.0	96.5	107.5	52.2	62.8		6311.6
233	213L1233	5.5	92.5	105.0	52.0	66.4		6288.7
154	213L1154	5.5	92.5	112.0	40.5	60.1		6262.2
27	213L1027	4.5	97.0	116.0	46.0	60.9		6248.1
105	213L1105	4.0	97.0	109.5	55.6	66.0		6230.4
151	213L1151	4.5	92.0	105.0	45.6	61.3		6203.8
77	213L1077	5.5	95.5	112.5	57.8	67.0		6179.4
272	213L1272	5.0	89.5	114.0	54.8	63.8		6172.7
164	213L1164	5.0	96.0	109.5	56.5	66.8		6136.6
168	213L1168	5.0	97.0	112.0	53.4	65.5		6125.9
78	213L1078	4.5	98.5	109.0	51.0	62.2		6038.4
229	213L1229	4.5	100.5	112.0	49.9	63.0		6031.2
69	213L1069	5.0	93.5	105.0	55.0	65.1		5738.5
218	213L1218	5.0	93.0	102.5	54.5	64.7		5649.2
197	213L1197	5.5	98.0	109.5	49.8	62.7		5608.5
103	213L1103	6.5	94.0	104.5	54.6	64.5		5594.0
273	213L1273	5.0	100.5	105.0	46.5	61.7		5555.0
245	213L1245	5.0	96.0	115.5	44.9	63.2		5535.7
206	213L1206	6.0	95.5	97.5	55.6	67.6		5334.2
252	213L1252	6.0	96.0	100.0	55.4	64.8		5254.3
102	213L1102	6.0	98.5	104.0	47.3	61.2		5128.5
55	213L1055	5.5	90.0	85.5	54.6	67.5		5105.7
241	213L1241	5.5	97.5	101.5	51.0	63.3		5091.6
97	213L1097	5.0	102.0	109.0	43.8	59.3		5004.2
36	213L1036	6.5	93.0	112.0	51.0	62.1		4957.4
45	213L1045	6.0	87.0	85.5	50.6	65.8		4147.2
296	193L2012	5.0	93.5	112.5	61.4	68.3		n/a

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

DATE OF PLANTING STUDIES

The purpose of these trials is to determine the grain yield, milling quality, and other agronomic characteristics of major rice varieties, experimental lines, and hybrids planted at various times. The choice of planting date can significantly impact growth, development, and yield. The information generated from these trials is important for understanding the impact on the key economic and production characteristics associated with rice production.

Experiment: Date of Planting

Location: H. Rouse Caffey Rice Research Station, Crowley, Louisiana

Planting Method: Drill seeded

Plot size: 4.66 x 16 ft

Experimental Design: Replicated complete block design with three replications

Entries: Cheniere, CL153, CLL15, CLL17, DG263L, PVL02, PVL03, RU1902026, RU1902034, RU1902207, RU1902212, RU2002126, and RU2002150

Planting Dates: Feb. 26, March 12, April 5, April 22, April 28, May 26, June 11, and June 18

Harvesting Dates: July 31, July 31, Aug. 9, Aug. 23, Aug. 23, Sept. 10, Sept. 22, and Sept. 27

Results: Results can be found in Tables 1-6, which are arranged across planting dates.

Table 1. Grain yields[†] of 13 rice varieties and experimental lines planted over eight planting dates, 2021. H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	10058.0	10715.9	9781.4	7908.6	7793.4	3824.9	5101.6	5390.8	7571.8
CL153	10304.3	10850.8	10236.6	7808.2	7711.3	5581.3	6422.5	5775.4	8086.3
CLL15	10332.8	10587.1	10144.0	6784.2	7312.0	6747.9	5931.4	6374.2	8026.7
CLL17	9824.9	11758.1	11226.6	8734.9	8772.4	6018.5	7551.3	8097.6	8998.0
DG263L	8362.9	12966.6	11797.3	10247.3	9861.5	6934.8	7566.8	6857.8	9324.4
PVL02	9561.1	10790.2	9130.3	7486.2	7206.3	7137.9	6216.3	7450.4	8122.3
PVL03	10605.7	10616.6	9400.2	7254.8	7442.9	6565.4	5821.2	6418.1	8015.6
RU1902026	11194.5	10906.3	10914.5	8940.6	8877.2	6054.5	7648.4	8296.7	9104.1
RU1902034	10636.3	12008.1	11256.9	9137.5	9004.8	7470.8	7714.7	8313.1	9442.8
RU1902207	10783.3	10575.6	10492.7	7579.0	8409.5	5665.5	6387.6	7226.0	8389.9
RU1902212	10604.7	11215.2	11008.4	9125.8	8900.0	6885.6	6880.1	7732.5	9044.0
RU2002126	10244.4	10792.6	9300.0	8024.6	7855.9	3896.1	5043.4	5100.4	7532.2
RU2002150	10379.7	10763.4	9411.2	8207.3	8024.9	4802.9	6533.7	6618.0	8092.6
Mean	10222.5	11119.0	10315.4	8249.2	8244.0	5968.2	6524.5	6896.2	

[†] Yield is in pounds of rough rice per acre at 12% moisture.

Table 2. Seedling vigor[†] of 13 rice varieties and experimental lines planted over eight planting dates, 2021. H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	3.3	3.3	3.0	3.0	2.8	2.5	2.5	4.0	3.1
CL153	4.7	3.3	3.0	3.0	3.7	3.3	3.7	5.7	3.8
CLL15	3.0	3.0	2.7	2.0	3.0	2.3	3.0	3.0	2.8
CLL17	3.0	2.0	2.3	2.3	3.0	2.0	2.3	2.0	2.4
DG263L	4.3	2.7	2.3	3.0	2.7	2.0	2.3	2.0	2.7
PVL02	3.0	2.7	3.0	2.7	3.0	2.3	2.7	2.7	2.8
PVL03	3.7	2.3	2.3	2.3	2.0	2.0	3.0	2.7	2.5
RU1902026	4.0	3.0	3.0	3.0	3.3	2.3	3.7	2.3	3.1
RU1902034	3.7	2.7	3.0	3.3	3.0	2.0	3.3	2.7	3.0
RU1902207	3.7	3.3	3.0	2.7	2.7	3.0	3.3	2.7	3.1
RU1902212	3.3	3.3	3.0	2.7	2.3	3.0	3.3	3.0	3.0
RU2002126	3.3	3.0	3.3	2.3	2.7	2.7	4.3	3.0	3.1
RU2002150	3.3	3.7	2.7	2.7	3.0	2.3	3.3	3.3	3.0
Mean	3.6	2.9	2.8	2.7	2.9	2.4	3.1	3.0	

[†] Subjective rating of 1 to 9, where 1 is the highest seedling vigor and 9 is the lowest seedling vigor.

Table 3. Days to 50% heading of 13 rice varieties and experimental lines planted over eight planting dates, 2021. H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	94.5	86.0	78.0	76.8	71.0	70.5	65.5	66.3	76.1
CL153	92.3	85.0	78.3	77.7	70.3	70.0	64.0	65.0	75.3
CLL15	91.0	83.7	77.7	77.3	68.7	66.0	62.7	61.0	73.5
CLL17	87.7	79.7	73.7	75.0	68.3	69.0	62.7	60.0	72.0
DG263L	87.0	81.0	72.3	74.3	67.3	65.3	63.0	65.3	71.9
PVL02	91.7	80.7	75.7	73.0	67.7	62.7	60.3	57.7	71.2
PVL03	93.7	84.7	75.3	75.3	70.7	68.7	63.7	62.7	74.4
RU1902026	88.3	80.3	72.7	74.0	67.7	64.3	62.3	60.0	71.2
RU1902034	88.3	80.0	74.3	73.7	67.3	66.3	62.3	59.7	71.5
RU1902207	93.3	86.3	74.7	77.0	68.0	66.7	62.0	60.7	73.6
RU1902212	85.7	77.7	71.3	70.7	64.3	62.7	58.0	54.7	68.1
RU2002126	92.0	86.0	78.7	81.0	75.0	76.0	69.3	69.0	78.4
RU2002150	92.7	86.0	78.3	76.7	69.7	69.0	63.7	64.0	75.0
Mean	90.6	82.9	75.5	75.6	68.9	67.5	63.0	62.0	

Table 4. Plant height[†] of 13 rice varieties and experimental lines planted over eight planting dates, 2021. H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean [§]
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	100.0	95.8	95.8	98.5	94.5	97.3	96.0	102.3	97.5
CL153	105.0	103.3	101.7	103.3	104.7	104.0	94.3	95.7	101.5
CLL15	98.7	99.7	95.0	98.7	98.0	98.7	92.0	93.7	96.8
CLL17	104.7	106.0	104.7	105.0	104.7	97.7	92.3	100.3	101.9
DG263L	98.7	100.3	100.7	105.0	101.0	103.0	96.0	96.7	100.2
PVL02	113.3	115.3	117.3	118.3	119.0	110.0	105.7	108.7	113.5
PVL03	101.7	106.7	101.7	101.3	108.3	103.7	100.7	98.7	102.9
RU1902026	100.0	99.0	95.7	101.7	99.7	97.0	93.3	92.7	97.4
RU1902034	100.0	99.3	98.3	103.3	100.7	102.0	97.0	100.3	100.1
RU1902207	104.0	102.3	100.3	100.3	99.7	101.0	95.3	98.0	100.1
RU1902212	101.7	102.0	97.3	101.3	98.0	96.0	95.7	92.7	98.1
RU2002126	99.0	100.7	97.0	100.7	94.3	93.0	94.0	96.7	96.9
RU2002150	104.7	105.3	101.3	106.7	106.0	101.3	97.3	102.0	103.1
Mean	102.4	102.7	100.5	103.4	102.2	100.4	96.1	98.3	

[†] Plant height in centimeters from the soil surface to the tip of the main panicle.

Table 5. Whole milling percentage[†] of 13 rice varieties and experimental lines planted over eight planting dates, 2021.
H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean [§]
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	66.5	69.0	69.0	64.3	66.5	51.2	64.9	62.3	66.5
CL153	66.0	68.2	68.0	59.0	60.9	48.2	62.2	61.8	66.0
CLL15	65.1	66.3	66.5	54.2	56.9	52.1	51.8	61.4	65.1
CLL17	64.8	65.9	66.7	56.5	58.9	54.3	57.3	62.5	64.8
DG263L	62.1	62.7	61.0	56.8	58.8	51.1	56.3	62.8	62.1
PVL02	68.2	69.4	69.7	64.1	65.5	60.1	60.8	66.8	68.2
PVL03	64.4	64.4	65.5	58.1	59.7	53.1	60.8	64.3	64.4
RU1902026	64.7	66.2	65.0	58.9	61.6	54.0	63.0	64.6	64.7
RU1902034	65.3	67.3	67.2	59.4	59.9	55.5	64.1	66.3	65.3
RU1902207	66.9	67.5	69.6	61.0	63.4	48.3	63.3	65.4	66.9
RU1902212	66.5	68.9	68.4	61.5	63.7	58.3	62.1	64.0	66.5
RU2002126	64.1	67.1	65.8	61.8	62.2	44.5	51.1	46.4	64.1
RU2002150	64.7	66.8	66.5	56.8	60.4	49.1	63.0	64.2	64.7
Mean	65.3	66.9	66.8	59.4	61.4	52.3	60.1	62.5	

[†] The percentage of unbroken grains after the removal of the hulls and broken grains.

Table 6. Total milling percentage[†] of 13 rice varieties and experimental lines planted over eight planting dates, 2021.
H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Planting Date								Mean [§]
	Feb. 26	March 12	April 5	April 22	April 28	May 26	June 11	June 18	
Cheniere	72.3	73.2	73.3	70.6	71.5	62.2	70.4	69.2	70.3
CL153	71.0	71.5	71.2	67.6	68.6	58.9	67.9	68.0	68.1
CLL15	70.7	70.7	71.1	64.9	66.8	61.8	61.5	68.0	66.9
CLL17	70.0	69.6	70.6	65.7	65.9	62.3	65.5	67.5	67.1
DG263L	68.5	68.2	68.1	65.9	66.1	60.1	64.1	67.7	66.1
PVL02	72.6	73.0	73.2	70.9	71.2	67.1	68.4	71.4	71.0
PVL03	71.2	69.8	71.4	69.1	68.7	64.1	69.0	71.4	69.3
RU1902026	71.2	70.2	70.8	68.3	69.3	63.0	68.6	70.0	68.9
RU1902034	71.4	71.5	72.0	68.5	68.6	64.1	69.3	70.8	69.5
RU1902207	72.7	71.7	72.9	69.4	70.9	62.0	69.5	71.1	70.0
RU1902212	71.8	72.4	71.8	68.2	70.0	65.4	68.3	69.7	69.7
RU2002126	70.6	70.9	71.2	68.7	68.5	58.7	63.9	63.7	67.0
RU2002150	71.1	71.9	71.8	68.7	69.3	62.0	69.3	70.4	69.3
Mean	71.2	71.1	71.5	68.2	68.9	62.4	67.4	69.1	

[†] The cumulative percentage of broken and unbroken grains after the removal of the hulls.

COOPERATIVE UNIFORM REGIONAL RICE NURSERY

The Uniform Regional Rice Nursery (URRN) 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. This allows researchers to evaluate entries adaptation in a single row.

The 2021 URRN 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 2021 URRN results from the HRCRRS will be reported. All plots were drill seeded on March 10. The test was harvested on August 4. Tests were conducted using standard agronomic practices (except that no fungicides were applied). Table 1 shows the herbicide type, line, pedigree, grain type, and source, while Tables 2 shows grain and milling yield and agronomic performance (seedling vigor, days to 50% heading, plant height, whole and total milling, chalk, and yield) of entries in the 2021 URRN at the HRCRRS.

Table 1. Entry number, pedigree, grain type, and source information for entries in the Uniform Regional Rice Nursery, 2021.

Herbicide Type	Entry	Line	Pedigree	Grain Type [†]	Source [‡]
CL	1	RU2101001		LG	AAES
CN	2	RU1902207	CTHL/CPRS/KBNT//RU9502008/3/CCDR_0xEE8DF64486CF 11EB92115B01F1F231DD	LG	LAES
CN	3	RU2004091		LG	MAES
	4	RU2003084		LG	TAES
CL	5	RU2101005		LG	AAES
CN	6	RU1902212	TRNS//CCDR/JEFF_0xEE8E2F6086CF11EB92115B01F1F231 DD/AHRENT/CCDR//RU9502008/LAGRUE_0xEE8E421686 CF11EB92115B01F1F231DD	LG	LAES
CN	7	RU2004099		LG	MAES
	8	RU2003112		LG	TAES
CN	9	JEWEL		LG	AAES
CN	10	RU2002126	THAD/CTHL	LG	LAES
CN	11	RU2004083		LG	MAES
	12	RU1903104		LG	TAES
CL	13	RU1801101		LG	AAES
CN	14	20DGL274		LG	LAES
CL	15	RU2004191		LG	MAES
	16	RU2003016		LG	TAES
CN	17	RU1601010		LG	AAES
CL	18	CL153	RU9502008A//Ahrent/CCDR/3/CFX26/RU9702128/4/CHNR	LG	LAES
CN	19	PRESIDIO	JEFF//Maybelle/Rosemont	LG	AAES
CN	20	DG263L		LG	LAES
CN	21	RU1901165		MG	AAES
CN	22	RU2002182	CPRS/KBNT//RU9502008A/3/CCDR/JEFF_0xEE8E7D3A86C F11EB92115B01F1F231DD/MMNT	LG	LAES
CL	23	RU2004187		LG	MAES
	24	RU1303153		LG	TAES
CN	25	RU2001185		LG	AAES
CN	26	RU2002150	CTHL/CL153	LG	LAES
CN	27	RU2004087		LG	MAES

Continued.

Table 1. Continued.

Herbicide Entry			Grain	
Type	Line	Pedigree	Type [†]	Source [‡]
	28	RU1603138	LG	TAES
CN	29	RU2001125	LG	AAES
CL	30	192L1111 CL163/CL153	LG	LAES
CN	31	RU2004115	LG	MAES
	32	RU1303138	LG	TAES
CN	33	RU1901033	MG	AAES
CN	34	191L1123 CTHL/Lakast	LG	LAES
CL	35	RU2004195	LG	MAES
	36	RU1403141	LG	TAES
CN	37	191L2051 RoyJ/CL153	LG	LAES
CN	38	WELLS	LG	AAES
CL	39	CLL16	LG	AAES
CN	40	DIAMOND	LG	AAES
CN	41	RU2101041	LG	AAES
CL	42	RU1702183 TRNS//CCDR/JEFF_0xEE8F1B3C86CF11EB92115B01F1F231DD/RU9502008A/DREW//CLR20/4/CPRS/KBNT//RU9502008A_0xEE8F302C86CF11EB92115B01F1F231DD	LG	LAES
CN	43	RU2004147	LG	MAES
	44	RU2003092	LG	TAES
CL	45	RU1801238	MG	AAES
CL	46	RU1902026 WELLS/CL161//DREW/CL161_0xEE8F783486CF11EB92115B01F1F231DD/CHNR//CCDR/JEFF_0xEE8F96E886CF11EB92115B01F1F231DD	LG	LAES
CN	47	RU2004055	LG	MAES
	48	RU1603144	LG	TAES
CL	49	RU1901081	LG	AAES
CL	50	RU1902034 RU9502008/DREW//CLR20/3/CPRS/KBNT//RU9502008_0xEE8FBF7E86CF11EB92115B01F1F231DD/KATY/CPRS//NEW BONNET/KATY/3/RU9502008/4/CLR9/5/RU9502008/TACA URI//CLR5_0xEE9001F086CF11EB92115B01F1F231DD	LG	LAES
CL	51	RU2004071	LG	MAES
	52	RU1303181	LG	TAES
CL	53	RU1901137	MG	AAES
CL	54	RU2002114 CL153/LAKAST	LG	LAES
CN	55	RU2004131	LG	MAES
	56	RU2003215	LG	TAES
CL	57	RU2004179	LG	MAES
CN	58	CHENIERE Newbonnet/Katy/3/L202/Lemont//L202	LG	LAES
CN	59	COCODRIE CPRS//L202/Tebonnet	LG	LAES
CL	60	CLL17 CL131/TRNS	LG	LAES
CL	61	RU1901129	LG	AAES
CN	62	RU1902227 NPTN/JPTR	MG	LAES
CL	63	RU2004219	LG	MAES
	64	RU1603113	LG	TAES
CN	65	RU2101065	LG	AAES
CN	66	191M1068 TITN/JPTR	MG	LAES
CN	67	RU2004111	LG	MAES
	68	RU2003220	LG	TAES
CL	69	RU1801145	LG	AAES
CN	70	191M1074 TITN/JPTR	MG	LAES

Continued.

Table 1. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	71	RU2004224	TITN/JPTR	LG	MAES
	72	RU1703172		LG	TAES
CL	73	RU2101073		LG	AAES
CN	74	191M1171		MG	LAES
CN	75	RU2104075	BNGL/Rico1/3/BNGL//Mercury/Rico1	LG	MAES
	76	RU1703129		LG	TAES
	77	RU1803196		LG	TAES
CN	78	JUPITER		MG	LAES
CN	79	ROYJ	CFFY/TITN	LG	AAES
CN	80	TITAN		MG	AAES
CL	81	RU2101081		LG	AAES
CN	82	191M1192		MG	LAES
CN	83	RU2104083	LAFITTE/ BNGL_0xEE91171686CF11EB92115B01F1F231DD/CFFY	LG	MAES
	84	RU2103084		LG	TAES
CL	85	RU2001085		LG	AAES
CN	86	RU2002086		MG	LAES
CN	87	RU2104087	CTHL/6/Tacauri/3/CPRS//82CAY21/Tebonnet/4/CL161/5/ CHNR	LG	MAES
	88	RU2103088		LG	TAES
CL	89	RU2101089		LG	AAES
CL	90	192L1072		LG	LAES
CN	91	RU2104091	TITN/RU1502068	LG	MAES
	92	RU2103092		LG	TAES
CL	93	RU2001093		LG	AAES
CN	94	LAH199		LG	LAES
CN	95	RU2104095	RU1402174/CL153	LG	MAES
	96	RU2103096		LG	TAES
CN	97	RU2101097		LG	AAES
CN	98	LAH200		MG	LAES
CN	99	RU2104099	NPTN//BNGL/CL161/3/BNGL/CL161//CFFY	LG	MAES
	100	RU2103100		LG	TAES
CL	101	RU2101101		LG	AAES
CN	102	191M1131		MG	LAES
CN	103	RU2104103	CL153/CL261	LG	MAES
	104	RU2003104		LG	TAES
CN	105	RU2101105		Aro	AAES
CL	106	191L1189		LG	LAES
CN	107	RU2104107	CL153/CL261	LG	MAES
	108	RU2103108		LG	TAES
CN	109	RU2101109		Aro	AAES
CL	110	192M1111		MG	LAES
CN	111	RU2104111	CL153/CL261	LG	MAES
	112	RU2103112		LG	TAES
CN	113	RU2101113		MG	AAES
CL	114	192M1128		MG	LAES
CN	115	RU2104115	CL153/CL261	LG	MAES
	116	RU2103116		LG	TAES
CN	117	RU2101117		LG	AAES
CN	118	LYNX		MG	AAES

Continued.

Table 1. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
CL	119	CLM04		LG	AAES
CL	120	CLL15		LG	AAES
CL	121	RU2001121		LG	AAES
CN	122	191L1184	CTHL/ MRMT	LG	LAES
CN	123	RU2104123		LG	MAES
	124	RU2103124		LG	TAES
CN	125	RU2101125		LG	AAES
CN	126	191L2009	PRSD/CL153	LG	LAES
CN	127	RU2104127		LG	MAES
	128	RU2103128		LG	TAES
CL	129	RU2001129		LG	AAES
CN	130	191L2025	PRSD/CL153	LG	LAES
CN	131	RU2104131		LG	MAES
	132	RU1703132		LG	TAES
CN	133	RU2001133		MG	AAES
CN	134	191L2066	RoyJ/CL153	LG	LAES
CL	135	RU2104135		LG	MAES
	136	RU1603187		LG	TAES
CN	137	RU2101137		LG	AAES
CN	138	191L2073	CTHL/CL153	LG	LAES
CL	139	RU2104139		LG	MAES
	140	RU2103140		LG	TAES
CN	141	RU2101141		LG	AAES
CN	142	191L2090	CHNR/CL111	LG	LAES
CL	143	RU2104143		LG	MAES
	144	RU1903144		LG	TAES
CN	145	RU2001145		LG	AAES
CN	146	191L2100	CTHL/Lakast	LG	LAES
CL	147	RU2104147		LG	MAES
	148	RU2103148		LG	TAES
CN	149	RU2101149		LG	AAES
CL	150	RU2102150	CL163/CL153	LG	LAES
CL	151	RU2104151		LG	MAES
	152	RU2103152		LG	TAES
CN	153	RU2001153		LG	AAES
CN	154	191L1190	Thad/CTHL	LG	LAES
CL	155	RU2104155		LG	MAES
	156	RU2103156		LG	TAES
CN	157	191L1033	Thad/CTHL	LG	LAES
CN	158	191L1030	Thad/CTHL	LG	LAES
	159	RU1603178		LG	TAES
CV	160	THAD		LG	MAES
CN	161	RU2101161		LG	AAES
CL	162	192L1486	CL172/RU1502115	LG	LAES
CL	163	RU2104163		LG	MAES
	164	RU2103164		LG	TAES
CN	165	RU2101165		MG	AAES
PV	166	RU2002070	PVL01/CTHL	LG	LAES
CL	167	RU2104167		LG	MAES

Continued.

Table 1. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
	168	RU1803168		LG	TAES
CN	169	RU2101169		LG	AAES
PV	170	193L1099	TRNS//CHNR/PV_BASF	LG	LAES
CL	171	RU2104171		LG	MAES
	172	RU2103172		LG	TAES
CN	173	RU2101173		LG	AAES
PV	174	RU2002174	PVL01/CTHL	LG	LAES
CN	175	RU2104175		LG	MAES
	176	RU1803176		LG	TAES
CL	177	RU2101177		LG	AAES
PV	178	193L2012	MRMTBCR048-5/MRMT//MRMT	LG	LAES
CN	179	RU2104179		LG	MAES
	180	RU2103180		LG	TAES
CL	181	RU2101181		LG	AAES
PV	182	193L2052	PVL081/CL172	LG	LAES
CL	183	RU2104183		LG	MAES
	184	RU2103184		LG	TAES
CN	185	RU2101185		LG	AAES
PV	186	193L2086	PVL01/CTHL	LG	LAES
CL	187	RU2104187		LG	MAES
	188	RU2103188		LG	TAES
CN	189	RU1901189		Aro	AAES
CL	190	192L1544	RU1502068//CL153/CL151	LG	LAES
CL	191	RU2104191		LG	MAES
	192	RU2103192		LG	TAES
CN	193	RU2101193		LG	AAES
CL	194	192L1596	RU1502068//CL153/CL151	LG	LAES
CL	195	RU2104195		LG	MAES
	196	RU2103196		LG	TAES
CN	197	RU2101197		LG	AAES
CL	198	CL163		LG	MAES
PV	199	PVL02	CHNR/PV_BASF	LG	LAES
PV	200	PVL03	PVL01/CTHL	LG	LAES
CN	201	RU2101201		LG	AAES
CN	202	RU2002232	TRNS//CCDR/JEFF_0xEE944F3086CF11EB92115B01F1F231 DD/RU9502008A//AHRENT/CCDR/3/CCDR/JEFF_0xEE9463 C686CF11EB92115B01F1F231DD	LG	LAES
	203	RU2103203		LG	TAES
CL	204	RU2104204		LG	MAES
	205	RU2003205		LG	TAES
CN	206	RU1901206		Aro	AAES
CN	207	191L1125	JZMN2/CTHL	Aro	LAES
CL	208	RU2101208		Aro	AAES
CL	209	RU2104209		LG	MAES
	210	RU2103210		LG	TAES
CN	211	RU2101211		LG	AAES
CN	212	RU2002166	JZMN2/CTHL	Aro	LAES
PV	213	RU2002066	CHNR//CCDR/JEFF_0xEE94C6FE86CF11EB92115B01F1F23 1DD/PVBASF	LG	LAES
CL	214	RU2104214		LG	MAES

Continued.

Table 1. Continued.

Herbicide				Grain	
Type	Entry	Line	Pedigree	Type [†]	Source [‡]
	215	RU2103215		LG	TAES
CL	216	RU2101216		LG	AAES
CL	217	192L1687	CL161//CCDRc/9770532DH2/3/CPRS/KBNT//RU9502008 A/4/CTHL/5/CL172/6/CL172	LG	LAES
CN	218	RU2101218		MG	AAES
CL	219	RU2104219		LG	MAES
	220	RU2103220		LG	TAES
CL	221	RU2101221		LG	AAES
CL	222	192L2160	CL172/Lakast	LG	LAES
	223	RU2103223		LG	TAES
CL	224	RU2104224		LG	MAES
	225	RU1903225		LG	TAES
CL	226	RU2101226		LG	AAES
CL	227	192L2171	RU1402174/CL153	LG	LAES
CN	228	RU2101228		MG	AAES
CL	229	RU2104229		LG	MAES
	230	RU1803230		LG	TAES
CN	231	RU1901231		Aro	AAES
CL	232	192L2050	Lakast/RU1402174	LG	LAES
CL	233	192L2134	RU1602168/CL172	LG	LAES
CL	234	RU2101234		MG	AAES
	235	RU2103235		LG	TAES
CN	236	RU2101236		LG	AAES
	237	ANTONIO		LG	MAES
CN	238	SANTEEGOLD		LG	AAES
CN	239	AROMA17		Aro	AAES
CN	240	REX		LG	MAES

[†] LG = Long grain, MG = Medium grain, AI = Long-grain aromatic-Della type, AL = Long-grain aromatic-Jazzman type, and HI = Long-grain high amylose-Dixiebelles type.

[‡] LAES – H. Rouse Caffey Rice Research Station, Louisiana Agricultural Experiment Station, LSU AgCenter, Crowley; AAES – Arkansas Agricultural Experiment Station, Stuttgart, AR; MAES – Delta Research and Extension Center, Stoneville, MS; and TAES, USDA – Texas A&M Research and Education Center, Texas Agricultural Experiment Station, U.S. Department of Agriculture, Beaumont, TX.

Table 2. Grain and milling yields and agronomic performance of entries in the 2021 Uniform Regional Rice Nursery, H. Rouse Caffey Rice Research Station, Crowley, LA.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
20	DG263L	4.3	89.3	98.0	60.4	64.0	9.2	11030.6
234	RU2101234	4.0	93.5	96.5	68.1	71.0	20.3	10761.0
119	CLM04	3.5	92.5	102.5	66.6	71.7	14.2	10679.5
45	RU1801238	3.3	96.7	90.3	65.2	73.4	9.8	10560.7
94	LAH199	4.5	94.0	124.0	61.9	69.9	19.5	10182.8
98	LAH200	4.5	93.5	119.5	65.1	70.3	15.1	10169.3
177	RU2101177	3.5	94.5	102.0	57.8	67.9	28.5	10013.2
208	RU2101208	4.0	91.5	99.5	69.8	73.7	20.0	10007.0
221	RU2101221	3.5	92.5	101.0	68.2	72.4	23.2	9916.7
60	CLL17	3.0	92.0	95.3	68.6	73.4	22.9	9880.3
39	CLL16	3.3	94.3	100.7	61.9	70.8	23.1	9879.9
86	RU2002086	4.0	89.5	95.5	64.7	71.6	18.5	9873.9
85	RU2001085	4.0	90.0	98.0	63.1	70.6	16.6	9798.7
118	Lynx	3.5	93.0	98.0	66.5	70.1	18.9	9787.1
14	20DGL274	5.0	94.0	100.0	64.4	68.6	17.3	9723.9
179	RU2104179	4.0	88.5	99.5	68.1	73.3	29.8	9683.7
87	RU2104087	3.5	92.0	106.0	61.2	71.0	18.3	9624.9
129	RU2001129	3.5	89.0	92.0	64.4	71.7	13.5	9624.6
106	RU2102106	4.0	91.5	103.0	70.3	73.1	9.8	9585.8
125	RU2101125	4.0	93.0	104.5	64.0	72.6	20.9	9548.5
162	RU2102162	4.0	90.0	96.5	67.1	73.9	19.5	9542.3
101	RU2101101	4.0	86.5	98.5	64.0	70.3	28.5	9525.0
164	RU2103164	6.0	94.0	122.0	55.1	67.3	21.3	9513.4
219	RU2104219	4.0	93.0	100.0	70.9	74.7	26.2	9503.3
12	RU1903104	4.7	97.3	119.3	62.3	66.8	7.5	9497.1
16	RU2003016	5.3	92.7	107.0	59.4	67.6	13.7	9488.0
3	RU2004091	3.3	93.0	100.7	59.4	69.4	23.8	9429.8
50	RU1902034	4.0	91.3	95.3	71.0	75.1	27.4	9422.8
226	RU2101226	3.0	91.5	98.0	65.8	73.7	17.6	9385.4
155	RU2104155	4.0	90.0	105.0	60.6	71.5	14.7	9357.9
194	RU2102194	4.5	92.5	103.5	64.6	71.9	16.6	9338.1
35	RU2004195	4.0	90.7	99.0	67.2	72.2	23.0	9327.4
181	RU2101181	3.5	93.0	112.0	61.8	70.1	21.4	9321.4
175	RU2104175	4.0	102.0	118.5	55.0	64.8	34.8	9271.6
172	RU2103172	4.0	93.0	110.5	63.5	70.6	11.3	9256.7
93	RU2001093	3.5	93.5	104.0	55.9	67.7	29.0	9247.3
18	CL153	4.0	92.3	100.0	67.0	70.7	11.3	9241.4
113	RU2101113	4.0	92.5	93.5	67.4	71.2	16.5	9227.2
53	RU1901137	4.3	95.0	87.0	66.3	73.1	19.0	9218.9
61	RU1901129	4.0	95.7	90.3	71.5	74.8	24.3	9180.3
133	RU2001133	4.0	95.0	94.0	65.4	69.8	25.8	9172.1
13	RU1801101	4.0	92.3	99.7	64.1	69.1	14.8	9157.0
83	RU2104083	4.0	91.5	103.0	59.0	70.8	23.6	9149.0

Continued.

Table 2. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
124	RU2103124	5.0	95.5	111.0	65.1	70.3	11.3	9131.2
217	RU2102217	4.0	87.5	87.0	59.1	73.9	22.0	9110.2
131	RU2104131	3.0	93.0	110.5	59.6	68.2	25.8	9109.2
198	CL163	3.5	87.5	105.0	65.4	72.0	20.9	9102.1
222	RU2102222	4.0	91.5	95.5	71.9	75.6	15.6	9099.2
209	RU2104209	4.0	93.5	100.0	70.1	73.4	17.1	9097.9
8	RU2003112	5.7	90.7	103.3	58.8	68.0	12.8	9087.4
42	RU1702183	4.0	87.7	96.0	70.3	74.2	20.7	9082.7
233	RU2102233	4.5	91.0	93.5	68.2	73.5	17.5	9064.3
188	RU2103188	5.0	93.0	114.5	60.3	69.7	14.7	9061.5
4	RU2003084	4.3	93.3	105.0	65.7	69.8	12.6	9022.2
82	RU2102082	4.0	89.5	94.5	67.5	72.9	13.3	9020.4
58	Cheniere	3.3	93.3	93.0	73.1	76.4	12.2	8990.2
105	RU2101105	4.0	97.5	100.0	70.1	73.6	25.4	8970.7
143	RU2104143	4.0	91.5	94.5	61.9	70.8	33.9	8968.4
46	RU1902026	4.3	90.3	94.0	69.9	73.8	26.1	8941.4
21	RU1901165	4.0	93.3	85.3	65.1	68.8	15.2	8935.8
186	RU2102186	4.5	92.5	107.0	66.6	73.0	13.6	8893.9
200	PVL03	4.0	89.0	103.0	67.9	73.9	11.0	8867.6
167	RU2104167	3.5	95.0	107.0	68.9	72.1	16.5	8862.2
216	RU2101216	3.5	94.5	102.0	67.9	73.1	15.8	8860.8
147	RU2104147	4.0	93.0	106.5	57.3	68.3	22.5	8858.8
49	RU1901081	3.7	94.0	100.3	67.9	72.3	27.7	8838.5
90	RU2102090	4.0	90.0	101.0	67.5	72.7	17.6	8834.1
24	RU1303153	6.0	87.7	107.3	68.0	71.5	17.2	8831.8
33	RU1901033	4.0	90.0	84.7	70.0	73.1	13.8	8827.7
51	RU2004071	3.7	92.7	100.7	66.2	72.7	16.5	8823.4
111	RU2104111	4.0	92.0	106.5	61.0	70.6	18.7	8823.0
32	RU1303138	6.3	88.3	109.0	71.5	73.9	15.9	8820.3
120	CLL15	3.5	91.5	95.5	66.4	71.4	16.4	8817.8
122	RU2102122	4.0	91.5	99.5	65.1	72.4	20.1	8814.9
127	RU2104127	4.0	97.5	110.5	61.2	69.6	18.2	8795.8
27	RU2004087	3.7	94.7	88.3	67.0	74.5	23.0	8787.5
185	RU2101185	4.0	89.0	103.0	61.8	72.6	16.7	8787.0
103	RU2104103	3.5	93.0	109.0	59.8	70.5	21.7	8783.2
110	RU2102110	4.0	91.5	97.0	70.0	73.7	15.6	8757.5
126	RU2102126	4.0	92.0	94.5	63.9	71.2	15.2	8756.9
5	RU2101005	3.7	91.7	97.0	62.9	69.4	15.2	8753.6
115	RU2104115	3.0	94.5	106.5	61.0	71.0	23.4	8747.5
102	RU2102102	3.5	92.0	104.0	72.3	75.0	9.3	8691.0
52	RU1303181	4.3	94.0	95.0	69.7	73.7	14.5	8677.0
9	Jewel	2.7	90.3	98.3	61.5	71.4	13.5	8660.1
91	RU2104091	3.5	91.0	105.5	59.4	70.8	22.6	8653.6

Continued.

Table 2. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
210	RU2103210	4.5	92.0	106.0	65.1	70.4	14.3	8647.2
218	RU2101218	4.0	88.0	83.5	68.0	74.5	12.4	8643.1
54	RU2002114	4.0	91.0	92.3	68.6	74.1	24.1	8618.4
148	RU2103148	5.0	97.0	110.0	65.5	69.6	10.6	8618.2
121	RU2001121	4.0	92.5	95.5	64.8	72.1	24.5	8611.7
165	RU2101165	4.0	93.0	97.5	65.2	69.8	27.9	8609.8
66	RU2102066	4.0	91.3	90.0	65.2	71.3	22.5	8605.6
135	RU2104135	4.0	95.0	107.5	64.7	70.6	19.3	8576.4
99	RU2104099	3.0	94.5	107.0	60.3	70.2	22.4	8564.3
73	RU2101073	4.0	87.7	90.7	62.8	74.1	20.9	8535.2
161	RU2101161	3.5	90.0	98.5	65.6	73.2	20.8	8518.6
163	RU2104163	4.0	92.0	103.5	70.5	74.3	16.6	8518.1
140	RU2103140	6.0	90.0	113.5	61.2	68.2	13.1	8447.4
6	RU1902212	4.0	86.0	87.3	65.9	71.0	15.6	8441.4
107	RU2104107	3.5	92.0	106.5	59.2	70.9	20.6	8437.4
10	RU2002126	3.7	89.3	94.3	64.1	70.2	10.9	8435.9
176	RU1803176	4.0	93.0	103.5	71.1	74.2	19.3	8421.5
205	RU2003205	5.0	96.0	109.5	71.3	74.3	13.0	8415.5
123	RU2104123	3.5	92.0	108.5	57.2	70.5	20.7	8410.1
228	RU2101228	4.0	92.0	93.0	69.0	73.4	17.0	8408.5
141	RU2101141	3.0	98.0	109.5	57.8	68.8	21.5	8388.3
17	RU1601010	3.0	87.0	103.3	57.4	68.3	16.5	8348.0
171	RU2104171	3.5	96.0	99.0	65.2	71.4	19.2	8336.5
139	RU2104139	4.0	91.5	118.0	59.0	66.9	29.9	8296.7
199	PVL02	3.5	90.0	114.0	71.8	75.5	13.6	8289.9
43	RU2004147	4.0	92.3	85.0	69.8	74.8	24.4	8287.6
23	RU2004187	3.7	94.7	111.0	66.9	71.3	15.0	8285.5
224	RU2104224	4.0	93.5	97.5	68.2	73.4	14.6	8281.8
149	RU2101149	3.0	98.0	108.5	53.5	68.7	27.6	8273.0
11	RU2004083	3.3	94.3	100.0	59.0	67.6	31.0	8255.4
236	RU2101236	3.0	90.5	98.5	62.2	73.2	25.1	8234.4
170	193L1099	4.5	84.5	98.5	66.0	71.9	11.7	8220.6
26	RU2002150	4.0	92.0	98.7	67.1	74.0	24.9	8216.6
190	RU2102190	4.0	91.5	104.5	64.9	72.2	15.4	8206.7
1	RU2101001	3.7	93.3	107.0	60.6	67.5	28.6	8192.8
56	RU2003215	6.7	86.3	104.7	69.9	72.2	14.4	8183.3
137	RU2101137	3.5	91.5	98.0	53.2	68.7	15.2	8183.1
197	RU2101197	3.5	93.0	105.5	64.3	72.5	22.2	8178.1
69	RU1801145	3.3	94.7	102.0	68.7	73.3	28.9	8178.0
22	RU2002182	4.0	91.0	96.7	68.3	72.5	20.3	8176.7
92	RU2103092	5.0	88.0	106.0	62.0	69.7	13.5	8165.5
160	Thad	3.5	87.0	95.5	57.4	70.5	9.0	8164.7
156	RU2103156	5.0	101.0	119.5	62.2	67.1	10.1	8161.9

Continued.

Table 2. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
151	RU2104151	3.5	94.0	90.5	62.5	69.9	12.5	8157.3
204	RU2104204	4.5	94.5	93.0	65.1	71.5	24.9	8147.0
30	RU2102030	3.7	91.0	100.0	71.2	73.9	14.4	8145.9
145	RU2001145	3.5	94.0	101.0	57.8	67.6	23.8	8133.3
109	RU2101109	3.5	94.0	107.5	67.9	71.4	11.5	8132.2
227	RU2102227	4.0	90.0	94.5	69.9	73.7	12.0	8128.3
37	RU2102037	4.0	94.0	93.3	67.8	73.0	25.7	8117.9
89	RU2101089	4.0	90.0	92.0	59.6	71.9	19.5	8112.2
173	RU2101173	3.5	94.0	103.0	63.6	72.2	19.2	8109.7
211	RU2101211	3.5	92.5	96.5	65.1	72.0	27.4	8107.7
80	Titan	3.7	89.0	92.7	69.9	72.9	13.6	8101.0
95	RU2104095	3.0	92.5	104.5	57.4	70.3	22.6	8096.6
41	RU2101041	4.0	92.7	96.7	65.8	73.0	25.7	8095.5
138	RU2102138	4.5	94.0	103.0	64.8	70.2	17.2	8085.6
202	RU2002232	4.0	92.0	92.5	70.6	74.6	13.4	8064.2
130	RU2102130	4.0	91.5	95.0	65.0	70.7	12.0	8062.7
223	RU2103223	5.5	101.5	120.5	66.3	69.7	7.1	8043.6
44	RU2003092	4.7	94.3	99.7	71.9	74.9	11.7	8029.9
57	RU2004179	3.7	94.7	100.0	65.2	70.5	31.1	8028.7
81	RU2101081	4.0	93.0	97.5	64.6	72.2	17.8	8000.6
134	RU2102134	4.5	96.0	97.0	63.3	71.9	17.7	7983.9
201	RU2101201	4.0	94.5	108.5	63.8	72.1	26.5	7979.8
169	RU2101169	4.0	87.5	94.0	66.4	72.6	16.9	7962.8
78	Jupiter	4.0	95.3	88.0	67.4	70.8	28.5	7959.3
65	RU2101065	3.0	95.3	107.7	64.6	72.8	32.1	7953.9
76	RU1703129	6.7	88.7	107.0	69.7	72.2	19.3	7950.3
195	RU2104195	3.5	90.5	105.5	65.0	71.9	17.0	7946.9
71	RU2004224	4.0	94.0	100.0	68.2	73.0	21.3	7945.1
229	RU2104229	4.0	94.0	105.0	68.5	72.1	21.9	7938.9
178	193L2012	4.0	96.5	100.0	69.3	73.6	13.2	7927.2
15	RU2004191	4.0	91.0	97.3	62.1	68.7	15.9	7914.4
67	RU2004111	3.7	93.7	97.7	66.8	73.6	22.2	7912.7
97	RU2101097	3.0	95.0	101.5	62.5	70.4	26.3	7909.2
157	RU2102157	4.5	90.0	105.0	63.9	70.9	10.2	7905.0
183	RU2104183	4.0	97.5	101.0	70.4	73.0	13.6	7903.6
158	RU2102158	4.0	89.0	92.5	65.1	70.9	14.6	7899.8
77	RU1803196	4.7	95.3	98.0	66.7	71.7	20.0	7889.8
240	Rex	3.0	93.5	102.5	67.1	71.9	26.2	7844.5
128	RU2103128	5.0	93.5	113.0	63.8	68.6	12.6	7833.6
62	RU1902227	4.3	93.3	86.7	67.5	73.0	10.5	7825.5
189	RU1901189	4.0	95.0	103.5	69.0	72.9	7.4	7825.4
68	RU2003220	5.0	93.3	98.3	70.5	74.5	15.0	7812.0
75	RU2104075	3.0	92.7	106.0	64.1	72.2	25.9	7791.3

Continued.

Table 2. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
29	RU2001125	3.7	91.7	102.7	60.0	69.9	20.7	7736.8
104	RU2003104	5.0	95.0	101.5	68.1	72.3	10.1	7735.9
38	Wells	3.0	93.3	98.7	62.6	72.4	24.8	7724.9
182	193L2052	5.5	98.0	88.5	63.6	69.9	17.2	7710.7
153	RU2001153	3.5	93.0	101.0	59.1	68.9	17.6	7703.8
79	RoyJ	3.0	95.0	103.0	68.0	71.9	21.1	7677.2
196	RU2103196	6.0	92.5	120.5	68.6	72.2	9.4	7662.9
96	RU2103096	5.0	95.0	91.0	57.7	69.2	21.6	7639.7
63	RU2004219	4.0	91.7	97.0	67.0	73.2	18.6	7629.1
25	RU2001185	3.7	92.0	100.3	62.8	71.8	24.2	7619.2
239	Aroma17	3.0	95.5	96.0	70.2	73.5	6.3	7617.1
114	RU2102114	5.0	88.5	105.0	68.7	71.0	15.8	7589.9
206	RU1901206	4.0	96.0	96.0	67.4	71.7	12.8	7585.7
132	RU1703132	6.0	96.0	105.5	67.8	71.6	12.2	7584.0
237	Antonio	4.0	91.0	99.0	70.4	74.4	20.8	7569.3
154	RU2102154	4.5	87.5	101.0	60.7	72.3	15.2	7515.6
40	Diamond	3.0	91.7	98.7	63.1	71.6	26.8	7515.2
2	RU1902207	3.7	92.0	96.7	62.2	69.9	17.8	7513.3
59	Cocodrie	4.0	92.3	92.3	70.4	75.1	20.1	7504.3
142	RU2102142	4.5	94.5	94.0	65.3	69.9	16.0	7488.9
166	RU2002070	4.5	93.0	102.5	64.6	70.9	10.3	7478.1
184	RU2103184	7.0	98.0	116.0	64.1	69.0	8.9	7473.8
230	RU1803230	4.5	94.0	109.0	68.9	73.1	17.0	7415.2
193	RU2101193	3.5	95.5	110.5	62.2	70.5	20.7	7382.2
100	RU2103100	5.5	95.5	100.5	65.0	70.6	15.5	7365.0
213	RU2002066	4.0	95.0	98.5	68.4	71.9	10.1	7363.3
55	RU2004131	3.0	95.7	93.7	67.5	72.4	40.8	7302.8
192	RU2103192	6.5	101.5	116.5	65.3	70.3	8.9	7302.2
232	RU2102232	5.5	90.5	82.5	69.0	73.2	15.9	7291.4
207	RU2102207	4.0	91.5	99.5	63.5	74.3	21.0	7259.5
191	RU2104191	3.5	98.0	108.0	68.0	71.8	23.6	7252.9
19	Presidio	3.0	90.0	95.3	63.3	69.0	11.8	7244.4
187	RU2104187	4.0	93.5	102.0	68.0	71.7	16.3	7228.2
84	RU2103084	4.5	93.5	94.0	64.5	72.6	19.4	7216.9
64	RU1603113	5.0	95.3	97.0	71.2	74.5	14.3	7189.7
72	RU1703172	5.0	96.3	102.0	71.5	74.6	14.8	7123.0
214	RU2104214	4.0	95.0	99.0	71.1	74.0	17.0	7104.6
136	RU1603187	5.5	96.5	94.5	64.8	70.3	14.4	7088.0
74	RU2102074	4.0	91.3	93.7	69.2	73.0	19.0	7085.8
70	RU2102070	4.3	90.7	90.3	68.6	72.1	16.0	7069.3
180	RU2103180	7.0	100.5	116.0	62.8	68.2	10.9	7027.7
88	RU2103088	5.5	95.0	95.5	58.9	69.6	16.2	7023.5
144	RU1903144	4.0	98.0	96.5	64.9	70.4	12.2	7009.9

Continued.

Table 2. Continued.

ENT	NAME	VIG ¹	HDT	HTE (cm)	WHOLE (%)	TOTAL (%)	CHALK (%)	YIELD (lb/A)
117	RU2101117	3.5	99.0	101.5	68.8	73.5	20.6	6984.7
7	RU2004099	3.0	93.0	98.0	57.8	68.5	24.1	6896.1
235	RU2103235	7.0	98.0	112.5	65.5	69.1	8.0	6853.3
47	RU2004055	3.7	100.7	115.7	58.1	67.6	28.3	6792.2
174	RU2002174	4.0	89.5	109.5	63.6	72.2	9.9	6780.4
48	RU1603144	5.0	96.7	96.0	69.5	73.8	15.8	6759.6
108	RU2103108	5.0	96.5	98.5	66.9	71.2	13.0	6716.0
231	RU1901231	4.0	94.5	104.0	65.1	71.2	8.5	6715.5
159	RU1603178	5.0	95.0	102.0	61.5	67.2	15.3	6674.5
31	RU2004115	3.0	95.3	93.3	67.1	71.7	22.0	6640.5
34	RU2102034	5.0	92.3	92.7	65.8	72.1	19.6	6618.5
28	RU1603138	4.7	95.7	95.0	69.8	73.6	16.3	6616.6
215	RU2103215	6.5	99.5	115.0	66.4	69.9	8.7	6546.4
36	RU1403141	5.0	98.3	94.7	71.9	75.0	13.0	6539.9
168	RU1803168	4.5	97.0	90.5	68.3	73.3	16.0	6538.5
112	RU2103112	4.5	96.5	111.5	65.4	70.4	13.9	6475.5
152	RU2103152	4.5	96.0	98.0	61.9	68.2	12.3	6430.8
220	RU2103220	7.0	99.5	118.0	65.5	69.0	8.6	6268.2
225	RU1903225	4.5	95.5	99.5	70.8	74.2	18.9	5995.1
203	RU2103203	7.0	96.0	114.0	65.1	69.3	6.7	5988.2
146	RU2102146	5.0	91.0	95.5	61.6	70.7	16.5	5981.4
116	RU2103116	4.0	96.5	104.5	70.3	73.4	5.6	5957.0
212	RU2002166	4.5	91.0	95.5	70.1	73.7	15.0	5954.5
238	Santee Gold	4.0	101.5	108.0	63.5	71.3	27.1	5806.7

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

DEVELOPMENT OF HYBRID RICE FOR LOUISIANA

J.H. Oard, A.N. Famoso, J.L. Thornton, and T.L. Roy

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. Commercial hybrids typically yield 10-20% more than the best inbreds grown under similar conditions 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) Develop elite cross combinations (hybrid varieties) through extensive test-crossing and yield trials, (2) Create and/or identify male-sterile (cytoplasmic A or environmental sensitive S) lines and restorer (R) lines adapted to Louisiana and southern U.S. environmental conditions, (3) Develop effective and economical hybrid seed production technology for Louisiana by modifying or optimizing available technologies.

Five new Louisiana Clearfield hybrids, CLH078, CLH074, CLH500, CLH124, CLH412, and Provisia hybrid PVH492 showed high yield potential in the 2021 Testcross Hybrid Yield Trial. These candidate hybrids produced main crop yields that were similar or superior to commercial hybrids XP753 and RT7321FP. Overall mean yield of the top five candidate Clearfield hybrids was 28% higher than Clearfield variety CLL17. Average plant height of the five hybrids at 48 inches was similar to commercial hybrids and three inches taller than CLL17. Early maturity at the average of 80 days to heading was observed for the candidate hybrids that was essentially identical to maturity for hybrid and varietal checks in this trial. Good milling yields for the five hybrids were similar or greater than milling yields of the varietal and hybrid checks. The new Clearfield hybrids showed moderate to good levels of tolerance to lodging that were comparable or superior to the hybrid checks. New Provisia hybrid PVH492 also produced high yields with a 21% yield advantage vs. CLL17.

The new Clearfield long-grain hybrid CLH240 showed good yield potential in the 2021 Hybrid Preliminary Yield Trial. Mean yield of this hybrid showed a 32% to 37% advantage when compared to Clearfield CLL17 and the new Provisia variety PVL103. CLH240 also produced good milling yields, low chalk and tolerance to lodging that were comparable to CLL17 and PVL103. Two additional hybrids produced good yields with smooth leaves and no hairs on the grain. Both producers and millers prefer smooth leaf hybrids and varieties that facilitate processing of harvested material and reduce wear and tear of equipment. The two candidate hybrids exhibited excellent milling yields that were similar to CLL17, PVL103, and three commercial hybrid checks.

PVH695 is a long grain Provisia hybrid that showed high yield potential in the 2021 Hybrid Preliminary Yield Trial 2. A 30% yield advantage was observed for PVH695 when compared to Provisia variety PVL103. This hybrid showed maturity that was seven days earlier and taller by four inches vs PVL103. Milling yield of the candidate hybrid was similar to PVL103. Percent chalk was low for PVH695 that compared favorably to CLL17 and PVL103. In the 2021 Hybrid Multilocation Yield Trial, PVH695 produced similar or higher grain yields, higher milling yields, and lower chalk values than CLL17 and PVL103.

20RB419 is an early-maturing, conventional long-grain inbred line that showed good yield potential with a 3% yield advantage over Cheniere in the 2021 Diversity Yield Trial. Moreover, 20RB419 produced similar yields to three elite lines from Dr. Famoso's program that are scheduled for commercial release in the near future. Milling yield, seedling vigor, and tolerance to lodging of 20RB419 were similar to Clearfield variety CLL17. Additional tests in 2022 are warranted for 20RB419 that also can be used immediately as a parent for development of new Louisiana varieties and hybrids.

Yield Trials

Table 1 shows main crop yield, height, heading, lodge score, milling yield, and % grain chalk for 16 Louisiana hybrids, two commercial hybrid checks, one Clearfield variety and one Nutrien variety in the 2021 Testcross Hybrid Yield Trial. Several new candidate hybrids with high yield potential were identified. Specifically, Clearfield hybrids CLH078, CLH074, CLH500, CLH124, CLH412 and Provisia hybrid PVH492 produced 1-15% yield advantage vs. RiceTec conventional hybrid XP753. Clearfield hybrids CLH463, CLH078, and CLH074 produced 1-8% higher yields than RiceTec hybrid RT7321FP. Overall mean yield of the top four candidate Clearfield hybrids was 3752 lb/A greater than mean yield of Clearfield variety CLL17. The average height of the top 17 candidate hybrids was 48 inches compared to 51 inches for checks RT7321FP, 49 inches for XP753, and 45 inches for CLL17. The selected 17 hybrids showed early maturity with an average heading date of 81 days vs. 80 days for RT7321FP, 81 days for XP753, and 80 days for CLL17. The average milling yield of the top seven candidate hybrids was 59/69 that was similar to milling of RT7321FP(57/69), CLL17(55/66), and less than the milling yield of 64/70 for XP753. The top candidate hybrids showed tolerance to lodging with an average lodge score of 0.7 that compared favorably with a score of 2 for RT7321FP, 1 for XP753, and 0.5 for CLL17. High yield potential of the candidate hybrids in this trial originated from a “new generation” of males and females developed at the H. Rouse Caffey Rice Research Station.

Table 1. 2021 Testcross Hybrid Yield Trial. Main crop yield, height, heading, lodge score, milling yield, and % grain chalk for 16 Louisiana hybrids, two commercial hybrid checks, one Clearfield variety and one Nutrien variety. Data are mean values from H. Rouse Caffey Rice Research Station, Crowley, LA.

Hybrid/Variety	Height (in)	Days to heading	Yield Main (lb/A)	% Yield vs RT7321FP	%Whole / % Total Milling	% Chalk	Lodge Rating (0-4)	NOTES
CLH463	48	80	13477	108	56/71	33	0.5	CL Hybrid
DG263L	46	80	13342	107	59/66	14	0.5	Conv Variety
CLH078	48	79	13221	106	59/66	16	1	CL Hybrid
CLH074	46	81	12791	102	59/67	20	1	CL Hybrid
RT7321FP	51	80	12482	100	57/69	24	2	FP Hybrid
CLH500	48	81	12379	99	64/72	24	0.5	CL Hybrid
CLH124	49	81	11983	96	62/70	20	0.5	CL Hybrid
PVH492	48	82	11691	94	50/69	30	0.5	PV Hybrid
CLH412	48	82	11605	93	62/71	24	1	CL Hybrid
XP753	49	81	11501	92	64/70	17	1	Conv Hybrid
CLH086	48	82	11483	92	59/68	16	0.5	CL Hybrid
CLH254	48	81	11465	92	54/69	18	1	CL Hybrid
CLH055	50	81	11396	91	58/69	24	1	CL Hybrid
CLH057	50	80	11190	90	61/70	21	1	CL Hybrid
CLH465	51	82	11035	88	56/71	23	0.5	CL Hybrid
CLH082	49	81	10932	88	59/68	21	0.5	CL Hybrid
CLH247	44	83	10881	87	60/68	18	0.5	CL Hybrid
CLH503	48	84	10846	87	64/72	20	0.5	CL Hybrid
CLH507	50	81	10777	86	63/72	30	0.5	CL Hybrid
CLL17	45	80	9215	74	55/66	14	0.5	CL Variety

Main crop yield, height, heading, lodge score, milling yield, and % grain chalk for 16 Louisiana hybrids, two commercial hybrid checks, one Clearfield variety and one Nutrien variety are shown in Table 2. Three new early-maturing long grain Clearfield hybrids produced high grain yields from 10239 to 12002 lb/A in the 2021 Hybrid Preliminary Yield Trial at the HRCRRS. Two of the hybrids produced smooth leaves that should benefit both producers and millers. The three hybrids produced a yield advantage of 18 to 37 percent when compared to Clearfield variety CLL17 and Provisia variety PVL103. Whole grain head rice yields of the top three candidate hybrids were good ranging from 61/70 to 63/70. Days to heading for these hybrids ranged from 72 to 79 days that were comparable to heading dates of 78 and 80 days for CLL17 and PVL103, respectively. Mean height of the candidate hybrids was five inches greater than the average height of CLL17 and PVL103. Each of the candidate hybrids and the two Louisiana varieties exhibited a moderate lodging scores 0.5 to 1.0 that compared favorably with RT7321FP (2), XP753 (1), and CLL17 (0.5).

Table 2. 2021 Hybrid Preliminary Yield Trial 1. Main crop yield, height, heading, lodge score, milling yield, and % grain chalk for four Louisiana hybrids, three commercial hybrid checks, and two Louisiana varieties. Data are mean values from H. Rouse Caffey Rice Research Station, Crowley, LA.

Hybrid/Variety	Height (in)	Days to heading	Yield Main (lb/A)	% Yield vs RT7321FP	%Whole / % Total Milling	% Chalk Impact Value	Lodge Rating (0-4)	NOTES
RT7321FP	54	76	13304	100	63/71	16	2	FP Hybrid
RT7301	47	73	12345	93	67/72	19	2	Conv Hybrid
XP753	51	73	12238	93	64/72	19	1	Conv Hybrid
CLH240	53	73	12002	90	63/68	16	1	CL Hybrid
CLH252	54	79	10577	79	63/70	20	1	CL Hybrid
CLH280	48	72	10239	77	61/70	13	1	CL Hybrid
CLH271	51	73	10061	76	60/69	17	1	CL Hybrid
CLL17	48	78	7671	58	66/69	17	1	CL Variety
PVL03	46	80	7024	53	66/71	9	1	PV Variety

Table 3 shows the main crop yield, height, heading, lodge score, milling yield, and % grain chalk for three Louisiana hybrids, four commercial hybrid checks, and two Louisiana varieties evaluated in the 2021 Hybrid Preliminary Yield Trial 2. Early-maturing long grain Provisia hybrid PVH695 showed high yield potential of 11229 lb/A in the 2021 Hybrid Preliminary Yield Trial 2 at the H. Rouse Caffey Rice Research Station. PVH695 produced a yield advantage of 30% when compared to the new Provisia variety PVL103. Mean height of PVH695 was four inches greater than PVL103. PVH695 exhibited early maturity at 73 days that was seven days earlier than PVL103. A milling yield of 57/69 for PVH695 was similar to PVL103 (55/65) and to the four RiceTec commercial hybrids. Percent chalk was low for PVH695 at 8 that was similar to PVL103 at 7, to CLL17 at 9, and considerably lower than the four RiceTec commercial hybrids that ranged from 17-22.

Table 3. 2021 Hybrid Preliminary Yield Trial 2. Main crop yield, height, heading, lodge score, milling yield, and % grain chalk for three Louisiana hybrids, four commercial hybrid checks, and two Louisiana varieties. Data are mean values from HRCRRS, Crowley, LA.

Hybrid/Variety	Height (in)	Days to heading	Yield Main (lb/A)	%Whole / % Total Milling	% Chalk Impact Value	Lodge Rating (0-4)	NOTES
RT7321FP	48	78	13946	57/70	17	1.5	FP Hybrid
RT7301	44	76	13414	60/68	22	0.5	Conv hybrid
XP753	45	76	13110	59/68	19	1.0	Conv hybrid
RT7521	53	78	11875	52/63	21	1.0	Conv hybrid
PVH695	51	73	11229	57/69	8	1.5	PV hybrid
CLH135	52	74	10279	56/69	16	1.5	CL hybrid
DG263L	43	76	9747	51/65	14	0.5	Conv variety
CLH134	51	72	9329	49/65	18	1.0	CL hybrid
PVL103	47	80	7885	55/65	7	0.0	PV variety
CLL17	46	81	7790	53/64	9	0.5	CL variety

Table 4 shows main crop yield, height, heading, lodge score, milling yield, and % grain chalk of five Louisiana long-grain hybrids, three commercial hybrid checks, one Clearfield variety and one Nutrien variety for the 2021 Hybrid Multilocation Yield Trial. PVH695 is an early-maturing long-grain hybrid that produced 9718 lbs/A across three test sites. Whole grain milling yields at 59/67 were good for PVH695 vs PVL103 (44/66), CL117 (45/64), DGL263L, and the commercial hybrid checks. Chalk value of 10 for PVH695 was similar or lower vs PVL103 (11), CLL17, (12), DGL263L (15), and the commercial hybrids (18-22). Days to heading for PVH695 at 75 was similar or earlier than varieties and hybrids including PVL103 AND CLL17 (78), DG263L (79), and three hybrid checks (75-77).

Table 4. 2021 Hybrid Multilocation Yield Trial. Main crop yield, height, heading, lodge score, milling yield, and % grain chalk of five Louisiana long-grain hybrids, three commercial hybrid checks, one Clearfield variety and one Nutrien variety. Data are mean values for three trials at H. Rouse Caffey Rice Research Station and the South Farm, Crowley, LA.

Hybrid/Variety	Height (in)	Days to heading	Yield Main (lb/A)	%Whole / % Total Milling	% Chalk Impact Value	Lodge Rating (0-4)	NOTES
XP753	48	75	13126	58/68	18	1.0	Conv Hybrid
RT7301	46	77	13070	57/69	22	1.3	Conv Hybrid
RT7321FP	50	77	11559	50/67	18	2.7	FP Hybrid
DG263L	42	79	9979	38/53	15	0.3	Conv Variety
PVL03	45	78	9797	44/66	11	0.2	PV Variety
PVH695	51	75	9718	59/67	10	2.0	PV Hybrid
PVH498	49	74	9395	50/67	12	2.7	PV Hybrid
CLH134	48	71	9146	51/65	20	2.5	CL Hybrid
CLH135	51	73	8554	51/66	18	2.5	CL Hybrid
CLL17	44	78	8515	45/64	12	1.3	CL Variety
LAH169	51	79	7869	44/64	14	2.9	Conv Hybrid

Main crop yield, height, heading, milling, vigor, and lodge score for nine elite long-grain inbred lines and varieties in the 2021 Diversity Yield Trial are shown in Table 5. The purpose of the Diversity Trial is to evaluate new elite germplasm developed by different AgCenter research programs. 20RB419 is an early-maturing long-grain line developed in the Hybrid Breeding program with good yield potential at 9459 lb/A that produced a 3% yield advantage over Cheniere in this trial. Moreover, yield potential of 20RB419 was 97% of that produced by RU1902212 and essentially identical to those of RU1902026 and RU1902207. This is noteworthy because these three RU lines developed by Dr. Famoso are scheduled for commercial release in the near future. Maturity of 20RB419 was early at 73 days to heading that was two days and four days earlier than CLL17 and Cheniere, respectively. The milling yield of 59/69 was comparable to CLL17 (57/67) and lower than the 64/70 milling of Cheniere. Seedling vigor and lodge scores were good and compared similarly with those of CLL17 and Cheniere. These results suggest that 20RB419 should be evaluated in additional trials and used as a parent to increase yields in both inbred and hybrid breeding efforts.

Table 5. 2021 Diversity Yield Trial. Main crop yield, height, heading, milling, vigor, and lodge score for nine elite long-grain inbred lines and varieties. Data are mean values from H. Rouse Caffey Rice Research Station, Crowley, LA.

Variety/Line	Height (in)	Days to heading	Yield Main (lb/A)	%Whole / % Total Milling	Seedling Vigor	Lodge Rating (0-4)	NOTES
RU1902212	39	69	9681	61/69	3.0	0	Conv line
CLL17	42	75	9507	57/67	2.0	0	CL Variety
RU1902026	39	73	9486	57/68	2.5	0	Conv line
RU1902207	42	74	9467	60/70	2.0	0	Conv line
20RB419	46	73	9459	59/69	2.5	0	CL line
RU1902034	40	73	9354	56/68	2.5	0	Conv line
20RB436	43	75	9128	59/68	3.0	15	CL line
CHENIERE	39	77	9081	64/70	2.5	0	Conv Variety
RU2002126	42	82	7956	60/68	2.5	0	Conv line

DEVELOPMENT AND BREEDING FOR LOW GLYCEMIC CULTIVARS FOR SOUTHERN AND OTHER U.S. RICE GROWING REGIONS

H.S. Utomo, I. Wenefrida, and H. Dugas

A main staple food of more than 2.4 billion people, rice continues to expand into communities that are traditionally non-rice eating with the increasing levels of cross culture exchange, travel, and tourism. Taste, texture, and ease to prepare are some of the reasons for its popularity. In the southern U.S. regions, rice is the main ingredient in many world-famous Cajun dishes such as gumbo, etouffee, dirty rice, and jambalaya. For many, cooked white rice that is just out of the rice cooker gives a pleasing experience of enjoying plain rice. Beside its excellent palatability, hypo-allergenicity, versatility, nutritional profile, and naturally gluten free, rice to some is perceived as a “bad” source of carbohydrates. Being high in a glycemic index (GI) of about 73 makes rice less favorable to people with diabetes as well as in supporting obesity prevention or weight loss programs. This drawback is the main reason for developing more perfect rice.

The glycemic index is a measure of how food with carbohydrates causes blood sugar to rise. As food or beverage that is high in carbohydrates are consumed, the human body breaks down the carbs into glucose. The glucose goes into the bloodstream causing the blood glucose (blood sugar) levels to rise. High-glycemic foods lead to a quicker and greater spike in blood sugar levels. In addition to raising average blood glucose levels that are considered unhealthy, high GI foods place a higher demand for insulin on the body, and lead to more dramatic dips in blood glucose after the spike, potentially causing hunger, carbohydrate cravings, and weakness. The low GI rice alleviates these problems.

More than 260 million rice-eating people worldwide are affected by diabetes. Providing low glycemic rice that can reach a great portion of these people from diverse cultures with different rice eating preferences is truly a monumental challenge. To serve more diverse market needs, breeding for low GI high protein cultivars is extended to include other types of rice. Two advanced lines are in the pipeline for releases, one long grain and one medium grain for the southern U.S. rice growing regions. Another medium grain rice for California is also in the development.

1. Low Glycemic Advanced Lines: Nutritional and grain quality profile indicators

Advanced lines of low Glycemic Index (GI) entries previously developed were evaluated for their nutritional and grain quality components and overall grain quality package. Reported here are some crude bran fat content, crude fiber, carbohydrates, protein content and cereal chemistry. Yield potential and other agronomic traits were based on field evaluations conducted in the 2021 Preliminary Yield (PY) trials in replicated plots at the H. Rouse Caffey Rice Research Station, Crowley, Louisiana (HRCRRS). Table 1 and 2 are analytical data of nutritional and grain quality profiles and yield potential respectively for four advanced GI lines and five new additional lines.

Table 1. Yield and analytical data of grain quality and nutritional profiles of four GI lines 19GIR-05, 19GIR-20, 19GIR-71, and 19GIR-87. Cultivar Frontiere (FNTR) was included as a check.

TRAIT	FNTR	19GIR-05	19GIR-20	19GIR-71	19GIR-87
Yield (lbs/A) †	5.603	7,503	6,674	7,062	6,832
Crude Fat (g/100g)	0.6	0.8	0.6	1.1	1.3
Crude Fiber (g/100g)	0.9	0.7	1.7	1.1	1.2
Carbs (g/100g)	78	78	76	77	78
Calories (kcal/100g)	360	-	-	-	-
Protein (w/w) %	10.22	11.2	11.4	11.1	11.2
Amylose (w/w) %	21.8	20.1	20.6	20.3	20.3
Alkali Spreading	5	5	5	5	5
Gel Temp	Int.	Int.	Int.	Int.	Int.

Continued.

Table 1. Continued.

Pasting Temp (°C)	82.73	74.3	71.2	83.2	85.9
Chalk (%)	9	8.1	9	7	7
Milling Quality (% hulls)	70.3	72.2	70.0	70.3	71.4
Milling yield (% whole kernel)	60.3	61.4	58.9	59.4	61.4
Glycemic Index^{††}	41				

[†]Averaged of 3 replications, 2021 PY tests.

^{††}Predicted value.

Table 2. Yield and analytical data of grain quality and nutritional profiles of five new GI lines 20GIR-01, 20GIR-02, 20GIR-03, 20GIR-04, and 20GIR-05.

TRAIT	20GIR-01	20GIR-02	20GIR-3	209GIR-4	20GIR-5
Yield (lbs/A) [†]	7,372	7,140	7,605	7,580	7,038
Crude Fat (g/100g)	0.9	1.1	0.9	1.2	1.5
Crude Fiber (g/100g)	0.9	1.0	2.3	1.2	1.4
Carbs (g/100g)	79	78	77	78	77
Calories (kcal/100g)	360				
Protein (w/w) %	12.2	12.2	12.6	11.8	12.2
Amylose (w/w) %	22.2	20.5	20.6	20.5	20.5
Alkali Spreading	5	4	5	5	4
Gel Temp	Int.	Int.	Int.	Int.	Int.
Pasting Temp (°C)	81.73	79.3	73.2	78.2	76.8
Chalk (%)	10.1	8	7.3	6.3	7.5
Milling Quality (%)	70.1	72.5	72.2	71.2	70.5
Milling yield (% whole kernel)	62.2	61.2	63.5	64.0	61.2
Glycemic Index^{††}					

[†]Averaged of 3 replications, 2021 PY tests.

^{††}Predicted value.

2. Low Glycemic Advanced Lines: Preliminary yield trials

The following data was collected from the Preliminary Yield trials in replicated plots at the H. Rouse Caffey Rice Research Station, Crowley, LA (HRCRRS). The main evaluation criteria were yield potential, vigor, plant height, heading date, and other agronomic traits.

Table 3. Performance of advanced marker-assisted breeding lines in the 2021 Preliminary Yield trials at the H. Rouse Caffey Rice Research Station, Crowley, LA.

Entry	Line ID	VIG*	HDT [†]	HTE [†]	Yield [†]	DNA Maker Analysis for Amylose Cont.	DNA Maker Analysis for Amylose ALK
20HUP 001	17MB013	4.2	92.1	98.2	8,390.4	High Amylose	High/Intermediate GT
20HUP 002	17MB045	4.3	88.6	95.6	6,833.3	High Amylose	High/Intermediate GT
20HUP 003	17MB047	4.9	86.2	94.2	8,090.9	High Amylose	High/Intermediate GT
20HUP 004	17MB048	4.5	90.4	88.4	8,195.6	High Amylose	High/Intermediate GT
20HUP 005	17MB079	4.3	84.6	83.1	8,450.0	High Amylose	High/Intermediate GT
20HUP 006	17MB097	4.2	85.3	91.2	9,241.8	High Amylose	High/Intermediate GT

Continued.

Table 3. Continued.

20HUP 007	17MB103	4.1	76.9	100.3	6,089.1	High Amylose	High/Intermediate GT
20HUP 008	17MB104	4.9	79.1	97.2	8,535.4	High Amylose	High/Intermediate GT
20HUP 009	17MB134	4.4	78.3	86.5	8,917.0	High Amylose	High/Intermediate GT
20HUP 010	17MB151	4.5	93.9	96.3	7,873.2	High Amylose	High/Intermediate GT
20HUP 011	17MB163	4.1	86.5	91.4	9,559.1	High Amylose	High/Intermediate GT
20HUP 012	17MB172	4.5	90.4	98.2	7,547.4	High Amylose	High/Intermediate GT
20HUP 013	17MB185	3.8	86.0	95.2	8,760.4	High Amylose	High/Intermediate GT
20HUP 014	17MB193	4.6	88.0	86.5	7,659.2	High Amylose	High/Intermediate GT
20HUP 015	17MB251	4.1	92.9	96.3	7,122.9	High Amylose	High/Intermediate GT
20HUP 016	17MB297	4.3	80.2	91.7	6,072.7	High Amylose	High/Intermediate GT
20HUP 017	17MB323	5.0	83.3	101.2	7,728.3	High Amylose	High/Intermediate GT
20HUP 018	17MB366	4.3	85.9	100.7	7,226.4	High Amylose	High/Intermediate GT
20HUP 019	17MB392	4.2	89.0	90.4	8,043.1	High Amylose	High/Intermediate GT
20HUP 020	17MB098	4.1	90.6	87.9	8,229.1	High Amylose	High/Intermediate GT
20HUP 021	17MB099	4.9	85.2	92.1	8,541.9	High Amylose	High/Intermediate GT
20HUP 022	17MB134	4.4	84.2	98.5	7,792.2	High Amylose	High/Intermediate GT
20HUP 023	17MB181	4.5	81.9	98.2	7,931.7	High Amylose	High/Intermediate GT
20HUP 024	17MB295	4.1	91.0	98.0	8,940.8	High Amylose	High/Intermediate GT
20HUP 025	17MB295	5.0	86.3	95.3	7,917.2	High Amylose	High/Intermediate GT
20HUP 026	17MB295	4.3	90.1	86.5	6,843.4	High Amylose	High/Intermediate GT
20HUP 027	17MB295	4.2	86.0	97.1	8,539.6	High Amylose	High/Intermediate GT
20HUP 028	17MB295	4.1	88.0	91.7	8,377.3	High Amylose	High/Intermediate GT
20HUP 029	17MB295	4.9	91.9	101.2	7,770.4	High Amylose	High/Intermediate GT
20HUP 030	17MB295	4.4	89.2	95.4	8,269.5	High Amylose	High/Intermediate GT
20HUP 031	17MB295	4.0	83.3	98.2	6,552.5	High Amylose	High/Intermediate GT
Check	Cypress	4.0	90.2	98.1	7,672.3	High Amylose	High/Intermediate GT

* Subjective rating for seedling vigor was 1 to 5, where 1 = poor and 5 = excellent.

† HDT (Heading date, 50% heading); HTE (Height, cm); Yield (lb/A).

3. Performance of Low GI breeding lines for traits indicators

A total of 3,500 breeding lines of GI rice were evaluated in the growing season of 2021. A portion of these breeding lines was evaluated for their resistant starch, bran oil content and protein content. In addition, standard amylose content and gel temp were also evaluated. Table 4 is the data summary that can be generated from the portion of the breeding lines.

Table 4. Performance of key trait indicators among breeding lines grown in the 2021 head rows at the HRCRRS.

Entry	Line ID	BOC [†]	RS ^{††}	Pro ^{††}	Row Yield [†]	DNA Maker Analysis for Amylose Cont.	Cooking Quality
20GIR 001	17CG-1-024	0.9	1.0	11.5	848	High Amylose	Intermediate
20GIR 002	17CG-1-023	0.8	1.9	11.3	656	High Amylose	Intermediate
20GIR 003	17CG-1-025	0.5	1.5	12.1	774	High Amylose	Intermediate
20GIR 004	17CG-1-026	0.9	1.2	12.9	845	High Amylose	Intermediate
20GIR 005	17CG-1-031	1.2	2.1	11.4	853	High Amylose	Intermediate
20GIR 006	17CG-1-046	1.3	1.7	11.6	912	High Amylose	Intermediate
20GIR 007	17CG-1-056	0.9	1.1	10.7	733	High Amylose	Intermediate
20GIR 008	17CG-1-075	0.8	2.0	11.3	762	High Amylose	Intermediate
20GIR 009	17CG-1-076	0.8	1.7	12.1	662	High Amylose	Intermediate
20GIR 010	17CG-2-078	0.7	1.0	12.4	869	High Amylose	Intermediate
20GIR 011	17CG-2-099	0.8	2.1	11.5	602	High Amylose	Intermediate
20GIR 012	17CG-2-104	1.3	1.1	10.7	621	High Amylose	Intermediate
20GIR 013	17CG-2-105	0.6	1.8	10.4	871	High Amylose	Intermediate

Continued.

Table 4. Continued.

20GIR 014	17CG-2-116	1.0	2.0	11.2	759	High Amylose	Intermediate
20GIR 015	17CG-2-122	1.1	1.7	12.8	689	High Amylose	Intermediate
20GIR 016	17CG-2-144	1.5	1.2	10.5	959	High Amylose	Intermediate
20GIR 017	17CG-2-147	0.7	2.1	10.1	882	High Amylose	Intermediate
20GIR 018	17CG-2-152	1.1	1.6	11.5	773	High Amylose	Intermediate
20GIR 019	17CG-3-174	0.9	1.0	10.6	874	High Amylose	Intermediate
20GIR 020	17CG-3-178	0.9	2.1	11.8	713	High Amylose	Intermediate
20GIR 021	17CG-3-199	1.8	1.2	12.4	988	High Amylose	Intermediate
20GIR 022	17CG-3-206	0.8	2.6	10.2	814	High Amylose	Intermediate
20GIR 023	17CG-3-211	0.9	1.8	11.6	825	High Amylose	Intermediate
20GIR 024	17CG-3-215	1.8	1.5	12.0	875	High Amylose	Intermediate
20GIR 025	17CG-3-216	0.8	2.0	13.2	862	High Amylose	Intermediate
20GIR 026	17CG-3-217	0.9	1.5	11.2	789	High Amylose	Intermediate
20GIR 027	17CG-3-218	1.1	1.6	11.1	879	High Amylose	Intermediate
20GIR 028	17CG-4-221	0.9	2.2	11.3	875	High Amylose	Intermediate
20GIR 029	17CG-4-223	1.2	1.7	11.5	707	High Amylose	Intermediate
20GIR 030	17CG-4-224	0.8	1.1	10.5	918	High Amylose	Intermediate
20GIR 031	17CG-4-226	0.8	2.1	11.7	733	High Amylose	Intermediate
20GIR 032	17CG-4-227	0.9	2.2	10.3	875	High Amylose	Intermediate
20GIR 033	17CG-4-228	0.9	1.1	10.4	773	High Amylose	Intermediate
20GIR 034	17CG-4-231	0.7	2.4	12.5	716	High Amylose	Intermediate
20GIR 035	17CG-4-234	0.9	2.0	10.3	762	High Amylose	Intermediate
20GIR 036	17CG-5-238	0.9	1.5	10.9	877	High Amylose	Intermediate
20GIR 037	17CG-5-239	1.2	1.4	12.3	872	High Amylose	Intermediate
20GIR 038	17CG-5-242	0.9	2.0	13.1	757	High Amylose	Intermediate
20GIR 039	17CG-5-243	1.5	1.7	12.4	857	High Amylose	Intermediate
20GIR 040	17CG-5-244	1.3	1.1	12.6	759	High Amylose	Intermediate
20GIR 041	17CG-5-256	1.2	2.4	11.9	981	High Amylose	Intermediate
20GIR 042	17CG-5-258	0.9	1.5	12.6	976	High Amylose	Intermediate
20GIR 043	17CG-5-259	0.8	1.0	11.4	857	High Amylose	Intermediate
20GIR 044	17CG-5-261	0.8	2.1	12.7	868	High Amylose	Intermediate
20GIR 045	17CG-5-263	0.8	2.0	10.3	776	High Amylose	Intermediate
20GIR 046	17CG-5-264	0.7	1.6	11.1	661	High Amylose	Intermediate
20GIR 047	17CG-6-265	0.6	1.3	12.3	658	High Amylose	Intermediate
20GIR 048	17CG-6-267	0.9	2.0	13.2	627	High Amylose	Intermediate
20GIR 049	17CG-6-269	0.8	1.7	10.4	825	High Amylose	Intermediate
20GIR 050	17CG-6-269	1.2	1.5	10.4	870	High Amylose	Intermediate
20GIR 051	17CG-6-270	0.5	-	12.2	820	High Amylose	Intermediate
20GIR 052	17CG-6-272	0.9	-	11.4	884	High Amylose	Intermediate
20GIR 053	17CG-6-274	1.2	-	12.8	776	High Amylose	Intermediate
20GIR 054	17CG-6-277	1.5	-	12.3	803	High Amylose	Intermediate
20GIR 055	17CG-6-278	0.8	-	13.2	886	High Amylose	Intermediate
20GIR 056	17CG-6-279	0.7	-	12.0	677	High Amylose	Intermediate
20GIR 057	17CG-6-280	0.9	-	13.2	871	High Amylose	Intermediate
20GIR 058	17CG-6-281	0.9	-	12.3	851	High Amylose	Intermediate
20GIR 059	17CG-6-282	0.8	-	11.6	916	High Amylose	Intermediate
20GIR 060	17CG-6-284	0.9	-	11.2	764	High Amylose	Intermediate
20GIR 061	17CG-6-286	1.7	-	10.0	877	High Amylose	Intermediate
20GIR 062	17CG-6-287	0.9	-	13.2	871	High Amylose	Intermediate
20GIR 063	17CG-6-288	0.5	-	10.1	958	High Amylose	Intermediate
20GIR 064	17CG-6-289	0.7	-	13.2	773	High Amylose	Intermediate
20GIR 065	17CG-7-290	1.2	-	11.2	655	High Amylose	Intermediate

Continued.

Table 4. Continued.

20GIR 066	17CG-7-293	0.9	-	11.7	869	High Amylose	Intermediate
20GIR 067	17CG-7-294	0.9	-	10.7	569	High Amylose	Intermediate
20GIR 068	17CG-7-295	1.5	-	12.6	570	High Amylose	Intermediate
20GIR 069	17CG-7-296	1.4	-	12.9	710	High Amylose	Intermediate
20GIR 070	17CG-7-297	0.7	-	12.5	784	High Amylose	Intermediate
20GIR 071	17CG-7-298	0.8	-	13.3	896	High Amylose	Intermediate
20GIR 072	17CG-7-299	1.7	-	10.8	926	High Amylose	Intermediate
20GIR 073	17CG-7-300	0.8	-	11.4	893	High Amylose	Intermediate
20GIR 074	17CG-7-301	0.9	-	12.3	898	High Amylose	Intermediate
20GIR 075	17CG-7-302	0.5	-	10.4	768	High Amylose	Intermediate
20GIR 076	17CG-7-304	1.9	-	12.2	993	High Amylose	Intermediate
20GIR 077	17CG-7-305	1.2	-	11.1	844	High Amylose	Intermediate
20GIR 078	17CG-7-307	0.8	-	12.9	742	High Amylose	Intermediate
20GIR 089	17CG-7-308	1.8	-	12.9	846	High Amylose	Intermediate
20GIR 080	17CG-7-310	0.8	-	11.9	831	High Amylose	Intermediate
20GIR 081	17CG-7-311	0.8	-	10.9	837	High Amylose	Intermediate
20GIR 082	17CG-7-312	0.9	-	10.1	763	High Amylose	Intermediate
20GIR 083	17CG-7-314	0.8	-	12.2	948	High Amylose	Intermediate
20GIR 084	17CG-7-316	1.2	-	13.3	818	High Amylose	Intermediate
20GIR 085	17CG-7-317	0.7	-	10.6	884	High Amylose	Intermediate
20GIR 086	17CG-7-318	0.9	-	10.2	780	High Amylose	Intermediate
20GIR 087	17CG-7-319	0.5	-	14.3	670	High Amylose	Intermediate
20GIR 088	17CG-7-320	1.4	-	12.8	756	High Amylose	Intermediate
20GIR 089	17CG-7-321	1.2	-	12.2	789	High Amylose	Intermediate
20GIR 090	17CG-7-322	0.9	-	11.3	887	High Amylose	Intermediate
20GIR 091	17CG-8-325	0.8	-	10.2	888	High Amylose	Intermediate
20GIR 092	17CG-8-326	1.4	-	10.8	923	High Amylose	Intermediate
20GIR 093	17CG-8-327	0.9	-	13.3	849	High Amylose	Intermediate
20GIR 094	17CG-8-320	0.7	-	12.5	726	High Amylose	Intermediate
20GIR 095	17CG-8-329	0.8	-	11.3	876	High Amylose	Intermediate
20GIR 096	17CG-8-331	1.5	-	11.1	728	High Amylose	Intermediate
20GIR 097	17CG-8-332	0.8	-	11.7	959	High Amylose	Intermediate
20GIR 098	17CG-8-333	1.6	-	13.5	823	High Amylose	Intermediate
20GIR 099	17CG-8-334	1.2	-	12.3	773	High Amylose	Intermediate
20GIR 100	17CG-8-338	0.9	-	12.8	728	High Amylose	Intermediate
CCDR	Check	-	-	7.1	823	High Amylose	High/Intermediate
CPRS	Check	-	-	7.2	782	High Amylose	High/Intermediate

* Protein Content determined using N-Combustion analyzer (% w/w).[†] BOC = Bran Oil Content (g/100g). ^{††}RS = Resistant starch (% w/w). ^{†††}Yield (lbs).

4. Marker Data for Low GI rice lines

Table 5. Marker data of GI lines.

No.	Plant ID	Blast Genes	Type	ALK	WaxyExon1	WaxyE xon2	Waxy Hap)	Amylose Content	Gel Temp
1	17CG-1-024	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
2	17CG-1-023	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
3	17CG-1-025	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
4	17CG-1-026	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
5	17CG-1-031	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
6	17CG-1-046	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
7	17CG-1-056	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel

Continued.

Table 5. Continued.

8	17CG-1-075	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
9	17CG-1-076	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
10	17CG-2-078	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
11	17CG-2-099	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
12	17CG-2-104	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
13	17CG-2-105	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
14	17CG-2-116	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
15	17CG-2-122	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
16	17CG-2-144	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
17	17CG-2-147	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
18	17CG-2-152	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
19	17CG-3-174	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
20	17CG-3-178	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
21	17CG-3-199	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
22	17CG-3-206	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
23	17CG-3-211	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
24	17CG-3-215	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
25	17CG-3-216	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
26	17CG-3-217	Pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
27	17CG-3-218	Pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
28	17CG-4-221	Pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
29	17CG-4-223	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
30	17CG-4-224	Pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
31	17CG-4-226	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
32	17CG-4-227	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
33	17CG-4-228	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
34	17CG-4-231	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
35	17CG-4-234	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
36	17CG-5-238	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
37	17CG-5-239	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
38	17CG-5-242	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
39	17CG-5-243	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
40	17CG-5-244	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
41	17CG-5-256	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
42	17CG-5-258	pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
43	17CG-5-259	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
44	17CG-5-261	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy3(2)	Int Am	Int Gel
45	17CG-5-263	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
46	17CG-5-264	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
47	17CG-6-265	Pi-ta ² , Pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
48	17CG-6-267	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
49	17CG-6-269	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel
50	17CG-6-269	pi-ta ² , pi-b	L	IGT(2)	Std(2)	Std(2)	Amy2(2)	Int Am	Int Gel

* L = Long grain.

5. Grain Quality of Low GI rice lines

Consistency and homogeneity of grain size and appearance are also important breeding goals of the Marker-Assisted Breeding Project of the HRCRRS in developing improved lines. Equally important is reducing the percentage of grain chalk among progeny lines. Selected lines were evaluated, and the improved lines will be advanced in the next growing season.

Table 6. Grain appearance expressed as % grain homogeneity and % chalk among GI rice lines evaluated.

Entry	Line ID	Grain Type	GH [†]	% Chalk
20GIR 001	17CG-1-024	L	92.3	11.6
20GIR 002	17CG-1-023	L	97.3	11.3
20GIR 003	17CG-1-025	L	90.4	3.0
20GIR 004	17CG-1-026	L	91.6	4.0
20GIR 005	17CG-1-031	L	91.1	7.3
20GIR 006	17CG-1-046	L	90.3	6.9
20GIR 007	17CG-1-056	L	94.7	4.3
20GIR 008	17CG-1-075	L	91.4	7.4
20GIR 009	17CG-1-076	L	81.7	5.9
20GIR 010	17CG-2-078	L	91.8	5.9
20GIR 011	17CG-2-099	L	90.6	8.2
20GIR 012	17CG-2-104	L	86.8	3.3
20GIR 013	17CG-2-105	L	92.1	8.7
20GIR 014	17CG-2-116	L	90.1	4.6
20GIR 015	17CG-2-122	L	85.3	2.7
20GIR 016	17CG-2-144	L	96.5	5.4
20GIR 017	17CG-2-147	L	90.7	7.8
20GIR 018	17CG-2-152	L	80.7	9.5
20GIR 019	17CG-3-174	L	92.2	11.1
20GIR 020	17CG-3-178	L	90.4	10.8
20GIR 021	17CG-3-199	L	89.8	18.9
20GIR 022	17CG-3-206	L	90.5	8.1
20GIR 023	17CG-3-211	L	93.7	6.2
20GIR 024	17CG-3-215	L	87.2	7.2
20GIR 025	17CG-3-216	L	88.1	11.8
20GIR 026	17CG-3-217	L	98.3	8.4
20GIR 027	17CG-3-218	L	92.7	8.6
20GIR 028	17CG-4-221	L	89.7	2.6
20GIR 029	17CG-4-223	L	89.9	3.8
20GIR 030	17CG-4-224	L	91.0	6.9
20GIR 031	17CG-4-226	L	91.2	6.2
20GIR 032	17CG-4-227	L	90.0	4.3
20GIR 033	17CG-4-228	L	90.3	3.7
20GIR 034	17CG-4-231	L	90.2	2.6
20GIR 035	17CG-4-234	L	92.2	3.8
20GIR 036	17CG-5-238	L	89.8	4.6
20GIR 037	17CG-5-239	L	97.7	10.4
20GIR 038	17CG-5-242	L	92.6	3.9
20GIR 039	17CG-5-243	L	93.4	7.9
20GIR 040	17CG-5-244	L	92.4	8.8
20GIR 041	17CG-5-256	L	91.7	11.2
20GIR 042	17CG-5-258	L	91.8	8.4
20GIR 043	17CG-5-259	L	91.8	5.5
20GIR 044	17CG-5-261	L	89.2	7.6
20GIR 045	17CG-5-263	L	91.3	10.1
20GIR 046	17CG-5-264	L	90.4	10.6

Continued.

Table 6. Continued

Entry	Line ID	Grain Type	GH [†]	% Chalk
20GIR 047	17CG-6-265	L	88.7	8.7
20GIR 048	17CG-6-267	L	89.9	7.7
20GIR 049	17CG-6-269	L	88.8	6.3
20GIR 050	17CG-6-269	L	87.0	8.4
20GIR 051	17CG-6-270	L	92.4	4.6
20GIR 052	17CG-6-272	L	91.7	5.7
20GIR 053	17CG-6-274	L	91.6	5.4
20GIR 054	17CG-6-277	L	93.3	7.3
20GIR 055	17CG-6-278	L	92.5	8.6
20GIR 056	17CG-6-279	L	94.6	8.7
20GIR 057	17CG-6-280	L	94.8	9.8
20GIR 058	17CG-6-281	L	92.3	5.2
20GIR 059	17CG-6-282	L	90.4	7.2
20GIR 060	17CG-6-284	L	88.5	4.3
20GIR 061	17CG-6-286	L	90.2	1.7
20GIR 062	17CG-6-287	L	92.8	2.5
20GIR 063	17CG-6-288	L	94.5	1.3
20GIR 064	17CG-6-289	L	90.7	6.6
20GIR 065	17CG-7-290	L	89.8	9.5
20GIR 066	17CG-7-293	L	96.3	7.8
20GIR 067	17CG-7-294	L	94.5	7.5
20GIR 068	17CG-7-295	L	93.7	11.2
20GIR 069	17CG-7-296	L	91.5	8.4
20GIR 070	17CG-7-297	L	88.6	6.7
20GIR 071	17CG-7-298	L	89.9	11.1
20GIR 072	17CG-7-299	L	88.3	6.2
20GIR 073	17CG-7-300	L	91.8	5.1
20GIR 074	17CG-7-301	L	91.8	5.1
20GIR 075	17CG-7-302	L	92.5	8.4
20GIR 076	17CG-7-304	L	81.7	5.7
20GIR 077	17CG-7-305	L	92.6	3.7
20GIR 078	17CG-7-307	L	91.5	9.2
20GIR 089	17CG-7-308	L	80.6	1.4
20GIR 080	17CG-7-310	L	97.5	1.5
20GIR 081	17CG-7-311	L	90.6	1.7
20GIR 082	17CG-7-312	L	88.8	1.1
20GIR 083	17CG-7-314	L	89.6	8.7
20GIR 084	17CG-7-316	L	88.5	3.7
20GIR 085	17CG-7-317	L	90.3	4.4
20GIR 086	17CG-7-318	L	92.4	7.9
20GIR 087	17CG-7-319	L	91.6	9.5
20GIR 088	17CG-7-320	L	90.1	8.5
20GIR 089	17CG-7-321	L	88.5	4.8
20GIR 090	17CG-7-322	L	88.9	6.1
20GIR 091	17CG-8-325	L	92.9	8.1
20GIR 092	17CG-8-326	L	82.6	4.6
20GIR 093	17CG-8-327	L	96.0	5.8
20GIR 094	17CG-8-320	L	84.4	5.9
20GIR 095	17CG-8-329	L	99.5	7.3
CCDR	Check	L	89.3	9.3
CPRS	Check	L	90.4	8.5

† GH=% Grain Homogeneity

RICE GRAIN QUALITY ENHANCEMENT PROJECT: GRAIN HIGH PROTEIN CONTENT AND HERBICIDE RESISTANT RICE DEVELOPMENT

I. Wenefrida and H.S. Utomo

Protein is extremely important for optimal functioning of human body. Over 750 million people globally are malnourished due to protein deficiency. More than a half of them are in the rice eating countries where they eat rice three times a day. Rice with higher protein content provides additional protein to help reduce protein deficiency. Several thousand plant species have been identified as a plant-based protein source. A total of 150 species have been commercially cultivated. Currently, the world's population depends on only about 20 different plant crops to provide approximately 65% of the world supply of edible protein. They are divided into cereals, legumes and other vegetables, fruits and nuts, with cereal grains. These plants provide almost half (47%) of the protein supplies. Plant protein sources in the developed countries constitute only about a third of their total protein intake: i.e., 31% of protein intake in the US diet and 36% in the UK. However, the major source of protein of about 80% in the developing countries is from wheat, (43%), rice, (39%) and maize, (12%).

While getting adequate protein may not be a problem among people in the developed countries, this rice provides more lean protein per serving. With that, it helps in moderation of red meats consumption to help establish healthier lifestyle while continuously maintaining optimal protein intake to the levels required for best functioning of the body. Plant protein sources differ from animal sources in terms of digestibility and amino acid composition. An increased consumption of plant food sources such as rice, cereals, fruit and vegetables has been recommended as part of the healthy diet.

The Rice Nutrition Enhancement Project conducted 1) grain quality analyses among the advanced as well as the newly developed high protein rice lines, 2) crude protein analyses among high protein rice lines that were evaluated in the 2021 replicated head-row trials and the preliminary yield trials, 3) crude protein analyses among newer developed high protein rice lines, 4) laboratory evaluation of glyphosate herbicide resistant rice lines, and 5) Petri dish tests for Dual Magnum (S-metolachlor) herbicide-resistant rice lines.

1. Analyses of Grain Quality Among High Protein Lines

New high protein lines continue to be developed using proven methodologies that have been used. Both new and advanced lines were subjected to grain quality assessment. Analyses were conducted on specific grain quality that includes gel temp, amylose content, and cooking characteristics. In addition, whole milling, total milling, grain shape homogeneity, and % chalkiness. All samples were collected from the 2021 field grown head rows or PY plots. Data generated (Table 1) will be used to select lines with grain quality better or at least comparable to that of cultivar 'Frontière'. Cultivar 'Frontière' is our first commercial high protein rice and currently being marketed as 'Cahokia' for the northern part of the United States. The second brand marketed for the Southern part of the US is under "Parish Rice".

Table 1. Grain quality analyses of advanced high protein rice lines planted in 2021.

Entry	Pedigree	Whole	Total	Grain Shape Homogeneity	% Chalk	Gel Temp	Amylose Content
20IDV 0006	16P100204	63.6	70.5	90.2	18	Intermediate-high	21.43
20IDV 0009	16P100214	65.3	72.6	90.4	11	Intermediate	21.44
20IDV 0010	16P100221	64.5	74.2	90.2	6	Intermediate-high	22.23
20IDV 0011	16P100225	64.0	73.3	95.2	5	Intermediate-high	22.72
20IDV 0013	16P100229	60.2	69.2	96.7	2	Intermediate-high	23.56
20IDV 0015	16P100231	65.8	75.3	96.7	12	Intermediate-high	23.84
20IDV 0017	16P100242	63.5	74.4	94.8	15	Intermediate-high	22.32

Continued.

Table 1. Continued

20IDV 0018	16P100243	62.6	68.6	94.4	4	Intermediate-high	22.53
20IDV 0020	16P100252	60.7	71.8	93.3	2	Intermediate-high	23.63
20IDV 0023	16P100254	65.1	69.2	93.2	4	Intermediate	21.45
20IDV 0024	16P100258	66.5	73.1	90.4	8	Intermediate-high	23.64
20IDV 0027	16P100259	65.7	73.5	93.1	12	Intermediate-high	21.35
20IDV 0028	16P100312	67.4	72.2	92.8	15	Intermediate-high	21.48
20IDV 0029	16P100326	65.2	74.4	91.2	3	Intermediate	22.59
20IDV 0030	16P100325	67.4	71.3	90.7	6	Intermediate	22.22
20IDV 0031	16P100328	64.2	68.0	90.7	12	Intermediate-high	21.71
20IDV 0032	16P100332	62.8	72.6	95.6	6	Intermediate-high	23.51
20IDV 0033	16P100337	65.5	69.4	94.9	11	Intermediate-high	23.94
20IDV 0036	16P100338	66.4	70.6	93.2	13	Intermediate	20.94
20IDV 0045	16P100356	64.6	75.6	92.4	8	Intermediate	22.93
20IDV 0047	16P100376	61.7	71.3	93.5	6	Intermediate-high	21.35
20IDV 0048	16P100384	63.7	71.4	95.6	13	Intermediate-high	21.86
20IDV 0049	16P100383	61.7	69.2	91.2	8	Intermediate	20.67
20IDV 0050	16P100391	63.4	68.2	91.8	5	Intermediate-high	23.51
20IDV 0054	16P100393	64.2	72.5	96.6	5	Intermediate-high	23.42
20IDV 0055	16P100396	64.8	71.8	92.4	6	Intermediate-high	22.34
20IDV 0056	16P100401	63.9	71.5	93.6	7	Intermediate-high	21.86
20IDV 0057	16P100402	62.8	73.8	92.3	8	Intermediate-high	22.53
20IDV 0059	16P100405	61.6	68.5	95.4	12	Intermediate-high	21.39
20IDV 0060	16P100411	62.7	70.7	92.3	14	Intermediate-high	24.47
20IDV 0081	16P100414	65.8	68.2	92.7	8	Intermediate	22.52
20IDV 0091	16P100421	62.5	75.2	92.9	7	Intermediate-high	24.71
20IDV 0101	16P100424	63.6	75.3	91.3	15	Intermediate-high	24.63
20IDV 0112	16P100433	64.9	74.5	98.2	5	Intermediate	22.52
20IDV 0113	16P100442	62.6	72.4	93.4	4	Intermediate-high	22.47
20IDV 0114	16P100453	63.0	72.3	92.3	14	Intermediate-high	21.93
20IDV 0115	16P100459	64.0	68.4	92.7	9	Intermediate-high	21.35
20IDV 0116	16P100461	64.3	71.8	90.4	3	Intermediate-high	21.84
20IDV 0117	16P100472	61.3	70.8	90.8	5	Intermediate-high	24.33
20IDV 0118	16P100485	63.6	68.5	90.3	12	Intermediate-high	22.67
20IDV 0119	16P100492	64.7	70.7	90.4	6	Intermediate-high	21.47
20IDV 0120	16P100505	63.8	74.6	93.8	13	Intermediate	21.31
20IDV 0122	16P100507	63.6	67.7	95.4	11	Intermediate-high	23.42
20IDV 0137	16P100511	64.5	74.3	90.3	3	Intermediate-high	24.73
20IDV 0238	16P100521	63.4	67.2	93.1	16	Intermediate-high	21.54
20IDV 0239	16P100522	63.3	70.5	98.1	13	Intermediate-high	22.72
20IDV 0230	16P100524	62.0	75.3	93.9	4	Intermediate	21.78
20IDV 0235	16P100527	61.2	68.5	92.2	5	Intermediate-high	23.56
20IDV 0241	16P100532	65.2	72.3	91.4	11	Intermediate-high	22.35
20IDV 0248	16P100533	65.5	75.6	93.6	9	Intermediate	21.52
20IDV 0253	16P100541	63.8	72.4	92.4	8	Intermediate-high	23.81
20IDV 0254	16P100542	64.6	72.7	94.6	10	Intermediate-high	22.43
20IDV 0261	16P100649	63.5	69.5	90.3	8	Intermediate-high	21.87
20IDV 0266	16P100650	64.9	76.2	90.9	12	Intermediate-high	20.26
20IDV 0267	16P100671	61.4	74.2	90.4	15	Intermediate-high	20.55
20IDV 0271	16P100685	60.5	67.2	93.5	10	Intermediate-high	20.37
20IDV 0272	16P100691	62.6	69.4	93.7	10	Intermediate-high	22.86
20IDV 0280	16P100694	62.5	73.5	94.2	5	Intermediate	20.31
20IDV 0281	16P100697	64.5	68.3	92.0	6	Intermediate-high	23.42
20IDV 0032	CPRS	64.4	69.3	91.5	11	Intermediate-high	23.21
20IDV 0033	CCDR	60.5	70.1	91.3	9	Intermediate-high	22.65

2. Analyses of Gel Temperature as an Indicator of Cooking Quality Among Select High Protein Rice Lines Grown in 2021 Planting.

Table 2. Characteristics of gelling temperature among high protein rice lines grown in 2021 yield plots compared with the experimental checks, medium-grain Bengal (BNGL) and long grains Chenier (CHNR), Hidalgo (HDLG), Cypress (CPRS) and Dixiebelle (DXBL).

Cell	Sample #	Seed # (Alkali Ratings)*						Average	Gel Temp [†]
		1	2	3	4	5	6		
C1	21-ID-01	3	3	3	4	2	3	3.0	Intermediate-high
C2	21-ID-02	5	4	6	6	7	7	5.8	Low
C3	21-ID-03	6	6	6	7	6	5	6.0	Low
C4	17-IL-HP-01	7	5	7	5	5	7	6.0	Low
B5	17-IL-HP-02	6	4	6	6	5	5	5.3	Low
C6	21-ID-07	3	3	2	3	3	4	3.0	Intermediate-high
C7	21-ID-10	3	4	4	2	2	4	3.2	Intermediate-high
C8	21-ID-11	2	2	4	3	3	4	3.0	Intermediate-high
C9	21-ID-12	3	3	2	4	4	3	3.2	Intermediate-high
C10	21-ID-21	4	4	2	2	3	3	3.0	Intermediate-high
C11	21-ID-22	3	4	4	2	4	2	3.2	Intermediate-high
C12	21-ID-31	3	4	2	3	3	3	3.0	Intermediate-high
C13	21-ID-33	4	3	3	4	3	3	3.3	Intermediate-high
C14	21-ID-37	3	4	2	3	3	4	3.2	Intermediate-high
C15	21-ID-38	3	4	3	3	3	2	3.2	Intermediate-high
C16	21-ID-40	4	5	3	2	3	3	3.2	Intermediate-high
C17	21-ID-41	4	4	3	3	3	3	3.3	Intermediate-high
C18	21-ID-42	3	4	2	2	3	4	3.0	Intermediate-high
C19	21-ID-48	3	5	3	2	3	3	3.2	Intermediate-high
C20	21-ID-49	4	4	2	2	3	3	3.0	Intermediate-high
C21	21-ID-50	3	5	3	2	3	3	3.2	Intermediate-high
C22	21-ID-52	3	5	3	2	3	3	3.2	Intermediate-high
C23	21-ID-61	4	4	2	2	3	3	3.0	Intermediate-high
C24	21-ID-66	3	5	3	2	3	3	3.2	Intermediate-high
C25	21-ID-68	3	5	3	2	3	3	3.2	Intermediate-high
C26	21-ID-72	2	4	2	4	3	3	3.0	Intermediate-high
C27	21-ID-73	4	4	2	2	3	3	3.0	Intermediate-high
C28	21-ID-76	4	4	2	2	3	3	3.0	Intermediate-high
C29	21-ID-78	3	5	3	2	2	3	3.0	Intermediate-high
C30	21-ID-79	3	5	3	2	3	3	3.2	Intermediate-high
C31	21-ID-81	2	4	2	4	3	3	3.0	Intermediate-high
C32	21-ID-82	3	5	3	3	3	3	3.3	Intermediate-high
C33	21-ID-83	4	4	2	2	3	3	3.0	Intermediate-high
C34	21-ID-84	3	5	3	2	3	3	3.2	Intermediate-high
C35	21-ID-87	3	5	3	3	3	3	3.3	Intermediate-high
C36	21-ID-88	4	4	2	3	3	2	3.0	Intermediate-high
C37	21-ID-91	3	4	3	3	3	4	3.3	Intermediate-high
C38	21-ID-94	3	4	3	2	3	3	3.0	Intermediate-high
C39	21-ID-96	4	4	3	2	3	3	3.0	Intermediate-high
C40	21-ID-98	5	3	3	3	2	3	3.2	Intermediate-high
C41	21-ID-102	4	4	2	2	2	4	3.0	Intermediate-high
C42	21-ID-103	2	3	3	4	3	3	3.0	Intermediate-high
C43	21-ID-105	3	3	3	4	4	3	3.3	Intermediate-high
C44	21-ID-107	3	4	3	2	3	4	3.2	Intermediate-high
C45	21-ID-108	4	3	2	2	3	4	3.0	Intermediate-high
C46	21-ID-111	4	4	2	2	3	3	3.0	Intermediate-high
C47	21-ID-117	3	5	3	2	3	3	3.2	Intermediate-high

Continued.

Table 2. Continued

C48	21-ID-127	2	4	3	5	3	3	3.3	Intermediate-high
C49	21-ID-128	3	5	3	2	3	3	3.2	Intermediate-high
C50	21-ID-132	4	3	2	3	2	4	3.0	Intermediate-high
C51	21-ID-134	4	4	2	3	3	3	3.2	Intermediate-high
C52	21-ID-148	3	5	3	2	2	3	3.0	Intermediate-high
C53	21-ID-149	3	5	3	3	3	3	3.3	Intermediate-high
C54	21-ID-156	3	5	3	2	3	3	3.2	Intermediate-high
C55	21-ID-167	2	4	2	4	3	3	3.0	Intermediate-high
C56	21-ID-168	4	2	4	3	3	3	3.2	Intermediate-high
C57	21-ID-170	3	4	2	2	4	3	3.0	Intermediate-high
C58	21-ID-172	3	5	3	3	3	3	3.3	Intermediate-high
C59	21-ID-173	3	4	2	2	3	4	3.0	Intermediate-high
C60	21-ID-175	3	5	3	3	3	3	3.3	Intermediate-high
C61	21-ID-176	3	5	3	2	3	3	3.2	Intermediate-high
C62	21-ID-185	4	3	3	2	3	3	3.0	Intermediate-high
C63	21-ID-187	3	5	3	3	3	3	3.3	Intermediate-high
C64	21-ID-188	4	3	3	3	3	3	3.2	Intermediate-high
C65	21-ID-241	3	4	3	3	3	3	3.2	Intermediate-high
C66	21-ID-243	3	5	3	2	2	4	3.2	Intermediate-high
C67	21-ID-244	3	5	3	4	3	2	3.3	Intermediate-high
C68	21-ID-246	4	3	2	3	2	4	3.0	Intermediate-high
C69	21-ID-247	3	4	3	2	4	3	3.2	Intermediate-high
C70	21-ID-248	3	4	2	2	3	4	3.0	Intermediate-high
C71	21-ID-251	3	4	3	2	3	4	3.2	Intermediate-high
C72	21-ID-261	5	3	3	2	3	3	3.2	Intermediate-high
C73	21-ID-265	4	3	3	2	4	2	3.0	Intermediate-high
C74	21-ID-277	3	5	3	2	2	4	3.2	Intermediate-high
C75	21-ID-278	3	5	3	2	3	3	3.2	Intermediate-high
C76	21-ID-281	2	4	2	3	3	4	3.0	Intermediate-high
C77	21-ID-283	3	4	3	2	3	3	3.0	Intermediate-high
C78	21-ID-288	4	4	2	2	3	3	3.0	Intermediate-high
C79	21-ID-289	3	4	4	2	2	3	3.0	Intermediate-high
C80	21-ID-291	3	4	3	2	3	4	3.2	Intermediate-high
C81	21-ID-313	4	4	3	2	3	3	3.2	Intermediate-high
C82	21-ID-315	4	3	2	3	3	3	3.0	Intermediate-high
C83	21-ID-318	3	5	2	3	3	4	3.3	Intermediate-high
C84	21-ID-319	3	4	2	4	3	3	3.2	Intermediate-high
C85	21-ID-341	3	5	3	2	3	3	3.2	Intermediate-high
C86	21-ID-403	3	5	3	3	3	2	3.2	Intermediate-high
C87	21-ID-404	4	4	3	2	4	3	3.3	Intermediate-high
C88	21-ID-405	3	3	2	2	4	4	3.0	Intermediate-high
C89	21-ID-407	3	4	3	3	3	3	3.2	Intermediate-high
C80	21-ID-408	4	3	2	2	4	3	3.0	Intermediate-high
C91	21-ID-501	3	5	3	3	2	3	3.2	Intermediate-high
C92	21-ID-602	4	4	3	2	3	3	3.2	Intermediate-high
C93	21-ID-605	4	3	2	3	3	3	3.0	Intermediate-high
C94	21-ID-707	3	5	2	2	3	4	3.2	Intermediate-high
C95	21-ID-708	4	4	3	2	3	3	3.2	Intermediate-high
C96	21-ID-802	2	5	2	3	3	3	3.0	Intermediate-high
C97	21-ID-803	4	3	2	2	4	3	3.0	Intermediate-high
C98	21-ID-808	3	4	2	2	4	3	3.0	Intermediate-high

Continued.

Table 2. Continued

C99	21-ID-809	3	4	3	2	2	4	3.0	Intermediate-high
C100	21-ID-903	4	3	3	2	3	4	3.2	Intermediate-high
C101	21-ID-933	3	5	2	3	3	3	3.2	Intermediate-high
C102	21-ID-935	4	4	2	3	3	2	3.0	Intermediate-high
C103	21-ID-937	3	4	3	3	4	3	3.3	Intermediate-high
C104	21-ID-939	3	4	2	3	3	4	3.2	Intermediate-high
C105	21-ID-941	3	4	3	2	4	3	3.2	Intermediate-high
C106	21-ID-943	3	4	3	2	3	4	3.2	Intermediate-high
C107	21-ID-944	4	4	3	3	3	3	3.3	Intermediate-high
C108	21-ID-945	3	3	3	2	3	4	3.0	Intermediate-high
C109	21-ID-947	4	5	3	2	3	2	3.2	Intermediate-high
C100	21-ID-948	4	3	2	3	3	3	3.0	Intermediate-high
C101	21-ID-951	3	5	4	2	3	2	3.2	Intermediate-high
C102	21-ID-952	4	4	3	2	2	4	3.2	Intermediate-high
C103	21-ID-955	3	4	2	2	3	4	3.0	Intermediate-high
C104	21-ID-957	3	5	3	2	3	3	3.2	Intermediate-high
C105	21-ID-958	4	3	4	2	3	3	3.2	Intermediate-high
C106	21-ID-962	2	3	3	4	3	3	3.0	Intermediate-high
C107	21-ID-963	3	4	3	2	3	3	3.0	Intermediate-high
C108	21-ID-968	4	3	2	3	3	3	3.0	Intermediate-high
C109	21-ID-969	3	4	3	2	2	4	3.0	Intermediate-high
C110	21-ID-973	3	4	4	2	3	3	3.2	Intermediate-high
C111	21-ID-971	2	5	3	3	3	3	3.2	Intermediate-high
C112	21-ID-972	3	3	3	2	3	5	3.2	Intermediate-high
C113	21-ID-973	4	3	2	3	3	3	3.0	Intermediate-high
C114	21-ID-977	3	4	4	2	3	3	3.2	Intermediate-high
C115	21-ID-978	2	5	3	2	4	3	3.2	Intermediate-high
C116	21-ID-982	2	3	3	4	3	3	3.0	Intermediate-high
C117	21-ID-983	3	4	2	2	4	3	3.0	Intermediate-high
C118	21-ID-984	4	3	2	3	3	3	3.0	Intermediate-high
C119	21-ID-989	3	4	3	3	2	3	3.0	Intermediate-high
C120	21-ID-993	5	3	3	2	3	3	3.2	Intermediate-high
A1	BNGL	6	6	6	6	5	6	5.7	Low
A2	CHNR	4	4	3	2	5	2	3.3	Intermediate-high
A3	HDLG	2	3	2	2	2	2	2.2	High
A4	DXBL	3	4	3	2	3	3	3.0	Intermediate-high
A5	CPRS	3	4	4	4	3	4	3.7	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 seven-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. Analyses of Crude Protein Content of High Protein Rice Lines from the 2021 Replicated Head-row Trials Evaluated at the H. Rouse Caffey Rice Research Station, Crowley, LA.

Crude protein content among promising high protein lines was analyzed using the N Combustion Analyzer through high temperature digestion of samples at 850 to 1,200 °C. The values presented are based on averaged crude N content from the 2021 replicated head-row trials. Data collected from these tests will be used to select lines to be advanced to PY trials. The PY tests will employ a bigger plot size to allow for grain yield evaluations.

Table 3. Averaged crude protein content of 100 high protein lines in the 2021 PY replicated trials at the H. Rouse Caffey Rice Research Station, near Crowley, LA.

No.	Genotype	Mass	N-Cont.	Crude Protein Content	No.	Genotype	Mass	N-Cont.	Crude Protein Content
1	17R-7001pan2	0.09	1.76	13.44	51	17R -7149pan3	0.11	2.09	13.06
2	17R-7002pan1	0.12	1.88	10.77	52	17R -7150pan5	0.10	1.97	13.54
3	17R-7012pan4	0.11	1.96	12.25	53	17R -7154pan5	0.09	2.17	16.58
4	17R-7014pan1	0.10	1.61	11.07	54	17R -7164pan3	0.12	1.76	10.08
5	17R-7032pan2	0.12	1.62	9.28	55	17R -7167pan4	0.11	2.42	15.13
6	17R-7043pan1	0.12	2.21	12.66	56	17R -7187pan5	0.11	2.27	14.19
7	17R-7044pan2	0.13	1.98	10.47	57	17R -7191pan3	0.09	1.86	14.21
8	17R-7047pan4	0.11	1.96	12.25	58	17R -7192pan1	0.12	1.62	9.28
9	17R-7048pan1	0.09	1.79	13.67	59	17R -7204pan1	0.09	1.87	14.28
10	17R-7051pan3	0.12	1.84	10.54	60	17R -7205pan3	0.09	1.62	12.38
11	17R-7052pan1	0.11	2.46	15.38	61	17R -7206pan1	0.12	2.3	13.18
12	17R -7053pan3	0.12	2.27	13.01	62	17R -7207pan4	0.10	2.19	15.06
13	17R -7055pan4	0.11	1.92	12.00	63	17R -7208pan2	0.11	2.41	15.06
14	17R -7058pan4	0.12	2.41	13.81	64	17R -7209pan4	0.10	2.32	15.95
15	17R -7059pan2	0.11	2.21	13.81	65	17R -7210pan3	0.11	2.17	13.56
16	17R -7061pan4	0.11	1.98	12.38	66	17R -7211pan2	0.10	1.99	13.68
17	17R -7062pan1	0.11	2.32	14.50	67	17R -7213pan1	0.11	1.8	11.25
18	17R -7064pan2	0.11	2.03	12.69	68	17R -7217pan6	0.10	2.35	16.16
19	17R -7065pan2	0.12	2.11	12.09	69	17R -7219pan4	0.11	1.8	11.25
20	17R -7067pan4	0.12	2.24	12.83	70	17R -7220pan3	0.10	1.78	12.24
21	17R -7068pan3	0.13	2.31	12.22	71	17R -7221pan5	0.11	1.84	11.50
22	17R -7071pan2	0.12	1.71	9.80	72	17R -7223pan1	0.12	2.22	12.72
23	17R -7073pan5	0.11	2.00	12.50	73	17R -7225pan3	0.11	2.34	14.63
24	17R -7075pan3	0.13	1.81	9.57	74	17R -7229pan2	0.11	1.77	11.06
25	17R -7078pan4	0.09	1.79	13.67	75	17R -7231pan6	0.11	1.92	12.00
26	17R -7079pan2	0.13	2.44	12.90	76	17R -7233pan3	0.12	2.32	13.29
27	17R -7080pan1	0.11	1.89	11.81	77	17R -7240pan3	0.12	1.97	11.29
28	17R -7082pan5	0.10	1.93	13.27	78	17R -7241pan4	0.09	1.99	15.20
29	17R -7091pan3	0.12	2.08	11.92	79	17R -7242pan2	0.12	2.33	13.35
30	17R -7093pan4	0.11	2.08	13.00	80	17R -7246pan5	0.10	1.66	11.41
31	17R -7094pan1	0.09	1.99	15.20	81	17R -7249pan2	0.12	1.89	10.83
32	17R -7101pan1	0.11	2.19	13.69	82	17R -7250pan4	0.11	1.99	12.44
33	17R -7102pan4	0.10	2.32	15.95	83	17R -7252pan3	0.10	1.98	13.61
34	17R -7104pan2	0.12	2.42	13.86	84	17R -7259pan5	0.09	1.97	15.05

Continued.

Table 3. Continued

35	17R -7115pan2	0.11	2.22	13.88	85	17R -7262pan6	0.11	1.88	11.75
36	17R -7117pan3	0.10	2.15	14.78	86	17R -7264pan4	0.10	1.92	13.20
37	17R -7119pan5	0.09	2.04	15.58	87	17R -7268pan3	0.10	1.89	12.99
38	17R -7122pan2	0.12	2.37	13.58	88	17R -7570pan2	0.11	1.69	10.56
39	17R -7123pan4	0.10	2.20	15.13	89	17R -7572pan1	0.10	2.09	14.37
40	17R -7128pan5	0.12	1.98	11.34	90	17R -7581pan1	0.11	2.25	14.06
41	17R -7129pan3	0.14	1.81	8.89	91	17R -7583pan2	0.12	2.05	11.74
42	17R -7131pan2	0.11	2.08	13.00	92	17R -7587pan4	0.12	2.4	13.75
43	17R -7134pan1	0.12	2.22	12.72	93	17R -7590pan1	0.09	2.21	16.88
44	17R -7135pan1	0.11	2.21	13.81	94	17R -7591pan6	0.12	1.94	11.11
45	17R -7138pan1	0.12	2.23	12.78	95	17R -7592pan4	0.10	1.79	12.31
46	17R -7139pan4	0.11	2.35	14.69	96	17R -7595pan3	0.12	2.05	11.74
47	17R -7142pan2	0.13	2.30	12.16	97	17R -7597pan2	0.12	2.01	11.52
48	17R -7143pan3	0.12	1.98	11.34	98	17R -7599pan5	0.11	2.31	14.44
49	17R -7146pan4	0.10	1.79	12.31	99	17R -7001pan3	0.13	2.14	11.32
50	17R -7148pan2	0.10	2.22	15.26	100	17R -7009pan5	0.11	2.25	14.06

4. Crude Protein Content of New Developed Lines.

Every year, newer versions of high protein rice lines are developed through a series of mutational experiments. In 2021 planting season, field tests were carried out for the 120 promising lines previously selected from 1,400 newly developed high protein lines (Table 4). In addition to high protein content, selections were emphasized also on 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 4. 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	N-Cont.	Crude Protein Content	No.	Genotype	Mass	N-Cont.	Crude Protein Content
1	18R -8201 pan3	0.11	1.93	12.06	61	18R -8307 pan3	0.10	1.81	12.44
2	18R -8206 pan1	0.11	1.69	10.56	62	18R -8308 pan4	0.11	2.11	13.19
3	18R -8207 pan1	0.09	1.92	14.67	63	18R -8309 pan5	0.10	2.13	14.64
4	18R -8209 pan2	0.11	1.99	12.44	64	18R -8310 pan3	0.12	2.34	13.41
5	18R -8210 pan3	0.12	1.72	9.85	65	18R -8311 pan3	0.11	2.07	12.94
6	18R -8217 pan3	0.11	2.32	14.50	66	18R -8312 pan1	0.10	2.03	13.96
7	18R -8219 pan1	0.11	1.99	12.44	67	18R -8315 pan4	0.12	2.02	11.57
8	18R -8221 pan4	0.11	2.30	14.38	68	18R -8316 pan2	0.10	1.89	12.99
9	18R -8222 pan6	0.09	1.66	12.68	69	18R -8317 pan1	0.09	2.02	15.43
10	18R -8224 pan5	0.12	1.79	10.26	70	18R -8318 pan1	0.10	1.92	13.20
11	18R -8225 pan4	0.11	1.86	11.63	71	18R -8320 pan3	0.11	2.22	13.88
12	18R -8236 pan4	0.10	1.99	13.68	72	18R -8322 pan4	0.10	2.03	13.96
13	18R -8231 pan2	0.10	1.66	11.41	73	18R -8323 pan3	0.10	1.99	13.68
14	18R -8233 pan1	0.11	1.86	11.63	74	18R -8324 pan5	0.09	2.02	15.43
15	18R -8234 pan1	0.12	2.23	12.78	75	18R -8326 pan2	0.10	1.78	12.24
16	18R -8236 pan4	0.10	1.79	12.31	76	18R -8327 pan4	0.11	1.89	11.81
17	18R -8237 pan7	0.11	2.09	13.06	77	18R -8328 pan1	0.10	1.70	11.69

Continued.

Table 4. Continued

18	18R -8239 pan3	0.09	1.86	14.21	78	18R -8329 pan5	0.10	2.11	14.51
19	18R -8241 pan2	0.10	1.81	12.44	79	18R -8330 pan3	0.09	2.01	15.35
20	18R -8242 pan5	0.11	2.18	13.63	80	18R -8331 pan2	0.11	1.78	11.13
21	18R -8243 pan6	0.12	2.22	12.72	81	18R -8332 pan4	0.11	1.89	11.81
22	18R -8247 pan3	0.11	1.77	11.06	82	18R -8333 pan4	0.11	2.00	12.50
23	18R -8248 pan3	0.11	1.77	11.06	83	18R -8334 pan1	0.10	1.87	12.86
24	18R -8249 pan2	0.11	2.04	12.75	84	18R -8335 pan5	0.09	1.78	13.60
25	18R -8251 pan4	0.11	2.19	13.69	85	18R -8336 pan4	0.10	1.99	13.68
26	18R -8253 pan5	0.10	1.65	11.34	86	18R -8337 pan5	0.12	1.86	10.66
27	18R -8254 pan3	0.10	1.98	13.61	87	18R -8338 pan2	0.11	1.99	12.44
27	18R -8256 pan2	0.12	2.33	13.35	88	18R -8339 pan3	0.10	1.97	13.54
29	18R -8257 pan5	0.11	1.78	11.13	89	18R -8340 pan1	0.11	1.87	11.69
30	18R -8258 pan2	0.09	1.78	13.60	90	18R -8342 pan3	0.11	1.77	11.06
31	18R -8259 pan3	0.12	1.99	11.40	91	18R -8343 pan4	0.12	1.79	10.26
32	18R -8260 pan7	0.1	1.78	12.24	92	18R -8344 pan3	0.09	2.07	15.81
33	18R -8261 pan3	0.11	1.65	10.31	93	18R -8345 pan2	0.11	2.09	13.06
34	18R -8263 pan8	0.10	1.98	13.61	94	18R -8346 pan1	0.10	2.05	14.09
35	18R -8264 pan2	0.12	1.77	10.14	95	18R -8349 pan3	0.11	2.12	13.25
36	18R -8265 pan4	0.09	2.12	16.19	96	18R -8350 pan4	0.11	2.32	14.50
37	18R -8268 pan1	0.11	1.96	12.25	97	18R -8354 pan2	0.12	1.87	10.71
38	18R -8269 pan2	0.11	1.77	11.06	98	18R -8355 pan4	0.12	1.97	11.29
39	18R -8270 pan6	0.10	1.87	12.86	99	18R -8357 pan4	0.12	1.77	10.14
40	18R -8275 pan4	0.12	2.34	13.41	100	18R -8358 pan1	0.11	1.87	11.69
41	18R -8277 pan4	0.12	1.87	10.71	101	18R -8359 pan1	0.10	1.89	12.99
42	18R -8278 pan3	0.11	1.84	11.50	102	18R -8362 pan1	0.11	2.21	13.81
43	18R -8279 pan3	0.12	1.65	9.45	103	18R -8363 pan3	0.10	2.08	14.30
44	18R -8280 pan2	0.09	1.76	13.44	104	18R -8364 pan4	0.10	1.76	12.10
45	18R -8283 pan1	0.11	1.91	11.94	105	18R -8367 pan3	0.10	1.9	13.06
46	18R -8284 pan2	0.11	2.12	13.25	106	18R -8368 pan4	0.12	0.79	4.53
47	18R -8285 pan2	0.10	1.67	11.48	107	18R -8369 pan3	0.11	1.87	11.69
48	18R -8286 pan4	0.11	2.02	12.63	108	18R -8370 pan1	0.12	1.98	11.34
49	18R -8287 pan3	0.12	2.07	11.86	109	18R -8372 pan4	0.11	2.01	12.56
50	18R -8288 pan2	0.11	1.87	11.69	110	18R -8376 pan3	0.10	1.96	13.48
51	18R -8289 pan3	0.11	1.78	11.13	111	18R -8377 pan5	0.10	1.76	12.10
52	18R -8292 pan4	0.11	2.08	13.00	112	18R -8378 pan3	0.12	1.86	10.66
53	18R -8293 pan3	0.12	1.73	9.91	113	18R -8379 pan5	0.10	2.07	14.23
54	18R -8295 pan3	0.11	1.68	10.50	114	18R -8380 pan2	0.10	1.9	13.06
55	18R -8297 pan1	0.10	1.82	12.51	115	18R -8381 pan1	0.11	1.89	11.81
56	18R -8298 pan5	0.1	2.11	14.51	116	18R -8383 pan4	0.11	2.04	12.75
57	18R -8299 pan3	0.12	1.99	11.40	117	18R -8384 pan3	0.12	2.03	11.63
58	18R -8301 pan2	0.12	1.78	10.20	118	18R -8385 pan4	0.10	1.98	13.61
59	18R -8305 pan2	0.11	2.12	13.25	119	18R -8387 pan5	0.10	2.1	14.44
60	18R -8306 pan4	0.09	1.79	13.67	120	18R -8388 pan2	0.11	1.83	11.44

5. Herbicide Resistant Rice

The research of herbicide resistant rice involves a broad-spectrum, Glyphosate [N-(phosphonomethyl) glycine)], and narrow spectrum, (S-metolachlor), herbicides.

5.a. Laboratory and incubator evaluation of glyphosate resistant rice lines

The active ingredient of glyphosate is an organophosphorus compound that activity capable of eradicating many weeds, including annual broadleaf weeds and grasses that compete with crops. In last year's research activities focused on conducting an elevated screening levels of screening started with 1X rate of Round Up was applied to the seedlings of 3-5 leaf stage. Standardized screening methodologies that provide consistent screening have been established. Progeny of 11 initially identified as possessing surviving 0.75 X rate have been used extensively to establish a base line for identifying newer lines. Results from further laboratory/incubator screenings identified new rice lines that are more tolerant than the previously identified. Seven new tolerant rice lines capable of tolerating glyphosate above 0.75 X levels were identified among newly mutagenized materials.

5.b. Laboratory and incubator evaluation for Dual Magnum (S-metolachlor)-resistant rice lines

S-metolachlor is an organic compound of aniline derivative. It is a member of the chloroacetanilide herbicide family. Herbicide S-metolachlor is in a different class compared with glyphosate, the Imidazolinones (ALS inhibitor), Acetyl-CoA carboxylase inhibitor (Provisia), or glyphosate (Round Up). 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 M₃ rice mutant population with recommended 1X spray rate. The M₃ rice mutant population was previously screened with 0.75X of the recommended spray rate. The planting rate of 200 lbs/acre was used in the field screening. A small number of plants was recovered from the treatment and they were moved to the greenhouse and grown to maturity. Their seed was collected and were used in various tests.

Similar to studies conducted on Round Up, we also developed lab-screening methodologies to study resistance characteristics more precisely. Both the progenies of the 1X surviving lines and the original populations are currently being evaluated. Nine plants that were recovered from the field treatment of 1X rate of Round Up were studied in laboratory screening to evaluate different response to increment of 0.1X from 0.5 to 1X concentrations. Incubator test and laboratory screening have been established to study the genetics and screening of herbicide resistance. Both the progenies of the 1X surviving parental line and the original populations are currently being screened through the standard germination methods.

RICE AGRONOMY

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

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 to generate agronomic production information representative of all Louisiana rice production areas. Rice nutrition studies were conducted in Acadia at the HRCRRS, St. Landry, Tensas at Northeast Research Station, Richland, and Calcasieu parishes. Cultural management studies were conducted at the HRCRRS north and south units.

The year 2021 was a difficult time for field management due to excessive and continuous rainfall throughout the growing season. The results of trials at Richland parish were not included in the report due to overfertilizing by a commercial agriculture aircraft during mid-season nitrogen application.

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:

Charlie Fontenot – St. Landry Parish
Northeast Research Station – Tensas Parish
Woodsland Plantation and Ashley Dixon – Richland 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 preflight
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° angle) and 5 = lodged to ground (90° 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
<u>Herbicides</u>			
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
<u>Insecticides</u>			
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
<u>Fungicides</u>			
Amistartop	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, J.P. Leonards, J.S. Fluit, J.R. Hartman, and M.J. Breau

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, fertilizer management in furrow irrigation rice (row rice) system, and ratoon rice research.

**Agronomic Response of Drill-Seeded PVL03 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 1. Agronomic response of drill-seeded PVL03 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		7/31/2021		10/26/2021	
Rating Date		50% HD		50% HD		Height		Yield		Yield	
Rating Unit		days		days		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	102.5	ef	91.5	ef	32.8	e	3505	g
2	UREA	30	4-5 leaf	102.8	def	91.8	def	35.5	d	5094	f
3	UREA	60	4-5 leaf	103.3	c-f	92.3	c-f	38.3	bc	6512	e
4	UREA	90	4-5 leaf	103.0	c-f	92.0	c-f	37.8	c	8510	bc
5	UREA	120	4-5 leaf	104.0	bcd	93.0	bcd	41.5	a	9390	ab
6	UREA	150	4-5 leaf	104.8	ab	93.8	ab	42.0	a	9442	ab
7	UREA	180	4-5 leaf	105.0	ab	94.0	ab	42.3	a	9574	a
8	UREA	210	4-5 leaf	105.5	a	94.5	a	41.5	a	9546	a
9	UREA	45	4-5 leaf	102.3	f	91.3	f	37.5	cd	7210	de
	UREA	45	PD								
10	UREA	75	4-5 leaf	103.8	b-e	92.8	b-e	40.8	a	7980	cd
	UREA	45	PD								
11	UREA	105	4-5 leaf	104.0	bcd	93.0	bcd	40.3	ab	9171	ab
	UREA	45	PD								
12	UREA	135	4-5 leaf	104.3	abc	93.3	abc	41.3	a	8831	abc
	UREA	45	PD								
LSD P=.05		1.34		1.34		1.34		2.18		1034.4	
Standard Deviation		0.93		0.93		0.93		1.51		719.0	
CV		0.9		0.9		1.0		3.85		9.1	
Treatment F		4.866		4.866		15.343		29.936		5.042	
Treatment Prob(F)		0.0002		0.0002		0.0001		0.0001		0.0002	

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

**Agronomic Response of Drill-Seeded DG-263L to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 2. Agronomic response of drill-seeded DG-263L to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice	
Rating Date						7/29/2021		7/31/2021		10/26/2021	
Rating Type		50% HD		50% HD		Height		Yield		Yield	
Rating Unit		days		days		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf			100.0	d	89.0	d	28.0	c
2	UREA	30	4-5 leaf			102.0	c	91.0	c	32.8	b
3	UREA	60	4-5 leaf			102.8	abc	91.8	abc	36.0	a
4	UREA	90	4-5 leaf			103.0	abc	92.0	abc	35.5	ab
5	UREA	120	4-5 leaf			103.8	a	92.8	a	38.3	a
6	UREA	150	4-5 leaf			103.5	a	92.5	a	36.0	a
7	UREA	180	4-5 leaf			103.3	ab	92.3	ab	37.5	a
8	UREA	210	4-5 leaf			103.8	a	92.8	a	38.0	a
9	UREA	45	4-5 leaf			102.0	c	91.0	c	35.3	ab
	UREA	45	PD								
10	UREA	75	4-5 leaf			102.3	bc	91.3	bc	36.8	a
	UREA	45	PD								
11	UREA	105	4-5 leaf			103.5	a	92.5	a	37.0	a
	UREA	45	PD								
12	UREA	135	4-5 leaf			103.5	a	92.5	a	37.8	a
	UREA	45	PD								
LSD P=.05		1.14		1.14		3.07		1291.0		260.6	
Standard Deviation		0.79		0.79		2.14		892.7		181.1	
CV		0.77		0.86		5.98		9.74		5.77	
Treatment F		7.502		7.502		7.210		9.334		1.847	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0853	

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

**Agronomic Response of Drill-Seeded CLL16 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 3. Agronomic response of drill-seeded CLL16 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice						
Description	Plant-hd		Emer-hd		Tip of Panicle		7/31/2021		10/26/2021						
Rating Date	50% HD		50% HD		Height		Yield		Yield						
Rating Unit	days		days		in		lb/A		lb/A						
Crop Stage Majority	Main		Main		Main		Main		Ratoon						
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UREA	0	4-5 leaf	100.0	e	89.0	e	30.5	h	4650	e	2686	a	7336	f
2	UREA	30	4-5 leaf	103.0	d	92.0	d	34.8	g	6999	d	2371	ab	9370	e
3	UREA	60	4-5 leaf	104.0	cd	93.0	cd	36.5	fg	8776	c	2063	bc	10839	d
4	UREA	90	4-5 leaf	105.3	ab	94.3	ab	39.0	de	10239	ab	2012	bc	12251	abc
5	UREA	120	4-5 leaf	105.5	ab	94.5	ab	40.8	bcd	10232	ab	2073	bc	12305	abc
6	UREA	150	4-5 leaf	106.0	a	95.0	a	42.3	abc	11306	a	2164	bc	13471	a
7	UREA	180	4-5 leaf	106.3	a	95.3	a	43.8	a	10757	ab	2090	bc	12848	ab
8	UREA	210	4-5 leaf	106.3	a	95.3	a	43.5	a	10554	ab	2273	bc	12827	ab
9	UREA	45	4-5 leaf	103.3	d	92.3	d	37.5	ef	8863	c	2103	bc	10966	cd
	UREA	45	PD												
10	UREA	75	4-5 leaf	104.8	bc	93.8	bc	40.3	bcd	9479	bc	1927	c	11406	cd
	UREA	45	PD												
11	UREA	105	4-5 leaf	105.5	ab	94.5	ab	40.0	cd	9952	bc	2032	bc	11984	bcd
	UREA	45	PD												
12	UREA	135	4-5 leaf	106.0	a	95.0	a	42.5	ab	9901	bc	2167	bc	12068	a-d
	UREA	45	PD												
LSD P=.05				1.20		1.20		2.28		1317.0		387.5		1406.2	
Standard Deviation				0.84		0.84		1.58		915.4		269.3		977.5	
CV				0.8		0.89		4.03		9.83		12.45		8.52	
Treatment F				19.447		19.447		24.553		16.345		2.261		12.112	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0347		0.0001	

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

**Agronomic Response of Drill-Seeded CLL17 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 4. Agronomic response of drill-seeded CLL17 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice	
Rating Date						7/29/2021		7/31/2021		10/26/2021	
Rating Type		50% HD		50% HD		Height		Yield		Yield	
Rating Unit		days		days		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	101.3	f	90.3	f	30.8	g	4898	f
2	UREA	30	4-5 leaf	101.8	ef	90.8	ef	34.0	f	7370	e
3	UREA	60	4-5 leaf	102.5	d	91.5	d	37.3	de	8410	de
4	UREA	90	4-5 leaf	102.8	cd	91.8	cd	40.0	bc	8813	b-e
5	UREA	120	4-5 leaf	103.5	ab	92.5	ab	41.0	abc	10350	abc
6	UREA	150	4-5 leaf	103.3	bc	92.3	bc	42.8	a	11103	a
7	UREA	180	4-5 leaf	103.5	ab	92.5	ab	43.3	a	10080	a-d
8	UREA	210	4-5 leaf	104.0	a	93.0	a	42.3	ab	10982	a
9	UREA	45	4-5 leaf	102.3	de	91.3	de	36.0	ef	8641	cde
	UREA	45	PD								
10	UREA	75	4-5 leaf	102.8	cd	91.8	cd	39.3	cd	10414	ab
	UREA	45	PD								
11	UREA	105	4-5 leaf	103.3	bc	92.3	bc	41.3	abc	10352	abc
	UREA	45	PD								
12	UREA	135	4-5 leaf	103.3	bc	92.3	bc	41.5	abc	10111	a-d
	UREA	45	PD								
LSD P=.05		0.74		0.74		0.74		2.26		1722.3	
Standard Deviation		0.52		0.52		0.52		1.57		1197.2	
CV		0.5		0.5		0.56		4.01		12.88	
Treatment F		9.396		9.396		9.396		24.249		8.972	
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 Jewel to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 5. Agronomic response of drill-seeded Jewel to nitrogen 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		Rice	Rice	Rice
Rating Date			7/29/2021	7/31/2021	10/26/2021		
Rating Type	50% HD	50% HD	Height	Yield	Yield	Total Yield	
Rating Unit	days	days	in	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon	MC+RC
Trt	Treatment	Rate	Growth				
No.	Name	(lb N/A)	Stage				
1	UREA	0	4-5 leaf	98.0	c	87.0	c
2	UREA	30	4-5 leaf	101.0	b	90.0	b
3	UREA	60	4-5 leaf	101.5	b	90.5	b
4	UREA	90	4-5 leaf	102.8	a	91.8	a
5	UREA	120	4-5 leaf	103.0	a	92.0	a
6	UREA	150	4-5 leaf	103.3	a	92.3	a
7	UREA	180	4-5 leaf	103.5	a	92.5	a
8	UREA	210	4-5 leaf	103.3	a	92.3	a
9	UREA	45	4-5 leaf	101.5	b	90.5	b
	UREA	45	PD				
10	UREA	75	4-5 leaf	101.5	b	90.5	b
	UREA	45	PD				
11	UREA	105	4-5 leaf	103.3	a	92.3	a
	UREA	45	PD				
12	UREA	135	4-5 leaf	103.0	a	92.0	a
	UREA	45	PD				
LSD P=.05				1.06		1.06	
Standard Deviation				0.74		0.74	
CV				0.72		0.81	
Treatment F				17.959		17.959	
Treatment Prob(F)				0.0001		0.0001	

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

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

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

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

Rice															
Crop Name	Rice			Rice			Rice			Rice					
Description	Plant-hd			Emer-hd			Tip of Panicle			Rice					
Rating Date	50% HD			50% HD			7/29/2021			7/31/2021					
Rating Type	days			days			Height			Yield					
Rating Unit	Main			Main			in			lb/A					
Crop Stage Majority	Main			Main			Main			Main					
Trt	Treatment	Rate	Growth	Rice			Rice			Rice					
No.	Name	(lb N/A)	Stage	7/29/2021			7/31/2021			10/26/2021					
1	UREA	0	4-5 leaf	108	a	97	a	31.0	c	4353	g	2256	a	6740	f
2	UREA	30	4-5 leaf	106	b	95	b	35.0	b	6632	f	2178	a	8815	e
3	UREA	60	4-5 leaf	106	b	95	b	38.5	a	8508	de	2017	a	10688	cd
4	UREA	90	4-5 leaf	106	b	95	b	39.3	a	9470	bc	1994	a	11494	bc
5	UREA	120	4-5 leaf	106	b	95	b	41.0	a	10290	a	1997	a	12287	ab
6	UREA	150	4-5 leaf	106	b	95	b	40.0	a	10443	a	2049	a	12492	ab
7	UREA	180	4-5 leaf	106	b	95	b	39.3	a	10060	ab	2159	a	12219	ab
8	UREA	210	4-5 leaf	106	b	95	b	39.5	a	10620	a	2243	a	12864	a
9	UREA	45	4-5 leaf	106	b	95	b	35.8	b	8252	e	1987	a	10306	d
	UREA	45	PD												
10	UREA	75	4-5 leaf	106	b	95	b	39.0	a	9165	cd	1797	a	11572	bc
	UREA	45	PD												
11	UREA	105	4-5 leaf	106	b	95	b	38.8	a	10111	ab	1823	a	11934	ab
	UREA	45	PD												
12	UREA	135	4-5 leaf	106	b	95	b	41.0	a	10219	ab	1966	a	12185	ab
	UREA	45	PD												
LSD P=.05				0.79		0.79		2.50		778.7		314.4		1044.5	
Standard Deviation				0.55		0.55		1.74		541.2		216.3		718.6	
CV				0.52		0.58		4.56		6.01		10.61		6.46	
Treatment F				3.362		3.362		11.048		47.740		1.869		24.631	
Treatment Prob(F)				0.0034		0.0034		0.0001		0.0001		0.0927		0.0001	

Means followed by the same letter or symbol do not significantly differ ($P = 0.05$, LSD).

**Agronomic Response of Drill-Seeded 1902026CLL to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 7. Agronomic response of drill-seeded 1902026CLL to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice	
Rating Date		50% HD		50% HD		7/29/2021		7/31/2021	
Rating Type		days		days		Height		Yield	
Rating Unit		Main		Main		in		lb/A	
Crop Stage Majority		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth						
No.	Name	(lb N/A)	Stage						
1	UREA	0	4-5 leaf	98.0	f	87.0	f	30.0	f
2	UREA	30	4-5 leaf	98.0	f	87.0	f	32.5	e
3	UREA	60	4-5 leaf	101.5	d	90.5	d	35.0	cd
4	UREA	90	4-5 leaf	102.0	cd	91.0	cd	37.3	abc
5	UREA	120	4-5 leaf	102.3	bc	91.3	bc	38.3	ab
6	UREA	150	4-5 leaf	102.5	abc	91.5	abc	38.5	ab
7	UREA	180	4-5 leaf	103.0	a	92.0	a	38.3	ab
8	UREA	210	4-5 leaf	103.0	a	92.0	a	38.8	a
9	UREA	45	4-5 leaf	100.5	e	89.5	e	33.5	de
	UREA	45	PD						
10	UREA	75	4-5 leaf	102.0	cd	91.0	cd	36.3	bc
	UREA	45	PD						
11	UREA	105	4-5 leaf	102.5	abc	91.5	abc	38.0	ab
	UREA	45	PD						
12	UREA	135	4-5 leaf	102.8	ab	91.8	ab	37.5	ab
	UREA	45	PD						
LSD P=.05		0.55		0.55		2.32		1748.3	
Standard Deviation		0.38		0.38		1.61		1215.3	
CV		0.38		0.42		4.47		12.7	
Treatment F		85.966		85.966		12.145		13.193	
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, LSD).

**Agronomic Response of Drill-Seeded 1902034CLL to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-08
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 8. Agronomic response of drill-seeded 1902034CLL to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name	Rice			Rice			Rice			Rice		
Description	Plant-hd			Emer-hd			Tip of Panicle			Rice		
Rating Date							7/29/2021			7/31/2021		
Rating Type	50% HD			50% HD			Height			Yield		
Rating Unit	days			days			in			lb/A		
Crop Stage Majority	Main			Main			Main			Main		
Trt	Treatment	Rate	Growth									
No.	Name	(lb N/A)	Stage									
1	UREA	0	4-5 leaf	98.0	e	87.0	e	31.3	g	4618	g	3206
2	UREA	30	4-5 leaf	101.0	d	90.0	d	35.0	f	8217	ef	3410
3	UREA	60	4-5 leaf	101.5	cd	90.5	cd	36.8	def	7515	f	3351
4	UREA	90	4-5 leaf	102.0	bc	91.0	bc	38.8	bcd	9629	cde	2961
5	UREA	120	4-5 leaf	102.0	bc	91.0	bc	40.0	abc	10446	bc	2816
6	UREA	150	4-5 leaf	102.5	ab	91.5	ab	41.5	a	10402	bc	2588
7	UREA	180	4-5 leaf	102.8	a	91.8	a	40.3	abc	10816	abc	2395
8	UREA	210	4-5 leaf	103.0	a	92.0	a	41.3	ab	11777	ab	2499
9	UREA	45	4-5 leaf	101.5	cd	90.5	cd	35.5	ef	8749	def	3203
	UREA	45	PD									
10	UREA	75	4-5 leaf	101.8	c	90.8	c	38.0	cde	9812	cd	3014
	UREA	45	PD									
11	UREA	105	4-5 leaf	102.5	ab	91.5	ab	39.5	abc	12086	a	2846
	UREA	45	PD									
12	UREA	135	4-5 leaf	102.8	a	91.8	a	40.5	abc	10146	cd	2542
	UREA	45	PD									
LSD P=.05				0.60		0.60		2.63		1592.8		273.0
Standard Deviation				0.42		0.42		1.83		1104.5		189.8
CV				0.41		0.46		4.79		11.6		6.54
Treatment F				41.264		41.264		11.205		13.660		13.293
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 1902207 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 9. Agronomic response of drill-seeded 1902207 to nitrogen 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		Rice		Rice		Rice				
Rating Date	50% HD		50% HD		7/29/2021		7/31/2021		10/26/2021						
Rating Type	days		days		Height		Yield		Yield		Total Yield				
Rating Unit	Main		Main		in		lb/A		lb/A		lb/A				
Crop Stage Majority	Main		Main		Main		Main		Ratoon		MC+RC				
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UREA	0	4-5 leaf	102.0	ef	91.0	ef	32.5	f	3728	f	2850	bcd	6578	f
2	UREA	30	4-5 leaf	101.8	f	90.8	f	35.0	e	6234	e	3210	a	9444	e
3	UREA	60	4-5 leaf	102.0	ef	91.0	ef	39.3	cd	7569	d	3030	ab	10598	d
4	UREA	90	4-5 leaf	102.5	cde	91.5	cde	38.8	d	9316	bc	2918	bcd	12234	c
5	UREA	120	4-5 leaf	103.0	abc	92.0	abc	42.0	b	9306	bc	2737	d	12043	c
6	UREA	150	4-5 leaf	103.3	ab	92.3	ab	43.5	ab	9836	ab	2702	d	12537	abc
7	UREA	180	4-5 leaf	103.0	abc	92.0	abc	42.8	ab	9761	ab	2706	d	12467	bc
8	UREA	210	4-5 leaf	103.5	a	92.5	a	45.0	a	10527	a	2819	bcd	13346	a
9	UREA	45	4-5 leaf	102.3	def	91.3	def	38.0	d	7803	d	3000	abc	10803	d
	UREA	45	PD												
10	UREA	75	4-5 leaf	102.8	bcd	91.8	bcd	39.3	cd	8865	c	3005	abc	11870	c
	UREA	45	PD												
11	UREA	105	4-5 leaf	103.3	ab	92.3	ab	41.3	bc	10335	a	2933	bcd	13269	ab
	UREA	45	PD												
12	UREA	135	4-5 leaf	103.3	ab	92.3	ab	42.3	b	9788	ab	2758	cd	12547	abc
	UREA	45	PD												
LSD P=.05				0.69		0.69		2.34		768.4		249.8		865.2	
Standard Deviation				0.48		0.48		1.63		534.1		173.6		601.4	
CV				0.47		0.52		4.08		6.22		6.01		5.24	
Treatment F				6.099		6.099		19.641		54.971		3.218		40.581	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0045		0.0001	

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

**Agronomic Response of Drill-Seeded 1902212 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 10. Agronomic response of drill-seeded 1902212 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		7/31/2021		10/26/2021	
Rating Date		50% HD		50% HD		Height		Yield		Yield	
Rating Type		days		days		in		lb/A		lb/A	
Rating Unit		Main		Main		Main		Main		Main	
Crop Stage Majority		Main		Main		Main		Main		Main	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	93.0	f	82.0	f	28.8	e	4324	g
2	UREA	30	4-5 leaf	93.8	f	82.8	f	34.0	d	7347	f
3	UREA	60	4-5 leaf	95.8	e	84.8	e	35.0	cd	8591	e
4	UREA	90	4-5 leaf	96.8	cd	85.8	cd	35.5	cd	10114	d
5	UREA	120	4-5 leaf	97.0	bc	86.0	bc	35.5	cd	10349	bcd
6	UREA	150	4-5 leaf	97.3	abc	86.3	abc	37.3	ab	11037	a
7	UREA	180	4-5 leaf	97.8	ab	86.8	ab	38.0	a	11009	a
8	UREA	210	4-5 leaf	98.0	a	87.0	a	37.5	ab	10897	ab
9	UREA	45	4-5 leaf	95.3	e	84.3	e	34.5	cd	8892	e
	UREA	45	PD								
10	UREA	75	4-5 leaf	96.0	de	85.0	de	34.5	cd	9853	d
	UREA	45	PD								
11	UREA	105	4-5 leaf	97.8	ab	86.8	ab	35.3	cd	10776	abc
	UREA	45	PD								
12	UREA	135	4-5 leaf	97.5	abc	86.5	abc	36.0	bc	10288	cd
	UREA	45	PD								
LSD P=.05		0.93		1.71		264.4		590.0		702.2	
Standard Deviation		0.64		1.19		183.8		410.1		488.1	
CV		0.67		3.37		5.49		4.34		3.81	
Treatment F		25.438		16.098		3.461		92.253		68.366	
Treatment Prob(F)		0.0001		0.0001		0.0028		0.0001		0.0001	

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

**Agronomic Response of Drill-Seeded Rtv7231 MA to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 11. Agronomic response of drill-seeded Rtv7231 MA to nitrogen 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				7/29/2021	7/31/2021	10/26/2021		
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	Treatment	Rate	Growth					
No.	Name	(lb N/A)	Stage					
1	UREA	0	4-5 leaf	98.0 d	87.0 d	33.3 f	4750 g	2959 abc
2	UREA	30	4-5 leaf	98.0 d	87.0 d	36.5 e	7165 f	3024 a
3	UREA	60	4-5 leaf	98.0 d	87.0 d	37.8 cde	8682 e	2976 ab
4	UREA	90	4-5 leaf	100.0 c	89.0 c	39.0 bc	9659 cd	2706 cde
5	UREA	120	4-5 leaf	102.5 ab	91.5 ab	39.0 bc	9916 bc	2759 b-e
6	UREA	150	4-5 leaf	101.8 b	90.8 b	41.0 a	10528 a	2891 abc
7	UREA	180	4-5 leaf	102.5 ab	91.5 ab	39.5 abc	10859 a	2946 abc
8	UREA	210	4-5 leaf	103.0 a	92.0 a	40.0 ab	10577 a	2723 b-e
9	UREA	45	4-5 leaf	100.0 c	89.0 c	37.0 de	7543 f	2545 e
	UREA	45	PD					
10	UREA	75	4-5 leaf	100.3 c	89.3 c	38.8 bcd	9467 d	2882 abc
	UREA	45	PD					
11	UREA	105	4-5 leaf	102.3 ab	91.3 ab	40.3 ab	9427 d	2578 de
	UREA	45	PD					
12	UREA	135	4-5 leaf	103.0 a	92.0 a	41.0 a	10090 b	2832 a-d
	UREA	45	PD					
LSD P= .05		1.02		1.02	1.94	426.3	264.2	578.8
Standard Deviation		0.71		0.71	1.35	296.0	183.6	401.8
CV		0.71		0.79	3.49	3.27	6.52	3.38
Treatment F		31.322		31.322	10.763	144.288	2.920	76.130
Treatment Prob(F)		0.0001		0.0001	0.0001	0.0001	0.0084	0.0001

Means followed by the same letter or symbol do not significantly differ ($P = 0.05$, LSD).

**Agronomic Response of Drill-Seeded DGL274 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	July 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 12. Agronomic response of drill-seeded DGL274 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice						
Description	Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice						
Rating Date					7/29/2021		7/31/2021		10/26/2021						
Rating Type	50% HD		50% HD		Height		Yield		Yield						
Rating Unit	days		days		in		lb/A		lb/A						
Crop Stage Majority	Main		Main		Main		Main		Ratoon						
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UREA	0	4-5 leaf	116.8	a	105.8	a	31.5	f	3685	g	2167	a	5852	e
2	UREA	30	4-5 leaf	114.8	b	103.8	b	32.3	f	4705	f	2057	a	6762	e
3	UREA	60	4-5 leaf	114.0	c	103.0	c	35.0	e	5913	e	2091	a	8004	d
4	UREA	90	4-5 leaf	113.0	e	102.0	e	36.5	cde	7466	d	2142	a	9608	c
5	UREA	120	4-5 leaf	113.0	e	102.0	e	38.0	bcd	8041	bcd	2162	a	10203	bc
6	UREA	150	4-5 leaf	113.3	de	102.3	de	39.0	ab	8495	bc	2281	a	10777	ab
7	UREA	180	4-5 leaf	113.3	de	102.3	de	40.5	a	8178	bcd	1906	a	10084	bc
8	UREA	210	4-5 leaf	113.0	e	102.0	e	41.0	a	9618	a	2004	a	11622	a
9	UREA	45	4-5 leaf	113.8	cd	102.8	cd	36.0	de	6200	e	2150	a	8349	d
	UREA	45	PD												
10	UREA	75	4-5 leaf	113.5	cde	102.5	cde	38.8	abc	7809	bcd	2280	a	10089	bc
	UREA	45	PD												
11	UREA	105	4-5 leaf	113.3	de	102.3	de	39.0	ab	7558	cd	2041	a	9600	c
	UREA	45	PD												
12	UREA	135	4-5 leaf	113.0	e	102.0	e	39.5	ab	8562	b	2147	a	10709	abc
	UREA	45	PD												
LSD P= .05				0.67		0.67		2.42		985.3		271.3		1158.2	
Standard Deviation				0.46		0.46		1.68		684.9		188.6		805.1	
CV				0.41		0.45		4.51		9.53		8.9		8.65	
Treatment F				22.200		22.200		13.355		25.470		1.310		18.351	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.2623		0.0001	

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

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

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	July 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide), Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amstar Top, Jun. 23

Table 13. Agronomic response of drill-seeded RT7321 FP to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice	
Description	Plant-hd	Emer-hd	Tip of Panicle		7/31/2021		7/31/2021		10/26/2021	
Rating Date	50% HD		Height		Lodge		Yield		Yield	
Rating Type	days	50% HD	in	% plot	rate	lb/A	lb/A	lb/A	lb/A	Total Yield
Rating Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	lb/A
Crop Stage Majority	50% HD		50% HD		50% HD		50% HD		50% HD	
Trt	Treatment	Rate	Growth	Main		Main		Main		MC+RC
No.	Name	(lb N/A)	Stage	Main		Main		Main		
1	UREA	0	4-5 leaf	37.0	d	0.0	a	0.0	a	3167 a
2	UREA	60	4-5 leaf	44.3	c	0.0	a	0.0	a	3305 a
3	UREA	90	4-5 leaf	47.5	abc	0.0	a	0.0	a	3230 a
4	UREA	120	4-5 leaf	48.0	ab	0.0	a	0.0	a	3104 a
5	UREA	150	4-5 leaf	49.0	a	20.0	a	0.3	a	3171 a
6	UREA	180	4-5 leaf	47.0	abc	27.5	a	1.0	a	3285 a
7	UREA	75	4-5 leaf	44.8	bc	0.0	a	0.0	a	3337 a
	UREA	45	50% HD							
8	UREA	105	4-5 leaf	44.8	bc	0.0	a	0.0	a	3171 a
	UREA	45	50% HD							
9	UREA	135	4-5 leaf	48.8	a	0.0	a	0.0	a	3285 a
	UREA	45	50% HD							
LSD P=.05		0.73		3.34		26.68		0.70		346.8
Standard Deviation		0.50		2.29		18.28		0.48		237.6
CV		0.49		5.01		346.4		346.4		7.36
Treatment F		26.000		10.495		1.355		1.920		0.442
Treatment Prob(F)		0.0001		0.0001		0.2656		0.1035		0.8835

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

**Agronomic Response of Drill-Seeded RT7301 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-41
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	July 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide), Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amstar Top, Jun. 23

Table 14. Agronomic response of drill-seeded RT7301 to nitrogen fertilizer rate and time of application. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice				
Description	Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice				
Rating Date					7/29/2021		7/31/2021		10/26/2021				
Rating Type	50% HD		50% HD		Height		Yield		Yield				
Rating Unit	days		days		in		lb/A		lb/A				
Crop Stage Majority	Main		Main		Main		Main		Ratoon				
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage										
1	UREA	0	4-5 leaf	98.0	d	87.0	d	4445	f	2920	bc	7365	d
2	UREA	60	4-5 leaf	101.5	c	90.5	c	9161	e	3385	a	12546	c
3	UREA	90	4-5 leaf	101.8	bc	90.8	bc	10645	cd	2962	bc	13607	b
4	UREA	120	4-5 leaf	102.8	a	91.8	a	11365	b	2677	c	14042	b
5	UREA	150	4-5 leaf	102.8	a	91.8	a	12283	a	2681	c	14964	a
6	UREA	180	4-5 leaf	102.5	ab	91.5	ab	12402	a	2876	c	15278	a
7	UREA	75	4-5 leaf	102.3	abc	91.3	abc	10118	d	3238	ab	13356	bc
	UREA	45	50% HD										
8	UREA	105	4-5 leaf	102.8	a	91.8	a	11098	bc	2843	c	13941	b
	UREA	45	50% HD										
9	UREA	135	4-5 leaf	102.8	a	91.8	a	12257	a	2960	bc	15217	a
	UREA	45	50% HD										
LSD P=.05				0.87		0.87	2.67	707.2		326.8		874.9	
Standard Deviation				0.60		0.60	1.83	484.6		224.0		599.5	
CV				0.58		0.65	4.51	4.65		7.59		4.48	
Treatment F				26.490		26.490	10.302	105.527		4.356		65.618	
Treatment Prob(F)				0.0001		0.0001	0.0001	0.0001		0.0024		0.0001	

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

**Agronomic Response of Drill-Seeded RT7523 FP to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	July 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide), Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amstar Top, Jun. 23

Table 15. Agronomic response of drill-seeded RT7523 FP to nitrogen 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		7/29/2021		7/31/2021		10/26/2021								
Rating Date	50% HD		50% HD		Height		7/31/2021		7/31/2021		10/26/2021								
Rating Type	days		days		in		Lodge		Yield		Yield								
Rating Unit	Main		Main		Main		Main		Main		Main								
Crop Stage Majority	50% HD		50% HD		50% HD		50% HD		50% HD		50% HD								
Trt	Treatment	Rate	Growth	Rate		Rate		Rate		Rate		Rate							
No.	Name	(lb N/A)	Stage	Rate		Rate		Rate		Rate		Rate							
1	UREA	0	4-5 leaf	103.0	a	92.0	a	39.0	d	0.0	b	0.0	d	5349	e	3012	ab	8361	f
2	UREA	60	4-5 leaf	103.0	a	92.0	a	44.5	c	0.0	b	0.0	d	10302	d	3195	ab	13496	e
3	UREA	90	4-5 leaf	103.3	a	92.3	a	49.3	a	30.0	ab	0.5	bcd	11900	c	2936	b	14836	cd
4	UREA	120	4-5 leaf	104.0	a	93.0	a	48.8	a	50.0	a	1.8	a	12467	bc	2609	c	15076	bcd
5	UREA	150	4-5 leaf	103.8	a	92.8	a	50.0	a	40.0	a	1.8	a	13199	ab	2627	c	15827	ab
6	UREA	180	4-5 leaf	104.3	a	93.3	a	49.8	a	47.5	a	1.5	ab	13515	a	2623	c	16138	a
7	UREA	75	4-5 leaf	103.3	a	92.3	a	46.0	bc	2.5	b	0.3	cd	10970	d	3260	a	14230	de
	UREA	45	50% HD	103.8	a	92.8	a	48.3	ab	17.5	ab	0.8	a-d	12281	c	3098	ab	15380	abc
8	UREA	105	4-5 leaf	103.8	a	92.8	a	48.3	ab	17.5	ab	0.8	a-d	12281	c	3098	ab	15380	abc
	UREA	45	50% HD	104.5	a	93.5	a	49.3	a	47.5	a	1.3	abc	13081	ab	3024	ab	16105	a
9	UREA	135	4-5 leaf	104.5	a	93.5	a	49.3	a	47.5	a	1.3	abc	13081	ab	3024	ab	16105	a
	UREA	45	50% HD	104.5	a	93.5	a	49.3	a	47.5	a	1.3	abc	13081	ab	3024	ab	16105	a
LSD P=.05				1.10	1.10	2.54	37.42	1.16	780.7	306.1	973.0								
Standard Deviation				0.75	0.75	1.74	25.64	0.80	534.9	209.8	666.7								
CV				0.73	0.81	3.68	98.2	92.49	4.67	7.16	4.64								
Treatment F				2.115	2.115	16.933	2.806	3.263	88.570	5.820	52.739								
Treatment Prob(F)				0.0746	0.0746	0.0001	0.0240	0.0117	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 LAH200 to Nitrogen
Fertilizer Rate and Time of Application – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	July 31
Ratoon Harvest date	Oct. 26
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide), Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amstar Top, Jun. 23

Table 16. Agronomic response of drill-seeded LAH200 to nitrogen 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		7/29/2021		7/31/2021		7/31/2021		10/26/2021						
Rating Date	50% HD		50% HD		Height		7/29/2021		7/31/2021		7/31/2021		10/26/2021						
Rating Type	days		days		in		Lodge		Yield		Yield		Yield						
Rating Unit	days		days		in		rate		lb/A		lb/A		lb/A						
Crop Stage Majority	Main		Main		Main		Main		Main		Main		Ratoon						
MC+RC	Main		Main		Main		Main		Main		Main		Ratoon						
Trt	Treatment	Rate	Growth																
No.	Name	(lb N/A)	Stage																
1	UREA	0	4-5 leaf	102.0	d	91.0	d	37.5	d	0.0	b	0.0	b	5249	f	3645	a	8894	e
2	UREA	60	4-5 leaf	103.0	c	92.0	c	45.5	c	0.0	b	0.0	b	9767	e	4032	a	13799	d
3	UREA	90	4-5 leaf	104.5	ab	93.5	ab	48.0	abc	0.0	b	0.0	b	10436	de	3685	a	14121	cd
4	UREA	120	4-5 leaf	105.0	a	94.0	a	47.5	bc	0.0	b	0.0	b	11182	c	4102	a	15284	b
5	UREA	150	4-5 leaf	105.0	a	94.0	a	49.3	ab	15.0	ab	1.0	a	12250	a	4159	a	16409	a
6	UREA	180	4-5 leaf	105.3	a	94.3	a	50.5	a	32.5	a	1.3	a	12209	ab	4115	a	16324	a
7	UREA	75	4-5 leaf	103.8	bc	92.8	bc	48.5	ab	0.0	b	0.0	b	10232	e	3892	a	14124	cd
	UREA	45	50% HD																
8	UREA	105	4-5 leaf	104.8	a	93.8	a	48.8	ab	0.0	b	0.0	b	11073	cd	4014	a	15087	bc
	UREA	45	50% HD																
9	UREA	135	4-5 leaf	105.0	a	94.0	a	50.0	ab	0.0	b	0.0	b	11517	bc	4180	a	15697	ab
	UREA	45	50% HD																
LSD P=.05				0.85		0.85		2.65		20.57		0.87		708.2		436.1		1005.1	
Standard Deviation				0.58		0.58		1.82		14.09		0.59		485.2		298.8		688.7	
CV				0.56		0.62		3.84		267.02		237.27		4.65		7.51		4.78	
Treatment F				14.710		14.710		18.872		2.594		2.842		76.353		1.771		43.749	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0337		0.0226		0.0001		0.1329		0.0001	

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

**Agronomic Response of Drill-Seeded PVL03 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-01
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / PVL03
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 17. Agronomic response of drill-seeded PVL03 to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice	
Rating Date		50% HD		50% HD		8/10/2021		8/10/2021		11/8/2021	
Rating Type		days		days		Height		Yield		Yield	
Rating Unit		Main		Main		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	103	g	88	g	35.0	d	6837	f
2	UREA	30	4-5 leaf	103	g	88	g	35.8	d	7502	e
3	UREA	60	4-5 leaf	104	fg	89	fg	39.3	c	8237	abc
4	UREA	90	4-5 leaf	106	de	91	de	38.3	c	7864	b-e
5	UREA	120	4-5 leaf	107	d	92	d	40.3	bc	8451	a
6	UREA	150	4-5 leaf	110	bc	95	bc	41.5	ab	8029	a-d
7	UREA	180	4-5 leaf	111	ab	96	ab	43.3	a	7591	de
8	UREA	210	4-5 leaf	112	a	97	a	42.8	a	7649	de
9	UREA	45	4-5 leaf	104	fg	89	fg	39.0	c	8390	a
	UREA	45	PD								
10	UREA	75	4-5 leaf	105	ef	90	ef	39.0	c	8307	abc
	UREA	45	PD								
11	UREA	105	4-5 leaf	107	d	92	d	42.0	ab	8351	ab
	UREA	45	PD								
12	UREA	135	4-5 leaf	109	c	94	c	41.8	ab	7844	cde
	UREA	45	PD								
LSD P=.05		1.34		1.34		1.34		2.11		504.1	
Standard Deviation		0.93		0.93		0.93		1.47		350.0	
CV		0.87		0.87		1.01		3.68		4.42	
Treatment F		43.135		43.135		43.135		12.802		7.387	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0442	

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

**Agronomic Response of Drill-Seeded DG-263L to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-02
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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	
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

**Agronomic Response of Drill-Seeded CLL16 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-03
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / CLL16
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 19. Agronomic response of drill-seeded CLL16 to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice		Rice		Rice		Rice	
Rating Date						8/10/2021		8/10/2021		8/10/2021		11/8/2021		11/8/2021		8/4/2021	
Rating Type		50% HD		50% HD		Height		Yield		Yield		Yield		Yield		Total Yield	
Rating Unit		days		days		in		lb/A		lb/A		lb/A		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Ratoon		Ratoon		MC+RC	
Trt	Treatment	Rate		Growth													
No.	Name	(lb N/A)		Stage													
1	UREA	0		4-5 leaf		102	f	87	f	35.5	g	7002	b-e	2416	a	9417	a
2	UREA	30		4-5 leaf		104	e	89	e	38.0	f	7522	abc	1889	b	9412	a
3	UREA	60		4-5 leaf		105	d	90	d	41.3	de	7695	ab	1643	bc	9338	a
4	UREA	90		4-5 leaf		108	c	93	c	41.8	d	7297	a-d	1248	c-f	8545	abc
5	UREA	120		4-5 leaf		110	b	95	b	44.0	bc	6817	cde	1081	ef	7898	bcd
6	UREA	150		4-5 leaf		112	a	97	a	44.3	bc	6325	ef	940	ef	7265	d
7	UREA	180		4-5 leaf		112	a	97	a	44.3	bc	5444	g	791	f	6234	e
8	UREA	210		4-5 leaf		112	a	97	a	45.8	a	6005	fg	1072	ef	7077	de
9	UREA	45		4-5 leaf		105	d	90	d	40.3	e	7762	a	1562	bcd	9324	a
	UREA	45		PD													
10	UREA	75		4-5 leaf		108	c	93	c	43.3	c	7735	a	1140	def	8875	ab
	UREA	45		PD													
11	UREA	105		4-5 leaf		110	b	95	b	44.5	abc	7193	a-d	1381	cde	8573	abc
	UREA	45		PD													
12	UREA	135		4-5 leaf		112	a	97	a	45.3	ab	6596	def	1155	def	7751	cd
	UREA	45		PD													
LSD P=.05						1.20		1.20		1.43		727.9		468.3		1024.6	
Standard Deviation						0.83		0.83		1.00		506.0		325.5		712.2	
CV						0.77		0.89		2.36		7.28		23.94		8.57	
Treatment F						69.273		69.273		39.168		8.571		7.827		8.869	
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 CLL17 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-04
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / CLL17
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

**Agronomic Response of Drill-Seeded 1902026CLL to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-07
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / 1902026CLL
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 21. Agronomic response of drill-seeded 1902026CLL to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice	
Rating Date		50% HD		50% HD		8/10/2021		8/10/2021		11/8/2021	
Rating Type		days		days		Height		Yield		Yield	
Rating Unit		Main		Main		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	97	f	82	f	31.5	e	5695	f
2	UREA	30	4-5 leaf	98	f	83	f	34.5	d	6913	e
3	UREA	60	4-5 leaf	100	e	85	e	35.8	cd	7905	cd
4	UREA	90	4-5 leaf	102	d	87	d	35.8	cd	8225	bc
5	UREA	120	4-5 leaf	103	cd	88	cd	37.3	abc	8331	abc
6	UREA	150	4-5 leaf	104	bc	89	bc	37.8	ab	8449	ab
7	UREA	180	4-5 leaf	104	ab	89	ab	38.3	a	8371	abc
8	UREA	210	4-5 leaf	105	a	90	a	39.0	a	7615	d
9	UREA	45	4-5 leaf	100	e	85	e	35.3	d	7740	d
	UREA	45	PD								
10	UREA	75	4-5 leaf	102	d	87	d	35.5	cd	8679	ab
	UREA	45	PD								
11	UREA	105	4-5 leaf	103	bcd	88	bcd	36.3	bcd	8610	ab
	UREA	45	PD								
12	UREA	135	4-5 leaf	103	bc	88	bc	37.8	ab	8747	a
	UREA	45	PD								
LSD P=.05		1.17		1.17		1.79		471.1		406.8	
Standard Deviation		0.81		0.81		1.24		327.4		282.8	
CV		0.8		0.94		3.43		4.12		8.42	
Treatment F		38.061		38.061		10.542		29.051		2.457	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0227	

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

**Agronomic Response of Drill-Seeded 1902034CLL to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-08
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / 1902034CLL
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 22. Agronomic response of drill-seeded 1902034CCLL to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice	
Description	Plant-hd	Emer-hd	Tip of Panicle		8/10/2021		8/10/2021		8/10/2021		11/8/2021	
Rating Date	50% HD		Height		Lodge		Yield		Yield		Yield	
Rating Type	days	days	in		rate		lb/A		lb/A		lb/A	
Rating Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Crop Stage Majority	50% HD		50% HD		50% HD		50% HD		50% HD		50% HD	
Trt	Treatment	Rate	Growth		8/10/2021		8/10/2021		8/10/2021		11/8/2021	
No.	Name	(lb N/A)	Stage	Stage	% plot	rate	lb/A	lb/A	lb/A	lb/A	lb/A	lb/A
1	UREA	0	4-5 leaf	97 g	82 g	32.5 g	0.0 a	0.0 a	6257 g	3680 bcd	9937 e	9937 e
2	UREA	30	4-5 leaf	98 g	83 g	34.8 f	0.0 a	0.0 a	7360 f	3767 abc	11127 cd	11127 cd
3	UREA	60	4-5 leaf	101 e	86 e	37.5 cd	0.0 a	0.0 a	8360 a-d	4021 a	12381 a	12381 a
4	UREA	90	4-5 leaf	103 d	88 d	38.0 bcd	0.0 a	0.0 a	8648 ab	3517 cd	12165 ab	12165 ab
5	UREA	120	4-5 leaf	103 cd	88 cd	39.8 a	0.0 a	0.0 a	8507 ab	3403 de	11910 ab	11910 ab
6	UREA	150	4-5 leaf	105 ab	90 ab	40.0 a	0.0 a	0.0 a	8350 a-d	3610 bcd	11960 ab	11960 ab
7	UREA	180	4-5 leaf	106 a	91 a	40.3 a	10.0 a	1.0 a	7944 de	2984 f	10929 d	10929 d
8	UREA	210	4-5 leaf	106 a	91 a	40.3 a	0.0 a	0.0 a	7638 ef	3144 ef	10781 d	10781 d
9	UREA	45	4-5 leaf	100 f	85 f	36.0 ef	0.0 a	0.0 a	8031 cde	3894 ab	11925 ab	11925 ab
	UREA	45	PD									
10	UREA	75	4-5 leaf	103 d	88 d	36.8 de	0.0 a	0.0 a	8742 a	3661 bcd	12403 a	12403 a
	UREA	45	PD									
11	UREA	105	4-5 leaf	104 bc	89 bc	38.3 bc	0.0 a	0.0 a	8481 abc	3594 bcd	12076 ab	12076 ab
	UREA	45	PD									
12	UREA	135	4-5 leaf	105 ab	90 ab	39.3 ab	0.0 a	0.0 a	8210 bcd	3420 de	11630 bc	11630 bc
	UREA	45	PD									
LSD P=.05			1.19	1.19	1.39	8.31	0.83	0.83	453.4	332.9	602.8	602.8
Standard Deviation			0.83	0.83	0.97	5.77	0.58	0.58	315.2	231.4	419.0	419.0
CV			0.81	0.95	2.56	692.82	692.82	692.82	3.92	6.5	3.61	3.61
Treatment F			46.972	46.972	25.205	1.000	1.000	1.000	19.457	6.422	12.932	12.932
Treatment Prob(F)			0.0001	0.0001	0.0001	0.4671	0.4671	0.4671	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 1902207 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-09
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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	
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 23. Agronomic response of drill-seeded 1902207 to nitrogen fertilizer rate and time of application, Calcasieu Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice	
Description	Plant-hd		Emer-hd		Tip of Panicle		8/10/2021		11/8/2021	
Rating Date	50% HD		50% HD		Height		Yield		Yield	
Rating Type	days		days		in		lb/A		lb/A	
Rating Unit	Main		Main		Main		Main		Ratoon	
Crop Stage Majority	50% HD		50% HD		50% HD		50% HD		50% HD	
Trt	Treatment	Rate	Growth	Stage	Plant-hd	Emer-hd	Tip of Panicle	8/10/2021	11/8/2021	Total Yield
No.	Name	(lb N/A)			days	days	Height	Yield	Yield	lb/A
1	UREA	0	4-5 leaf	0	98	83	34.3	7528	3908	11436
2	UREA	30	4-5 leaf	30	99	84	39.5	8203	4091	12294
3	UREA	60	4-5 leaf	60	102	87	38.8	9125	4189	13315
4	UREA	90	4-5 leaf	90	105	90	41.3	8210	4141	12352
5	UREA	120	4-5 leaf	120	104	89	42.3	8841	3961	12802
6	UREA	150	4-5 leaf	150	106	91	39.3	8493	4060	12554
7	UREA	180	4-5 leaf	180	106	91	42.3	7886	3807	11693
8	UREA	210	4-5 leaf	210	107	92	43.0	7145	3967	11112
9	UREA	45	4-5 leaf	45	102	87	38.0	9064	4245	13310
	UREA	45	PD							abc
10	UREA	75	4-5 leaf	75	103	88	40.3	10243	4120	14363
	UREA	45	PD							a
11	UREA	105	4-5 leaf	105	105	90	41.5	9209	4238	13447
	UREA	45	PD							ab
12	UREA	135	4-5 leaf	135	105	90	42.8	8634	3906	12541
	UREA	45	PD							bcd
LSD P=.05					0.91	0.91	3.13	1545.4	378.0	1703.9
Standard Deviation					0.63	0.63	2.18	1074.2	262.7	1184.4
CV					0.61	0.72	5.41	12.57	6.48	9.4
Treatment F					79.749	79.749	5.310	2.421	1.174	2.445
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0245	0.3413	0.0233

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

**Agronomic Response of Drill-Seeded 1902212 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-10
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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	
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 24. Agronomic response of drill-seeded 1902212 to nitrogen fertilizer rate and time of application, Calcasieu Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice	
Rating Date						8/10/2021		8/10/2021		11/8/2021	
Rating Type		50% HD		50% HD		Height		Yield		Yield	
Rating Unit		days		days		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	92.3	a	77.3	a	32.0	f	5407	b
2	UREA	30	4-5 leaf	95.3	a	80.3	a	34.3	e	6012	b
3	UREA	60	4-5 leaf	96.3	a	81.3	a	37.8	cd	8148	a
4	UREA	90	4-5 leaf	98.3	a	83.3	a	38.0	cd	9032	a
5	UREA	120	4-5 leaf	97.5	a	82.5	a	40.0	ab	8262	a
6	UREA	150	4-5 leaf	99.5	a	84.5	a	40.8	a	9300	a
7	UREA	180	4-5 leaf	98.8	a	83.8	a	41.3	a	8467	a
8	UREA	210	4-5 leaf	99.8	a	84.8	a	41.3	a	8953	a
9	UREA	45	4-5 leaf	93.8	a	78.8	a	36.8	d	8514	a
	UREA	45	PD								
10	UREA	75	4-5 leaf	97.0	a	82.0	a	38.8	bc	9209	a
	UREA	45	PD								
11	UREA	105	4-5 leaf	97.8	a	82.8	a	40.3	ab	9143	a
	UREA	45	PD								
12	UREA	135	4-5 leaf	98.5	a	83.5	a	39.8	ab	9020	a
	UREA	45	PD								
LSD P=.05		1.43		1.43		1.65		1.65		293.5	
Standard Deviation		1.00		1.00		1.14		1.14		204.0	
CV		1.03		1.21		2.98		2.98		5.09	
Treatment F		21.336		21.336		25.336		4.287		4.971	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0006		0.0002	

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

**Agronomic Response of Drill-Seeded Rtv7231 MA to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-11
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / Rtv7231 MA
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 25. Agronomic response of drill-seeded Rtv7231 MA to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice		
Description	Plant-hd		Emer-hd		Tip of Panicle		8/10/2021		8/10/2021		11/8/2021		
Rating Date	50% HD		50% HD		Height		Yield		Yield		Total Yield		
Rating Type	days		days		in		lb/A		lb/A		lb/A		
Rating Unit	Main		Main		Main		Main		Main		Ratoon		
Crop Stage Majority	Main		Main		Main		Main		Main		MC+RC		
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage										
1	UREA	0	4-5 leaf	95	f	36.8	f	7159	a	3076	c	10235	a
2	UREA	30	4-5 leaf	97	de	38.8	ef	8437	a	3197	bc	11634	a
3	UREA	60	4-5 leaf	98	cde	39.8	cde	8777	a	3473	ab	12250	a
4	UREA	90	4-5 leaf	99	bc	41.8	abc	8872	a	3480	ab	12352	a
5	UREA	120	4-5 leaf	99	bc	42.8	a	8375	a	3192	bc	11567	a
6	UREA	150	4-5 leaf	101	ab	41.8	abc	9558	a	3763	a	13321	a
7	UREA	180	4-5 leaf	102	a	42.0	ab	8798	a	3250	bc	12047	a
8	UREA	210	4-5 leaf	102	a	41.0	a-d	9079	a	3464	ab	12543	a
9	UREA	45	4-5 leaf	96	ef	39.5	de	8444	a	3262	bc	11706	a
	UREA	45	PD										
10	UREA	75	4-5 leaf	98	cd	40.5	b-e	9277	a	3401	bc	12678	a
	UREA	45	PD										
11	UREA	105	4-5 leaf	98	cd	40.8	a-e	9697	a	3456	ab	13153	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	101	a	42.0	ab	9456	a	3235	bc	12691	a
	UREA	45	PD										
LSD P=.05				1.78		2.11		1624.5		358.3		1694.1	
Standard Deviation				1.23		1.46		1129.2		249.1		1177.6	
CV				1.25		3.6		12.79		7.43		9.67	
Treatment F				14.562		5.357		1.496		2.249		1.999	
Treatment Prob(F)				0.0001		0.0001		0.1800		0.0357		0.0613	

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

**Agronomic Response of Drill-Seeded Hybrid RT7521 FP to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number	21-CP-40
Site and design	
Location/Cooperator	Calcasieu Parish / Kyle Hensgens
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-Vidrine complex
% Organic matter	1.73
pH	5.75
Extractable nutrients (ppm)	Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9
Crop/Variety	Rice / Hybrid RT7521 FP
Planting method/date	Drill seeded / Mar. 19
Seeding rate/depth	10 seeds /ft ² / 0.5 inch
Emergence date	Apr. 3
Harvest date	Aug. 10
Ratoon Harvest date	Nov. 8
Seed treatment/cwt	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 22
	90 lb N/A 46-0-0, Aug. 11 (ratoon)
Water management	Underground irrigation
Flush	NA
Flood	May 7
Drain	Jul. 29
Ratoon Flood	Aug. 13
Ratoon Drain	Oct. 22
Pest management	
Herbicides	1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant, Mar. 19
	2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5
Insecticides	No blanket applications
Fungicides	15 oz/A Amistar Top, Jun. 7
	15 oz/A Amistar Top, Jun. 28

Table 26. Agronomic response of drill-seeded Hybrid RT7521 FP to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice		Rice		Sheath Blight	
Description	Plant-hd		Emer-hd		Tip of Panicle		8/10/2021		8/10/2021		11/8/2021		8/4/2021			
Rating Date	50% HD		50% HD		Height		Yield		Yield		Yield		Total Yield			
Rating Unit	days		days		in		lb/A		lb/A		lb/A		lb/A			
Crop Stage Majority	Main		Main		Main		Main		Main		Ratoon		MC + RC		rating (0-9)	
Trt	Treatment	Rate	Growth													
No.	Name	(lb N/A)	Stage													
1	UREA	0	4-5 leaf	97	f	82	f	40.3	d	9340	a	4751	bcd	14091	c	0.38 e
2	UREA	60	4-5 leaf	100	e	85	e	45.8	c	11443	a	5395	a	16839	a	2.75 d
3	UREA	90	4-5 leaf	102	d	87	d	47.5	bc	10680	a	4967	abc	15647	abc	3.63 bcd
4	UREA	120	4-5 leaf	102	cd	87	cd	49.5	ab	11766	a	4813	bcd	16579	a	4.88 abc
5	UREA	150	4-5 leaf	104	ab	89	ab	49.8	a	10191	a	4756	bcd	14947	bc	5.25 ab
6	UREA	180	4-5 leaf	105	a	90	a	50.0	a	11434	a	4379	d	15813	ab	6.00 a
7	UREA	75	4-5 leaf	101	d	86	d	46.8	c	11135	a	5050	abc	16185	ab	3.25 cd
	UREA	45	50% HD													
8	UREA	105	4-5 leaf	102	cd	87	cd	49.0	ab	11143	a	5149	ab	16292	ab	5.00 abc
	UREA	45	50% HD													
9	UREA	135	4-5 leaf	103	bc	88	bc	50.5	a	11229	a	4542	cd	15771	ab	5.38 ab
	UREA	45	50% HD													
LSD P=.05				1.38		1.38		2.18		1512.8		532.8		1567.1		1.779
Standard Deviation				0.94		0.94		1.49		1036.6		365.1		1073.8		1.219
CV				0.93		1.09		3.13		9.48		7.5		6.8		30.06
Treatment F				25.250		25.250		18.563		2.109		2.906		2.493		8.276
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0754		0.0204		0.0398		0.0001

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

**Agronomic Response of Drill-Seeded Hybrid RT7301 to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number: 21-CP-41

Site and design:

Location/Cooperator: Calcasieu Parish / Kyle Hensgens

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-Vidrine complex

% Organic matter.....: 1.73

pH.....: 5.75

Extractable nutrients (ppm).....: Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9

Crop/Variety: Rice / Hybrid RT7301

Planting method/date: Drill seeded / Mar. 19

Seeding rate/depth: 10 seeds /ft² / 0.5 inch

Emergence date.....: Apr. 3

Harvest date: Aug. 10

Ratoon Harvest date.....: Nov. 8

Seed treatment/cwt: **Hybrids:**

Apron (fungicide)

Dynasty (fungicide)

Fludioxonil (fungicide)(Maxim)

Gibberellic Acid

Sedaxane (fungicide)

Thiamethoxam (insecticide)

Zinc

AV-1011 (bird repellent) – 18.3 oz

Dermacor – 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 22

90 lb N/A 46-0-0, Aug. 11 (ratoon)

Water management: Underground irrigation

Flush: NA

Flood: May 7

Drain.....: Jul. 29

Ratoon Flood.....: Aug. 13

Ratoon Drain.....: Oct. 22

Pest management:

Herbicides.....: 1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant,
Mar. 19

2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5

Insecticides: No blanket applications

Fungicides.....: 15 oz/A Amistar Top, Jun. 7

15 oz/A Amistar Top, Jun. 28

**Agronomic Response of Drill-Seeded Hybrid RT7523 FP to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number: 21-CP-42

Site and design:

Location/Cooperator: Calcasieu Parish / Kyle Hensgens

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-Vidrine complex

% Organic matter.....: 1.73

pH.....: 5.75

Extractable nutrients (ppm).....: Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9

Crop/Variety: Rice / Hybrid RT7523 FP

Planting method/date: Drill seeded / Mar. 19

Seeding rate/depth: 10 seeds /ft² / 0.5 inch

Emergence date.....: Apr. 3

Harvest date: Aug. 10

Ratoon Harvest date.....: Nov. 8

Seed treatment/cwt: **Hybrids:**

Apron (fungicide)

Dynasty (fungicide)

Fludioxonil (fungicide)(Maxim)

Gibberellic Acid

Sedaxane (fungicide)

Thiamethoxam (insecticide)

Zinc

AV-1011 (bird repellent) – 18.3 oz

Dermacor – 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 22

90 lb N/A 46-0-0, Aug. 11 (ratoon)

Water management: Underground irrigation

Flush: NA

Flood: May 7

Drain.....: Jul. 29

Ratoon Flood.....: Aug. 13

Ratoon Drain.....: Oct. 22

Pest management:

Herbicides.....: 1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant,
Mar. 19

2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5

Insecticides: No blanket applications

Fungicides.....: 15 oz/A Amistar Top, Jun. 7

15 oz/A Amistar Top, Jun. 28

**Agronomic Response of Drill-Seeded Hybrid RT7421 FP to Nitrogen
Fertilizer Rate and Time of Application – Calcasieu Parish**

Experiment number: 21-CP-44

Site and design:

Location/Cooperator: Calcasieu Parish / Kyle Hensgens

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-Vidrine complex

% Organic matter.....: 1.73

pH.....: 5.75

Extractable nutrients (ppm).....: Ca-587; Cu-0.92; Mg-111; P-7.39; K-98; Na-47; S-7.7; Zn-3.9

Crop/Variety: Rice / Hybrid RT7421 FP

Planting method/date: Drill seeded / Mar. 19

Seeding rate/depth: 10 seeds /ft² / 0.5 inch

Emergence date.....: Apr. 3

Harvest date: Aug. 10

Ratoon Harvest date.....: Nov. 8

Seed treatment/cwt: **Hybrids:**

Apron (fungicide)

Dynasty (fungicide)

Fludioxonil (fungicide)(Maxim)

Gibberellic Acid

Sedaxane (fungicide)

Thiamethoxam (insecticide)

Zinc

AV-1011 (bird repellent) – 18.3 oz

Dermacor – 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 22

90 lb N/A 46-0-0, Aug. 11 (ratoon)

Water management: Underground irrigation

Flush: NA

Flood: May 7

Drain.....: Jul. 29

Ratoon Flood.....: Aug. 13

Ratoon Drain.....: Oct. 22

Pest management:

Herbicides.....: 1 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +.25% Surfactant,
Mar. 19

2 qt/A Stam + 2 qt/A Rice Beaux + .25 oz/A Permit + 1 oz/A Londax, May 5

Insecticides: No blanket applications

Fungicides.....: 15 oz/A Amistar Top, Jun. 7

15 oz/A Amistar Top, Jun. 28

Table 29. Agronomic response of drill-seeded Hybrid RT7421 FP to nitrogen fertilizer rate and time of application. Calcasieu Parish.

Rice Growth and Development Characteristics																
Crop Name	Rice		Rice		Rice		Rice		Rice		Rice		Rice			
Description	Plant-hd	Emer-hd	Tip of Panicle		Rice		Rice		Rice		Rice		Sheath Blight			
Rating Date	50% HD		8/10/2021		8/10/2021		8/10/2021		11/8/2021		11/8/2021		8/4/2021			
Rating Type	50% HD	50% HD	Height		Yield		Yield		Yield		Total Yield					
Rating Unit	days	days	in		lb/A		lb/A		lb/A		lb/A					
Crop Stage Majority	Main	Main	Main		Main		Main		Ratoon		MC + RC		rating (0-9)			
Trt	Treatment	Rate	Growth													
No.	Name	(lb N/A)	Stage													
1	UREA	0	4-5 leaf	98	e	45.3	d	9288	a	4887	a	14175	a	0.13	d	
2	UREA	60	4-5 leaf	101	d	48.0	c	9800	a	5077	a	14877	a	1.00	cd	
3	UREA	90	4-5 leaf	103	c	49.5	abc	10721	a	4946	a	15667	a	1.50	bc	
4	UREA	120	4-5 leaf	104	b	51.3	ab	9881	a	4661	ab	14543	a	2.50	ab	
5	UREA	150	4-5 leaf	105	a	51.5	a	10053	a	4658	ab	14711	a	3.38	a	
6	UREA	180	4-5 leaf	105	a	50.8	ab	10284	a	4161	b	14445	a	3.38	a	
7	UREA	75	4-5 leaf	101	d	48.3	c	10367	a	4912	a	15279	a	2.88	a	
	UREA	45	50% HD													
8	UREA	105	4-5 leaf	103	c	49.3	bc	10229	a	5151	a	15380	a	2.88	a	
	UREA	45	50% HD													
9	UREA	135	4-5 leaf	103	bc	49.5	abc	9362	a	4825	a	14187	a	3.38	a	
	UREA	45	50% HD													
LSD P=.05				0.83		0.83		2.21		1286.1		529.3		1358.7		1.255
Standard Deviation				0.57		0.57		1.51		881.3		362.7		931.0		0.860
CV				0.55		0.65		3.07		8.81		7.54		6.29		36.84
Treatment F				50.698		50.698		6.559		1.132		2.620		1.320		7.590
Treatment Prob(F)				0.0001		0.0001		0.0001		0.3781		0.0324		0.2807		0.0001

Means followed by the same letter or symbol do not significantly differ ($P = 0.05$, LSD).

**Agronomic Response of Drill-Seeded PVL03 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-SLP-01
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	Dundee silty clay loam
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	Rice / PVL03
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	Underground irrigation
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 30. Agronomic response of drill-seeded PVL03 to nitrogen 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								8/13/2021		8/16/2021		8/16/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	g	85.8	g	34.3	f	14.7	f	4055	h
2	UREA	30	4-5 leaf	98.3	g	86.3	g	35.3	ef	14.9	f	5174	g
3	UREA	60	4-5 leaf	99.5	f	87.5	f	35.0	ef	15.2	ef	6694	f
4	UREA	90	4-5 leaf	101.8	cd	89.8	cd	36.8	cde	16.1	cd	7285	de
5	UREA	120	4-5 leaf	100.5	e	88.5	e	38.8	abc	16.2	cd	7711	bcd
6	UREA	150	4-5 leaf	101.3	de	89.3	de	39.5	ab	17.1	ab	7841	bcd
7	UREA	180	4-5 leaf	103.3	ab	91.3	ab	40.0	ab	17.5	a	8037	ab
8	UREA	210	4-5 leaf	103.5	a	91.5	a	40.5	a	17.1	ab	8525	a
9	UREA	45	4-5 leaf	100.8	e	88.8	e	36.0	def	15.1	f	6808	ef
	UREA	45	PD										
10	UREA	75	4-5 leaf	101.3	de	89.3	de	36.3	def	16.0	cde	7407	cd
	UREA	45	PD										
11	UREA	105	4-5 leaf	102.3	c	90.3	c	38.0	bcd	15.5	def	7556	bcd
	UREA	45	PD										
12	UREA	135	4-5 leaf	102.5	bc	90.5	bc	41.0	a	16.6	bc	7894	bc
	UREA	45	PD										
LSD P=.05				0.90		0.90		2.25		0.82		556.6	
Standard Deviation				0.63		0.63		1.57		0.57		386.9	
CV				0.62		0.7		4.16		3.57		5.46	
Treatment F				33.890		33.890		8.821		11.097		43.798	
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 DG-263L to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 31. Agronomic response of drill-seeded DG-263L to nitrogen 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						8/13/2021	8/16/2021	8/16/2021
Rating Type				50% HD	50% HD	Height	Moist	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	97.3 g	85.3 g	30.8 e	13.4 h	6073 e
2	UREA	30	4-5 leaf	97.3 g	85.3 g	33.0 de	13.8 gh	7487 d
3	UREA	60	4-5 leaf	96.0 h	84.0 h	33.8 de	14.8 g	8036 c
4	UREA	90	4-5 leaf	100.0 f	88.0 f	35.5 bcd	16.1 ef	8602 ab
5	UREA	120	4-5 leaf	101.8 e	89.8 e	36.0 a-d	16.5 de	8678 a
6	UREA	150	4-5 leaf	104.8 c	92.8 c	38.0 abc	18.5 ab	8184 abc
7	UREA	180	4-5 leaf	106.5 b	94.5 b	38.8 a	17.8 abc	8240 abc
8	UREA	210	4-5 leaf	109.3 a	97.3 a	38.5 ab	19.0 a	8060 bc
9	UREA	45	4-5 leaf	103.5 d	91.5 d	34.3 d	14.9 fg	8137 abc
	UREA	45	PD					
10	UREA	75	4-5 leaf	101.5 e	89.5 e	35.0 cd	16.8 cde	8591 ab
	UREA	45	PD					
11	UREA	105	4-5 leaf	106.3 b	94.3 b	35.8 a-d	17.3 bcd	8266 abc
	UREA	45	PD					
12	UREA	135	4-5 leaf	107.0 b	95.0 b	37.8 abc	18.3 ab	8326 abc
	UREA	45	PD					
LSD P=.05				0.99	0.99	3.22	1.22	545.3
Standard Deviation				0.69	0.69	2.24	0.84	379.0
CV				0.67	0.76	6.29	5.14	4.7
Treatment F				158.585	158.585	4.703	19.673	13.670
Treatment Prob(F)				0.0001	0.0001	0.0003	0.0001	0.0001

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

**Agronomic Response of Drill-Seeded CLL16 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-SLP-03
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	Dundee silty clay loam
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	Rice / CLL16
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	Underground irrigation
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 32. Agronomic response of drill-seeded CLL16 to nitrogen fertilizer rate and time of application. St. Landry Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Hog damage		Rice	
Rating Date		50% HD		50% HD		8/13/2021		8/16/2021		8/16/2021	
Rating Type		days		days		Height		%		Moist	
Rating Unit		Main		Main		in		Main		%	
Crop Stage Majority		Main		Main		Main		Main		Main	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	UREA	0	4-5 leaf	100.3	f	88.3	f	33.3	h	0.0	e
2	UREA	30	4-5 leaf	102.8	e	90.8	e	35.8	g	0.0	e
3	UREA	60	4-5 leaf	103.0	de	91.0	de	37.3	fg	1.3	de
4	UREA	90	4-5 leaf	104.5	c	92.5	c	39.5	de	2.5	cde
5	UREA	120	4-5 leaf	105.0	c	93.0	c	40.5	cd	2.5	cde
6	UREA	150	4-5 leaf	105.8	b	93.8	b	42.8	ab	10.0	ab
7	UREA	180	4-5 leaf	106.0	b	94.0	b	42.0	bc	8.8	abc
8	UREA	210	4-5 leaf	106.8	a	94.8	a	41.5	bc	10.0	ab
9	UREA	45	4-5 leaf	104.5	c	92.5	c	37.8	ef	6.3	b-e
	UREA	45	PD								
10	UREA	75	4-5 leaf	105.0	c	93.0	c	39.5	de	7.5	a-d
	UREA	45	PD								
11	UREA	105	4-5 leaf	103.5	d	91.5	d	40.5	cd	13.8	a
	UREA	45	PD								
12	UREA	135	4-5 leaf	107.0	a	95.0	a	44.3	a	10.0	ab
	UREA	45	PD								
LSD P=.05		0.69		0.69		1.93		6.83		1.33	
Standard Deviation		0.48		0.48		1.34		4.75		0.93	
CV		0.46		0.52		3.39		78.58		4.23	
Treatment F		64.000		64.000		21.530		3.824		33.996	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0013		0.0001	

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

**Agronomic Response of Drill-Seeded CLL17 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	Dundee silty clay loam
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	Rice / CLL17
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	Underground irrigation
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 33. Agronomic response of drill-seeded CLL17 to nitrogen fertilizer rate and time of application. St. Landry Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice				
Description	Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice		Rice				
Rating Date	50% HD		50% HD		8/13/2021		8/16/2021		8/16/2021		8/16/2021				
Rating Type	50% HD		50% HD		Height		Lodge		Moist		Yield				
Rating Unit	days		days		in		rate		%		lb/A				
Crop Stage Majority	Main		Main		Main		Main		Main		Main				
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UREA	0	4-5 leaf	103.0	g	91.0	g	34.3	e	0.0	d	14.7	g	5822	e
2	UREA	30	4-5 leaf	104.8	f	92.8	f	35.8	de	0.0	d	15.3	fg	7047	a-d
3	UREA	60	4-5 leaf	105.8	de	93.8	de	37.0	cd	30.0	c	15.8	efg	7486	ab
4	UREA	90	4-5 leaf	106.8	bc	94.8	bc	39.0	bc	40.0	c	16.5	cde	7526	a
5	UREA	120	4-5 leaf	108.0	a	96.0	a	39.3	abc	70.0	ab	17.4	abc	7303	abc
6	UREA	150	4-5 leaf	107.5	ab	95.5	ab	40.8	ab	90.0	a	16.5	cde	6420	cde
7	UREA	180	4-5 leaf	107.8	a	95.8	a	41.8	a	87.5	a	18.4	a	6823	a-d
8	UREA	210	4-5 leaf	107.3	ab	95.3	ab	40.3	ab	91.3	a	17.8	ab	6230	de
9	UREA	45	4-5 leaf	105.8	de	93.8	de	38.8	bc	45.0	bc	16.2	def	7584	a
	UREA	45	PD												
10	UREA	75	4-5 leaf	105.5	def	93.5	def	39.8	ab	77.5	a	16.9	b-e	7282	abc
	UREA	45	PD												
11	UREA	105	4-5 leaf	106.3	cd	94.3	cd	39.3	abc	90.0	a	17.0	bcd	6554	b-e
	UREA	45	PD												
12	UREA	135	4-5 leaf	105.3	ef	93.3	ef	41.0	ab	87.5	a	17.6	abc	6519	cde
	UREA	45	PD												
LSD P=.05				0.98		0.98		2.63		26.52		1.34		954.5	
Standard Deviation				0.68		0.68		1.83		18.44		0.93		663.5	
CV				0.64		0.72		4.71		31.22		30.6		9.64	
Treatment F				17.951		17.951		5.847		14.346		17.834		3.009	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0070	

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

**Agronomic Response of Drill-Seeded 1902026CLL to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 34. Agronomic response of drill-seeded 1902026CLL to nitrogen fertilizer rate and time of application, St. Landry Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice	
Description	Plant-hd	Emer-hd	Tip of Panicle	Hog damage	Rice		Rice		Rice	
Rating Date	50% HD		8/13/2021	8/16/2021	8/16/2021		8/16/2021		8/16/2021	
Rating Type	50% HD		Height	%	Moist		Moist		Yield	
Rating Unit	days		in		%		%		lb/A	
Crop Stage Majority	Main	Main	Main	Main	Main		Main		Main	
Trt	Treatment	Rate	Growth							
No.	Name	(lb N/A)	Stage							
1	UREA	0	4-5 leaf	100.8 e	88.8 e	31.5 bc	0.0 a	11.9 d	5446 d	
2	UREA	30	4-5 leaf	100.5 e	88.5 e	30.8 c	0.0 a	11.9 d	6430 c	
3	UREA	60	4-5 leaf	101.5 e	89.5 e	30.5 c	2.5 a	12.7 cd	6904 bc	
4	UREA	90	4-5 leaf	101.3 e	89.3 e	34.5 a	0.0 a	12.9 c	7663 ab	
5	UREA	120	4-5 leaf	104.0 bcd	92.0 bcd	34.0 a	2.5 a	13.2 c	7268 ab	
6	UREA	150	4-5 leaf	105.3 ab	93.3 ab	36.0 a	2.5 a	13.2 bc	7358 ab	
7	UREA	180	4-5 leaf	104.5 a-d	92.5 a-d	34.5 a	7.5 a	14.1 ab	7299 ab	
8	UREA	210	4-5 leaf	105.0 abc	93.0 abc	34.5 a	2.5 a	14.5 a	7773 a	
9	UREA	45	4-5 leaf	103.5 d	91.5 d	31.0 c	0.0 a	12.4 cd	7469 ab	
	UREA	45	PD							
10	UREA	75	4-5 leaf	105.3 ab	93.3 ab	34.5 a	2.5 a	12.7 cd	7615 ab	
	UREA	45	PD							
11	UREA	105	4-5 leaf	103.8 cd	91.8 cd	33.8 ab	0.0 a	13.1 c	7053 abc	
	UREA	45	PD							
12	UREA	135	4-5 leaf	105.5 a	93.5 a	35.0 a	0.0 a	13.2 c	7761 a	
	UREA	45	PD							
LSD P=.05				1.26	1.26	2.47	6.24	0.91	809.8	
Standard Deviation				0.87	0.87	1.71	4.33	0.63	562.2	
CV				0.84	0.96	5.14	259.81	4.86	7.84	
Treatment F				18.667	18.667	4.885	1.051	5.907	5.646	
Treatment Prob(F)				0.0001	0.0001	0.0002	0.4286	0.0001	0.0001	

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

**Agronomic Response of Drill-Seeded 1902034CLL to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 35. Agronomic response of drill-seeded 1902034CLL to nitrogen fertilizer rate and time of application, St. Landry Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice				
Description	Plant-hd		Emer-hd		Tip of Panicle		Hog damage		Moist		Yield				
Rating Date	50% HD		50% HD		8/13/2021		8/16/2021		8/16/2021		8/16/2021				
Rating Type	days		days		Height		%		%		lb/A				
Rating Unit	Main		Main		in		Main		Main		Main				
Crop Stage Majority	Main		Main		Main		Main		Main		Main				
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UREA	0	4-5 leaf	99.3	f	87.3	f	32.0	e	0.0	d	12.7	de	5710	c
2	UREA	30	4-5 leaf	99.0	f	87.0	f	32.8	de	0.0	d	12.4	e	6922	b
3	UREA	60	4-5 leaf	99.3	f	87.3	f	31.5	e	0.0	d	12.7	de	7325	ab
4	UREA	90	4-5 leaf	101.0	e	89.0	e	33.8	cde	0.0	d	12.6	e	7615	ab
5	UREA	120	4-5 leaf	102.0	d	90.0	d	34.8	bcd	5.0	bcd	13.6	bc	7407	ab
6	UREA	150	4-5 leaf	104.5	c	92.5	c	37.3	ab	10.0	ab	13.6	bcd	7434	ab
7	UREA	180	4-5 leaf	104.8	bc	92.8	bc	35.5	abc	13.8	a	12.4	e	7264	ab
8	UREA	210	4-5 leaf	105.5	ab	93.5	ab	36.8	ab	12.5	a	14.8	a	7528	ab
9	UREA	45	4-5 leaf	102.3	d	90.3	d	33.5	cde	0.0	d	12.5	e	7440	ab
	UREA	45	PD												
10	UREA	75	4-5 leaf	104.3	c	92.3	c	35.5	abc	2.5	cd	12.7	cde	7416	ab
	UREA	45	PD												
11	UREA	105	4-5 leaf	105.5	ab	93.5	ab	34.8	bcd	2.5	cd	12.9	cde	7680	ab
	UREA	45	PD												
12	UREA	135	4-5 leaf	105.8	a	93.8	a	37.8	a	7.5	abc	14.1	ab	7838	a
	UREA	45	PD												
LSD P=.05				0.90		0.90		2.70		6.92		0.96		768.2	
Standard Deviation				0.63		0.63		1.88		4.81		0.67		534.0	
CV				0.61		0.69		5.42		107.35		5.12		7.32	
Treatment F				70.038		70.038		4.634		4.691		5.463		4.233	
Treatment Prob(F)				0.0001		0.0001		0.0003		0.0003		0.0001		0.0006	

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

**Agronomic Response of Drill-Seeded 1902207 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	Dundee silty clay loam
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	Rice / 1902207
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	Underground irrigation
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 36. Agronomic response of drill-seeded 1902207 to nitrogen fertilizer rate and time of application. St. Landry Parish.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Hog damage		Rice		Rice	
Rating Date		50% HD		50% HD		8/13/2021		8/16/2021		8/16/2021		8/16/2021	
Rating Type		days		days		Height		%		Moist		Yield	
Rating Unit		Main		Main		in		Main		%		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Main	
Trt	Treatment	Rate		Growth									
No.	Name	(lb N/A)		Stage									
1	UREA	0	4-5 leaf	99.0	h	87.0	h	32.3	f	0.0	a	12.5	f
2	UREA	30	4-5 leaf	100.3	g	88.3	g	34.0	ef	0.0	a	12.7	f
3	UREA	60	4-5 leaf	101.3	f	89.3	f	35.5	cde	0.0	a	14.0	de
4	UREA	90	4-5 leaf	102.0	de	90.0	de	35.0	de	5.0	a	15.0	cd
5	UREA	120	4-5 leaf	103.3	c	91.3	c	38.0	abc	0.0	a	14.9	cd
6	UREA	150	4-5 leaf	101.8	ef	89.8	ef	37.5	a-d	2.5	a	16.4	ab
7	UREA	180	4-5 leaf	103.5	c	91.5	c	39.0	ab	0.0	a	16.3	ab
8	UREA	210	4-5 leaf	105.3	a	93.3	a	39.5	a	5.0	a	16.8	a
9	UREA	45	4-5 leaf	101.3	f	89.3	f	36.0	cde	0.0	a	13.7	e
	UREA	45	PD										bc
10	UREA	75	4-5 leaf	102.5	d	90.5	d	36.8	bcd	0.0	a	14.8	cd
	UREA	45	PD										a
11	UREA	105	4-5 leaf	101.5	ef	89.5	ef	36.5	b-e	2.5	a	15.5	bc
	UREA	45	PD										abc
12	UREA	135	4-5 leaf	104.3	b	92.3	b	39.5	a	0.0	a	16.8	a
	UREA	45	PD										abc
LSD P=.05		0.67		2.73		0.67		4.40		0.94		766.4	
Standard Deviation		0.47		1.90		0.47		3.06		0.65		532.7	
CV		0.46		5.19		0.52		244.54		4.38		6.86	
Treatment F		54.983		5.561		54.983		1.703		20.746		19.665	
Treatment Prob(F)		0.0001		0.0001		0.0001		0.1163		0.0001		0.0001	

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

**Agronomic Response of Drill-Seeded 1902212 to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 37. Agronomic response of drill-seeded 1902212 to nitrogen 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								8/13/2021		8/16/2021		8/16/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	94.3	h	82.3	h	28.0	e	14.1	de	4003	f
2	UREA	30	4-5 leaf	96.8	fg	84.8	fg	32.0	cd	14.1	e	5847	e
3	UREA	60	4-5 leaf	96.5	g	84.5	g	30.0	de	14.9	cde	7133	d
4	UREA	90	4-5 leaf	96.3	g	84.3	g	34.0	abc	15.7	bc	7977	bc
5	UREA	120	4-5 leaf	97.8	f	85.8	f	34.8	abc	16.4	ab	8224	b
6	UREA	150	4-5 leaf	99.3	de	87.3	de	36.3	ab	16.7	a	8384	ab
7	UREA	180	4-5 leaf	100.3	cd	88.3	cd	37.0	ab	16.3	ab	8734	a
8	UREA	210	4-5 leaf	101.0	bc	89.0	bc	35.8	abc	16.5	ab	8735	a
9	UREA	45	4-5 leaf	99.0	e	87.0	e	34.3	abc	15.0	cd	7614	c
	UREA	45	PD										
10	UREA	75	4-5 leaf	100.5	bc	88.5	bc	35.3	abc	15.3	c	8191	b
	UREA	45	PD										
11	UREA	105	4-5 leaf	101.5	b	89.5	b	33.3	bcd	16.3	ab	8374	ab
	UREA	45	PD										
12	UREA	135	4-5 leaf	102.8	a	90.8	a	37.3	a	16.6	a	8422	ab
	UREA	45	PD										
LSD P=.05				1.20		1.20		3.82		0.87		473.4	
Standard Deviation				0.84		0.84		2.65		0.60		329.0	
CV				0.85		0.96		7.81		3.86		4.31	
Treatment F				36.888		36.888		4.464		9.726		72.410	
Treatment Prob(F)				0.0001		0.0001		0.0004		0.0001		0.0001	

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

**Agronomic Response of Drill-Seeded Rtv7321 MA to Nitrogen
Fertilizer Rate and Time of Application – St. Landry Parish**

Experiment number	21-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	Dundee silty clay loam
% Organic matter	2.27
pH	7.14
Extractable nutrients (ppm)	Ca-2770; Cu-4.7; Mg-237; P-27; K-130; Na-19; S-12; Zn-4.6
Crop/Variety	Rice / Rtv7321 MA
Planting method/date	Drill seeded / March 22
Seeding rate/depth	33 seeds /ft ² / 0.5 inch
Emergence date	April 3
Harvest date	August 16
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	183 lb/A 13.5-34.5-19.8-12.7 applied in mid-March by farmer
Water management	Underground irrigation
Flush	NA
Flood	May 29
Drain	August 2
Pest management	
Herbicides	1 qt/A Roundup + 8 oz/A Command + 3 oz/A Sharpen, March 19
	28 oz/A Facet + 0.4 oz/A Regiment + 0.4 oz/A Holomax, May 26
Insecticides	None
Fungicides	15 oz/A Amistar Top, July 1

Table 38. Agronomic response of drill-seeded Rtv7321 MA to nitrogen 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								8/13/2021		8/16/2021		8/16/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	33.5	e	12.6	d	5914	g
2	UREA	30	4-5 leaf	100.3	g	88.3	g	35.3	de	12.5	d	7318	f
3	UREA	60	4-5 leaf	101.5	efg	89.5	efg	35.5	de	12.5	d	8680	e
4	UREA	90	4-5 leaf	102.8	cde	90.8	cde	36.3	cd	14.2	c	9602	d
5	UREA	120	4-5 leaf	98.5	h	86.5	h	38.3	abc	14.5	bc	10383	c
6	UREA	150	4-5 leaf	101.5	efg	89.5	efg	40.0	a	15.1	bc	10573	c
7	UREA	180	4-5 leaf	103.5	bc	91.5	bc	39.3	ab	15.7	ab	11274	ab
8	UREA	210	4-5 leaf	105.0	a	93.0	a	39.5	ab	16.5	a	11671	a
9	UREA	45	4-5 leaf	101.8	def	89.8	def	36.8	cd	14.0	c	9552	d
	UREA	45	PD										
10	UREA	75	4-5 leaf	103.0	cd	91.0	cd	37.3	bcd	14.1	c	10199	cd
	UREA	45	PD										
11	UREA	105	4-5 leaf	104.5	ab	92.5	ab	37.5	bcd	14.8	bc	10385	c
	UREA	45	PD										
12	UREA	135	4-5 leaf	100.8	fg	88.8	fg	38.0	abc	14.9	bc	10845	bc
	UREA	45	PD										
LSD P=.05				1.41		1.41		2.50		1.23		663.4	
Standard Deviation				0.98		0.98		1.73		0.86		461.2	
CV				0.96		1.09		4.66		6.01		4.75	
Treatment F				20.329		20.329		4.908		8.764		52.493	
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 PVL03 to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-SJ-01
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	
% Organic matter	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 39. Agronomic response of drill-seeded PVL03 to nitrogen 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								9/28/2021		9/28/2021		9/28/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	75.3	a	69.3	a	31.5	d	19.3	a	5824	f
2	UREA	30	4-5 leaf	75.5	a	69.5	a	34.3	cd	18.9	a	6538	f
3	UREA	60	4-5 leaf	75.8	a	69.8	a	38.3	b	19.2	a	7651	e
4	UREA	90	4-5 leaf	76.3	a	70.3	a	40.5	ab	18.6	a	8667	d
5	UREA	120	4-5 leaf	77.0	a	71.0	a	40.0	ab	19.1	a	9615	bc
6	UREA	150	4-5 leaf	77.3	a	71.3	a	41.3	ab	18.9	a	9896	abc
7	UREA	180	4-5 leaf	76.3	a	70.3	a	43.0	a	19.9	a	10109	ab
8	UREA	210	4-5 leaf	77.0	a	71.0	a	40.3	ab	19.5	a	10430	a
9	UREA	45	4-5 leaf	76.0	a	70.0	a	38.0	bc	18.8	a	8539	d
	UREA	45	PD										
10	UREA	75	4-5 leaf	76.8	a	70.8	a	40.8	ab	18.7	a	9238	cd
	UREA	45	PD										
11	UREA	105	4-5 leaf	76.8	a	70.8	a	43.0	a	19.1	a	10041	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	76.5	a	70.5	a	43.0	a	19.3	a	10378	ab
	UREA	45	PD										
LSD P=.05				1.45		1.45		3.91		0.75		811.5	
Standard Deviation				1.01		1.01		2.72		0.52		564.1	
CV				1.32		1.44		6.89		2.73		6.33	
Treatment F				1.579		1.579		6.818		1.969		29.363	
Treatment Prob(F)				0.1513		0.1513		0.0001		0.0655		0.0001	

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

**Agronomic Response of Drill-Seeded DG-263L to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-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	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety: Rice / DG-263L	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt: Conventional Varieties:	
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization: No blanket applications	
Water management: Underground irrigation	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 40. Agronomic response of drill-seeded DG-263L to nitrogen 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								9/28/2021		9/28/2021		9/28/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	72.8	cd	66.8	cd	30.0	g	17.2	bc	7065	e
2	UREA	30	4-5 leaf	71.8	d	65.8	d	34.3	f	17.1	bc	7937	d
3	UREA	60	4-5 leaf	73.5	bcd	67.5	bcd	35.8	def	16.6	c	9119	c
4	UREA	90	4-5 leaf	74.3	abc	68.3	abc	37.8	bcd	16.8	bc	9146	bc
5	UREA	120	4-5 leaf	74.3	abc	68.3	abc	37.8	bcd	16.6	c	9451	abc
6	UREA	150	4-5 leaf	74.8	ab	68.8	ab	39.0	abc	17.2	bc	9469	abc
7	UREA	180	4-5 leaf	75.5	a	69.5	a	39.8	ab	17.3	bc	9466	abc
8	UREA	210	4-5 leaf	74.0	abc	68.0	abc	40.8	a	18.0	ab	9822	a
9	UREA	45	4-5 leaf	74.0	abc	68.0	abc	35.5	ef	16.8	bc	9148	bc
	UREA	45	PD										
10	UREA	75	4-5 leaf	75.5	a	69.5	a	37.3	cde	17.9	ab	9462	abc
	UREA	45	PD										
11	UREA	105	4-5 leaf	74.8	ab	68.8	ab	38.5	bc	17.0	bc	9581	abc
	UREA	45	PD										
12	UREA	135	4-5 leaf	75.5	a	69.5	a	39.5	ab	18.7	a	9635	ab
	UREA	45	PD										
LSD P=.05				1.98		1.98		2.16		1.27		499.7	
Standard Deviation				1.38		1.38		1.50		0.88		347.3	
CV				1.86		2.02		4.04		5.12		3.81	
Treatment F				2.745		2.745		15.436		2.133		21.286	
Treatment Prob(F)				0.0122		0.0122		0.0001		0.0458		0.0001	

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

**Agronomic Response of Drill-Seeded 1902207 to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-SJ-09
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	
% Organic matter	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 41. Agronomic response of drill-seeded 1902207 to nitrogen 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								9/28/2021		9/28/2021		9/28/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	74.8	a	68.8	a	33.8	f	19.0	ab	5873	g
2	UREA	30	4-5 leaf	74.5	a	68.5	a	35.8	f	17.2	d	6677	f
3	UREA	60	4-5 leaf	75.5	a	69.5	a	39.3	e	17.8	bcd	7792	e
4	UREA	90	4-5 leaf	75.3	a	69.3	a	41.8	bcd	17.9	bcd	8486	d
5	UREA	120	4-5 leaf	74.8	a	68.8	a	41.5	b-e	18.0	bcd	9466	b
6	UREA	150	4-5 leaf	75.3	a	69.3	a	43.0	abc	18.0	a-d	9619	b
7	UREA	180	4-5 leaf	75.5	a	69.5	a	44.8	a	19.1	a	10214	a
8	UREA	210	4-5 leaf	75.0	a	69.0	a	41.0	cde	19.1	a	10309	a
9	UREA	45	4-5 leaf	75.0	a	69.0	a	39.5	de	18.1	a-d	8322	d
	UREA	45	PD										
10	UREA	75	4-5 leaf	75.3	a	69.3	a	40.8	cde	17.8	cd	8861	c
	UREA	45	PD										
11	UREA	105	4-5 leaf	75.0	a	69.0	a	42.5	abc	18.3	a-d	9623	b
	UREA	45	PD										
12	UREA	135	4-5 leaf	75.3	a	69.3	a	43.8	ab	18.4	abc	9797	b
	UREA	45	PD										
LSD P=.05				1.39		1.39		2.40		1.15		333.2	
Standard Deviation				0.96		0.96		1.67		0.80		231.6	
CV				1.28		1.4		4.12		4.39		2.65	
Treatment F				0.408		0.408		14.619		2.154		145.408	
Treatment Prob(F)				0.9425		0.9425		0.0001		0.0438		0.0001	

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

**Agronomic Response of Drill-Seeded 1902212 to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-SJ-10
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	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety: Rice / 1902212	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt: Conventional Varieties:	
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization: No blanket applications	
Water management: Underground irrigation	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 42. Agronomic response of drill-seeded 1902212 to nitrogen 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								9/28/2021		9/28/2021		9/28/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	72.5	b	66.5	b	31.3	e	18.6	a	6672	g
2	UREA	30	4-5 leaf	70.3	c	64.3	c	34.3	de	18.9	a	6800	fg
3	UREA	60	4-5 leaf	72.5	b	66.5	b	37.5	bcd	19.0	a	8179	de
4	UREA	90	4-5 leaf	73.5	ab	67.5	ab	35.5	cd	18.4	a	7792	ef
5	UREA	120	4-5 leaf	74.0	ab	68.0	ab	38.3	abc	18.6	a	9031	a-d
6	UREA	150	4-5 leaf	74.3	a	68.3	a	39.5	ab	19.2	a	9604	ab
7	UREA	180	4-5 leaf	74.0	ab	68.0	ab	41.8	a	19.6	a	9841	a
8	UREA	210	4-5 leaf	73.3	ab	67.3	ab	41.3	a	19.9	a	9289	abc
9	UREA	45	4-5 leaf	73.8	ab	67.8	ab	37.5	bcd	19.1	a	8439	cde
	UREA	45	PD										
10	UREA	75	4-5 leaf	74.3	a	68.3	a	38.3	abc	18.9	a	8531	b-e
	UREA	45	PD										
11	UREA	105	4-5 leaf	74.0	ab	68.0	ab	40.8	ab	19.7	a	9695	a
	UREA	45	PD										
12	UREA	135	4-5 leaf	74.8	a	68.8	a	40.5	ab	20.6	a	9597	ab
	UREA	45	PD										
LSD P=.05				1.72		1.72		3.60		1.27		1108.3	
Standard Deviation				1.19		1.19		2.50		0.89		770.4	
CV				1.63		1.77		6.58		4.61		8.93	
Treatment F				4.096		4.096		6.233		2.024		8.096	
Treatment Prob(F)				0.0008		0.0008		0.0001		0.0582		0.0001	

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

**Agronomic Response of Drill-Seeded Rtv7231 MA to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-SJ-11
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	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety: Rice / Rtv7231 MA	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt: Conventional Varieties:	
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization: No blanket applications	
Water management: Underground irrigation	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 43. Agronomic response of drill-seeded 1902212 to nitrogen 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								9/28/2021		9/28/2021		9/28/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	a	71.3	a	34.8	e	16.8	cd	6401	h
2	UREA	30	4-5 leaf	77.5	a	71.5	a	36.5	e	16.8	cd	7704	g
3	UREA	60	4-5 leaf	77.8	a	71.8	a	39.5	d	16.7	d	9027	f
4	UREA	90	4-5 leaf	78.3	a	72.3	a	41.0	cd	17.1	bcd	10304	de
5	UREA	120	4-5 leaf	77.8	a	71.8	a	41.8	bc	16.7	d	10577	cde
6	UREA	150	4-5 leaf	77.8	a	71.8	a	41.0	cd	17.4	bcd	10693	cd
7	UREA	180	4-5 leaf	78.0	a	72.0	a	43.0	abc	17.6	bc	11616	ab
8	UREA	210	4-5 leaf	77.8	a	71.8	a	44.0	a	18.8	a	11795	a
9	UREA	45	4-5 leaf	77.3	a	71.3	a	39.5	d	16.8	cd	9502	f
	UREA	45	PD										
10	UREA	75	4-5 leaf	77.5	a	71.5	a	41.0	cd	17.1	bcd	10108	e
	UREA	45	PD										
11	UREA	105	4-5 leaf	77.8	a	71.8	a	42.3	abc	17.4	bcd	10827	cd
	UREA	45	PD										
12	UREA	135	4-5 leaf	77.8	a	71.8	a	43.5	ab	17.7	b	11127	bc
	UREA	45	PD										
LSD P=.05				0.62		0.62		2.12		0.85		558.9	
Standard Deviation				0.43		0.43		1.47		0.59		388.5	
CV				0.56		0.6		3.62		3.41		3.9	
Treatment F				1.727		1.727		14.073		4.251		67.738	
Treatment Prob(F)				0.1104		0.1104		0.0001		0.0006		0.0001	

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

**Agronomic Response of Drill-Seeded DGL274 to Nitrogen
Fertilizer Rate and Time of Application – Tensas Parish**

Experiment number	21-SJ-12
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	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety: Rice / DGL274	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	June 6
Harvest date	Sept. 28
Seed treatment/cwt: Conventional Varieties:	
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization: No blanket applications	
Water management: Underground irrigation	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 44. Agronomic response of drill-seeded 1902212 to nitrogen fertilizer rate and time of application. Tensas Parish.

Crop Name	Rice		Rice		Rice		Rice		Rice	
	Plant-hd		Emer-hd		Tip of Panicle		Lodge		Moist	
	50% HD	50% HD	50% HD	50% HD	Height	Height	% plot	rate	%	Yield
Rating Date	days	days	days	days	in	in	Main	Main	Main	lb/A
Rating Type	days	days	days	days	in	in	Main	Main	Main	lb/A
Rating Unit	days	days	days	days	in	in	Main	Main	Main	lb/A
Crop Stage Majority	days	days	days	days	in	in	Main	Main	Main	Main
Trt	Treatment	Rate	Growth							
No.	Name	(lb N/A)	Stage							
1	UREA	0	4-5 leaf	86.8 a	80.8 a	33.8 d	0.0 a	0.0 a	23.8 def	6421 d
2	UREA	30	4-5 leaf	84.5 b	78.5 b	36.0 cd	0.0 a	0.0 a	23.2 f	7234 d
3	UREA	60	4-5 leaf	84.3 b	78.3 b	38.3 bc	0.0 a	0.0 a	23.6 ef	8088 c
4	UREA	90	4-5 leaf	84.0 b	78.0 b	41.0 ab	0.0 a	0.0 a	24.2 cde	8888 abc
5	UREA	120	4-5 leaf	84.3 b	78.3 b	41.8 ab	0.0 a	0.0 a	24.6 bcd	8993 ab
6	UREA	150	4-5 leaf	84.8 b	78.8 b	44.0 a	7.5 a	0.8 a	24.7 bcd	9650 a
7	UREA	180	4-5 leaf	84.5 b	78.5 b	42.3 ab	0.0 a	0.0 a	25.7 a	9725 a
8	UREA	210	4-5 leaf	84.3 b	78.3 b	44.5 a	17.5 a	1.8 a	25.3 ab	9276 ab
9	UREA	45	4-5 leaf	84.3 b	78.3 b	42.0 ab	0.0 a	0.0 a	23.9 def	8727 bc
	UREA	45	PD							
10	UREA	75	4-5 leaf	83.5 b	77.5 b	42.3 ab	0.0 a	0.0 a	24.2 cde	9116 ab
	UREA	45	PD							
11	UREA	105	4-5 leaf	84.5 b	78.5 b	44.8 a	0.0 a	0.0 a	25.0 abc	9362 ab
	UREA	45	PD							
12	UREA	135	4-5 leaf	84.0 b	78.0 b	44.5 a	12.5 a	1.3 a	24.5 bcd	9411 ab
	UREA	45	PD							
LSD P=.05				1.33	1.33	4.08	15.97	1.60	0.86	852.3
Standard Deviation				0.93	0.93	2.84	11.10	1.11	0.60	592.5
CV				1.1	1.18	6.87	355.32	355.32	2.45	6.78
Treatment F				2.894	2.894	6.179	1.184	1.184	5.851	11.627
Treatment Prob(F)				0.0089	0.0089	0.0001	0.3349	0.3349	0.0001	0.0001

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 PVL03 – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-13
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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 45. Evaluation of seeding rate and plant population in a stale seedbed for PVL03. 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	Yield	Yield	Yield	Yield								
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021										
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Total Yield								
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A								
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon	MC+RC									
Trt	Treatment															
No.	Name															
1	5 seed/ft2 (11.6 lb/A)	3.7	f	108.8	a	97.8	a	41.8	a	6917	e	1314	a	8231	e	
2	7.5 seed/ft2 (17.4 lb/A)	6.3	ef	108.3	ab	97.3	ab	42.0	a	8106	d	1244	a	9351	d	
3	10 seed/ft2 (22.3 lb/A)	7.7	de	108.3	ab	97.3	ab	43.3	a	9247	bc	1496	a	10743	bc	
4	15 seed/ft2 (34.9 lb/A)	9.9	d	107.0	bc	96.0	bc	40.8	a	8893	cd	1478	a	10370	cd	
5	20 seed/ft2 (46.6 lb/A)	13.8	c	106.8	cd	95.8	cd	41.0	a	9652	abc	1706	a	11359	abc	
6	25 seed/ft2 (58.2 lb/A)	16.2	c	105.5	de	94.5	de	40.5	a	10065	ab	1552	a	11617	ab	
7	30 seed/ft2 (69.9 lb/A)	21.2	b	105.0	ef	94.0	ef	41.0	a	10364	a	1449	a	11813	ab	
8	35 seed/ft2 (81.5 lb/A)	21.6	ab	105.0	ef	94.0	ef	40.0	a	9793	abc	1476	a	11269	abc	
9	40 seed/ft2 (93.1 lb/A)	24.5	a	104.0	f	93.0	f	39.8	a	10361	a	1572	a	11933	a	
LSD P=.05									3.00	1.48	1.48	2.19	519.3	1086.3		
Standard Deviation									2.05	1.02	1.02	1.50	667.7	744.3		
CV									14.8	0.95	1.06	3.65	7.21	24.1	6.93	
Treatment F									53.165	11.260	11.260	2.086	11.744	0.589	11.162	
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0783	0.0001	0.7769	0.0001	

Continued.

Table 45. Continued.

Crop Name Description	Yield Components									
	Rice		Rice		Rice		Rice		Rice	
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed	
	grams	number	grams	number	grams	number	grams	number	head	total
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m		
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows		
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit										
Crop Stage Majority										
Trt Treatment										
No. Name										
1 5 seed/ft2 (11.6 lb/A)	346.4 a	38 c	128.6 a	42.46 a	1684 a	66.13 a	73.06 a			
2 7.5 seed/ft2 (17.4 lb/A)	414.1 a	48 bc	174.1 a	41.90 a	1661 a	66.81 a	73.02 a			
3 10 seed/ft2 (22.3 lb/A)	379.3 a	43 c	159.7 a	43.68 a	1740 a	67.76 a	73.76 a			
4 15 seed/ft2 (34.9 lb/A)	379.4 a	49 bc	158.6 a	40.07 a	1568 a	67.19 a	73.43 a			
5 20 seed/ft2 (46.6 lb/A)	388.5 a	55 abc	164.3 a	37.82 a	1553 a	67.60 a	73.60 a			
6 25 seed/ft2 (58.2 lb/A)	400.0 a	68 ab	176.5 a	31.49 a	1271 a	67.69 a	73.36 a			
7 30 seed/ft2 (69.9 lb/A)	428.2 a	63 ab	185.9 a	34.44 a	1408 a	67.78 a	73.57 a			
8 35 seed/ft2 (81.5 lb/A)	437.8 a	70 a	194.0 a	33.46 a	1401 a	66.96 a	73.47 a			
9 40 seed/ft2 (93.1 lb/A)	437.8 a	72 a	191.3 a	33.42 a	1364 a	67.86 a	74.02 a			
LSD P=.05	122.44	19.6	60.43	9.251	383.3	1.540	0.809			
Standard Deviation	83.90	13.4	41.41	6.339	262.7	1.055	0.554			
CV	20.91	23.92	24.31	16.84	17.32	1.57	0.75			
Treatment F	0.547	3.486	0.971	2.080	1.530	1.227	1.298			
Treatment Prob(F)	0.8096	0.0083	0.4811	0.0791	0.1991	0.3260	0.2910			

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for DG-263L – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 46. Evaluation of seeding rate and plant population in a stale seedbed for DG-263L, H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Rice Density	Plant-hd	Emer-hd	Tip of panicle	Height	% plot	rate	Yield	Yield	Yield	Yield	Yield	Yield
Rating Date	4/12/2021				7/29/2021			8/6/2021	8/6/2021	8/6/2021	8/6/2021	11/1/2021	
Rating Type	Stand Count	50% HD	50% HD										
Rating Unit	#/sq ft.	days	days		in								
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Ratoon	MC+RC
Trt Treatment													
No. Name													
1 5 seed/ft2 (11.6 lb/A)	3.5 e	110.3 a	99.3 a	38.0 a	0.0 a	0.0 c		6970 a	2037 a	9007 a			
2 7.5 seed/ft2 (17.4 lb/A)	6.1 de	109.8 a	98.8 a	36.8 a	22.5 a	0.5 bc		8571 a	1523 a	10094 a			
3 10 seed/ft2 (22.3 lb/A)	9.7 cd	107.8 b	96.8 b	37.3 a	22.5 a	0.5 bc		8280 a	2019 a	10298 a			
4 15 seed/ft2 (34.9 lb/A)	12.8 c	106.8 bc	95.8 bc	38.3 a	37.5 a	1.3 abc		9156 a	1993 a	11149 a			
5 20 seed/ft2 (46.6 lb/A)	18.6 b	105.5 cd	94.5 cd	37.3 a	67.5 a	2.3 a		9381 a	1981 a	11361 a			
6 25 seed/ft2 (58.2 lb/A)	18.8 b	103.5 e	92.5 e	36.8 a	45.0 a	1.5 ab		9057 a	2110 a	11168 a			
7 30 seed/ft2 (69.9 lb/A)	20.0 b	105.3 cd	94.3 cd	38.0 a	42.5 a	2.0 a		8679 a	2089 a	10769 a			
8 35 seed/ft2 (81.5 lb/A)	25.8 a	104.0 de	93.0 de	35.3 a	55.0 a	2.3 a		8827 a	2041 a	10868 a			
9 40 seed/ft2 (93.1 lb/A)	27.6 a	103.3 e	92.3 e	37.5 a	42.5 a	1.0 abc		9288 a	1983 a	11271 a			
LSD P=.05	4.45	1.70	1.70	2.51	50.35	1.41		1635.4	534.5	1681.6			
Standard Deviation	3.05	1.16	1.16	1.72	34.50	0.96		1120.6	366.3	1152.2			
CV	19.21	1.1	1.22	4.62	92.7	77.08		12.9	18.55	10.8			
Treatment F	30.378	19.913	19.913	1.132	1.331	2.895		1.731	0.919	1.732			
Treatment Prob(F)	0.0001	0.0001	0.0001	0.3783	0.2762	0.0208		0.1423	0.5180	0.1419			

Continued.

Table 46. Continued.

Crop Name Description	Yield Components										Rice
	Rice		Rice		Rice		Rice		Rice		
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		
	grams	number	number	grams	grams	grams	number	number	head	total	
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit											
Crop Stage Majority											
Trt	Treatment										
No.	Name										
1	5 seed/ft2 (11.6 lb/A)	411.5 a	56 c	142.4 a	40.86 a	1678 a	63.37 a		70.26 a		
2	7.5 seed/ft2 (17.4 lb/A)	443.3 a	69 abc	186.1 a	36.70 a	1508 a	64.08 a		70.52 a		
3	10 seed/ft2 (22.3 lb/A)	372.8 a	59 bc	133.1 a	33.62 a	1357 a	63.14 a		70.44 a		
4	15 seed/ft2 (34.9 lb/A)	458.1 a	72 abc	173.1 a	33.79 a	1375 a	63.44 a		70.34 a		
5	20 seed/ft2 (46.6 lb/A)	498.6 a	85 a	199.7 a	32.72 a	1350 a	62.51 a		70.18 a		
6	25 seed/ft2 (58.2 lb/A)	467.2 a	77 ab	161.0 a	31.29 a	1259 a	62.53 a		69.95 a		
7	30 seed/ft2 (69.9 lb/A)	477.9 a	80 a	168.7 a	32.63 a	1352 a	63.12 a		70.36 a		
8	35 seed/ft2 (81.5 lb/A)	468.6 a	83 a	170.7 a	33.10 a	1355 a	62.66 a		70.08 a		
9	40 seed/ft2 (93.1 lb/A)	484.9 a	84 a	148.2 a	27.46 a	1127 a	62.41 a		70.02 a		
LSD P=.05		144.37	18.3	61.53	8.409	318.5	1.609		0.631		
Standard Deviation		98.93	12.5	42.16	5.762	218.2	1.103		0.432		
CV		21.81	16.98	25.59	17.16	15.89	1.75		0.62		
Treatment F		0.635	2.960	1.008	1.617	1.953	1.007		0.815		
Treatment Prob(F)		0.7403	0.0187	0.4558	0.1722	0.0980	0.4569		0.5969		

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for DGL274 – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 47. Evaluation of seeding rate and plant population in a stale seedbed for DGL274. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Rice Density	Plant-hd	Emer-hd	Tip of panicle	Height	% plot	Lodge	rate	Yield	Yield	Yield	Yield	Total Yield
Rating Date	4/12/2021				7/29/2021		8/6/2021		8/6/2021	8/6/2021	8/6/2021	11/1/2021	
Rating Type	Stand Count	50% HD	50% HD										
Rating Unit	#/sq ft.	days	days	in	Main	Main	Main	Main	lb/A	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Ratoon	MC+RC
Trt	Treatment												
No.	Name												
1	5 seed/ft2 (11.6 lb/A)	3.0 e	114.3 a	103.3 a	42.3 a	17.5 a	2.8 a	bc	9562 a	1830 b	11482 a		
2	7.5 seed/ft2 (17.4 lb/A)	4.1 e	114.3 a	103.3 a	40.8 a	22.5 a	2.0 a	c	9136 a	2123 ab	11375 a		
3	10 seed/ft2 (22.3 lb/A)	5.8 e	113.0 b	102.0 b	42.3 a	45.0 a	1.0 a	c	10209 a	1933 b	12142 a		
4	15 seed/ft2 (34.9 lb/A)	8.8 d	112.5 b	101.5 b	42.3 a	60.0 a	3.0 abc		9707 a	1903 b	11610 a		
5	20 seed/ft2 (46.6 lb/A)	11.1 cd	112.3 b	101.3 b	42.5 a	47.5 a	2.8 bc		8269 a	2233 ab	10502 a		
6	25 seed/ft2 (58.2 lb/A)	13.5 bc	112.0 b	101.0 b	40.8 a	57.5 a	4.5 ab		11226 a	2530 a	13756 a		
7	30 seed/ft2 (69.9 lb/A)	15.7 b	112.0 b	101.0 b	40.5 a	70.0 a	5.0 a		8917 a	2490 a	11407 a		
8	35 seed/ft2 (81.5 lb/A)	20.4 a	112.3 b	101.3 b	41.0 a	42.5 a	5.0 a		9225 a	2416 a	11640 a		
9	40 seed/ft2 (93.1 lb/A)	19.7 a	112.3 b	101.3 b	40.5 a	70.0 a	5.0 a		7695 a	2452 a	10147 a		
LSD P=.05	2.93	1.02	1.02	1.02	2.45	38.89	2.19		3646.6	419.7	3762.0		
Standard Deviation	2.01	0.70	0.70	0.70	1.68	26.65	1.50		2493.0	286.2	2558.3		
CV	17.73	0.62	0.62	0.69	4.06	55.46	43.66		26.73	12.94	22.13		
Treatment F	41.328	6.623	6.623	6.623	1.062	1.987	3.890		0.690	3.693	0.638		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.4205	0.0925	0.0046		0.6961	0.0071	0.7376		

Continued.

Table 47. Continued.

Crop Name Description	Yield Components										Rice				
	Rice		Rice		Rice		Rice		Rice						
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed						
	grams	number	number	grams	grams	grams	grams	number	number	head	Milling				
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m						
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows						
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main						
Collection Basis, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main						
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main						
Trt	Treatment														
No.	Name														
1	5 seed/f2 (11.6 lb/A)	422.9	a	53	c	153.9	a	40.47	ab	1546	a	63.71	a	70.39	a
2	7.5 seed/f2 (17.4 lb/A)	469.3	a	64	bc	177.2	a	37.67	abc	1428	abc	64.24	a	71.11	a
3	10 seed/f2 (22.3 lb/A)	531.2	a	69	abc	187.1	a	41.80	a	1583	a	63.70	a	69.85	a
4	15 seed/f2 (34.9 lb/A)	536.1	a	73	ab	169.8	a	37.57	abc	1400	abc	63.32	a	69.93	a
5	20 seed/f2 (46.6 lb/A)	506.2	a	71	ab	175.7	a	39.43	abc	1490	ab	63.77	a	70.40	a
6	25 seed/f2 (58.2 lb/A)	545.3	a	76	ab	175.3	a	32.38	bcd	1170	cd	63.79	a	70.34	a
7	30 seed/f2 (69.9 lb/A)	516.5	a	85	a	170.3	a	32.74	bc	1215	bcd	63.38	a	69.80	a
8	35 seed/f2 (81.5 lb/A)	452.1	a	74	ab	146.1	a	24.40	d	914	d	63.11	a	69.86	a
9	40 seed/f2 (93.1 lb/A)	579.3	a	85	a	180.2	a	31.77	cd	1157	cd	63.34	a	70.18	a
LSD P=.05		153.50		18.5		67.79		8.173		317.5		1.230		0.860	
Standard Deviation		105.18		12.7		46.45		5.601		217.6		0.839		0.587	
CV		20.76		17.61		27.23		15.84		16.45		1.32		0.84	
Treatment F		0.893		2.525		0.309		3.873		4.145		0.663		2.024	
Treatment Prob(F)		0.5376		0.0378		0.9553		0.0047		0.0032		0.7181		0.0911	

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for CLL16 – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 48. Evaluation of seeding rate and plant population in a stale seedbed for CLL16. 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	Yield	Yield	Yield	Yield	Yield						
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021									
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Yield	Total Yield						
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A	lb/A						
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon			MC+RC						
Trt	Treatment														
No.	Name														
1	5 seed/ft2 (11.6 lb/A)	4.3	g	109.3	a	98.3	a	43.0	a	8659	d	1907	a	10566	c
2	7.5 seed/ft2 (17.4 lb/A)	5.5	g	109.3	a	98.3	a	42.3	a	9361	c	1589	b	10950	bc
3	10 seed/ft2 (22.3 lb/A)	8.9	f	107.5	b	96.5	b	42.3	a	9597	bc	1228	c	10824	c
4	15 seed/ft2 (34.9 lb/A)	10.7	ef	107.5	b	96.5	b	43.8	a	10115	ab	1386	bc	11500	ab
5	20 seed/ft2 (46.6 lb/A)	12.8	e	106.5	bc	95.5	bc	41.3	a	10421	a	1387	bc	11807	a
6	25 seed/ft2 (58.2 lb/A)	17.0	d	105.3	cd	94.3	cd	41.0	a	10319	a	1581	b	11900	a
7	30 seed/ft2 (69.9 lb/A)	20.1	c	105.0	cd	94.0	cd	41.0	a	10276	a	1339	bc	11615	a
8	35 seed/ft2 (81.5 lb/A)	23.7	b	104.3	d	93.3	d	41.0	a	10129	ab	1560	b	11689	a
9	40 seed/ft2 (93.1 lb/A)	26.9	a	103.8	d	92.8	d	40.8	a	10087	ab	1588	b	11675	a
LSD P=.05										2.58	1.64	2.41	280.9	660.0	
Standard Deviation										1.77	1.13	1.65	371.8	452.2	
CV										12.27	1.06	3.94	12.77	3.97	
Treatment F										81.002	13.226	13.226	1.651	4.280	4.549
Treatment Prob(F)										0.0001	0.0001	0.0001	0.1628	0.0026	0.0018

Continued.

Table 48. Continued.

Crop Name Description	Yield Components									
	Rice		Rice		Rice		Rice		Rice	
	WP dry wt.		Panicke #		Grain wt.		10 P gr wt.		10 P seed	
	grams	number	number	grams	grams	number	grams	number	head	total
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m		
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows		
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit										
Crop Stage Majority										
Trt Treatment										
No. Name										
1 5 seed/ft2 (11.6 lb/A)	477.5 a	54 c	209.6 a	47.10 a	1861 a	62.94 a	71.87 a			
2 7.5 seed/ft2 (17.4 lb/A)	340.9 c	49 c	144.6 c	36.20 bc	1387 bc	63.55 a	71.98 a			
3 10 seed/ft2 (22.3 lb/A)	369.7 bc	56 c	159.3 bc	35.56 bcd	1380 bc	62.29 a	71.75 a			
4 15 seed/ft2 (34.9 lb/A)	385.6 bc	60 bc	169.4 bc	33.46 bcd	1295 bc	63.40 a	71.95 a			
5 20 seed/ft2 (46.6 lb/A)	432.0 ab	72 a	189.2 ab	29.82 bcd	1172 c	62.80 a	71.50 a			
6 25 seed/ft2 (58.2 lb/A)	404.8 bc	71 ab	168.0 bc	39.59 ab	1586 ab	62.15 a	71.33 a			
7 30 seed/ft2 (69.9 lb/A)	415.8 ab	76 a	177.0 b	29.06 cd	1180 bc	60.97 a	71.18 a			
8 35 seed/ft2 (81.5 lb/A)	416.7 ab	76 a	180.2 ab	31.82 bcd	1263 bc	61.79 a	71.80 a			
9 40 seed/ft2 (93.1 lb/A)	398.0 bc	75 a	174.7 bc	25.87 d	1021 c	61.57 a	71.33 a			
LSD P=.05	68.64	11.0	31.56	10.231	412.4	2.364	0.820			
Standard Deviation	47.03	7.6	21.63	7.010	282.6	1.620	0.562			
CV	11.63	11.6	12.38	20.45	20.94	2.6	0.78			
Treatment F	2.718	7.996	2.864	3.280	3.124	1.130	1.153			
Treatment Prob(F)	0.0276	0.0001	0.0218	0.0113	0.0145	0.3795	0.3663			

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for CLL17 – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 49. Evaluation of seeding rate and plant population in a stale seedbed for CLL17. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Rice Density	Plant-hd	Emer-hd	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle
Rating Date	4/12/2021				7/29/2021	8/6/2021	8/6/2021	8/6/2021	8/6/2021	8/6/2021	8/6/2021	11/1/2021
Rating Type	Stand Count	50% HD	50% HD		Height	Lodge						Total Yield
Rating Unit	#/sq ft.	days	days		in	% plot	rate					lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	MC+RC
Trt Treatment												
No. Name												
1 5 seed/ft2 (11.6 lb/A)	4.1 f	103.5 a	95.5 a	42.5 a	27.5 a	2.5 a	2.5 a	9124 a	2169 a	11294 c		
2 7.5 seed/ft2 (17.4 lb/A)	8.0 e	101.8 b	93.8 b	40.5 ab	22.5 a	1.3 a	1.3 a	9160 a	2377 a	11536 bc		
3 10 seed/ft2 (22.3 lb/A)	8.8 e	99.8 c	91.8 c	41.0 ab	35.0 a	2.5 a	2.5 a	9481 a	2820 a	12301 ab		
4 15 seed/ft2 (34.9 lb/A)	12.9 d	99.5 c	91.5 c	41.3 ab	37.5 a	2.0 a	2.0 a	9659 a	2582 a	12240 abc		
5 20 seed/ft2 (46.6 lb/A)	13.4 d	99.3 c	91.3 c	41.0 ab	45.0 a	3.8 a	3.8 a	10237 a	2657 a	12894 a		
6 25 seed/ft2 (58.2 lb/A)	19.8 c	99.3 c	91.3 c	38.0 c	37.5 a	3.0 a	3.0 a	10250 a	2233 a	12483 ab		
7 30 seed/ft2 (69.9 lb/A)	20.3 c	99.3 c	91.3 c	39.3 bc	45.0 a	2.5 a	2.5 a	9922 a	2454 a	12376 ab		
8 35 seed/ft2 (81.5 lb/A)	25.1 b	99.0 c	91.0 c	40.0 bc	37.5 a	3.8 a	3.8 a	9611 a	2821 a	12432 ab		
9 40 seed/ft2 (93.1 lb/A)	29.7 a	99.0 c	91.0 c	39.5 bc	12.5 a	2.5 a	2.5 a	10116 a	2797 a	12913 a		
LSD P=.05	3.50	1.17	1.17	2.48	48.28	3.43	3.43	1108	637.1	1004.2		
Standard Deviation	2.40	0.80	0.80	1.70	33.08	2.35	2.35	759.0	436.6	688.1		
CV	15.21	0.8	0.87	4.22	99.24	89.08	7.8	7.8	17.15	5.61		
Treatment F	50.371	15.000	15.000	2.400	0.417	0.454	1.290	1.323	2.512			
Treatment Prob(F)	0.0001	0.0001	0.0001	0.047	0.899	0.876	0.295	0.280	0.039			

Continued.

Table 49. Continued.

Crop Name Description	Yield Components									
	Rice		Rice		Rice		Rice		Rice	
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed	
	grams	number	grams	number	grams	number	grams	number	head	total
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m		
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows		
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit										
Crop Stage Majority										
Trt	Treatment									
No.	Name									
1	5 seed/ft2 (11.6 lb/A)	462.0 a	81 a	215.9 a	37.29 a	1628 a	67.67 a	72.74 a		
2	7.5 seed/ft2 (17.4 lb/A)	456.8 a	89 a	216.7 a	29.85 a	1341 a	67.79 a	72.68 a		
3	10 seed/ft2 (22.3 lb/A)	385.7 a	80 a	170.7 a	34.10 a	1514 a	67.45 a	72.83 a		
4	15 seed/ft2 (34.9 lb/A)	388.3 a	89 a	166.3 a	25.77 a	1144 a	67.12 a	72.35 a		
5	20 seed/ft2 (46.6 lb/A)	397.6 a	95 a	169.1 a	28.14 a	1201 a	66.70 a	72.08 a		
6	25 seed/ft2 (58.2 lb/A)	412.4 a	97 a	180.1 a	31.23 a	1324 a	66.32 a	71.89 a		
7	30 seed/ft2 (69.9 lb/A)	418.8 a	100 a	182.8 a	26.29 a	1157 a	66.51 a	72.00 a		
8	35 seed/ft2 (81.5 lb/A)	430.5 a	77 a	185.0 a	22.86 a	1006 a	66.62 a	72.25 a		
9	40 seed/ft2 (93.1 lb/A)	451.6 a	117 a	188.3 a	25.31 a	1107 a	67.79 a	72.73 a		
LSD P=.05	111.63	28.3	53.98	9.602	445.8	1.279	0.903			
Standard Deviation	76.49	19.4	36.99	6.579	305.5	0.876	0.619			
CV	18.1	21.14	19.88	22.7	24.07	1.31	0.85			
Treatment F	0.590	1.627	1.023	1.965	1.743	1.801	1.352			
Treatment Prob(F)	0.776	0.169	0.446	0.096	0.139	0.127	0.267			

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for 1902026CLL – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-18
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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 50. Evaluation of seeding rate and plant population in a stale seedbed for 1902026CLL. 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	Yield	Yield	Yield	Yield
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021		
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Total Yield
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon		MC+RC
Trt	Treatment							
No.	Name							
1	5 seed/ft2 (11.6 lb/A)	3.6 d	107.3 a	96.3 a	38.8 a	8617 d	1805 a	10422 d
2	7.5 seed/ft2 (17.4 lb/A)	3.8 d	106.5 a	95.5 a	39.8 a	9491 cd	2101 a	11591 c
3	10 seed/ft2 (22.3 lb/A)	6.8 cd	106.0 ab	95.0 ab	40.3 a	10058 bc	2299 a	12357 bc
4	15 seed/ft2 (34.9 lb/A)	8.9 bc	104.8 bc	93.8 bc	38.0 a	10768 ab	2543 a	13312 ab
5	20 seed/ft2 (46.6 lb/A)	10.2 b	104.3 cd	93.3 cd	39.3 a	10870 ab	2402 a	13272 ab
6	25 seed/ft2 (58.2 lb/A)	15.7 a	104.0 cd	93.0 cd	38.8 a	11241 a	2377 a	13618 a
7	30 seed/ft2 (69.9 lb/A)	15.1 a	103.3 d	92.3 d	37.3 a	11137 a	2481 a	13618 a
8	35 seed/ft2 (81.5 lb/A)	17.4 a	103.8 cd	92.8 cd	38.3 a	11137 a	2486 a	13623 a
9	40 seed/ft2 (93.1 lb/A)	17.7 a	103.5 cd	92.5 cd	37.8 a	10752 ab	2184 a	12936 ab
LSD P=.05		3.30	1.35	1.35	1.97	878.6	452.9	1161.3
Standard Deviation		2.26	0.93	0.93	1.35	602.0	310.3	795.8
CV		20.55	0.88	0.99	3.49	5.76	13.51	6.24
Treatment F		24.712	9.616	9.616	2.056	8.790	2.293	7.745
Treatment Prob(F)		0.0001	0.0001	0.0001	0.0824	0.0001	0.0554	0.0001

Continued.

Table 50. Continued.

Crop Name Description	Yield Components										Rice	Rice	Rice		
	Rice		Rice		Rice		Rice		Rice						
	WP dry wt.	Panicle #	Grain wt.	10 P gr wt.	10 P seed	10 P seed	10 P seed	10 P seed	10 P seed	10 P seed					
	grams	number	grams	grams	number	number	number	number	number	number					
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	
Collection Basis, Unit															
Crop Stage Majority															
Trt	Treatment														
No.	Name														
1	5 seed/f ₂ (11.6 lb/A)	334.8	a	46	c	152.5	a	40.42	a	1724	a	68.48	a	72.74	a
2	7.5 seed/f ₂ (17.4 lb/A)	388.8	a	57	bc	173.6	a	39.45	a	1663	ab	68.68	a	73.03	a
3	10 seed/f ₂ (22.3 lb/A)	413.5	a	67	ab	191.1	a	33.27	ab	1409	bc	68.63	a	72.88	a
4	15 seed/f ₂ (34.9 lb/A)	418.2	a	65	abc	202.7	a	33.83	ab	1413	bc	67.85	a	72.73	a
5	20 seed/f ₂ (46.6 lb/A)	343.8	a	66	ab	157.4	a	31.51	b	1316	c	67.53	a	72.38	a
6	25 seed/f ₂ (58.2 lb/A)	415.5	a	81	a	190.7	a	28.46	b	1188	c	68.10	a	72.95	a
7	30 seed/f ₂ (69.9 lb/A)	334.2	a	70	ab	148.3	a	27.82	b	1187	c	68.63	a	73.13	a
8	35 seed/f ₂ (81.5 lb/A)	322.8	a	70	ab	146.4	a	28.34	b	1177	c	68.15	a	73.00	a
9	40 seed/f ₂ (93.1 lb/A)	362.0	a	78	a	169.0	a	26.81	b	1131	c	67.35	a	72.60	a
LSD P=.05		95.03		19.8		51.29		7.199		295.8		1.087		0.567	
Standard Deviation		65.11		13.6		35.14		4.933		202.7		0.745		0.389	
CV		17.58		20.46		20.65		15.31		14.95		1.09		0.53	
Treatment F		1.431		2.379		1.398		4.141		4.588		1.761		1.487	
Treatment Prob(F)		0.2344		0.0480		0.2473		0.0032		0.0017		0.1353		0.2137	

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for 1902034CLL – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-19
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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 51. Evaluation of seeding rate and plant population in a stale seedbed for 1902034CLL. 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	Yield	Yield	Yield	Yield
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021		
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Total Yield
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon		MC+RC
Trt	Treatment							
No.	Name							
1	5 seed/ft2 (11.6 lb/A)	3.6 e	104.8 a	93.8 a	40.8 a	9518 b	2174 a	11692 c
2	7.5 seed/ft2 (17.4 lb/A)	6.3 e	103.5 b	92.5 b	39.3 a	9572 b	2325 a	11897 c
3	10 seed/ft2 (22.3 lb/A)	6.4 e	102.8 c	91.8 c	39.0 a	9826 b	2601 a	12427 bc
4	15 seed/ft2 (34.9 lb/A)	11.7 d	102.8 c	91.8 c	39.3 a	10700 a	2459 a	13159 ab
5	20 seed/ft2 (46.6 lb/A)	14.1 cd	102.8 c	91.8 c	38.5 a	10981 a	2558 a	13539 a
6	25 seed/ft2 (58.2 lb/A)	15.9 bc	103.0 bc	92.0 bc	39.0 a	11092 a	2449 a	13540 a
7	30 seed/ft2 (69.9 lb/A)	18.2 b	102.5 c	91.5 c	39.0 a	10804 a	2493 a	13297 a
8	35 seed/ft2 (81.5 lb/A)	21.7 a	102.5 c	91.5 c	38.8 a	10951 a	2528 a	13479 a
9	40 seed/ft2 (93.1 lb/A)	23.1 a	102.5 c	91.5 c	38.0 a	10964 a	2678 a	13642 a
LSD P=.05		3.22	0.74	0.74	2.09	608.4	359.4	739.2
Standard Deviation		2.20	0.50	0.50	1.44	416.9	246.3	506.5
CV		16.39	0.49	0.55	3.68	3.97	9.95	3.91
Treatment F		40.308	8.345	8.345	1.085	9.816	1.492	8.928
Treatment Prob(F)		0.0001	0.0001	0.0001	0.4061	0.0001	0.2122	0.0001

Continued.

Table 51. Continued.

Crop Name Description	Yield Components										Rice	Rice	Rice
	Rice		Rice		Rice		Rice		Rice				
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed				
	grams	number	number	grams	grams	grams	grams	number	number	head	total		
Rating Type													
Rating Unit													
Sample Size, Unit													
Collection Basis, Unit													
Crop Stage Majority													
Trt Treatment													
No. Name													
1 5 seed/ft2 (11.6 lb/A)													
2 7.5 seed/ft2 (17.4 lb/A)													
3 10 seed/ft2 (22.3 lb/A)													
4 15 seed/ft2 (34.9 lb/A)													
5 20 seed/ft2 (46.6 lb/A)													
6 25 seed/ft2 (58.2 lb/A)													
7 30 seed/ft2 (69.9 lb/A)													
8 35 seed/ft2 (81.5 lb/A)													
9 40 seed/ft2 (93.1 lb/A)													
LSD P=.05													
Standard Deviation													
CV													
Treatment F													
Treatment Prob(F)													

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for 1902212 – H. Rouse Caffey Rice Research Station**

Experiment number: 21-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.....: 1.22

pH.....: 7.01

Extractable nutrients (ppm).....: Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7

Crop/Variety: Rice / 1902212

Planting method/date: Drill seeded / Mar. 10

Seeding rate/depth.....: See Trt. Name / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 6

Ratoon Harvest date.....: Nov. 1

Seed treatment/cwt: **Conventional Varieties:**

Apron (fungicide) – 8.88 ml

Maxim (fungicide) – 0.88 ml

Release (gibberellic acid) – 10 g

Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml

AV-1011 (bird repellent) – 18.3 oz

Dermacor- 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

150 lb N/A 46-0-0, Apr. 27

90 lb N/A 46-0-0, Aug. 6 (ratoon)

Water management: Underground irrigation

Flush: NA

Flood: Apr. 28

Drain: Jul. 21

Ratoon flood: Aug. 9

Ratoon drain: Oct. 11

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +

.25% Surfactant, Mar. 9

2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

15 oz/A Amistar Top, Jun. 23

Table 52. Evaluation of seeding rate and plant population in a stale seedbed for 1902212. 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	Yield	Yield	Yield	Yield
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021		
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Total Yield
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon		MC+RC
Trt	Treatment							
No.	Name							
1	5 seed/ft2 (11.6 lb/A)	3.6 f	100.0 a	89.0 a	36.8 ab	7021 d	3073 b	10095 d
2	7.5 seed/ft2 (17.4 lb/A)	5.4 ef	97.8 bc	86.8 bc	38.0 a	7947 c	3098 b	11045 c
3	10 seed/ft2 (22.3 lb/A)	6.9 e	98.0 b	87.0 b	35.8 bcd	8400 bc	3559 a	11959 b
4	15 seed/ft2 (34.9 lb/A)	10.1 d	97.3 bcd	86.3 bcd	36.5 abc	8908 ab	3420 a	12328 ab
5	20 seed/ft2 (46.6 lb/A)	12.5 cd	97.3 bcd	86.3 bcd	34.8 d	9166 a	3408 a	12574 ab
6	25 seed/ft2 (58.2 lb/A)	14.3 c	96.8 cd	85.8 cd	35.5 bcd	9239 a	3466 a	12705 ab
7	30 seed/ft2 (69.9 lb/A)	18.2 b	96.5 de	85.5 de	34.5 d	9077 ab	3360 ab	12437 ab
8	35 seed/ft2 (81.5 lb/A)	19.5 b	96.8 cd	85.8 cd	34.3 d	9410 a	3523 a	12933 a
9	40 seed/ft2 (93.1 lb/A)	23.6 a	95.5 e	84.5 e	35.0 cd	9205 a	3346 ab	12551 ab
LSD P=.05	2.94	1.01	1.01	1.01	1.74	711.5	305.4	913.8
Standard Deviation	2.02	0.69	0.69	0.69	1.19	487.5	209.3	626.2
CV	15.92	0.71	0.8	0.8	3.35	5.6	6.23	5.19
Treatment F	46.138	13.078	13.078	13.078	4.208	10.365	2.671	8.669
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0029	0.0001	0.0298	0.0001

Continued.

Table 52. Continued.

Crop Name Description	Yield Components										Rice	Rice	Rice	
	Rice		Rice		Rice		Rice		Rice					
	WP dry wt.	Panicle #	Grain wt.	10 P gr wt.	10 P seed									
	grams	number	grams	grams	number									
Rating Type														
Rating Unit														
Sample Size, Unit														
Collection Basis, Unit														
Crop Stage Majority														
Trt Treatment														
No. Name														
1 5 seed/ft2 (11.6 lb/A)	229.0	a	40	f	102.6	a	37.06	a	1531	ab	69.34	a	73.55	a
2 7.5 seed/ft2 (17.4 lb/A)	308.4	a	55	ef	143.4	a	38.59	a	1643	a	69.22	a	72.61	a
3 10 seed/ft2 (22.3 lb/A)	335.5	a	65	de	154.8	a	32.45	ab	991	c	68.62	a	72.43	a
4 15 seed/ft2 (34.9 lb/A)	334.4	a	67	cde	155.3	a	31.73	ab	1281	abc	68.73	a	72.52	a
5 20 seed/ft2 (46.6 lb/A)	332.1	a	78	a-d	158.1	a	28.27	b	1115	c	69.15	a	72.65	a
6 25 seed/ft2 (58.2 lb/A)	297.5	a	69	b-e	140.7	a	27.97	b	1199	bc	68.85	a	72.48	a
7 30 seed/ft2 (69.9 lb/A)	340.8	a	84	abc	155.9	a	28.45	b	1201	bc	67.41	a	72.39	a
8 35 seed/ft2 (81.5 lb/A)	336.8	a	87	ab	164.0	a	27.34	b	1166	bc	68.26	a	72.22	a
9 40 seed/ft2 (93.1 lb/A)	327.2	a	90	a	148.6	a	28.43	b	1056	c	67.85	a	72.44	a
LSD P=.05	69.75		18.1		37.65		7.268		406.7		1.615		1.251	
Standard Deviation	47.79		12.4		25.80		4.980		278.7		1.107		0.857	
CV	15.14		17.64		17.54		15.99		22.43		1.61		1.18	
Treatment F	2.215		6.828		1.985		2.821		2.373		1.396		0.791	
Treatment Prob(F)	0.0631		0.0001		0.0928		0.0234		0.0485		0.2483		0.6154	

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

**Evaluation of Seeding Rate and Plant Population in a Stale
Seedbed for 1902207 – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	See Trt. Name / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 53. Evaluation of seeding rate and plant population in a stale seedbed for 1902207. 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	Yield	Yield	Yield	Yield
Rating Date	4/12/2021			7/29/2021	8/6/2021	11/1/2021		
Rating Type	Stand Count	50% HD	50% HD	Height	Yield	Yield	Yield	Total Yield
Rating Unit	#/sq ft.	days	days	in	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Ratoon		MC+RC
Trt	Treatment							
No.	Name							
1	5 seed/ft2 (11.6 lb/A)	3.6 f	109.8 a	98.8 a	41.3 a	7251 d	2165 d	9415 d
2	7.5 seed/ft2 (17.4 lb/A)	5.3 f	109.0 ab	98.0 ab	41.8 a	8125 cd	2415 cd	10540 cd
3	10 seed/ft2 (22.3 lb/A)	6.8 ef	108.3 bc	97.3 bc	41.8 a	8770 bc	2464 bcd	11234 bc
4	15 seed/ft2 (34.9 lb/A)	10.1 e	107.5 cd	96.5 cd	41.3 a	9445 ab	2937 a	12382 ab
5	20 seed/ft2 (46.6 lb/A)	13.9 d	106.8 de	95.8 de	43.0 a	9975 ab	2885 ab	12860 ab
6	25 seed/ft2 (58.2 lb/A)	15.7 cd	106.0 e	95.0 e	41.3 a	10053 a	2916 a	12969 a
7	30 seed/ft2 (69.9 lb/A)	19.0 b	106.3 e	95.3 e	41.5 a	10033 a	3012 a	13045 a
8	35 seed/ft2 (81.5 lb/A)	18.2 bc	106.0 e	95.0 e	40.5 a	9786 ab	2777 abc	12563 ab
9	40 seed/ft2 (93.1 lb/A)	25.1 a	105.8 e	94.8 e	41.0 a	10068 a	3049 a	13117 a
LSD P=.05	3.33	1.08	1.08	1.08	2.32	1250.9	451.0	1649.0
Standard Deviation	2.28	0.74	0.74	0.74	1.59	857.1	309.0	1130.0
CV	17.46	0.69	0.69	0.77	3.84	9.24	11.3	9.41
Treatment F	39.672	15.559	15.559	15.559	0.751	5.626	4.052	5.436
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.6471	0.0004	0.0036	0.0006

Continued.

Table 53. Continued.

Crop Name Description	Yield Components						Rice								
	Rice		Rice		Rice										
	WP dry wt.		Panicle #		Grain wt.										
	grams	number	number	grams	grams	number									
Rating Type							10 P seed								
Rating Unit							number								
Sample Size, Unit	1 m	1 m	1 m	1 m	1 m	1 m	1 m								
Collection Basis, Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows								
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main								
Trt	Treatment														
No.	Name														
1	5 seed/ft2 (11.6 lb/A)	408.5	a	34	d	98.2	a	46.94	a	1981	a	67.58	a	73.14	a
2	7.5 seed/ft2 (17.4 lb/A)	493.0	a	44	cd	142.5	a	43.71	ab	1884	ab	69.89	a	73.54	a
3	10 seed/ft2 (22.3 lb/A)	480.9	a	48	cd	146.9	a	38.19	bc	1659	bc	68.39	a	73.94	a
4	15 seed/ft2 (34.9 lb/A)	466.0	a	47	cd	140.4	a	38.48	bc	1643	bc	68.74	a	72.88	a
5	20 seed/ft2 (46.6 lb/A)	487.6	a	50	c	151.7	a	35.92	c	1548	c	69.59	a	73.66	a
6	25 seed/ft2 (58.2 lb/A)	503.0	a	58	abc	157.9	a	37.32	bc	1584	c	70.63	a	74.16	a
7	30 seed/ft2 (69.9 lb/A)	522.7	a	67	a	161.7	a	34.04	c	1499	c	69.58	a	74.01	a
8	35 seed/ft2 (81.5 lb/A)	461.9	a	51	bc	142.8	a	37.44	bc	1621	bc	69.34	a	73.47	a
9	40 seed/ft2 (93.1 lb/A)	497.4	a	65	ab	157.4	a	35.49	c	1529	c	67.50	a	73.08	a
LSD P=.05		95.66		14.7		53.67		6.461		291.0		2.358		0.879	
Standard Deviation		65.55		10.1		36.78		4.427		199.4		1.616		0.602	
CV		13.65		19.63		25.47		11.46		12.0		2.34		0.82	
Treatment F		0.993		4.270		1.059		3.481		2.722		1.714		2.185	
Treatment Prob(F)		0.4662		0.0027		0.4223		0.0084		0.0274		0.1464		0.0664	

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for PVL03 – Tensas Parish

Experiment number	21-SJ-13
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	
% Organic matter	2.34
pH	6.80
Extractable nutrients ppm	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	See treatment / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
Conventional Varieties:	
Apron (fungicide) – 8.88 ml	
Maxim (fungicide) – 0.88 ml	
Release (gibberellic acid) – 10 g	
Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml	
AV-1011 (bird repellent) – 18.3 oz	
Dermacor- 0.137 lb ai/cwt	
Fertilization	
150 lb N/A 46-0-0, Jun. 24	
Water management	
Underground irrigation	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
2 pt/A Prowl H ₂ O, Jun. 15	
2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24	
Insecticides	None
Fungicides	None

Table 54. Evaluation of seeding rate and plant population in a stale seedbed for PVL03. Tensas Parish.

Crop Name	Rice		Rice		Rice		Rice				
Description	Rice Density		Plant-hd		Emer-hd		Tip of panicle				
Rating Date	4/12/2021						9/27/2021				
Rating Type	Stand Count		50% HD		50% HD		Height				
Rating Unit	#/sq ft.		days		days		in				
Crop Stage Majority	Main		Main		Main		Main				
Trt	Treatment										
No.	Name										
1	5 seed/ft2 (11.6 lb/A)	3.8	e	76.0	a	70.0	a	44.5	a	7541	a
2	7.5 seed/ft2 (17.4 lb/A)	6.0	e	76.0	a	70.0	a	43.3	a	7679	a
3	10 seed/ft2 (22.3 lb/A)	5.7	e	76.0	a	70.0	a	43.8	a	7042	a
4	15 seed/ft2 (34.9 lb/A)	9.8	d	76.0	a	70.0	a	43.5	a	7909	a
5	20 seed/ft2 (46.6 lb/A)	12.6	d	76.0	a	70.0	a	43.8	a	8240	a
6	25 seed/ft2 (58.2 lb/A)	16.7	c	76.0	a	70.0	a	43.3	a	8536	a
7	30 seed/ft2 (69.9 lb/A)	20.2	b	76.0	a	70.0	a	43.8	a	8281	a
8	35 seed/ft2 (81.5 lb/A)	24.3	a	76.0	a	70.0	a	44.0	a	8562	a
9	40 seed/ft2 (93.1 lb/A)	25.2	a	76.0	a	70.0	a	42.0	a	8194	a
LSD P=.05		3.26		NA		NA		2.55		991.4	
Standard Deviation		2.24		0.00		0.00		1.75		677.8	
CV		16.2		0.0		0.0		4.02		8.47	
Treatment F		53.419		0.000		0.000		0.622		2.196	
Treatment Prob(F)		0.0001		1.0000		1.0000		0.7512		0.0670	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Continued.

Table 54. Continued.

Crop Name Description	Yield Components									
	Rice		Rice		Rice		Rice		Rice	
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed	
	grams	number	grams	number	grams	number	grams	number	head	total
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m		
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows		
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit										
Crop Stage Majority										
Trt Treatment										
No. Name										
1 5 seed/f2 (11.6 lb/A)	313.0 a	47 a	98.8 a	32.89 a	1339 a	61.11 a	71.23 a			
2 7.5 seed/f2 (17.4 lb/A)	388.2 a	58 a	124.4 a	27.43 a	1073 a	59.64 a	70.93 a			
3 10 seed/f2 (22.3 lb/A)	395.4 a	65 a	126.6 a	24.62 a	962 a	59.60 a	70.76 a			
4 15 seed/f2 (34.9 lb/A)	354.7 a	57 a	110.6 a	23.44 a	977 a	59.92 a	70.50 a			
5 20 seed/f2 (46.6 lb/A)	366.3 a	65 a	123.7 a	19.38 a	781 a	58.50 a	70.82 a			
6 25 seed/f2 (58.2 lb/A)	385.6 a	63 a	132.3 a	23.20 a	931 a	58.26 a	70.79 a			
7 30 seed/f2 (69.9 lb/A)	396.3 a	76 a	125.1 a	24.40 a	979 a	59.08 a	70.82 a			
8 35 seed/f2 (81.5 lb/A)	332.4 a	62 a	110.0 a	27.19 a	1056 a	58.72 a	70.65 a			
9 40 seed/f2 (93.1 lb/A)	374.6 a	70 a	127.7 a	23.68 a	950 a	58.48 a	70.73 a			
LSD P=.05	102.50	16.1	40.68	7.869	332.3	2.688	0.684			
Standard Deviation	70.24	11.1	27.87	5.392	227.7	1.838	0.467			
CV	19.12	17.73	23.25	21.45	22.65	3.1	0.66			
Treatment F	0.688	2.183	0.611	1.931	1.742	0.982	0.738			
Treatment Prob(F)	0.6979	0.0666	0.7597	0.1017	0.1397	0.4743	0.6575			

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

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for DG-263L – Tensas Parish

Experiment number	21-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	
% Organic matter	2.34
pH	6.80
Extractable nutrients ppm	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	See treatment / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	150 lb N/A 46-0-0, Jun. 24
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 55. Evaluation of seeding rate and plant population in a stale seedbed for DG-263L, Tensas Parish.

Crop Name	Rice		Rice		Rice		Rice				
Description	Rice Density		Plant-hd		Emer-hd		Tip of panicle				
Rating Date	4/12/2021						9/27/2021				
Rating Type	Stand Count		50% HD		50% HD		Height				
Rating Unit	#/sq ft.		days		days		in				
Crop Stage Majority	Main		Main		Main		Main				
Trt	Treatment										
No.	Name										
1	5 seed/ft2 (11.6 lb/A)	4.8	f	77.0	a	71.0	a	40.5	a	9970	a
2	7.5 seed/ft2 (17.4 lb/A)	6.6	ef	77.0	a	71.0	a	40.8	a	10242	a
3	10 seed/ft2 (22.3 lb/A)	9.3	de	77.0	a	71.0	a	40.0	a	10115	a
4	15 seed/ft2 (34.9 lb/A)	12.6	d	77.0	a	71.0	a	40.3	a	9912	a
5	20 seed/ft2 (46.6 lb/A)	17.1	c	77.0	a	71.0	a	40.5	a	10845	a
6	25 seed/ft2 (58.2 lb/A)	18.3	bc	77.0	a	71.0	a	39.5	a	10671	a
7	30 seed/ft2 (69.9 lb/A)	20.8	b	77.0	a	71.0	a	40.5	a	10758	a
8	35 seed/ft2 (81.5 lb/A)	24.3	a	77.0	a	71.0	a	40.0	a	11026	a
9	40 seed/ft2 (93.1 lb/A)	25.5	a	77.0	a	71.0	a	39.3	a	10621	a
LSD P=.05		3.42		NA		NA		1.85		832.9	
Standard Deviation		2.35		0.00		0.00		1.26		570.7	
CV		15.16		0.0		0.0		3.15		5.45	
Treatment F		41.251		0.000		0.000		0.630		2.049	
Treatment Prob(F)		0.0001		1.0000		1.0000		0.7451		0.0833	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Continued.

Table 55. Continued.

Crop Name Description	Yield Components										Rice	Rice	Rice	
	Rice		Rice		Rice		Rice		Rice					
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed					
	grams	number	number	grams	grams	number	grams	number	number	head	total			
Rating Type	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m
Rating Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows
Sample Size, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Collection Basis, Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Crop Stage Majority														
Trt	Treatment													
No.	Name													
1	5 seed/ft2 (11.6 lb/A)	347.4	a	54	a	144.2	a	29.26	a	1187	a	61.69	a	70.18
2	7.5 seed/ft2 (17.4 lb/A)	412.9	a	68	a	175.2	a	35.72	a	1477	a	60.11	a	69.23
3	10 seed/ft2 (22.3 lb/A)	435.8	a	69	a	176.1	a	35.01	a	1455	a	61.10	a	70.11
4	15 seed/ft2 (34.9 lb/A)	373.4	a	72	a	145.1	a	29.87	a	1244	a	61.13	a	70.05
5	20 seed/ft2 (46.6 lb/A)	436.2	a	83	a	187.0	a	27.92	a	1164	a	60.83	a	70.12
6	25 seed/ft2 (58.2 lb/A)	408.4	a	83	a	161.9	a	29.97	a	1245	a	59.45	a	69.85
7	30 seed/ft2 (69.9 lb/A)	393.3	a	78	a	167.9	a	27.59	a	1164	a	60.45	a	70.38
8	35 seed/ft2 (81.5 lb/A)	358.2	a	77	a	155.6	a	28.94	a	1195	a	59.83	a	70.10
9	40 seed/ft2 (93.1 lb/A)	383.9	a	86	a	155.6	a	32.33	a	1328	a	58.60	a	70.07
LSD P=.05		117.97		22.7		58.49		7.519		289.6		2.153		0.653
Standard Deviation		80.84		15.5		40.08		5.152		198.5		1.476		0.448
CV		20.5		20.92		24.56		16.76		15.59		2.45		0.64
Treatment F		0.618		1.602		0.530		1.322		1.477		1.700		2.092
Treatment Prob(F)		0.7545		0.1767		0.8225		0.2799		0.2173		0.1498		0.0776

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

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLL16 – Tensas Parish

Experiment number	21-SJ-16
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	
% Organic matter	2.34
pH	6.80
Extractable nutrients ppm	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	See treatment / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	150 lb N/A 46-0-0, Jun. 24
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 56. Evaluation of seeding rate and plant population in a stale seedbed for CLL16. Tensas Parish.

Crop Name	Rice		Rice	Rice	Rice	Rice	Rice
Description	Rice Density		Plant-hd	Emer-hd	Tip of panicle		
Rating Date	4/12/2021				9/27/2021		
Rating Type	Stand Count		50% HD	50% HD	Height		
Rating Unit	#/sq ft.		days	days	in		
Crop Stage Majority	Main		Main	Main	Main		
Trt	Treatment						
No.	Name						
1	5 seed/ft2 (11.6 lb/A)	3.4	d	82.8	ab	76.8	ab
2	7.5 seed/ft2 (17.4 lb/A)	6.6	cd	83.0	a	77.0	a
3	10 seed/ft2 (22.3 lb/A)	7.6	cd	83.0	a	77.0	a
4	15 seed/ft2 (34.9 lb/A)	10.1	c	82.3	bc	76.3	bc
5	20 seed/ft2 (46.6 lb/A)	15.3	b	82.5	ab	76.5	ab
6	25 seed/ft2 (58.2 lb/A)	16.2	b	82.3	bc	76.3	bc
7	30 seed/ft2 (69.9 lb/A)	19.5	ab	81.5	d	75.5	d
8	35 seed/ft2 (81.5 lb/A)	24.0	a	81.8	cd	75.8	cd
9	40 seed/ft2 (93.1 lb/A)	22.6	a	81.3	d	75.3	d
LSD P=.05		5.18		0.71		0.71	
Standard Deviation		3.55		0.49		0.49	
CV		25.51		0.59		0.64	
Treatment F		17.153		6.882		6.882	
Treatment Prob(F)		0.0001		0.0001		0.0001	

Continued.

Table 56. Continued.

Crop Name Description	Yield Components										Rice			
	Rice		Rice		Rice		Rice		Rice					
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed					
	grams	number	number	grams	grams	number	grams	number	number	head	total			
Rating Type	1 m	1 m	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows			
Rating Unit	1 m	1 m	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows			
Sample Size, Unit	1 m	1 m	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows			
Collection Basis, Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows			
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main			
Trt Treatment														
No. Name														
1 5 seed/ft2 (11.6 lb/A)	433.6	a	56	a	180.3	a	35.68	a	1410	a	65.67	a	71.49	a
2 7.5 seed/ft2 (17.4 lb/A)	459.2	a	60	a	179.7	a	39.24	a	1628	a	63.51	bcd	70.02	a
3 10 seed/ft2 (22.3 lb/A)	402.5	a	57	a	156.7	a	36.11	a	1720	a	65.47	ab	71.69	a
4 15 seed/ft2 (34.9 lb/A)	406.2	a	63	a	163.2	a	28.65	a	1135	a	63.84	a-d	70.65	a
5 20 seed/ft2 (46.6 lb/A)	418.0	a	71	a	163.7	a	33.30	a	1290	a	64.39	abc	71.31	a
6 25 seed/ft2 (58.2 lb/A)	394.1	a	64	a	154.0	a	42.74	a	1679	a	62.60	cd	70.78	a
7 30 seed/ft2 (69.9 lb/A)	443.4	a	65	a	190.5	a	34.49	a	1342	a	63.48	bcd	70.65	a
8 35 seed/ft2 (81.5 lb/A)	475.6	a	80	a	197.4	a	29.85	a	1188	a	61.98	d	70.18	a
9 40 seed/ft2 (93.1 lb/A)	423.2	a	76	a	168.8	a	35.85	a	1401	a	63.18	cd	70.81	a
LSD P=.05	131.13		19.8		61.17		10.309		455.0		2.132		1.311	
Standard Deviation	89.85		13.6		41.92		7.064		311.8		1.461		0.898	
CV	20.97		20.66		24.27		20.12		21.94		2.29		1.27	
Treatment F	0.366		1.522		0.520		1.506		1.843		2.802		1.580	
Treatment Prob(F)	0.9286		0.2017		0.8298		0.2071		0.1179		0.0241		0.1831	

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

Evaluation of Seeding Rate and Plant Population in a Stale Seedbed for CLL17 – Tensas Parish

Experiment number	21-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	
% Organic matter	2.34
pH	6.80
Extractable nutrients ppm	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	See treatment / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	150 lb N/A 46-0-0, Jun. 24
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 57. Evaluation of seeding rate and plant population in a stale seedbed for CLL17. Tensas Parish.

Crop Name	Rice		Rice	Rice	Rice	Rice	Rice
Description	Rice Density		Plant-hd	Emer-hd	Tip of panicle		
Rating Date	4/12/2021				9/27/2021		
Rating Type	Stand Count		50% HD	50% HD	Yield		
Rating Unit	#/sq ft.		days	days	lb/A		
Crop Stage Majority	Main		Main	Main	Main		
Trt	Treatment						
No.	Name						
1	5 seed/ft2 (11.6 lb/A)	3.4	d	82.8	ab	76.8	ab
2	7.5 seed/ft2 (17.4 lb/A)	6.6	cd	83.0	a	77.0	a
3	10 seed/ft2 (22.3 lb/A)	7.6	cd	83.0	a	77.0	a
4	15 seed/ft2 (34.9 lb/A)	10.1	c	82.3	bc	76.3	bc
5	20 seed/ft2 (46.6 lb/A)	15.3	b	82.5	ab	76.5	ab
6	25 seed/ft2 (58.2 lb/A)	16.2	b	82.3	bc	76.3	bc
7	30 seed/ft2 (69.9 lb/A)	19.5	ab	81.5	d	75.5	d
8	35 seed/ft2 (81.5 lb/A)	24.0	a	81.8	cd	75.8	cd
9	40 seed/ft2 (93.1 lb/A)	22.6	a	81.3	d	75.3	d
LSD P=.05		5.18		0.71		0.71	
Standard Deviation		3.55		0.49		0.49	
CV		25.51		0.59		0.64	
Treatment F		17.153		6.882		6.882	
Treatment Prob(F)		0.0001		0.0001		0.0001	
			</				

Continued.

Table 57. Continued.

Crop Name Description	Yield Components										Rice
	Rice		Rice		Rice		Rice		Rice		
	WP dry wt.		Panicle #		Grain wt.		10 P gr wt.		10 P seed		
	grams	number	number	grams	grams	number	grams	number	head	total	
Rating Type	1 m	1 m	2 rows	2 rows	2 rows	2 rows	1 m	1 m	2 rows	2 rows	
Rating Unit	1 m	1 m	2 rows	2 rows	2 rows	2 rows	1 m	1 m	2 rows	2 rows	
Sample Size, Unit	1 m	1 m	2 rows	2 rows	2 rows	2 rows	1 m	1 m	2 rows	2 rows	
Collection Basis, Unit	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	2 rows	
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	
Trt Treatment											
No. Name											
1 5 seed/ft2 (11.6 lb/A)	433.6 a	56 a	180.3 a	35.68 a	1410 a	65.67 a	71.49 a				
2 7.5 seed/ft2 (17.4 lb/A)	459.2 a	60 a	179.7 a	39.24 a	1628 a	63.51 bcd	70.02 a				
3 10 seed/ft2 (22.3 lb/A)	402.5 a	57 a	156.7 a	36.11 a	1720 a	65.47 ab	71.69 a				
4 15 seed/ft2 (34.9 lb/A)	406.2 a	63 a	163.2 a	28.65 a	1135 a	63.84 a-d	70.65 a				
5 20 seed/ft2 (46.6 lb/A)	418.0 a	71 a	163.7 a	33.30 a	1290 a	64.39 abc	71.31 a				
6 25 seed/ft2 (58.2 lb/A)	394.1 a	64 a	154.0 a	42.74 a	1679 a	62.60 cd	70.78 a				
7 30 seed/ft2 (69.9 lb/A)	443.4 a	65 a	190.5 a	34.49 a	1342 a	63.48 bcd	70.65 a				
8 35 seed/ft2 (81.5 lb/A)	475.6 a	80 a	197.4 a	29.85 a	1188 a	61.98 d	70.18 a				
9 40 seed/ft2 (93.1 lb/A)	423.2 a	76 a	168.8 a	35.85 a	1401 a	63.18 cd	70.81 a				
LSD P=.05	131.13	19.8	61.17	10.309	455.0	2.132	1.311				
Standard Deviation	89.85	13.6	41.92	7.064	311.8	1.461	0.898				
CV	20.97	20.66	24.27	20.12	21.94	2.29	1.27				
Treatment F	0.366	1.522	0.520	1.506	1.843	2.802	1.580				
Treatment Prob(F)	0.9286	0.2017	0.8298	0.2071	0.1179	0.0241	0.1831				

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

**Agronomic Response of Drill Seeded RT7521 FP to Nitrogen Fertilizer Rate
in Delayed Flood Irrigation – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-33A
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 30
Ratoon Harvest date	NA
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, March 10
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	NA
Ratoon drain	NA
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 58. Agronomic response of drill seeded RT7521 FP to N fertilizer rate in a delayed flood system. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-hd	Emer-hd	Tip of panicle	Rice	Rice	Rice	Rice
Rating Date			7/29/2021				7/30/2021
Rating Type	50% HD	50% HD	Height	Lodging			Moist
Rating Unit	days	days	in	% plot	rate		Yield
Crop Stage Majority	Main	Main	Main	Main	Main	Main	lb/A
Trt	Treatment	Growth					
No.	Name	Rate	Stage				
1	UREA	0	4-5 leaf	99	c	88	c
2	UREA	90	4-5 leaf	101	b	90	b
3	UREA	120	4-5 leaf	101	b	90	b
4	UREA	150	4-5 leaf	102	ab	91	ab
5	UREA	180	4-5 leaf	102	ab	91	ab
6	UREA	210	4-5 leaf	103	a	92	a
LSD P=.05							
Standard Deviation							
CV							
Treatment F							
Treatment Prob(F)							

Means followed by same letter or symbol do not significantly differ ($P=0.05$, LSD).

**Agronomic Response of RT7521 FP to Nitrogen Fertilizer Application Timing
In Delayed Flood System – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-33B
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 30
Ratoon Harvest date	NA
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	NA
Ratoon drain	NA
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 59. Agronomic response of RT7521 FP to nitrogen fertilizer application timing in delayed flood system. H. Rouse Caffey Rice Research Station.

Crop Name	Rice										Rice	
	Plant-hd		Emer-hd		Tip of panicle		Rice		Rice		Rice	
	50% HD		50% HD		7/29/2021		7/30/2021		7/30/2021		7/30/2021	
	days	Main	days	Main	Height	in	% plot	rate	Moist	%	Yield	lb/A
Crop Stage Majority												
Main												
Trt	Treatment		Rate		Growth		Lodge		Moisture		Yield	
No.	Name		(lb N/A)		Stage		Main		Main		Main	
1	120 lb N/A		120		4-LEAF		0.0	b	0.0	b	17.85	b
	Single Pre-flood (4 Leaf)						0.0	b	0.0	b	13616	a
2	120 lb N/A		60		4-LEAF		47.5	ab	46.8	abc	16.45	cd
	2-way split		60		4-LEAF+7D		44.5	cd	43.8	d	16.25	de
3	120 lb N/A		60		4-LEAF		43.8	d	43.8	d	16.05	de
	2-way split		60		4-LEAF+14D		43.8	d	43.8	d	16.05	de
4	120 lb N/A		40		4-LEAF		43.8	d	43.8	d	16.05	de
	3-way split		40		4-LEAF+7D		43.8	d	43.8	d	16.05	de
			40		4-LEAF+14D		43.8	d	43.8	d	16.05	de
5	165 lb N/A		165		4-LEAF		48.3	a	48.3	a	18.75	a
	Single Pre-flood (4 Leaf)						48.3	a	48.3	a	18.75	a
6	165 lb N/A		82.5		4-LEAF		48.3	a	48.3	a	16.65	cd
	2-way split		82.5		4-LEAF+7D		48.3	a	48.3	a	16.65	cd
7	165 lb N/A		82.5		4-LEAF		46.8	abc	46.8	abc	17.13	c
	2-way split		82.5		4-LEAF+14D		46.8	abc	46.8	abc	17.13	c
8	165 lb N/A		55		4-LEAF		45.0	bcd	45.0	bcd	16.38	d
	3-way split		55		4-LEAF+7D		45.0	bcd	45.0	bcd	16.38	d
			55		4-LEAF+14D		45.0	bcd	45.0	bcd	16.38	d
9	0 N		99		d		37.5	e	37.5	e	15.65	e
	LSD P=.05		1.12		1.12		2.54		2.54		0.698	
	Standard Deviation		0.77		0.77		1.74		1.74		0.478	
	CV		0.76		0.86		3.84		3.84		2.85	
							353.4		353.4		2.85	
	Treatment F		6.082		6.082		14.881		14.881		16.430	
	Treatment Prob(F)		0.0003		0.0003		0.0001		0.0212		0.0001	

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

Evaluation of SuperU Fertilizer in Delayed Flood System – H. Rouse Caffey Rice Research Station

Experiment number	21-CM-33C
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 30
Ratoon Harvest date	NA
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	NA
Ratoon drain	NA
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 60. Evaluation of SuperU fertilizer in delayed flood system. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of panicle		Rice		Rice	
Rating Date		50% HD		50% HD		7/29/2021		7/30/2021		7/30/2021	
Rating Type		days		days		Height		Lodge		Yield	
Rating Unit		Main		Main		in		Main		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main	
Trt	Treatment	Rate		Growth		Stage		Rate		Yield	
No.	Name	(lb N/A)		Stage		Rate		Yield		Yield	
1	Urea	138		4-LEAF		103 a		46.3 ab		13062 a	
2	Single pre-flood	69		4-LEAF		100 bc		42.8 cd		10363 cd	
	Urea	69		4-LEAF + 7		89		0.0 a		0.0 a	
	2-way split (7-days apart)	69		4-LEAF + 7		89		0.0 a		10689 bc	
3	Urea	69		4-LEAF		100 c		43.5 cd		10689 bc	
	2-way split (14-days apart)	69		4-LEAF + 14		89		0.0 a		0.0 a	
4	Urea	46		4-LEAF		100 c		41.5 cd		9552 e	
	3-way split (7-days apart)	46		4-LEAF + 7		89		0.0 a		0.0 a	
	3-way split (7-days apart)	46		4-LEAF + 14		89		0.0 a		9552 e	
5	Urea + Agrotain Advanced	138		4-LEAF		103 a		48.3 a		13223 a	
	Single pre-flood	69		4-LEAF		100 bc		44.0 bc		10825 bc	
6	Urea + Agrotain Advanced	69		4-LEAF		100 bc		44.0 bc		10825 bc	
	2-way split (7-days apart)	69		4-LEAF + 7		89		0.0 a		0.0 a	
7	Urea + Agrotain Advanced	69		4-LEAF		101 b		42.0 cd		10720 bc	
	2-way split (14-days apart)	69		4-LEAF + 14		90		0.0 a		0.0 a	
8	Urea + Agrotain Advanced	46		4-LEAF		100 bc		42.0 cd		9976 de	
	3-way split (7-days apart)	46		4-LEAF + 7		89		0.0 a		0.0 a	
	3-way split (7-days apart)	46		4-LEAF + 14		89		0.0 a		9976 de	
9	SuperU	138		4-LEAF		103 a		47.8 a		13323 a	
	Single pre-flood	69		4-LEAF		101 bc		43.0 cd		11167 b	
10	SuperU	69		4-LEAF		101 bc		43.0 cd		11167 b	
	2-way split (7-days apart)	69		4-LEAF + 7		90		0.0 a		0.0 a	
11	SuperU	69		4-LEAF		101 bc		43.3 cd		10364 cd	
	2-way split (14-days apart)	69		4-LEAF + 14		90		0.0 a		0.0 a	
12	SuperU	46		4-LEAF		100 bc		42.5 cd		9666 e	
	3-way split (7-days apart)	46		4-LEAF + 7		89		0.0 a		0.0 a	
	3-way split (7-days apart)	46		4-LEAF + 14		89		0.0 a		9666 e	
13	Urea + Anvol	138		4-LEAF		103 a		47.0 a		13579 a	
	Single pre-flood	69		4-LEAF		100 c		42.8 cd		10931 bc	
14	Urea + Anvol	69		4-LEAF		100 c		42.8 cd		10931 bc	
	2-way split (7-days apart)	69		4-LEAF + 7		89		0.0 a		0.0 a	

Continued.

Table 60. Continued

Crop Name Description Rating Date Rating Type Rating Unit	Rice		Rice		Rice		Rice		Rice		
	Plant-hd		Emer-hd		Tip of panicle		7/29/2021		7/30/2021		
	50% HD		50% HD		Height		Lodge		Yield		
	days	Main	days	Main	in	Main	% plot	rate	Main	lb/A	
Crop Stage Majority											
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
15	Urea + Anvol	69		4-LEAF							
	2-way split (14-days apart)	69		4-LEAF + 14							
16	Urea + Anvol	46		4-LEAF							
	3-way split (7-days apart)	46		4-LEAF + 7							
		46		4-LEAF + 14							
17	No N	0									
LSD P=.05											
Standard Deviation											
CV											
Treatment F											
Treatment Prob(F)											

Continued.

Table 60. Continued.

Crop Name Part Rated Rating Type Rating Unit Crop Stage Majority	Trt Treatment No. Name	Rate (lb N/A) Growth Stage	Rice		Rice		Rice Abvgrd, - Biomass-dry lb/A 50% HD	Rice Abvgrd, - Tissue N % 50% HD	Rice Total, - N Uptake lb/A 50% HD	Rice N fert Eff. % 50% HD				
			Head % Main	Milling Total % Main	Rice Total % Main	Rice Abvgrd, - Biomass-dry lb/A 50% HD								
1	Urea Single pre-flood	138 4-LEAF	69.5	abc	74.2	abc	9167	ab	1.34	ab	123	ab	66	ab
2	Urea 2-way split (7-days apart)	69 4-LEAF	65.4	efg	72.5	gh	7196	bcd	0.96	c	68	efg	25	efg
3	Urea 2-way split (14-days apart)	69 4-LEAF	67.0	de	73.3	def	7232	bcd	0.94	c	66	efg	24	efg
4	Urea 3-way split (7-days apart)	46 4-LEAF	63.9	g	72.6	gh	6081	d	1.03	c	60	fgh	20	fgh
5	Urea + Agrotain Advanced Single pre-flood	138 4-LEAF	70.0	ab	74.3	ab	8059	a-d	1.42	a	116	abc	60	abc
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69 4-LEAF	67.9	cd	73.5	cde	8189	a-d	1.10	bc	91	b-f	42	b-f
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69 4-LEAF	64.7	fg	72.6	gh	7851	a-d	0.93	c	73	efg	29	efg
8	Urea + Agrotain Advanced 3-way split (7-days apart)	46 4-LEAF	65.4	efg	72.7	fg	9724	a	0.99	c	97	b-e	46	b-e
9	SuperU Single pre-flood	138 4-LEAF	70.1	a	74.2	abc	8766	ab	1.51	a	134	a	72	a
10	SuperU 2-way split (7-days apart)	69 4-LEAF	68.0	bcd	73.8	a-d	7729	a-d	1.10	bc	84	c-g	37	c-g
11	SuperU 2-way split (14-days apart)	69 4-LEAF	66.6	def	73.4	def	7542	bcd	1.10	c	83	c-g	36	d-g
12	SuperU 3-way split (7-days apart)	46 4-LEAF	65.1	efg	72.8	fg	6551	cd	0.89	c	57	gh	18	gh
13	Urea + Anvol Single pre-flood	138 4-LEAF	70.2	a	74.4	a	7553	a-d	1.45	a	107	a-d	54	a-d
14	Urea + Anvol 2-way split (7-days apart)	69 4-LEAF	68.0	bcd	73.6	bcd	7582	a-d	1.07	c	82	d-g	35	d-g
15	Urea + Anvol	69 4-LEAF	66.9	de	73.4	def	8376	abc	0.97	c	81	d-g	35	d-g

Continued.

Table 60. Continued.

Crop Name Part Rated Rating Type Rating Unit Crop Stage Majority	Trt Treatment No.	Treatment Name	Rate (lb N/A)	Growth Stage	Rice		Rice		Rice		Rice		Rice			
					Milling		Abvgrd, -		Abvgrd, -		Abvgrd, -					
					Head	Total	Biomass-dry	Tissue N	Biomass-dry	Tissue N	N Uptake	N fert Eff.				
					%	%	lb/A	%	lb/A	%	lb/A	%				
					Main	Main	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD		
16	2-way split (14-days apart)	Urea + Anvol	69	4-LEAF + 14	65.2	efg	72.9	efg	7467	bcd	1.10	bc	85	c-g	38	c-g
			46	4-LEAF												
	3-way split (7-days apart)		46	4-LEAF + 7												
			46	4-LEAF + 14												
17	No N		0		61.6	h	71.9	h	3279	e	1.00	c	33	h	0	h
LSD P=.05					2.04		0.70		2179		0.241		33.2		23.6	
Standard Deviation					1.44		0.49		1533		0.170		23.3		16.6	
CV					2.15		0.67		20.3		15.26		27.58		44.33	
Treatment F					11.274		8.728		3.397		5.289		4.768		4.856	
Treatment Prob(F)					0.0001		0.0001		0.0005		0.0001		0.0001		0.0001	

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

Table 61. Two-way table for the evaluation of SuperU fertilizer in delayed flood system. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice			
Description	Plant-hd		Emer-hd		Tip of panicle		7/29/2021		7/30/2021		7/30/2021			
Rating Date	50% HD		50% HD		Height		Lodge		Yield		Yield			
Rating Type	days		days		in		% plot		rate		lb/A			
Rating Unit	Main		Main		Main		Main		Main		Main			
Crop Stage Majority	Main		Main		Main		Main		Main		Main			
Trt	Treatment		Rate (lb N/A)		Growth									
No.	Name		Stage											
TABLE OF A (N Source) MEANS														
1	Urea		101	a	90	a	43.5	a	1.3	a	0.1	a	10917	a
2	Urea + Agrotain Advanced		101	a	90	a	44.1	a	0.0	a	0.0	a	11186	a
3	SuperU		101	a	90	a	44.1	a	1.3	a	0.1	a	11130	a
4	Urea + Anvol		101	a	90	a	43.1	a	1.9	a	0.1	a	11250	a
P			0.582		0.582		0.370		0.768		0.798		0.143	
LSD	P=.05		0.500		0.500		1.740		4.810		0.200		396	
TABLE OF B (N Timing) MEANS														
1	Single pre-flood		103	a	92	a	47.3	a	4.4	a	0.2	a	13297	a
2	2-way split (7-days apart)		100	b	89	b	43.1	b	0.0	a	0.0	a	10822	b
2			69		69		4-LEAF + 7							
3	2-way split (14-days apart)		100	b	89	b	42.6	b	0.0	a	0.0	a	10645	b
3			69		69		4-LEAF + 14							
4	3-way split (7-days apart)		100	b	89	b	41.8	b	0.0	a	0.0	a	9719	c
4			46		46		4-LEAF							
4			46		46		4-LEAF + 7							
4			46		46		4-LEAF + 14							
P			0.0001		0.0001		0.0001		0.043		0.0383		0.0001	
LSD	P=.05		0.500		0.500		1.740		4.810		0.200		396.1	

Continued.

Table 61. Continued.

Crop Name	Rating Date	Part Rated	Rating Type	Rating Unit	Crop Stage Majority	Rice		Rice		Rice		Rice		Rice	
						10/20/2021									
						Milling									
						Head	Total	Abvgrd, -	Abvgrd, -	Abvgrd, -	Total	Abvgrd, -	Total	Abvgrd, -	N fert Eff.
						%	%	lb/A	lb/A	Tissue N	lb/A	%	lb/A	lb/A	%
						Main	Main	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD
Trt	Treatment	Rate (lb N/A)	Growth Stage												
No.	Name														
TABLE OF A (N Source) MEANS															
1	Urea					66.4 a	73.1 a	7419 a	1.07 a	79 a	34 a				
2	Urea + Agrotain Advanced					67.0 a	73.3 a	8456 a	1.11 a	94 a	44 a				
3	SuperU					67.4 a	73.5 a	7647 a	1.15 a	90 a	41 a				
4	Urea + Anvol					67.6 a	73.5 a	7744 a	1.15 a	89 a	40 a				
<i>P</i>						0.107	0.055	0.281	0.511	0.363	0.356				
LSD	<i>P</i> =.05					1.332	0.463	1471	0.165	22.6	16.2				
TABLE OF B (N Timing) MEANS															
1	Single pre-flood	138	4-LEAF			69.9 a	74.2 a	8386 a	1.43 a	120 a	63 a				
2	2-way split (7-days apart)	69	4-LEAF			67.3 b	73.4 b	7674 a	1.06 b	81 b	35 b				
2		69	4-LEAF + 7												
3	2-way split (14-days apart)	69	4-LEAF			66.3 b	73.2 bc	7750 a	0.98 b	76 b	31 b				
3		69	4-LEAF + 14												
4	3-way split (7-days apart)	46	4-LEAF			64.9 c	72.7 c	7456 a	1.00 b	75 b	30 b				
4		46	4-LEAF + 7												
4		46	4-LEAF + 14												
<i>P</i>						0.0001	0.0001	0.379	0.0001	0.0001	0.0001				
LSD	<i>P</i> =.05					1.332	0.463	1471	0.165	22.600	16.200				

Continued.

Table 61. Continued.

Crop Name													
Description													
Rating Date													
Rating Type													
Rating Unit													
Crop Stage Majority													
Trt	Treatment		Rate	Growth									
No.	Name		(lb N/A)	Stage									
TABLE OF A (N Source) B (N Timing) MEANS													
1	Urea					103	a	92	a	46.3	a	5.0	a
1	Single pre-flood		138	4-LEAF								0.3	a
2	Urea + Agrotain Advanced					103	a	92	a	48.3	a	0.0	a
1	Single pre-flood		138	4-LEAF									
3	SuperU					103	a	92	a	47.8	a	5.0	a
1	Single pre-flood		138	4-LEAF								0.3	a
4	Urea + Anvol					103	a	92	a	47.0	a	7.5	a
1	Single pre-flood		138	4-LEAF								0.3	a
1	Urea		69	4-LEAF		100	a	89	a	42.8	a	0.0	a
2	2-way split (7-days apart)		69	4-LEAF + 7								0.0	a
2	Urea + Agrotain Advanced		69	4-LEAF		100	a	89	a	44.0	a	0.0	a
2	2-way split (7-days apart)		69	4-LEAF + 7								0.0	a
3	SuperU		69	4-LEAF		101	a	90	a	43.0	a	0.0	a
2	2-way split (7-days apart)		69	4-LEAF + 7								0.0	a
4	Urea + Anvol		69	4-LEAF		100	a	89	a	42.8	a	0.0	a
2	2-way split (7-days apart)		69	4-LEAF + 7								0.0	a
1	Urea		69	4-LEAF		100	a	89	a	43.5	a	0.0	a
3	2-way split (14-days apart)		69	4-LEAF + 14								0.0	a
2	Urea + Agrotain Advanced		69	4-LEAF		101	a	90	a	42.0	a	0.0	a
3	2-way split (14-days apart)		69	4-LEAF + 14								0.0	a

Continued.

Table 61. Continued.

Crop Name	Rice		Rice		Rice		Rice		Rice				
Description	Plant-hd	Emer-hd	Tip of panicle		Lodge		Yield						
Rating Date	50% HD		7/29/2021		7/30/2021		7/30/2021						
Rating Type	50% HD		Height		% plot		rate		Main				
Rating Unit	days		in		Main		Main		Main				
Crop Stage Majority	Main		Main		Main		Main		Main				
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage	TABLE OF A (N Source) B (N Timing) MEANS (continued)									
3	SuperU	69	4-LEAF	101	a	90	a	43.3	a	0.0	a	10364	a
3	2-way split (14-days apart)	69	4-LEAF + 14										
4	Urea + Anvol	69	4-LEAF	100	a	89	a	41.8	a	0.0	a	10808	a
3	2-way split (14-days apart)	69	4-LEAF + 14										
1	Urea	46	4-LEAF	100	a	89	a	41.5	a	0.0	a	9552	a
4	3-way split (7-days apart)	46	4-LEAF + 7										
4		46	4-LEAF + 14										
2	Urea + Agrotain Advanced	46	4-LEAF	100	a	89	a	42.0	a	0.0	a	9976	a
4	3-way split (7-days apart)	46	4-LEAF + 7										
4		46	4-LEAF + 14										
3	SuperU	46	4-LEAF	100	a	89	a	42.5	a	0.0	a	9666	a
4	3-way split	46	4-LEAF + 7										
4		46	4-LEAF + 14										
4	Urea + Anvol	46	4-LEAF	100	a	89	a	41.0	a	0.0	a	9683	a
4	3-way split (7-days apart)	46	4-LEAF + 7										
4		46	4-LEAF + 14										
P				0.741		0.741		0.831		0.938		0.957	0.373
LSD P=.05				1.37		1.37		4.72		13.07		0.55	1077
Standard Deviation				0.53		0.53		1.84		5.10		0.21	419.9
CV				0.53		0.59		4.22		466.3		458.5	3.8
Continued.													

Table 61. Continued.

Crop Name	Rating Date	Part Rated	Rating Type	Rating Unit	Crop Stage Majority	Rice														
						10/20/2021														
						Milling					Rice									
						Head %	Total %	Abvgrd, - lb/A	Biomass-dry lb/A	Abvgrd, - Tissue N %	Rice	Rice	Rice	Rice	Rice					
											Main					50% HD	50% HD	50% HD	50% HD	50% HD
Trt	Treatment	No.	Name	Rate (lb N/A)	Growth Stage															
TABLE OF A (N Source) B (N Timing) MEANS																				
1	Urea					69.5	a	74.2	a	9167	a	1.34	a	123	a	66	a			
1	Single pre-flood			138	4-LEAF															
2	Urea + Agrotain Advanced					70.0	a	74.3	a	8059	a	1.42	a	116	a	60	a			
1	Single pre-flood			138	4-LEAF															
3	SuperU					70.1	a	74.2	a	8766	a	1.51	a	134	a	72	a			
1	Single pre-flood			138	4-LEAF															
4	Urea + Anvol					70.2	a	74.4	a	7553	a	1.45	a	107	a	54	a			
1	Single pre-flood			138	4-LEAF															
1	Urea			69	4-LEAF	65.4	a	72.5	a	7196	a	0.96	a	68	a	25	a			
2	2-way split (7-days apart)			69	4-LEAF + 7															
2	Urea + Agrotain Advanced			69	4-LEAF	67.9	a	73.5	a	8189	a	1.10	a	91	a	42	a			
2	2-way split (7-days apart)			69	4-LEAF + 7															
3	SuperU			69	4-LEAF	68.0	a	73.8	a	7729	a	1.10	a	84	a	37	a			
2	2-way split (7-days apart)			69	4-LEAF + 7															
4	Urea + Anvol			69	4-LEAF	68.0	a	73.6	a	7582	a	1.07	a	82	a	35	a			
2	2-way split (7-days apart)			69	4-LEAF + 7															
1	Urea			69	4-LEAF	67.0	a	73.3	a	7232	a	0.94	a	66	a	24	a			
3	2-way split (14-days apart)			69	4-LEAF + 14															
2	Urea + Agrotain Advanced			69	4-LEAF	64.7	a	72.6	a	7851	a	0.93	a	73	a	29	a			
3	2-way split (14-days apart)			69	4-LEAF + 14															

Continued.

Table 61. Continued.

Crop Name Rating Date Part Rated Rating Type Rating Unit Crop Stage Majority	Trt Treatment No. Name	Rate (lb N/A) Growth Stage	Rice 10/20/2021												
			Milling												
			Head %	Total %	Abvgrd, - Biomass-dry lb/A		Abvgrd, - Tissue N %		Rice 50% HD		Rice 50% HD		Rice 50% HD		
			Main		Main		50% HD		50% HD		50% HD		50% HD		
TABLE OF A (N Source) B (N Timing) MEANS (continued)															
3	SuperU	69	4-LEAF	66.6	a	73.4	a	7542	a	1.10	a	83	a	36	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
4	Urea + Anvol	69	4-LEAF	66.9	a	73.4	a	8376	a	0.97	a	81	a	35	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
1	Urea	46	4-LEAF	63.9	a	72.6	a	6081	a	1.03	a	60	a	20	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
2	Urea + Agrotain Advanced	46	4-LEAF	65.4	a	72.7	a	9724	a	0.99	a	97	a	46	a
4	3-way split	46	4-LEAF + 7												
4		46	4-LEAF + 14												
3	SuperU	46	4-LEAF	65.1	a	72.8	a	6551	a	0.89	a	57	a	18	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
4	Urea + Anvol	46	4-LEAF	65.2	a	72.9	a	7467	a	1.10	a	85	a	38	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
P				0.158		0.057		0.176		0.667		0.335		0.337	
LSD P=.05				3.621		1.257		3998		0.448		61.5		44.0	
Standard Deviation				1.413		0.490		1560		0.175		24.0		17.2	
CV				2.105		0.668		20.0		15.64		27.3		43.0	

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

**Agronomic Response of Drill Seeded CLL17 FP to Nitrogen Fertilizer Rate in
Delayed Flood Irrigation – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-33D
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 30
Ratoon Harvest date	NA
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	NA
Ratoon drain	NA
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

**Table 62. Agronomic response of drill-seeded CLL17 to N fertilizer rate in delayed flood system.
H. Rouse Caffey Rice Research Station**

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of panicle		Moisture			
Rating Date								7/29/2021		7/30/2021		7/30/2021	
Rating Type				50% HD		50% HD		Height		Moist		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage										
1	UREA	0	4-5 leaf	101	b	90	b	31.5	c	17.5	d	4910	b
2	UREA	90	4-5 leaf	103	a	92	a	39.5	b	18.6	c	10166	a
3	UREA	120	4-5 leaf	103	a	92	a	41.3	ab	19.3	bc	10390	a
4	UREA	150	4-5 leaf	103	a	92	a	42.8	ab	20.0	ab	10578	a
5	UREA	180	4-5 leaf	103	a	92	a	43.5	a	20.6	a	10253	a
6	UREA	210	4-5 leaf	103	a	92	a	42.8	ab	20.5	a	10381	a
LSD P=.05				1.17		1.17		3.25		0.73		518.3	
Standard Deviation				0.77		0.77		2.16		0.48		343.9	
CV				0.76		0.85		5.36		2.49		3.64	
Treatment F				5.778		5.778		17.396		24.835		167.728	
Treatment Prob(F)				0.0036		0.0036		0.0001		0.0001		0.0001	

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

**Agronomic Response of CLL17 to Nitrogen Fertilizer Application Timing
In Delayed Flood System – H. Rouse Caffey Rice Research Station**

Experiment number	21-CM-33E
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	
% Organic matter	1.26
pH	6.48
Extractable nutrients (ppm)	Ca-1526; Cu-1.54; Mg-275; P-18.0; K-72; Na-117; S-5.77; Zn-9.56
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Jul. 30
Ratoon Harvest date	NA
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 16
Ratoon flood	NA
Ratoon drain	NA
Pest management	
Herbicides	1 pt/A 2,4-D + 1.5 qt/A Glyphosate + 2 oz/A Lead off, Nov. 18, 2020
	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 8 oz/A Command +
	.25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

**Table 63. Agronomic response of CLL17 to nitrogen fertilizer application timing in delayed flood system.
H. Rouse Caffey Rice Research Station.**

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of panicle		Moisture			
Rating Date								7/29/2021		7/30/2021		7/30/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	120 lb N/A			103	ab	92	ab	41.5	a	19.0	a	10123	a
	Single Pre-flood	120	4-LEAF										
2	120 lb N/A	60	4-LEAF	102	bcd	91	bcd	38.8	bc	17.1	d	9407	bc
	2-way split	60	4-LEAF+7D										
3	120 lb N/A	60	4-LEAF	102	bcd	91	bcd	38.3	bc	17.3	cd	9162	cd
	2-way split	60	4-LEAF+14D										
4	120 lb N/A	40	4-LEAF	102	d	91	d	35.8	d	16.8	d	8491	d
	3-way split	40	4-LEAF+7D										
		40	4-LEAF+14D										
5	165 lb N/A			104	a	93	a	41.8	a	19.4	a	10493	a
	Single Pre-flood	165	4-LEAF										
6	165 lb N/A	82.5	4-LEAF	103	bc	92	bc	38.8	bc	17.8	bc	9921	ab
	2-way split	82.5	4-LEAF+7D										
7	165 lb N/A	82.5	4-LEAF	102	bcd	91	bcd	40.0	ab	18.0	b	10355	a
	2-way split	82.5	4-LEAF+14D										
8	165 lb N/A	55	4-LEAF	102	cd	91	cd	37.3	cd	17.1	d	9295	bc
	3-way split	55	4-LEAF+7D										
		55	4-LEAF+14D										
9	0 N			100	e	89	e	31.8	e	16.9	d	5482	e
LSD P=.05				0.77		0.77		2.20		0.64		672.0	
Standard Deviation				0.53		0.53		1.51		0.44		460.5	
CV				0.52		0.58		3.95		2.46		5.01	
Treatment F				13.860		13.860		16.666		19.312		44.223	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

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

**Agronomic Response of RT7521 FP to Nitrogen Fertilizer Rate in
Furrow Irrigation – H. Rouse Caffey Rice Research Station**

Experiment number: 21-CM-34A

Site and design:

Location/Cooperator: H. Rouse Caffey Rice Research Station (Crowley Main)

Tillage type.....: Fall Stale (Row Irrigation)

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.....: 1.28

pH.....: 6.17

Extractable nutrients (ppm).....: Ca-1158; Cu-1.59; Mg-240; P-7.84; K-77; Na-80; S-5.01; Zn-7.52

Crop/Variety: Rice / RT 7521 FP

Planting method/date: Drill seeded / Mar. 10

Seeding rate/depth.....: 10 seeds /ft² / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 1

Seed treatment/cwt: **Hybrids:**

 Apron (fungicide)

 Dynasty (fungicide)

 Fludioxonil (fungicide)(Maxim)

 Gibberellic Acid

 Sedaxane (fungicide)

 Thiamethoxam (insecticide)

 Zinc

 AV-1011 (bird repellent) – 18.3 oz

 Dermacor – 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

Water management: Underground irrigation

Flush: April 29, May 6, May 17 (rainfall), May 24, Jun. 14, Jun. 18

Flood: NA

Drain: NA

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +
 .25% Surfactant, Mar. 9

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

 2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit, Jun. 2

 21 oz/A Clincher + 8 oz/A Crop oil, Jun. 7

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

 15 oz/A Amistar Top, Jun. 23

Table 64. Agronomic response of RT7521 FP to N fertilizer rate in furrow irrigation system. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of Panicle					
Rating Date								7/27/2021		8/1/2021		8/1/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	b	94	b	34.5	b	16.9	b	5058	c
2	UREA	90	4-5 leaf	109	a	98	a	38.8	a	17.4	b	8267	b
3	UREA	120	4-5 leaf	109	a	98	a	38.5	a	18.7	a	8383	b
4	UREA	150	4-5 leaf	109	a	98	a	39.3	a	19.1	a	8935	a
5	UREA	180	4-5 leaf	109	a	98	a	39.8	a	19.4	a	9011	a
6	UREA	210	4-5 leaf	109	a	98	a	41.0	a	19.8	a	9219	a
LSD P=.05				1.23		1.23		3.26		1.19		480.3	
Standard Deviation				0.82		0.82		2.16		0.79		318.7	
CV				0.75		0.84		5.6		4.25		3.91	
Treatment F				16.000		16.000		4.166		8.346		95.544	
Treatment Prob(F)				0.0001		0.0001		0.0142		0.0006		0.0001	

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

**Agronomic Response of RT7521 FP to Nitrogen Fertilizer Application Timing
In Furrow Irrigation System – H. Rouse Caffey Rice Research Station**

Experiment number: 21-CM-34B

Site and design:

Location/Cooperator: H. Rouse Caffey Rice Research Station (Crowley Main)

Tillage type.....: Fall Stale (Row Irrigation)

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.....: 1.28

pH.....: 6.17

Extractable nutrients (ppm).....: Ca-1158; Cu-1.59; Mg-240; P-7.84; K-77; Na-80; S-5.01; Zn-7.52

Crop/Variety: Rice / RT 7521 FP

Planting method/date: Drill seeded / Mar. 10

Seeding rate/depth: 10 seeds /ft² / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 1

Seed treatment/cwt: **Hybrids:**

 Apron (fungicide)

 Dynasty (fungicide)

 Fludioxonil (fungicide)(Maxim)

 Gibberellic Acid

 Sedaxane (fungicide)

 Thiamethoxam (insecticide)

 Zinc

 AV-1011 (bird repellent) – 18.3 oz

 Dermacor – 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

Water management: Underground irrigation

Flush: Apr. 29, May 6, May 17 (rainfall), May 24, Jun. 14, Jun. 18

Flood: NA

Drain: NA

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +
 .25% Surfactant, Mar. 9

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

 2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit, Jun. 2

 21 oz/A Clincher + 8 oz/A Crop oil, Jun. 7

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

 15 oz/A Amistar Top, Jun. 23

Table 65. Agronomic response of RT7521 FP to N fertilizer application timing in furrow irrigation system. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of Panicle		Moisture		Rice	
Rating Date		50% HD		50% HD		7/27/2021		7/31/2021		7/31/2021	
Rating Type		days		days		Height		Moist		Yield	
Rating Unit		Main		Main		in		%		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main	
Trt	Treatment	Rate		Growth							
No.	Name	(lb N/A)		Stage							
1	120 lb N/A	120		4-LEAF		108.3	ab	97.3	ab	40.3	abc
	Single Pre-flood										
2	120 lb N/A	60		4-LEAF		107.5	b	96.5	b	40.3	abc
	2-way split (7-day)	60		4-LEAF							
	2-way split (7-day)	60		4-LEAF+7D							
3	120 lb N/A	60		4-LEAF		108.5	ab	97.5	ab	40.5	abc
	2-way split (14-day)	60		4-LEAF							
	2-way split (14-day)	60		4-LEAF+14D							
4	120 lb N/A	40		4-LEAF		109.0	a	98.0	a	37.8	bc
	3-way (7 day)	40		4-LEAF							
	3-way (14 day)	40		4-LEAF+7D							
	3-way (21 day)	40		4-LEAF+14D							
5	165 lb N/A	165				109.0	a	98.0	a	42.3	a
	Single Pre-flood										
6	165 lb N/A	82.5		4-LEAF		109.0	a	98.0	a	40.3	abc
	2-way split (7-day)	82.5		4-LEAF							
	2-way split (7-day)	82.5		4-LEAF+7D							
7	165 lb N/A	82.5		4-LEAF		109.0	a	98.0	a	41.0	ab
	2-way split (14-day)	82.5		4-LEAF							
	2-way split (14-day)	82.5		4-LEAF+14D							
8	165 lb N/A	55		4-LEAF		109.0	a	98.0	a	40.3	abc
	3-way (7 day)	55		4-LEAF							
	3-way (14 day)	55		4-LEAF+7D							
	3-way (21 day)	55		4-LEAF+14D							
9	0 N	104.5		c		104.5	c	93.5	c	33.3	d
		1.17									
		0.80									
		0.74									
LSD P=.05											
Standard Deviation											
CV											
Treatment F											
Treatment Prob(F)											
Means followed by same letter or symbol do not significantly differ (P=.05, LSD).											

Evaluation of SuperU Fertilizer in Furrow Irrigation System – H. Rouse Caffey Rice Research Station

Experiment number	21-CM-34C
Site and design	
Location/Cooperator	H. Rouse Caffey Rice Research Station (Crowley Main)
Tillage type	Fall Stale (Row Irrigation)
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	1.28
pH	6.17
Extractable nutrients (ppm)	Ca-1158; Cu-1.59; Mg-240; P-7.84; K-77; Na-80; S-5.01; Zn-7.52
Crop/Variety	Rice / RT 7521 FP
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 1
Seed treatment/cwt	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 10
Water management	Underground irrigation
Flush	Apr. 29, May 6, May 17 (rainfall), May 24, Jun. 14, Jun. 18
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7 2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit, Jun. 2 21 oz/A Clincher + 8 oz/A Crop oil, Jun. 7
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8 15 oz/A Amistar Top, Jun. 23

Table 66. Evaluation of SuperU fertilizer in furrow irrigation system. H. Rouse Caffey Rice Research Station.

Table 06. Evaluation of SuperU fertilizer in furrow irrigation system. II. Kouse Carey Rice Research Station.												
Crop Name		Rice			Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of panicle		Moisture		Yield		
Rating	Type	Rating	days	days	days	Height	Height	%	%	lb/A	Main	
Unit			Main	Main	Main	in	Main	Main	Main	Main	Main	
Crop Stage Majority												
Trt	Treatment	Rate	Growth									
No.	Name	(lb N/A)	Stage									
1	Urea Single pre-flood	138	4-LEAF	109.0	a	98.0	a	39.3	abc	17.2	abc	8936 a-d
2	Urea 2-way split (7-days apart)	69	4-LEAF	109.0	a	98.0	a	37.0	c	16.9	bcd	8260 f
3	Urea 2-way split (14-days apart)	69	4-LEAF + 7	109.0	a	98.0	a	38.5	abc	17.4	ab	8876 a-d
4	Urea 3-way split (7-days apart)	69	4-LEAF	107.5	b	96.5	b	40.0	abc	16.4	de	8866 a-d
		46	4-LEAF									
		46	4-LEAF + 7									
		46	4-LEAF + 14									
5	Urea + Agrotain Advanced Single pre-flood	138	4-LEAF	108.5	ab	97.5	ab	40.8	ab	17.7	a	9055 ab
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69	4-LEAF	109.0	a	98.0	a	37.5	c	17.2	abc	8367 ef
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69	4-LEAF	109.0	a	98.0	a	38.5	abc	17.7	a	9035 ab
8	Urea + Agrotain Advanced 3-way split (7-days apart)	69	4-LEAF + 14									
		46	4-LEAF	109.0	a	98.0	a	37.8	bc	17.2	abc	8591 c-f
		46	4-LEAF + 7									
		46	4-LEAF + 14									
9	SuperU Single pre-flood	138	4-LEAF	109.0	a	98.0	a	38.3	abc	17.7	a	8991 abc
10	SuperU 2-way split (7-days apart)	69	4-LEAF	108.3	ab	97.3	ab	39.8	abc	16.6	cd	8690 b-f
11	SuperU 2-way split (14-days apart)	69	4-LEAF + 7									
		69	4-LEAF	108.0	ab	97.0	ab	39.8	abc	17.4	ab	9300 a
12	SuperU 3-way split (7-days apart)	69	4-LEAF + 14									
		46	4-LEAF	109.0	a	98.0	a	41.0	a	17.2	abc	8756 b-e
		46	4-LEAF + 7									
		46	4-LEAF + 14									
13	Urea + Anvol Single pre-flood	138	4-LEAF	109.0	a	98.0	a	38.0	abc	17.6	ab	8956 a-d
14	Urea + Anvol 2-way split (7-days apart)	69	4-LEAF	109.0	a	98.0	a	38.5	abc	17.3	abc	8276 f
15	Urea + Anvol 2-way split (14-days apart)	69	4-LEAF + 7									
		69	4-LEAF	109.0	a	98.0	a	38.8	abc	17.7	a	8989 abc
16	Urea + Anvol 3-way split (7-days apart)	69	4-LEAF + 14									
		46	4-LEAF	108.3	ab	97.3	ab	37.8	bc	17.0	a-d	8529 def
		46	4-LEAF + 7									
		46	4-LEAF + 14									
17	No N	0		104.0	c	93.0	c	32.0	d	15.7	e	4862 g
LSD P=.05 Standard												
Deviation CV												

Continued.

Table 66. Continued.

Crop Name Description Rating Type Rating Unit Crop Stage Scale Crop Stage Majority	Trt Treatment No. Name	Rate (lb N/A) Stage	Rice		Rice Tissue biomass-dry lb/A 50% HD Main	Rice Tissue N % N 50% HD Main	Rice N Uptake lb/A 50% HD Main	Rice NUE %
			Milling					
			Head %	Total %				
			Main	Main				
1 Urea	Single pre-flood	138	65.2 cde	73.0 ab	6346 a	1.55 a	96 a-d	45 a-d
2 Urea	2-way split (7-days apart)	69	65.3 b-e	72.9 b	6903 a	1.14 def	76 b-e	31 a-d
3 Urea	2-way split (14-days apart)	69	65.0 de	73.1 ab	9268 a	1.26 cde	117 ab	57 abc
4 Urea	3-way split (7-days apart)	46	65.2 cde	72.9 b	6634 a	1.18 def	75 b-e	30 bcd
5 Urea + Agrotain Advanced	Single pre-flood	138	67.0 ab	73.4 ab	7370 a	1.32 bcd	94 a-d	44 a-d
6 Urea + Agrotain Advanced	2-way split (7-days apart)	69	66.6 a-d	73.5 ab	9686 a	1.09 ef	105 abc	52 abc
7 Urea + Agrotain Advanced	2-way split (14-days apart)	69	67.1 a	73.3 ab	8195 a	1.20 c-f	92 a-d	43 a-d
8 Urea + Agrotain Advanced	3-way split (7-days apart)	46	66.3 a-e	73.3 ab	7116 a	1.26 cde	90 a-d	41 a-d
9 SuperU	Single pre-flood	138	66.7 a-d	73.3 ab	6363 a	1.41 abc	78 a-d	33 a-d
10 SuperU	2-way split (7-days apart)	69	64.8 e	73.0 ab	6464 a	1.12 def	71 cde	27 cde

Continued.

Table 66. Continued.

Table 66: Continued																
Crop Name Description	Rating Type	Rating Unit	Crop Stage Scale	Crop Stage Majority	Rice		Rice Tissue	Rice Tissue N	Rice N Uptake	Rice NUE						
					Milling											
					Head %	Total %										
					biomass-dry											
					lb/A		50% HD		Main							
					Main		Main		Main							
Trt	Treatment	Rate (lb N/A)	Growth Stage													
11	SuperU	69	4-LEAF	65.7	a-e	73.0	ab	6220	a	1.53	ab	98	a-d	47	abc	
2-way split (14-days apart)				69	4-LEAF + 14											
12	SuperU	46	4-LEAF	66.1	a-e	73.2	ab	10001	a	1.15	def	112	abc	57	abc	
3-way split (7-days apart)				46	4-LEAF + 7											
				46	4-LEAF + 14											
13	Urea + Anvol	138	4-LEAF	66.9	abc	73.6	a	9456	a	1.29	cde	122	a	61	a	
Single pre-flood																
14	Urea + Anvol	69	4-LEAF	66.1	a-e	73.0	ab	5868	a	1.00	fg	55	de	16	de	
2-way split (7-days apart)				69	4-LEAF + 7											
15	Urea + Anvol	69	4-LEAF	66.8	abc	73.3	ab	9319	a	1.34	a-d	115	abc	59	ab	
2-way split (14-days apart)				69	4-LEAF + 14											
16	Urea + Anvol	46	4-LEAF	66.5	a-d	73.4	ab	7057	a	1.17	def	77	b-e	32	a-d	
3-way split (7-days apart)				46	4-LEAF + 7											
				46	4-LEAF + 14											
17	No N	0		60.2	f	71.4	c	4042	a	0.85	g	33	e	0	e	
LSD P=.05				1.731	3836.7											
Standard Deviation				1.218	2698.6											
CV				1.85	36.32											
Treatment F				6.966	1.480											
Treatment Prob(F)				0.0001	0.1469											
				4.839	4.872											
				0.0001	0.0177											
				2.208	2.405											
				0.0098	0.0098											

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

Table 67. Two-way table for the evaluation of SuperU fertilizer in furrow irrigation system. H. Rouse Caffey Rice Research Station.

Rice Research Station													
Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of Panicle		Moisture			
Rating Date								8/2/2021		8/2/2021		8/2/2021	
Rating Type				50% HD		50% HD		Height		Moist		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt	Treatment			Rate		Growth							
No.	Name			(lb N/A)		Stage							
TABLE OF A (N Source) MEANS													
1	Urea			109	a	98	a	38.7	a	16.97	a	8735	a
2	Urea + Agrotain Advanced			109	a	98	a	38.6	a	17.46	a	8762	a
3	SuperU			109	a	98	a	39.7	a	17.19	a	8934	a
4	Urea + Anvol			109	a	98	a	38.3	a	17.40	a	8688	a
<i>P</i>				0.7		0.7		0.2		0.06		0.125	
LSD <i>P</i> =.05				0.79		0.79		1.84		0.515		285.8	
TABLE OF B (N Timing) MEANS													
1	Single pre-flood			138	4-LEAF	109	a	98	a	39.1	a	17.55	a
2	2-way split (7-days apart)			69	4-LEAF	109	a	98	a	38.2	a	16.98	b
2				69	4-LEAF + 7								
3	2-way split (14-days apart)			69	4-LEAF	109	a	98	a	38.9	a	17.56	a
3				69	4-LEAF + 14								
4	3-way split (7-days apart)			46	4-LEAF	108	a	97	a	39.1	a	16.94	b
4				46	4-LEAF + 7								
4				46	4-LEAF + 14								
<i>P</i>				0.4715		0.4715		0.514		0.001		0.001	
LSD <i>P</i> =.05				0.79		0.79		1.84		0.515		285.8	
TABLE OF A (N Source) B (N Timing) MEANS													
1	Urea			109	a	98	a	39.3	a	17.23	a	8936	a
1	Single pre-flood			138	4-LEAF								
2	Urea + Agrotain Advanced			109	a	98	a	40.8	a	17.73	a	9055	a
1	Single pre-flood			138	4-LEAF								
3	SuperU			109	a	98	a	38.3	a	17.65	a	8991	a
1	Single pre-flood			138	4-LEAF								
4	Urea + Anvol			109	a	98	a	38.0	a	17.60	a	8956	a
1	Single pre-flood			138	4-LEAF								

Continued.

Table 67. Continued.

Crop Name				Rice	Rice	Rice	Rice	Rice
Description				Plant-hd	Emer-hd	Tip of Panicle	Moisture	
Rating Date						8/2/2021	8/2/2021	8/2/2021
Rating Type				50% HD	50% HD	Height	Moist	Yield
Rating Unit				days	days	in	%	lb/A
Crop Stage Majority				Main	Main	Main	Main	Main
Trt	Treatment	Rate	Growth					
No.	Name	(lb N/A)	Stage					
TABLE OF A (N Source) B (N Timing) MEANS (continued)								
1	Urea	69	4-LEAF	109	a	98	a	37.0 a 16.88 a 8260 a
2	2-way split (7-days apart)	69	4-LEAF + 7					
2	Urea + Agrotain Advanced	69	4-LEAF	109	a	98	a	37.5 a 17.18 a 8367 a
2	2-way split (7-days apart)	69	4-LEAF + 7					
3	SuperU	69	4-LEAF	108	a	97	a	39.8 a 16.58 a 8690 a
2	2-way split (7-days apart)	69	4-LEAF + 7					
4	Urea + Anvol	69	4-LEAF	109	a	98	a	38.5 a 17.28 a 8276 a
2	2-way split (7-days apart)	69	4-LEAF + 7					
1	Urea	69	4-LEAF	109	a	98	a	38.5 a 17.43 a 8876 a
3	2-way split (14-days apart)	69	4-LEAF + 14					
2	Urea + Agrotain Advanced	69	4-LEAF	109	a	98	a	38.5 a 17.73 a 9035 a
3	2-way split (14-days apart)	69	4-LEAF + 14					
3	SuperU	69	4-LEAF	108	a	97	a	39.8 a 17.40 a 9300 a
3	2-way split (14-days apart)	69	4-LEAF + 14					
4	Urea + Anvol	69	4-LEAF	109	a	98	a	38.8 a 17.70 a 8989 a
3	2-way split (14-days apart)	69	4-LEAF + 14					
1	Urea	46	4-LEAF	108	a	97	a	40.0 a 16.35 a 8866 a
4	3-way split (7-days apart)	46	4-LEAF + 7					
4		46	4-LEAF + 14					
2	Urea + Agrotain Advanced	46	4-LEAF	109	a	98	a	37.8 a 17.23 a 8591 a
4	3-way split (7-days apart)	46	4-LEAF + 7					
4		46	4-LEAF + 14					
3	SuperU	46	4-LEAF	109	a	98	a	41.0 a 17.15 a 8756 a
4	3-way split (7-days apart)	46	4-LEAF + 7					
4		46	4-LEAF + 14					
4	Urea + Anvol	46	4-LEAF	108	a	97	a	37.8 a 17.03 a 8529 a
4	3-way split (7-days apart)	46	4-LEAF + 7					
4		46	4-LEAF + 14					
P				0	0	0.1462	0.7671	0.6534
LSD P=.05				2.16	2.16	5.01	1.399	776.8
Standard Deviation				0.84	0.84	1.95	0.546	303.0
CV				0.77	0.86	5.03	3.163	3.5

Continued.

Table 67. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice			
Description				Milling				Tissue		Tissue N		Tissue N		Rice N fert Eff.	
Part Rated								Abvgrd, - Biomass-dry		Abvgrd, -		Total, -			
Rating Type				Head		Total						N Uptake			
Rating Unit				%		%		lb/A		%		lb N/A		%	
Crop Stage Majority				Main		Main		50%HD		50%HD		50%HD		50%HD	
Trt No	Treatment	Rate (lb N/A)	Growth Stage												
TABLE OF A (N Source) MEANS															
1	Urea			65.2	b	73.0	a	7288	a	1.28	a	91	a	41	a
2	Urea + Agrotain			66.7	a	73.4	a	8092	a	1.21	a	95	a	45	a
3	Advanced			65.8	a	73.1	a	7262	a	1.30	a	90	a	41	a
4	SuperU			66.6	b	73.3	a	7925	a	1.20	a	92	a	42	a
	Urea + Anvol			0.05	0.00										
P				1	2			0.74	0.21			0.097		0.964	
				1.13	0.40										
LSD P=.05				8	9			2499	0.152			30.1		20.3	
TABLE OF B (N Timing) MEANS															
1	Single pre-flood	138	4-LEAF	66.4	a	73.3	a	7384	a	1.39	a	97	a	46	a
2	2-way split (7-days apart)	69	4-LEAF	65.7	a	73.1	a	7230	a	1.09	c	77	a	32	a
2		69	4-LEAF + 7												
3	2-way split (14-days apart)	69	4-LEAF	66.1	a	73.2	a	8250	a	1.33	a	105	a	52	a
3		69	4-LEAF + 14												
4	3-way split (7-days apart)	46	4-LEAF	66.1	a	73.2	a	7702	a	1.19	b	88	a	40	a
4		46	4-LEAF + 7												
4		46	4-LEAF + 14												
P				0.62	0.37			0.000	0.079	0.071					
				4	9			1	8	1					
				1.13	0.40										
LSD P=.05				8	9			2500	0.152			30.1		20.3	
TABLE OF A (N Source) B (N Timing) MEANS															
1	Urea			65.2	a	73.0	a	6346	a	1.55	a	96	a	45	a
1	Single pre-flood	138	4-LEAF												
2	Urea + Agrotain			67.0	a	73.4	a	7370	a	1.32	a	94	a	44	a
2	Advanced														
1	Single pre-flood	138	4-LEAF												
3	SuperU			66.7	a	73.3	a	6363	a	1.41	a	78	a	33	a
1	Single pre-flood	138	4-LEAF												
4	Urea + Anvol			66.9	a	73.6	a	9456	a	1.29	a	122	a	61	a
1	Single pre-flood	138	4-LEAF												

Continued.

Table 67. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice			
Description				Milling				Tissue		Tissue N		Tissue N		N fert Eff.	
Part Rated								Abvgrd, -		Abvgrd, -		Total, -			
Rating Type				Head		Total		Biomass-dry				N Uptake			
Rating Unit				%		%		lb/A		%		lb N/A		%	
Crop Stage Majority				Main		Main		50%HD		50%HD		50%HD		50%HD	
Trt	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	Urea	69	4-LEAF	65.3	a	72.9	a	6903	a	1.14	a	76	a	31	a
2	2-way split (7-days apart)	69	4-LEAF + 7												
2	Urea + Agrotain Advanced	69	4-LEAF	66.6	a	73.5	a	9686	a	1.09	a	105	a	52	a
2	2-way split (7-days apart)	69	4-LEAF + 7												
3	SuperU	69	4-LEAF	64.8	a	73.0	a	6464	a	1.12	a	71	a	27	a
2	2-way split (7-days apart)	69	4-LEAF + 7												
4	Urea + Anvol	69	4-LEAF	66.1	a	73.0	a	5868	a	1.00	a	55	a	16	a
2	2-way split (7-days apart)	69	4-LEAF + 7												
1	Urea	69	4-LEAF	65.0	a	73.1	a	9268	a	1.26	a	117	a	57	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
2	Urea + Agrotain Advanced	69	4-LEAF	67.1	a	73.3	a	8195	a	1.20	a	92	a	43	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
3	SuperU	69	4-LEAF	65.7	a	73.0	a	6220	a	1.53	a	98	a	47	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
4	Urea + Anvol	69	4-LEAF	66.8	a	73.3	a	9319	a	1.34	a	115	a	59	a
3	2-way split (14-days apart)	69	4-LEAF + 14												
1	Urea	46	4-LEAF	65.2	a	72.9	a	6634	a	1.18	a	75	a	30	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
2	Urea + Agrotain Advanced	46	4-LEAF	66.3	a	73.3	a	7116	a	1.26	a	90	a	41	a
4	3-way split	46	4-LEAF + 7												
4		46	4-LEAF + 14												
3	SuperU	46	4-LEAF	66.1	a	73.2	a	10001	a	1.15	a	112	a	57	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
4	Urea + Anvol	46	4-LEAF	66.5	a	73.4	a	7057	a	1.17	a	77	a	32	a
4	3-way split (7-days apart)	46	4-LEAF + 7												
4		46	4-LEAF + 14												
P				0.8709		0.8765		0.1267		0.1624		0.1597		0.1398	
LSD P=.05				3.0936		1.1114		6794.1		0.4135		81.9		55.3	
Standard Deviation				1.2068		0.4335		2650.3		0.1613		32.0		21.6	
CV				1.8263		0.5923		34.7		12.909		34.8		51.1	

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

**Agronomic Response of CLL17 to Nitrogen Fertilizer Rate in
Furrow Irrigation System – H. Rouse Caffey Rice Research Station**

Experiment number : 21-CM-34D

Site and design :

Location/Cooperator : H. Rouse Caffey Rice Research Station (Crowley Main)

Tillage type..... : Fall Stale (Row Irrigation)

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..... : 1.28

pH..... : 6.17

Extractable nutrients (ppm)..... : Ca-1158; Cu-1.59; Mg-240; P-7.84; K-77; Na-80; S-5.01; Zn-7.52

Crop/Variety : Rice / CLL17

Planting method/date : Drill seeded / Mar.10

Seeding rate/depth..... : 33 seeds /ft² / 0.5 inches

Emergence date..... : Mar. 21

Harvest date : Aug. 1

Seed treatment/cwt : **Conventional Varieties:**

Apron (fungicide) – 8.88 ml

Maxim (fungicide) – 0.88 ml

Release (gibberellic acid) – 10 g

Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml

AV-1011 (bird repellent) – 18.3 oz

Dermacor- 0.137 lb ai/cwt

Fertilization : 250 lb/A 0-24-24-2.8, Mar. 10

Water management : Underground irrigation

Flush : Apr. 29, May 6, May 17 (rainfall), May 24, Jun. 14, Jun. 18

Flood : NA

Drain : NA

Pest management :

Herbicides..... : 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +
.25% Surfactant, Mar. 9

2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

2 pt/A Prowl H₂O + 1.5 oz/A Gambit, Jun. 2

21 oz/A Clincher + 8 oz/A Crop oil, Jun. 7

Insecticides : None

Fungicides..... : 15 oz/A Amistar Top, Jun. 8

15 oz/A Amistar Top, Jun. 23

Table 68. Agronomic response of CLL17 to N fertilizer rate in a furrow irrigation system. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of Panicle					
Rating Date								7/27/2021		8/1/2021		8/1/2021	
Rating Type				50% HD		50% HD		Height		Moist		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	111.8	a	100.8	a	29.0	b	19.4	b	3611	d
2	UREA	90	4-5 leaf	111.3	a	100.3	a	34.5	a	19.4	b	6369	c
3	UREA	120	4-5 leaf	111.8	a	100.8	a	34.3	a	19.3	b	6771	ab
4	UREA	150	4-5 leaf	112.8	a	101.8	a	36.0	a	21.1	a	6893	ab
5	UREA	180	4-5 leaf	112.8	a	101.8	a	36.0	a	21.1	a	7152	a
6	UREA	210	4-5 leaf	113.8	a	102.8	a	36.0	a	21.7	a	6700	bc
LSD P=.05				1.97		1.97		2.05		1.33		384.6	
Standard Deviation				1.30		1.30		1.36		0.88		255.2	
CV				1.16		1.29		3.96		4.34		4.08	
Treatment F				1.980		1.980		15.986		5.950		106.654	
Treatment Prob(F)				0.1402		0.1402		0.0001		0.0032		0.0001	

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

**Agronomic Response of CLL17 to Nitrogen Fertilizer Application Timing
In Furrow Irrigation System – H. Rouse Caffey Rice Research Station**

Experiment number: 21-CM-34E

Site and design:

Location/Cooperator: H. Rouse Caffey Rice Research Station (Crowley Main)

Tillage type.....: Fall Stale (Row Irrigation)

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.....: 1.28

pH.....: 6.17

Extractable nutrients (ppm).....: Ca-1158; Cu-1.59; Mg-240; P-7.84; K-77; Na-80; S-5.01; Zn-7.52

Crop/Variety: Rice / CLL17

Planting method/date: Drill seeded / Mar.10

Seeding rate/depth.....: 33 seeds /ft² / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 1

Seed treatment/cwt: **Conventional Varieties:**

 Apron (fungicide) – 8.88 ml

 Maxim (fungicide) – 0.88 ml

 Release (gibberellic acid) – 10 g

 Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml

 AV-1011 (bird repellent) – 18.3 oz

 Dermacor- 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

Water management: Underground irrigation

Flush: Apr. 29, May 6, May 17 (rainfall), May 24, Jun. 14, Jun. 18

Flood: NA

Drain: NA

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +
 .25% Surfactant, Mar. 9

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

 2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit, Jun. 2

 21 oz/A Clincher + 8 oz/A Crop oil, Jun. 7

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

 15 oz/A Amistar Top, Jun. 23

Table 69. Agronomic response of CLL17 to N fertilizer application timing in a furrow irrigation system. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of Panicle		Moisture			
Rating Date								7/27/2021		8/1/2021		8/1/2021	
Rating Type				50% HD		50% HD		Height		Moist		Yield	
Rating Unit				days		days		in		%		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage										
1	120 lb N/A			112.8	a	101.8	a	35.0	a	20.0	a	6640	abc
	Single Pre-flood	120	4-LEAF										
2	120 lb N/A			111.0	c	100.0	c	32.5	b	18.8	a	6279	c
	2-way split (7-day)	60	4-LEAF										
	2-way split (7-day)	60	4-LEAF+7D										
3	120 lb N/A			112.3	abc	101.3	abc	34.8	a	19.7	a	6697	abc
	2-way split (14-day)	60	4-LEAF										
	2-way split (14-day)	60	4-LEAF+14D										
4	120 lb N/A			112.0	abc	101.0	abc	34.0	ab	19.6	a	6506	abc
	3-way (7 day)	40	4-LEAF										
	3-way (14 day)	40	4-LEAF+7D										
	3-way (21 day)	40	4-LEAF+14D										
5	165 lb N/A			113.3	a	102.3	a	35.8	a	20.7	a	6913	a
	Single Pre-flood	165											
6	165 lb N/A			112.5	ab	101.5	ab	34.0	ab	20.1	a	6432	bc
	2-way split (7-day)	82.5	4-LEAF										
	2-way split (7-day)	82.5	4-LEAF+7D										
7	165 lb N/A			112.8	a	101.8	a	34.0	ab	20.3	a	6862	ab
	2-way split (14-day)	82.5	4-LEAF										
	2-way split (14-day)	82.5	4-LEAF+14D										
8	165 lb N/A			112.0	abc	101.0	abc	34.5	ab	19.5	a	6911	a
	3-way (7 day)	55	4-LEAF										
	3-way (14 day)	55	4-LEAF+7D										
	3-way (21 day) 9	55	4-LEAF+14D										
0 N				111.3	bc	100.3	bc	29.0	c	19.0	a	3838	d
LSD P=.05				1.26		1.26		2.04		1.16		456.7	
Standard Deviation				0.86		0.86		1.40		0.80		313.0	
CV				0.77		0.85		4.14		4.04		4.93	
Treatment F				2.850		2.850		8.073		2.318		38.00	
Treatment Prob(F)				0.0223		0.0223		0.0001		0.0532		0.0001	

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

Agronomic Response of RT7521 FP to Nitrogen Fertilizer Rate in Furrow Irrigation – Tensas Parish

Experiment number	21-SJ-34A
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	
% Organic matter	2.91
pH	6.81
Extractable nutrients (ppm)	Ca-4063; Cu-2.14; Mg-869; P-49.7; K-474; Na-19; S-8.2; Zn-4.9
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	As needed
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	0.33 oz/A Permit + 2 qt/A Stam, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit + 2 pt/A Prowl H2O, Jun. 24
Insecticides	None
Fungicides	None

Table 70. Agronomic response of RT7521 FP to nitrogen fertilizer rate in furrow irrigation. Tensas Parish.

Crop Name				Rice	Rice	Rice	Rice
Description				Tip of Panicle			
Rating Date				9/27/2021	7/30/2020	9/27/2021	7/30/2020
Rating Type				Height	Moist	Test Weight	Yield
Rating Unit				in	%	lb/bu	lb/A
Crop Stage Majority				Main	Main	Main	Main
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage				
1	UREA	0	4-5 leaf	36.8 b	14.7 b	40.9 a	4574 c
2	UREA	90	4-5 leaf	43.8 a	16.2 ab	41.6 a	7203 b
3	UREA	120	4-5 leaf	44.0 a	16.3 ab	40.4 a	7222 b
4	UREA	150	4-5 leaf	44.5 a	17.6 a	41.4 a	8371 a
5	UREA	180	4-5 leaf	45.0 a	16.7 a	40.3 a	8297 a
6	UREA	210	4-5 leaf	44.0 a	17.9 a	41.0 a	7989 ab
LSD P=.05				2.37	1.68	1.03	1068.1
Standard Deviation				1.57	1.12	0.69	708.7
CV				3.66	6.75	1.68	9.74
Treatment F				15.457	4.203	2.290	16.022
Treatment Prob(F)				0.0001	0.0137	0.0981	0.0001

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

Agronomic Response of RT7521 FP to Nitrogen Fertilizer Timing in Furrow Irrigation – Tensas Parish

Experiment number	21-SJ-34B
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	
% Organic matter	2.91
pH	6.81
Extractable nutrients (ppm)	Ca-4063; Cu-2.14; Mg-869; P-49.7; K-474; Na-19; S-8.2; Zn-4.9
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	No blanket applications
Water management	
Flush	As needed
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	0.33 oz/A Permit + 2 qt/A Stam, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit + 2 pt/A Prowl H20, Jun. 24
Insecticides	None
Fungicides	None

Table 71. Agronomic response of RT7521 FP to nitrogen fertilizer timing in furrow irrigation. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice	
Description		Tip of Panicle							
Rating Date		9/27/2021		9/27/2021		9/27/2021		9/27/2021	
Rating Type		Height		Moist		Test Weight		Yield	
Rating Unit		in		%		lb/bu		lb/A	
Crop Stage Majority		Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage						
1	120 lb N/A			43.0	b	15.7	a	40.7	a
	Single Pre-flood	120	4-LEAF						
2	120 lb N/A			42.8	b	15.2	a	41.8	a
	2-way split (7-day)	60	4-LEAF						
	2-way split (7-day)	60	4-LEAF+7D						
3	120 lb N/A			45.8	a	16.3	a	41.8	a
	2-way split (14-day)	60	4-LEAF						
	2-way split (14-day)	60	4-LEAF+14D						
4	120 lb N/A			43.3	ab	15.6	a	41.2	a
	3-way (7 day)	40	4-LEAF						
	3-way (14 day)	40	4-LEAF+7D						
	3-way (21 day)	40	4-LEAF+14D						
5	165 lb N/A			44.5	ab	15.2	a	41.0	a
	Single Pre-flood	165							
6	165 lb N/A			44.5	ab	15.3	a	41.1	a
	2-way split (7-day)	82.5	4-LEAF						
	2-way split (7-day)	82.5	4-LEAF+7D						
7	165 lb N/A			45.8	a	16.1	a	41.2	a
	2-way split (14-day)	82.5	4-LEAF						
	2-way split (14-day)	82.5	4-LEAF+14D						
8	165 lb N/A			44.8	ab	15.7	a	40.2	a
	3-way (7 day)	55	4-LEAF						
	3-way (14 day)	55	4-LEAF+7D						
	3-way (21 day)	55	4-LEAF+14D						
9	0 N			36.3	c	15.9	a	41.8	a
	LSD P=.05			2.53		1.20		1.08	
	Standard Deviation			1.73		0.82		0.74	
	CV			3.99		5.26		1.79	
	Treatment F			11.178		0.878		2.095	
	Treatment Prob(F)			0.0001		0.5482		0.0771	

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

Evaluation of SuperU Fertilizer in Furrow Irrigation Rice System – Tensas Parish

Experiment number	21-SJ-34C
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	
% Organic matter	2.91
pH	6.81
Extractable nutrients (ppm)	Ca-4063; Cu-2.14; Mg-869; P-49.7; K-474; Na-19; S-8.2; Zn-4.9
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	As needed
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	0.33 oz/A Permit + 2 qt/A Stam, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit + 2 pt/A Prowl H2O, Jun. 24
Insecticides	None
Fungicides	None

Table 72. Evaluation of SuperU fertilizer in furrow irrigation rice system. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of panicle				Milling			
Rating Date				9/27/2021		9/27/2021					
Rating Type				Height		Yield		Head		Total	
Rating Unit				in		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage								
1	Urea Single pre-flood	138	4-LEAF	44.8	ab	7779	a	57.06	def	70.98	a
2	Urea 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	44.8	ab	8105	a	60.24	a-d	71.41	a
3	Urea 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	44.3	ab	7476	a	58.52	b-e	71.11	a
4	Urea 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	44.5	ab	8574	a	62.15	ab	72.12	a
5	Urea + Agrotain Advanced Single pre-flood	138	4-LEAF	44.3	ab	7946	a	59.57	a-e	71.42	a
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	45.8	a	8718	a	60.42	a-d	71.83	a
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	43.5	b	7524	a	60.57	a-d	72.00	a
8	Urea + Agrotain Advanced 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	46.0	a	8417	a	62.25	a	72.00	a
9	SuperU Single pre-flood	138	4-LEAF	44.5	ab	8297	a	61.36	abc	71.83	a
10	SuperU 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	44.5	ab	7857	a	58.33	cde	71.39	a
11	SuperU 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	44.3	ab	8423	a	62.30	a	72.41	a
12	SuperU 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	44.5	ab	7919	a	60.83	abc	71.98	a
13	Urea + Anvol Single pre-flood	138	4-LEAF	43.5	b	8301	a	56.06	ef	70.74	a
14	Urea + Anvol 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	45.8	a	8028	a	60.93	abc	71.76	a
15	Urea + Anvol 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	44.3	ab	8373	a	60.55	a-d	71.76	a
16	Urea + Anvol 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	44.5	ab	8397	a	59.98	a-d	71.73	a
17	No N	0		35.8	c	5833	b	54.66	f	70.61	a
LSD P=.05				1.99		1245.7		3.649		1.108	
Standard Deviation				1.40		876.2		2.566		0.780	
CV				3.18		10.95		4.3		1.09	
Treatment F				10.362		2.267		2.886		1.654	
Treatment Prob(F)				0.0001		0.0149		0.0023		0.0906	

Continued.

Table 72. Continued.

Crop Name Description Rating Type Rating Unit Crop Stage Scale Crop Stage Majority				Rice Tissue biomass-dry lb/A 50% HD Main		Rice Tissue N % N 50% HD Main		Rice N Uptake lb/A 50% HD Main		Rice NUE % 50% HD Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage								
1	Urea Single pre-flood	138	4-LEAF	14662	a	0.91	a	133	abc	65	ab
2	Urea 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	11878	a-d	0.98	a	117	a-e	53	a-d
3	Urea 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	10223	bcd	0.92	a	93	c-f	36	b-e
4	Urea 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	12310	a-d	0.91	a	113	a-e	50	a-d
5	Urea + Agrotain Advanced Single pre-flood	138	4-LEAF	11222	a-d	0.89	a	101	c-f	42	b-e
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	11503	a-d	1.00	a	116	a-e	53	a-d
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	12549	abc	0.87	a	110	b-e	48	a-d
8	Urea + Agrotain Advanced 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	13567	ab	1.06	a	144	ab	72	a
9	SuperU Single pre-flood	138	4-LEAF	12558	abc	1.25	a	154	a	76	a
10	SuperU 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	10246	bcd	0.89	a	91	def	34	cde
11	SuperU 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	11042	bcd	0.93	a	102	c-f	42	b-e
12	SuperU 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	12741	ab	1.01	a	127	a-d	60	abc
13	Urea + Anvol Single pre-flood	138	4-LEAF	8998	de	0.75	a	68	fg	18	ef
14	Urea + Anvol 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	11988	a-d	1.10	a	125	a-d	59	abc
15	Urea + Anvol 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	11539	a-d	1.01	a	118	a-e	54	a-d
16	Urea + Anvol 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	9138	cde	0.85	a	81	efg	28	def
17	No N	0		5779	e	0.77	a	44	g	0	f
LSD P=.05				3499.3		0.2585		41.7		29.4	
Standard Deviation				2461.3		0.1818		29.3		20.7	
CV				21.8		19.21		27.18		44.49	
Treatment F				2.740		1.783		3.512		3.504	
Treatment Prob(F)				0.0036		0.0625		0.0004		0.0004	

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

Table 73. Two-way table for the evaluation of SuperU fertilizer in furrow irrigation system. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of Panicle		Milling					
Rating Date				9/27/2021		9/27/2021					
Rating Type				Height		Yield		Head		Total	
Rating Unit				in		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main	

Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
TABLE OF A (N Source) MEANS											
1	Urea			44.6	a	7984	a	59.49	a	71.41	a
2	Urea + Agrotain Advanced			44.9	a	8151	a	60.70	a	71.81	a
3	SuperU			44.4	a	8124	a	60.70	a	71.90	a
4	Urea + Anvol			44.5	a	8275	a	59.38	a	71.50	a
P				0.8		0.823		0.276		0.222	
LSD P=.05				1.32		819		2.399		0.732	
TABLE OF B (N Timing) MEANS											
1	Single pre-flood	138	4-LEAF	44.3	a	8081	a	58.51	b	71.24	a
2	2-way split (7-days apart)	69	4-LEAF	45.2	a	8177	a	59.98	ab	71.60	a
2		69	4-LEAF + 7								
3	2-way split (14-days apart)	69	4-LEAF	44.1	a	7949	a	60.48	ab	71.82	a
3		69	4-LEAF + 14								
4	3-way split (7-days apart)	46	4-LEAF	44.9	a	8327	a	61.30	a	71.96	a
4		46	4-LEAF + 7								
4		46	4-LEAF + 14								
P				0.093		0.659		0.026		0.066	
LSD P=.05				1.32		818.9		2.399		0.732	
TABLE OF A (N Source) B (N Timing) MEANS											
1	Urea			44.8	a	7779	a	57.06	a	70.98	a
1	Single pre-flood	138	4-LEAF								
2	Urea + Agrotain Advanced			44.3	a	7946	a	59.57	a	71.42	a
1	Single pre-flood	138	4-LEAF								
3	SuperU			44.5	a	8297	a	61.36	a	71.83	a
1	Single pre-flood	138	4-LEAF								
4	Urea + Anvol			43.5	a	8301	a	56.06	a	70.74	a
1	Single pre-flood	138	4-LEAF								

Continued.

Table 73. Continued.

Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of Panicle				Milling			
Rating Date				9/27/2021		9/27/2021					
Rating Type				Height		Yield		Head		Total	
Rating Unit				in		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment		Rate	Growth							
No.	Name		(lb N/A)	Stage							
TABLE OF A (N Source) B (N Timing) MEANS (continued)											
1	Urea		69	4-LEAF		44.8	a	8105	a	60.24	a
2	2-way split (7-days apart)		69	4-LEAF + 7							
2	Urea + Agrotain Advanced		69	4-LEAF		45.8	a	8718	a	60.42	a
2	2-way split (7-days apart)		69	4-LEAF + 7							
3	SuperU		69	4-LEAF		44.5	a	7857	a	58.33	a
2	2-way split (7-days apart)		69	4-LEAF + 7							
4	Urea + Anvol		69	4-LEAF		45.8	a	8028	a	60.93	a
2	2-way split (7-days apart)		69	4-LEAF + 7							
1	Urea		69	4-LEAF		44.3	a	7476	a	58.52	a
3	2-way split (14-days apart)		69	4-LEAF + 14							
2	Urea + Agrotain Advanced		69	4-LEAF		43.5	a	7524	a	60.57	a
3	2-way split (14-days apart)		69	4-LEAF + 14							
3	SuperU		69	4-LEAF		44.3	a	8423	a	62.30	a
3	2-way split (14-days apart)		69	4-LEAF + 14							
4	Urea + Anvol		69	4-LEAF		44.3	a	8373	a	60.55	a
3	2-way split (14-days apart)		69	4-LEAF + 14							
1	Urea		46	4-LEAF		44.5	a	8574	a	62.15	a
4	3-way split (7-days apart)		46	4-LEAF + 7							
4			46	4-LEAF + 14							
2	Urea + Agrotain Advanced		46	4-LEAF		46.0	a	8417	a	62.25	a
4	3-way split (7-days apart)		46	4-LEAF + 7							
4			46	4-LEAF + 14							
3	SuperU		46	4-LEAF		44.5	a	7919	a	60.83	a
4	3-way split (7-days apart)		46	4-LEAF + 7							
4			46	4-LEAF + 14							
4	Urea + Anvol		46	4-LEAF		44.5	a	8397	a	59.98	a
4	3-way split (7-days apart)		46	4-LEAF + 7							
4			46	4-LEAF + 14							
P						0.556		0.544		0.104	
LSD P=.05						3.58		2226		6.52	
Standard Deviation						1.40		868		2.54	
CV						3.13		10.7		4.23	

Continued.

Table 73. Continued.

Table 75: Continued.												
Crop Name				Rice		Rice		Rice		Rice		
Description				Tissue		Tissue N		Tissue N		N fert Eff.		
Part Rated				Abvgrd, -		Abvgrd, -		Total, -				
Rating Type				Biomass-dry				N Uptake				
Rating Unit				lb/A		%		lb N/A		%		
Crop Stage Majority				Main		Main		Main		Main		
Trt	Treatment			Rate	Growth							
No.	Name			(lb N/A)	Stage							
TABLE OF A (N Source) MEANS												
1	Urea				12268	a	0.93	a	114	a	51	a
2	Urea + Agrotain Advanced				12210	a	0.96	a	118	a	53	a
3	SuperU				11646	a	1.02	a	118	a	53	a
4	Urea + Anvol				10416	a	0.93	a	98	a	40	a
P					0.149		0.478		0.197		0.223	
LSD P=.05					2377		0.176		28.5		20.1	
TABLE OF B (N Timing) MEANS												
1	Single pre-flood	138	4-LEAF		11860	a	0.95	a	114	a	50	a
2	2-way split (7-days apart)	69	4-LEAF		11404	a	0.99	a	112	a	50	a
2		69	4-LEAF + 7									
3	2-way split (14-days apart)	69	4-LEAF		11338	a	0.93	a	105	a	45	a
3		69	4-LEAF + 14									
4	3-way split (7-days apart)	46	4-LEAF		11939	a	0.96	a	116	a	53	a
4		46	4-LEAF + 7									
4		46	4-LEAF + 14									
P					0.869		0.814		0.775		0.779	
LSD P=.05					2377		0.176		28.5		20.1	
TABLE OF A (N Source) B (N Timing) MEANS												
1	Urea				14662	a	0.905	ab	133	ab	65	ab
1	Single pre-flood	138	4-LEAF									
2	Urea + Agrotain Advanced				11222	a	0.885	ab	101	ab	42	ab
1	Single pre-flood	138	4-LEAF									
3	SuperU				12558	a	1.248	a	154	a	76	a
1	Single pre-flood	138	4-LEAF									
4	Urea + Anvol				8998	a	0.753	b	68	b	18	b
1	Single pre-flood	138	4-LEAF									

Continued.

Table 73. Continued.

Table 75. Continued.											
Crop Name				Rice		Rice		Rice		Rice	
Description				Tissue		Tissue N		Tissue N		N fert Eff.	
Part Rated				Abvgrd, -		Abvgrd, -		Total, -			
Rating Type				Biomass-dry				N Uptake			
Rating Unit				lb/A		%		lb N/A		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
TABLE OF A (N Source) B (N Timing) MEANS (continued)											
1	Urea	69	4-LEAF	11878	a	0.983	ab	117	ab	53	ab
2	2-way split (7-days apart)	69	4-LEAF + 7								
2	Urea + Agrotain Advanced	69	4-LEAF	11503	a	1.000	ab	116	ab	53	ab
2	2-way split (7-days apart)	69	4-LEAF + 7								
3	SuperU	69	4-LEAF	10246	a	0.890	ab	91	ab	34	ab
2	2-way split (7-days apart)	69	4-LEAF + 7								
4	Urea + Anvol	69	4-LEAF	11988	a	1.100	ab	125	ab	59	ab
2	2-way split (7-days apart)	69	4-LEAF + 7								
1	Urea	69	4-LEAF	10223	a	0.915	ab	93	ab	36	ab
3	2-way split (14-days apart)	69	4-LEAF + 14								
2	Urea + Agrotain Advanced	69	4-LEAF	12549	a	0.873	ab	110	ab	48	ab
3	2-way split (14-days apart)	69	4-LEAF + 14								
3	SuperU	69	4-LEAF	11042	a	0.930	ab	102	ab	42	ab
3	2-way split (14-days apart)	69	4-LEAF + 14								
4	Urea + Anvol	69	4-LEAF	11539	a	1.008	ab	118	ab	54	ab
3	2-way split (14-days apart)	69	4-LEAF + 14								
1	Urea	46	4-LEAF	12310	a	0.913	ab	113	ab	50	ab
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
2	Urea + Agrotain Advanced	46	4-LEAF	13567	a	1.063	ab	144	ab	72	ab
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
3	SuperU	46	4-LEAF	12741	a	1.008	ab	127	ab	60	ab
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
4	Urea + Anvol	46	4-LEAF	9138	a	0.850	ab	81	ab	28	ab
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
P				0.120		0.041		0.006		0.007	
LSD P=.05				6459		0.478		77.5		54.5	
Standard Deviation				2520		0.186		30.2		21.3	
CV				21.7		19.5		27.0		43.1	

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

Agronomic Response of CLL17 to Nitrogen Fertilizer Rate in Furrow Irrigation – Tensas Parish

Experiment number	21-SJ-34D
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	
% Organic matter	2.91
pH	6.81
Extractable nutrients (ppm)	Ca-4063; Cu-2.14; Mg-869; P-49.7; K-474; Na-19; S-8.2; Zn-4.9
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	As needed
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31 0.33 oz/A Permit + 2 qt/A Stam, Jun. 15 2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit + 2 pt/A Prowl H2O, Jun. 24
Insecticides	None
Fungicides	None

Table 74. Agronomic response of CLL17 to nitrogen fertilizer rate in furrow irrigation. Tensas Parish.

Crop Name				Rice	Rice	Rice	Rice
Description				Tip of Panicle			
Rating Date				9/27/2021	9/27/2021	9/27/2021	9/27/2021
Rating Type				Height	Moist	Test Weight	Yield
Rating Unit				in	%	lb/bu	lb/A
Crop Stage Majority				Main	Main	Main	Main
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage				
1	UREA	0	4-5 leaf	28.5 c	16.5 a	45.0 a	4757 b
2	UREA	90	4-5 leaf	36.3 b	16.0 a	45.6 a	7370 a
3	UREA	120	4-5 leaf	37.8 ab	16.4 a	44.7 a	7349 a
4	UREA	150	4-5 leaf	38.0 a	16.8 a	44.3 a	7804 a
5	UREA	180	4-5 leaf	38.3 a	17.6 a	44.1 a	7444 a
6	UREA	210	4-5 leaf	38.5 a	17.0 a	45.0 a	7402 a
LSD P=.05				1.51	1.11	1.63	552.5
Standard Deviation				1.00	0.74	1.08	366.6
CV				2.77	4.42	2.41	5.22
Treatment F				59.050	2.254	1.006	37.446
Treatment Prob(F)				0.0001	0.1022	0.4476	0.0001

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

Agronomic Response of CLL17 to Nitrogen Fertilizer Timing in Furrow Irrigation – Tensas Parish

Experiment number	21-SJ-34E
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	
% Organic matter	2.91
pH	6.81
Extractable nutrients (ppm)	Ca-4063; Cu-2.14; Mg-869; P-49.7; K-474; Na-19; S-8.2; Zn-4.9
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	33 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	As needed
Flood	NA
Drain	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31 0.33 oz/A Permit + 2 qt/A Stam, Jun. 15 2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit + 2 pt/A Prowl H2O, Jun. 24
Insecticides	None
Fungicides	None

Table 75. Agronomic response of CLL17 to nitrogen fertilizer timing in furrow irrigation. Tensas Parish.

Table 7-3. Agronomic response of CLEET to nitrogen fertilizer timing in furrow irrigation, Tensas Parish.											
Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of Panicle							
Rating Date				9/27/2021		9/27/2021		9/27/2021		9/27/2021	
Rating Type				Height		Moist		Test Weight		Yield	
Rating Unit				in		%		lb/bu		lb/A	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
1	120 lb N/A			37.5	abc	15.9	a	45.9	a	7742	ab
	Single Pre-flood	120	4-LEAF								
2	120 lb N/A			37.3	bc	16.0	a	45.3	ab	7281	b
	2-way split (7-day)	60	4-LEAF								
	2-way split (7-day)	60	4-LEAF+7D								
3	120 lb N/A			36.8	c	15.9	a	44.6	bc	7553	ab
	2-way split (14-day)	60	4-LEAF								
	2-way split (14-day)	60	4-LEAF+14D								
4	120 lb N/A			37.0	c	16.1	a	45.3	ab	7740	ab
	3-way (7 day)	40	4-LEAF								
	3-way (14 day)	40	4-LEAF+7D								
	3-way (21 day)	40	4-LEAF+14D								
5	165 lb N/A			38.0	abc	16.2	a	44.8	b	7927	a
	Single Pre-flood	165									
6	165 lb N/A			39.0	a	16.6	a	44.7	b	7953	a
	2-way split (7-day)	82.5	4-LEAF								
	2-way split (7-day)	82.5	4-LEAF+7D								
7	165 lb N/A			38.8	ab	17.6	a	43.8	c	7366	b
	2-way split (14-day)	82.5	4-LEAF								
	2-way split (14-day)	82.5	4-LEAF+14D								
8	165 lb N/A			37.5	abc	17.0	a	45.1	ab	7702	ab
	3-way (7 day)	55	4-LEAF								
	3-way (14 day)	55	4-LEAF+7D								
	3-way (21 day)	55	4-LEAF+14D								
9	0 N			28.5	d	16.1	a	45.3	ab	4657	c
LSD P=.05				1.59		1.17		0.87		525.6	
Standard Deviation				1.09		0.80		0.60		360.2	
CV				2.97		4.9		1.33		4.92	
Treatment F				33.725		2.195		3.845		32.452	
Treatment Prob(F)				0.0001		0.0653		0.0049		0.0001	

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

Evaluation of SuperU Fertilizer in Drill seeded Delayed Flood– Tensas Parish

Experiment number	21-SJ-33C
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	
% Organic matter	2.34
pH	6.80
Extractable nutrients (ppm)	Ca-3655; Cu-3.07; Mg-700; P-50; K-397; Na-25; S-6.3; Zn-5.5
Crop/Variety	
Planting method/date	Drill seeded / May 31
Seeding rate/depth	10 seeds /ft ² / 0.5 inches
Emergence date	Jun. 6
Harvest date	Sept. 27
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	No blanket applications
Water management	
Flush	NA
Flood	Jun. 25
Drain	Sept. 16
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 16 oz/A Command, May 31
	2 pt/A Prowl H ₂ O, Jun. 15
	2 qt/A Stam + 2 qt/A Rice Beaux + 0.33 oz/A Permit, Jun. 24
Insecticides	None
Fungicides	None

Table 76. Evaluation of SuperU fertilizer in drill seeded delayed flood rice system. Tensas Parish.

Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of panicle				Milling			
Rating Date				9/27/2021		9/27/2021					
Rating Type				Height		Yield		Head		Total	
Rating Unit				in		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage								
1	Urea Single pre-flood	138	4-LEAF	49.3	ab	10903	ab	63.73	ab	73.85	a
2	Urea 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	48.3	abc	9681	de	59.96	cde	72.99	a-d
3	Urea 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	47.8	a-d	9773	cde	61.64	a-e	73.24	a-d
4	Urea 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	45.3	d	9517	de	59.89	cde	72.73	cd
5	Urea + Agrotain Advanced Single pre-flood	138	4-LEAF	48.3	abc	10724	ab	63.16	abc	73.63	abc
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	48.0	a-d	9779	cde	60.42	cde	73.00	a-d
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	48.5	abc	9852	cd	61.46	a-e	73.13	a-d
8	Urea + Agrotain Advanced 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	47.8	a-d	9639	de	59.97	cde	72.79	bcd
9	SuperU Single pre-flood	138	4-LEAF	50.0	a	11286	a	63.90	a	73.76	ab
10	SuperU 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	46.0	cd	9815	cd	60.48	b-e	72.94	a-d
11	SuperU 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	47.5	a-d	10089	cd	62.54	abc	73.37	a-d
12	SuperU 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	47.3	a-d	9752	cde	59.09	de	72.37	de
13	Urea + Anvol Single pre-flood	138	4-LEAF	47.3	a-d	10799	ab	61.60	a-e	73.31	a-d
14	Urea + Anvol 2-way split (7-days apart)	69 69	4-LEAF 4-LEAF + 7	46.3	cd	9825	cd	60.58	b-e	72.94	a-d
15	Urea + Anvol 2-way split (14-days apart)	69 69	4-LEAF 4-LEAF + 14	46.8	bcd	10313	bc	62.20	a-d	73.28	a-d
16	Urea + Anvol 3-way split (7-days apart)	46 46 46	4-LEAF 4-LEAF + 7 4-LEAF + 14	46.3	cd	9180	e	58.71	ef	72.39	de
17	No N	0		38.5	e	6450	f	55.52	f	71.70	e
LSD P=.05				2.93		625.3		3.308		1.020	
Standard Deviation				2.06		439.8		2.327		0.718	
CV				4.39		4.47		3.82		0.98	
Treatment F				5.841		22.383		3.148		2.254	
Treatment Prob(F)				0.0001		0.0001		0.0011		0.0154	

Continued.

Table 76. Continued.

Crop Name Description Rating Date Rating Type Rating Unit Crop Stage Majority				Rice Tissue biomass-dry lb/A 50% HD Main	Rice Tissue N % N 50% HD Main	Rice N Uptake lb/A 50% HD Main	Rice NUE % 50% HD Main
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage				
1	Urea Single pre-flood	138	4-LEAF	16356	a	0.9988	a
2	Urea 2-way split (7-days apart)	69	4-LEAF	15253	a	0.7433	a
3	Urea 2-way split (14-days apart)	69	4-LEAF + 7	12268	a	0.7948	a
4	Urea 3-way split (7-days apart)	69	4-LEAF + 14	12268	a	0.7948	a
		46	4-LEAF	14262	a	0.7860	a
		46	4-LEAF + 7	14262	a	0.7860	a
		46	4-LEAF + 14	14262	a	0.7860	a
5	Urea + Agrotain Advanced Single pre-flood	138	4-LEAF	12811	a	0.8728	a
6	Urea + Agrotain Advanced 2-way split (7-days apart)	69	4-LEAF	14631	a	0.7980	a
		69	4-LEAF + 7	14631	a	0.7980	a
7	Urea + Agrotain Advanced 2-way split (14-days apart)	69	4-LEAF	16687	a	0.7868	a
		69	4-LEAF + 14	16687	a	0.7868	a
8	Urea + Agrotain Advanced 3-way split (7-days apart)	46	4-LEAF	13923	a	0.7678	a
		46	4-LEAF + 7	13923	a	0.7678	a
		46	4-LEAF + 14	13923	a	0.7678	a
9	SuperU Single pre-flood	138	4-LEAF	16074	a	0.8453	a
10	SuperU 2-way split (7-days apart)	69	4-LEAF	17787	a	0.8560	a
		69	4-LEAF + 7	17787	a	0.8560	a
11	SuperU 2-way split (14-days apart)	69	4-LEAF	16850	a	0.8503	a
		69	4-LEAF + 14	16850	a	0.8503	a
12	SuperU 3-way split (7-days apart)	46	4-LEAF	13657	a	0.8680	a
		46	4-LEAF + 7	13657	a	0.8680	a
		46	4-LEAF + 14	13657	a	0.8680	a
13	Urea + Anvol Single pre-flood	138	4-LEAF	13356	a	0.9008	a
14	Urea + Anvol 2-way split (7-days apart)	69	4-LEAF	15203	a	0.7095	a
		69	4-LEAF + 7	15203	a	0.7095	a
15	Urea + Anvol 2-way split (14-days apart)	69	4-LEAF	15230	a	0.8368	a
		69	4-LEAF + 14	15230	a	0.8368	a
16	Urea + Anvol 3-way split (7-days apart)	46	4-LEAF	18529	a	0.7710	a
		46	4-LEAF + 7	18529	a	0.7710	a
		46	4-LEAF + 14	18529	a	0.7710	a
17	No N	0		8474	a	0.6725	a
LSD P=.05				4956		0.1987	
Standard Deviation				3486		0.1398	
CV				23.58		17.15	
Treatment F				1.853		1.211	
Treatment Prob(F)				0.0510		0.2943	

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

Table 77. Two-ways table for the evaluation of SuperU fertilizer in delayed flood rice system. Tensas Parish.

Crop Name		Rice		Rice		Rice		Rice	
Description		Tip of Panicle				Milling			
Rating Date		9/27/2021		9/27/2021					
Rating Type		Height		Yield		Head		Total	
Rating Unit		in		lb/A		%		%	
Crop Stage Majority		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth						
No.	Name	(lb N/A)	Stage						
TABLE OF A (N Source) MEANS									
1	Urea			47.6	a	9968	a	61.30	a
2	Urea + Agrotain Advanced			48.1	a	9998	a	61.25	a
3	SuperU			47.7	a	10235	a	61.50	a
4	Urea + Anvol			46.6	a	10029	a	60.77	a
P				0.2		0.344		0.846	0.858
LSD P=.05				2.00		427.8		2.242	0.698
TABLE OF B (N Timing) MEANS									
1	Single pre-flood	138	4-LEAF	48.7	a	10928	a	63.10	a
2	2-way split (7-days apart)	69	4-LEAF	47.1	a	9775	bc	60.36	bc
2		69	4-LEAF + 7						
3	2-way split (14-days apart)	69	4-LEAF	47.6	a	10007	b	61.96	ab
3		69	4-LEAF + 14						
4	3-way split (7-days apart)	46	4-LEAF	46.6	a	9522	c	59.41	c
4		46	4-LEAF + 7						
4		46	4-LEAF + 14						
P				0.053		0.0001		0.0003	0.0017
LSD P=.05				2.00		427.8		2.242	0.698
TABLE OF A (N Source) B (N Timing) MEANS									
1	Urea			49.3	a	10903	a	63.73	a
1	Single pre-flood	138	4-LEAF						
2	Urea + Agrotain Advanced			48.3	a	10724	a	63.16	a
1	Single pre-flood	138	4-LEAF						
3	SuperU			50.0	a	11286	a	63.90	a
1	Single pre-flood	138	4-LEAF						
4	Urea + Anvol			47.3	a	10799	a	61.60	a
1	Single pre-flood	138	4-LEAF						

Continued.

Table 77. Continued.

Crop Name				Rice		Rice		Rice		Rice	
Description				Tip of Panicle		Milling					
Rating Date				9/27/2021		9/27/2021					
Rating Type				Height		Yield		Head		Total	
Rating Unit				in		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
TABLE OF A (N Source) B (N Timing) MEANS (continued)											
1	Urea	69	4-LEAF	48.3	a	9681	a	59.96	a	72.99	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
2	Urea + Agrotain Advanced	69	4-LEAF	48.0	a	9779	a	60.42	a	73.00	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
3	SuperU	69	4-LEAF	46.0	a	9815	a	60.48	a	72.94	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
4	Urea + Anvol	69	4-LEAF	46.3	a	9825	a	60.58	a	72.94	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
1	Urea	69	4-LEAF	47.8	a	9773	a	61.64	a	73.24	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
2	Urea + Agrotain Advanced	69	4-LEAF	48.5	a	9852	a	61.46	a	73.13	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
3	SuperU	69	4-LEAF	47.5	a	10089	a	62.54	a	73.37	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
4	Urea + Anvol	69	4-LEAF	46.8	a	10313	a	62.20	a	73.28	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
1	Urea	46	4-LEAF	45.3	a	9517	a	59.89	a	72.73	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
2	Urea + Agrotain Advanced	46	4-LEAF	47.8	a	9639	a	59.97	a	72.79	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
3	SuperU	46	4-LEAF	47.3	a	9752	a	59.09	a	72.37	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
4	Urea + Anvol	46	4-LEAF	46.3	a	9180	a	58.71	a	72.39	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
P				0.561		0.586		0.958		0.993	
LSD P=.05				5.44		1162.7		6.094		1.896	
Standard Deviation				2.12		453.6		2.377		0.740	
CV				4.47		4.5		3.9		1.0	

Continued.

Table 77. Continued.

Table 77. Continued.											
Crop Name				Rice		Rice		Rice		Rice	
Description				Tissue		Tissue N		Tissue N		N fert Eff.	
Rating Date				Abvgrd, -		Abvgrd, -		Total, -			
Rating Type				Biomass-dry				N Uptake			
Rating Unit				lb/A		%		lb N/A		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
TABLE OF A (N Source) MEANS											
1	Urea			14535	a	0.83	a	121	a	46	a
2	Urea + Agrotain Advanced			14513	a	0.81	a	116	a	42	a
3	SuperU			16092	a	0.85	a	138	a	56	a
4	Urea + Anvol			15579	a	0.80	a	125	a	49	a
P				0.514		0.725		0.331		0.409	
LSD P=.05				3367		0.135		32.7		22.5	
TABLE OF B (N Timing) MEANS											
1	Single pre-flood	138	4-LEAF	14649	a	0.90	a	132	a	54	a
2	2-way split (7-days apart)	69	4-LEAF	15719	a	0.78	a	122	a	47	a
2		69	4-LEAF + 7								
3	2-way split (14-days apart)	69	4-LEAF	15259	a	0.82	a	126	a	48	a
			4-LEAF +								
3		69	14								
4	3-way split (7-days apart)	46	4-LEAF	15092	a	0.80	a	119	a	44	a
4		46	4-LEAF + 7								
4		46	4-LEAF +								
			14								
P				0.864		0.076		0.738		0.715	
LSD P=.05				3367		0.135		32.7		22.5	
TABLE OF A (N Source) B (N Timing) MEANS											
1	Urea			16356	a	1.00	a	161	a	74	a
1	Single pre-flood	138	4-LEAF								
2	Urea + Agrotain Advanced			12811	a	0.87	a	112	a	39	a
1	Single pre-flood	138	4-LEAF								
3	SuperU			16074	a	0.85	a	135	a	56	a
1	Single pre-flood	138	4-LEAF								
4	Urea + Anvol			13356	a	0.90	a	121	a	46	a
1	Single pre-flood	138	4-LEAF								

Continued.

Table 77. Continued.

Table 77. Continued.											
Crop Name				Rice		Rice		Rice		Rice	
Description				Tissue		Tissue N		Tissue N		N fert Eff.	
Rating Date				Abvgrd, -		Abvgrd, -		Total, -			
Rating Type				Biomass-dry				N Uptake			
Rating Unit				lb/A		%		lb N/A		%	
Crop Stage Majority				Main		Main		Main		Main	
Trt	Treatment	Rate	Growth								
No.	Name	(lb N/A)	Stage								
TABLE OF A (N Source) B (N Timing) MEANS (continued)											
1	Urea	69	4-LEAF	15253	a	0.74	a	114	a	41	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
2	Urea + Agrotain Advanced	69	4-LEAF	14631	a	0.80	a	116	a	42	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
3	SuperU	69	4-LEAF	17787	a	0.86	a	150	a	67	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
4	Urea + Anvol	69	4-LEAF	15203	a	0.71	a	110	a	38	a
2	2-way split (7-days apart)	69	4-LEAF + 7								
1	Urea	69	4-LEAF	12268	a	0.79	a	99	a	31	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
2	Urea + Agrotain Advanced	69	4-LEAF	16687	a	0.79	a	130	a	52	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
3	SuperU	69	4-LEAF	16850	a	0.85	a	149	a	59	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
4	Urea + Anvol	69	4-LEAF	15230	a	0.84	a	127	a	50	a
3	2-way split (14-days apart)	69	4-LEAF + 14								
1	Urea	46	4-LEAF	14262	a	0.79	a	109	a	37	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
2	Urea + Agrotain Advanced	46	4-LEAF	13923	a	0.77	a	107	a	35	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
3	SuperU	46	4-LEAF	13657	a	0.87	a	118	a	44	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
4	Urea + Anvol	46	4-LEAF	18529	a	0.77	a	142	a	61	a
4	3-way split (7-days apart)	46	4-LEAF + 7								
4		46	4-LEAF + 14								
P				0.251		0.773		0.288		0.258	
LSD P=.05				9151		0.367		88.9		61.1	
Standard Deviation				3570		0.143		34.7		23.8	
CV				23.5		17.4		27.8		49.5	

Means followed by 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	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	July 31
Ratoon Harvest date	Nov. 2
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. t 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, March 9 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7 2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8 15 oz/A Amistar Top, Jun. 23

Table 78. 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			
Description				Plant-hd		Emer-hd		Tip of Panicle							
Rating Date								7/29/2021		7/29/2021		11/2/2021			
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	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
1	UTC 0 N	0		102	b	91	b	30.8	b	4871	e	2074	a	6945	e
2	UREA SPF	138	1 DPreF	104	a	93	a	38.0	a	9026	a	1939	a	11131	a
3	UREA SPostF	138	1 DPostF	102	b	91	b	31.8	b	5291	cde	1950	a	7241	de
4	UREA 2/3	92	1 DPostF	102	b	91	b	31.3	b	5389	bcd	2121	a	7510	b-e
	UREA 1/3	46	3 DpostF												
5	UREA 2/3	92	1 DpostF	102	b	91	b	30.3	b	5239	de	2062	a	7357	cde
	UREA 1/3	46	5 DpostF												
6	UREA 2/3	92	1 DpostF	101	b	90	b	30.5	b	5331	cd	2554	a	8056	b
	UREA 1/3	46	10 DpostF												
7	UREA 1/2	69	1 DPostF	102	b	91	b	31.5	b	5444	bcd	2142	a	7693	bcd
	UREA 1/2	69	3 DpostF												
8	UREA 1/2	69	1 DpostF	102	b	91	b	31.3	b	5471	bcd	1952	a	7423	b-e
	UREA 1/2	69	5 DpostF												
9	UREA 1/2	69	1 DpostF	102	b	91	b	31.3	b	5475	bcd	2276	a	7751	bcd
	UREA 1/2	69	10 DpostF												
10	UREA 1/3	46	1 DPostF	102	b	91	b	31.5	b	5822	b	2163	a	7985	bc
	UREA 2/3	92	3 DpostF												
11	UREA 1/3	46	1 DpostF	101	b	90	b	31.8	b	5689	bc	2208	a	7896	bcd
	UREA 2/3	92	5 DpostF												
12	UREA 1/3	46	1 DpostF	102	b	91	b	31.3	b	5404	bcd	2091	a	7495	b-e
	UREA 2/3	92	10 DpostF												
LSD P=.05				1.10		1.10		1.80		442.7		348.7		677.4	
Standard Deviation				0.76		0.76		1.25		307.7		241.1		468.4	
CV				0.75		0.84		3.95		5.39		11.33		5.95	
Treatment F				3.788		3.788		10.418		48.503		1.991		21.066	
Treatment Prob(F)				0.0014		0.0014		0.0001		0.0001		0.0678		0.0001	

Continued.

Table 78. Continued.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Tissue		Tissue N		N Uptake		N fert Eff.		N fert Eff.	
Part Rated				Abvgrd -		50% HD		50% HD		50% HD		50% HD	
Rating Type				biomass-dry		Abvgrd -		total N		by block		by mean	
Rating Unit				lb/A		% N		lb/A		%		%	
Crop Stage Majority				Main		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth										
No.	Name	(lb N/A)	Stage										
1	UTC 0 N	0		4287	d	0.81	b	35	c	0	d	0	d
2	UREA SPF	138	1 DPreF	8798	a	0.96	a	86	a	37	a	37	a
3	UREA SPostF	138	1 DPostF	6723	bc	0.75	bc	52	b	12	bc	13	bc
4	UREA 2/3	92	1 DPostF	5474	cd	0.78	bc	42	bc	6	bcd	6	bcd
	UREA 1/3	46	3 DpostF										
5	UREA 2/3	92	1 DpostF	6029	bc	0.69	c	42	bc	5	cd	5	cd
	UREA 1/3	46	5 DpostF										
6	UREA 2/3	92	1 DpostF	7173	ab	0.72	bc	51	b	13	bc	14	bc
	UREA 1/3	46	10 DpostF										
7	UREA 1/2	69	1 DPostF	6528	bc	0.71	bc	46	bc	8	bcd	8	bcd
	UREA 1/2	69	3 DpostF										
8	UREA 1/2	69	1 DpostF	6325	bc	0.77	bc	48	bc	10	bc	10	bc
	UREA 1/2	69	5 DpostF										
9	UREA 1/2	69	1 DpostF	5597	bcd	0.75	bc	42	bc	7	bcd	7	bcd
	UREA 1/2	69	10 DpostF										
10	UREA 1/3	46	1 DPostF	6806	bc	0.81	bc	55	b	15	b	15	b
	UREA 2/3	92	3 DpostF										
11	UREA 1/3	46	1 DpostF	5857	bcd	0.77	bc	44	bc	7	bcd	7	bcd
	UREA 2/3	92	5 DpostF										
12	UREA 1/3	46	1 DpostF	6321	bc	0.72	bc	45	bc	8	bcd	8	bcd
	UREA 2/3	92	10 DpostF										
LSD P=.05				1639.9		0.12101		14.5		9.5		9.5	
Standard Deviation				1139.9		0.08412		10.1		6.6		6.6	
CV				18.02		10.92		20.52		62.21		61.97	
Treatment F				3.632		2.919		6.514		7.773		7.860	
Treatment Prob(F)				0.0020		0.0085		0.0001		0.0001		0.0001	

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

**Evaluation of ProGibb Application Timing on Main and Ratoon Crop Yield of CLL17 – H. Rouse Caffey
Rice Research Station**

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 6
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	120 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6 (ratoon)
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 79. Evaluation of ProGibb application timing on main and ratoon crop yield of CLL17. H. Rouse Caffey Rice Research Station.

Crop Name		Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice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Means followed by 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 – H. Rouse Caffey Rice Research Station

Experiment number: 21-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.....: 1.22

pH.....: 7.01

Extractable nutrients (ppm).....: Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7

Crop/Variety: Rice / CLL17

Planting method/date: Drill seeded / Mar. 10

Seeding rate/depth.....: 33 seed/ft² / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 5

Ratoon Harvest date.....: Nov. 1

Seed treatment/cwt: **Conventional Varieties:**

Apron (fungicide) – 8.88 ml

Maxim (fungicide) – 0.88 ml

Release (gibberellic acid) – 10 g

Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml

AV-1011 (bird repellent) – 18.3 oz

Dermacor- 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

120 lb N/A 46-0-0, Apr. 27

90 lb N/A 46-0-0, Aug. 6 (ratoon)

Water management: Underground irrigation

Flush: NA

Flood: April 28

Drain: July 21

Ratoon flood: August 9

Ratoon drain: October 11

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, March 9

2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

15 oz/A Amistar Top, Jun. 23

Table 80. Evaluation of ProGibb application timing on main and ratoon crop yield with and without stubble management. 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			7/29/2021	8/5/2021	8/5/2021	8/5/2021	8/5/2021	11/1/2021	
Rating Type	50% HD	50% HD	Height	Lodge		Yield	Yield	Yield	Total Yield
Rating Unit	days	days	in	% plot	rate	lb/A	lb/A	lb/A	lb/A
Crop Stage Majority	Main	Main	Main	Main	Main	Main	Main	Ratoon	MC+RC
Trt Treatment	Rate	Growth							
No. Name	(oz/A)	Stage							
1 Normal cut (16 inch)	102 a	91 a	38.3 a	20.0 a	1.0 a	9876 a	3278 a	13154 a	
Without ProGibb									
2 Normal cut (16 inch)	102 a	91 a	39.0 a	0.0 a	0.0 a	10273 a	3463 a	13736 a	
ProGibb 4 oz	4	Softdough							
3 Normal cut (16 inch)	102 a	91 a	39.5 a	0.0 a	0.0 a	10239 a	3216 a	13455 a	
ProGibb 6 oz	6	Softdough							
4 Bush hog (8 inch)	102 a	91 a	39.5 a	5.0 a	0.5 a	10062 a	3058 a	13120 a	
Without ProGibb									
5 Bush hog (8 inch)	102 a	91 a	41.5 a	5.0 a	0.5 a	9935 a	3416 a	13351 a	
ProGibb 4 oz	4	Softdough							
6 Bush hog (8 inch)	102 a	91 a	39.8 a	7.5 a	1.0 a	10352 a	3408 a	13761 a	
ProGibb 6 oz	6	Softdough							
LSD P=.05	NA	NA	2.01	23.76	1.51	819.7	345.1	900.1	
Standard Deviation	0.00	0.00	1.33	15.77	1.00	543.9	229.0	597.2	
CV	0.0	0.0	3.37	252.28	200.0	5.37	6.93	4.45	
Treatment F	0.000	0.000	2.625	0.875	0.800	0.511	1.792	0.858	
Treatment Prob(F)	1.0000	1.0000	0.0674	0.5209	0.5667	0.7642	0.1751	0.5311	

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

Table 81. Two-way comparison of ProGibb application timing on yield with and without stubble management. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice		Rice		
Description	Plant-hd		Emer-hd		Tip of Panicle		Rice		Rice		Rice		Rice		
Rating Date	50% HD		50% HD		7/29/2021		8/5/2021		8/5/2021		8/5/2021		11/1/2021		
Rating Type	days		days		Height		Lodge		Yield		Yield		Yield		
Rating Unit	Main		Main		in		% plot		lb/A		lb/A		lb/A		
Crop Stage Majority	Main		Main		Main		Main		Main		Main		Ratoon		
Trt	Treatment	Rate	Growth	Stage											
No.	Name	(oz/A)	Stage												
TABLE OF A (Stubble height) MEANS															
1	Normal cut (16 inch)	102	a	91	a	38.9	b	6.7	a	0.3	a	10129	a	3319	a
2	Bush hog (8 inch)	102	a	91	a	40.3	a	5.8	a	0.7	a	10116	a	3294	a
P		1.0		1.0		0.0		0.9		0.4		0.955		0.793	
		NA		NA		1.16		13.72		0.87		473.2		199.3	
LSD P=.05															
TABLE OF B (Pesticide) MEANS															
1	Without ProGibb	102	a	91	a	38.9	a	12.5	a	0.8	a	9969	a	3168	a
2	ProGibb 4 oz	102	a	91	a	40.3	a	2.5	a	0.3	a	10104	a	3439	a
3	ProGibb 6 oz	102	a	91	a	39.6	a	3.8	a	0.5	a	10296	a	3312	a
P		1.0		1.0		0.2		0.4		0.6		0.499		0.09	
		NA		NA		1.73		20.47		1.30		706.1		297.3	
LSD P=.05															
TABLE OF A (Stubble height) B (Pesticide) MEANS															
1	Normal cut (16 inch)	102	a	91	a	38.3	a	20.0	a	1.0	a	9876	a	3278	a
1	Without ProGibb														
2	Bush hog (8 inch)	102	a	91	a	39.5	a	5.0	a	0.5	a	10062	a	3058	a
1	Without ProGibb														
1	Normal cut (16 inch)	102	a	91	a	39.0	a	0.0	a	0.0	a	10273	a	3463	a
2	ProGibb 4 oz														
2	Bush hog (8 inch)	102	a	91	a	41.5	a	5.0	a	0.5	a	9935	a	3416	a
2	ProGibb 4 oz														
1	Normal cut (16 inch)	102	a	91	a	39.5	a	0.0	a	0.0	a	10239	a	3216	a
3	ProGibb 6 oz														
2	Bush hog (8 inch)	102	a	91	a	39.8	a	7.5	a	1.0	a	10352	a	3408	a
3	ProGibb 6 oz														
P		1.0		1.0		0.270		0.322		0.338		0.591		0.229	
LSD P=.05															
Standard Deviation															
CV		0.00		0.00		1.33		15.77		1.00		544		229	
		0.00		0.00		3.37		252		200		5.4		6.9	
														4.4	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Evaluation of Stubble Management and Nitrogen Rate for Ratoon Crop of PVL03 – H. Rouse Caffey Rice Research Station

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 5
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9
	2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7
	2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8
	15 oz/A Amistar Top, Jun. 23

Table 82. Evaluation of stubble management and nitrogen rate for ratoon crop of PVL03. H. Rouse Caffey Rice Research Station.

Crop Name				Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of panicle					
Rating Date								8/2/2021		8/5/2021		11/1/2021	
Rating Type				50% HD		50% HD		Height		Yield		Yield	
Rating Unit				days		days		in		lb/A		lb/A	
Crop Stage Majority				Main		Main		Main		Main		Ratoon	
Trt No.	Treatment Name	Rate (lb N/A)	Growth Stage										
1	Normal cut Urea 0 N	0	Ratoon PF	103	a	92	a	40.0	cd	9299	a	1937	f
2	Normal cut Urea 30 lb N/A	30	Ratoon PF	103	a	92	a	40.3	bcd	10007	a	2506	d
3	Normal cut Urea 60 lb N/A	60	Ratoon PF	103	a	92	a	39.8	d	10241	a	2902	bc
4	Normal cut Urea 90 lb N/A	90	Ratoon PF	103	a	92	a	41.0	a-d	10216	a	3046	ab
5	Normal cut Urea 120 lb N/A	120	Ratoon PF	103	a	92	a	41.5	ab	10067	a	3187	ab
6	Normal cut Urea 150 lb N/A	150	Ratoon PF	103	a	92	a	40.0	cd	9890	a	3207	ab
7	Bush hog 8" Urea 0 N	0	Ratoon PF	103	a	92	a	41.0	a-d	9938	a	2118	ef
8	Bush hog 8" Urea 30 lb N/A	30	Ratoon PF	103	a	92	a	41.8	a	9170	a	2370	de
9	Bush hog 8" Urea 60 lb N/A	60	Ratoon PF	103	a	92	a	41.3	abc	9374	a	2607	cd
10	Bush hog 8" Urea 90 lb N/A	90	Ratoon PF	103	a	92	a	40.8	a-d	10078	a	3035	ab
11	Bush hog 8" Urea 120 lb N/A	120	Ratoon PF	103	a	92	a	41.5	ab	9407	a	3193	ab
12	Bush hog 8" Urea 150 lb N/A	150	Ratoon PF	103	a	92	a	42.0	a	9816	a	3291	a
LSD P=.05				NA		NA		1.45		999.0		316.9	
Standard Deviation				0.00		0.00		1.01		694.4		220.0	
CV				0.0		0.0		2.47		7.09		7.9	
Treatment F				0.000		0.000		2.202		1.183		17.685	
Treatment Prob(F)				1.000		1.000		0.039		0.336		0.0001	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Table 83. Two-way table for the evaluation of stubble management and N rate for ratoon crop of PVL03. H. Rouse Caffey Rice Research Station.

Rouse Caffey Rice Research Station.															
Crop Name				Rice		Rice		Rice		Rice		Rice		Rice	
Description				Plant-hd		Emer-hd		Tip of panicle							
Rating Date								8/2/2021		8/5/2021		11/1/2021			
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	Treatment	Rate	Growth												
No.	Name	(lb N/A)	Stage												
TABLE OF A (Cultural practices) MEANS															
1	Normal cut			103	a	92	a	40.4	b	9953	a	2798	a	12852	a
2	Bush hog 8"			103	a	92	a	41.4	a	9630	a	2769	a	12399	b
<i>P</i>				1.0		1.0		0.002		0.117		0.656		0.045	
LSD P=.05				NA		NA		0.59		407.8		129.4		441.4	
TABLE OF B (Nitrogen rates) MEANS															
1	Urea 0 N	0	Ratoon PF	103	a	92	a	40.5	a	9618	a	2027	d	11947	c
2	Urea 30 lb N/A	30	Ratoon PF	103	a	92	a	41.0	a	9589	a	2438	c	12027	bc
3	Urea 60 lb N/A	60	Ratoon PF	103	a	92	a	40.5	a	9807	a	2754	bc	12562	abc
4	Urea 90 lb N/A	90	Ratoon PF	103	a	92	a	40.9	a	10147	a	3040	ab	13187	a
5	Urea 120 lb N/A	120	Ratoon PF	103	a	92	a	41.5	a	9737	a	3190	a	12927	abc
6	Urea 150 lb N/A	150	Ratoon PF	103	a	92	a	41.0	a	9853	a	3249	a	13102	ab
<i>P</i>				1.0		1.0		0.4		0.643		0.0001		0.005	
LSD P=.05				NA		NA		1.53		1050		333.2		1137	

Continued.

Table 83. Continued.

Crop Name				Rice	Rice	Rice	Rice	Rice	Rice
Description				Plant-hd	Emer-hd	Tip of panicle			
Rating Date						8/2/2021	8/5/2021	11/1/2021	
Rating	Type	Rating		50% HD	50% HD	Height	Yield	Yield	Total Yield
Unit				days	days	in	lb/A	lb/A	lb/A
Crop Stage Majority				Main	Main	Main	Main	Ratoon	MC + RC
Trt	Treatment	Rate	Growth						
No.	Name	(lb N/A)	Stage						
TABLE OF A (Cultural practices) B (Nitrogen rates) MEANS									
1	Normal cut			103	a	92	a	40.0	a
1	Urea 0 N	0	Ratoon PF					9299	a
2	Bush hog 8"			103	a	92	a	41.0	a
1	Urea 0 N	0	Ratoon PF					9938	a
1	Normal cut			103	a	92	a	40.3	a
2	Urea 30 lb N/A	30	Ratoon PF					10007	a
2	Bush hog 8"			103	a	92	a	41.8	a
2	Urea 30 lb N/A	30	Ratoon PF					9170	a
1	Normal cut			103	a	92	a	39.8	a
3	Urea 60 lb N/A	60	Ratoon PF					10241	a
2	Bush hog 8"			103	a	92	a	41.3	a
3	Urea 60 lb N/A	60	Ratoon PF					9374	a
1	Normal cut			103	a	92	a	41.0	a
4	Urea 90 lb N/A	90	Ratoon PF					10216	a
2	Bush hog 8"			103	a	92	a	40.8	a
4	Urea 90 lb N/A	90	Ratoon PF					10078	a
1	Normal cut			103	a	92	a	41.5	a
5	Urea 120 lb N/A	120	Ratoon PF					10067	a
2	Bush hog 8"			103	a	92	a	41.5	a
5	Urea 120 lb N/A	120	Ratoon PF					9407	a
1	Normal cut			103	a	92	a	40.0	a
6	Urea 150 lb N/A	150	Ratoon PF					9890	a
2	Bush hog 8"			103	a	92	a	42.0	a
6	Urea 150 lb N/A	150	Ratoon PF					9816	a
P				1.0	1.0	0.191	0.248	0.350	0.374
LSD P=.05				NA	NA	2.51	1724	547.4	1868
Standard Deviation				0.00	0.00	1.01	694.4	220.0	750.7
CV				0.00	0.00	2.47	7.1	7.9	5.9

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (*P*=.05, LSD).

Evaluation of Stubble Management and Nitrogen Rate for Ratoon Crop of CLL17 – H. Rouse Caffey Rice Research Station

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 5
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7 2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8 15 oz/A Amistar Top, Jun. 23

Table 84. Evaluation of stubble management and nitrogen rate for ratoon crop of CLL17. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of panicle		Lodge		Yield		Yield		Yield		Total Yield	
Rating Date		50% HD		50% HD		8/2/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021		11/1/2021	
Rating Type		days		days		Height		% plot		rate		Main		Main		lb/A	
Rating Unit		Main		Main		Main		Main		Main		Main		Main		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Main		Main		Main		MC + RC	
Trt	Treatment	Rate		Growth		Rice		Rice		Rice		Rice		Rice		Rice	
No.	Name	(lb N/A)		Stage		in		in		in		in		in		in	
1	Normal cut	0		Ratoon PF		40.5		40.5		40.5		40.5		40.5		40.5	
2	Urea 0 N	30		Ratoon PF		40.8		40.8		40.8		40.8		40.8		40.8	
3	Urea 30 lb N/A	60		Ratoon PF		39.3		39.3		39.3		39.3		39.3		39.3	
4	Urea 60 lb N/A	90		Ratoon PF		41.8		41.8		41.8		41.8		41.8		41.8	
5	Urea 90 lb N/A	120		Ratoon PF		40.8		40.8		40.8		40.8		40.8		40.8	
6	Urea 120 lb N/A	150		Ratoon PF		40.3		40.3		40.3		40.3		40.3		40.3	
7	Urea 150 lb N/A	0		Ratoon PF		41.5		41.5		41.5		41.5		41.5		41.5	
8	Bush hog 8"	30		Ratoon PF		40.3		40.3		40.3		40.3		40.3		40.3	
9	Urea 30 lb N/A	60		Ratoon PF		40.0		40.0		40.0		40.0		40.0		40.0	
10	Urea 60 lb N/A	90		Ratoon PF		40.8		40.8		40.8		40.8		40.8		40.8	
11	Urea 90 lb N/A	120		Ratoon PF		40.0		40.0		40.0		40.0		40.0		40.0	
12	Urea 120 lb N/A	150		Ratoon PF		41.5		41.5		41.5		41.5		41.5		41.5	
LSD P= .05		NA		NA		2.43		27.46		1.43		1089		407.0		1260.7	
Standard Deviation		0.00		0.00		1.69		19.09		0.99		756.8		282.9		876.3	
CV		0.0		0.0		4.17		147.79		122.18		7.57		8.8		6.64	
Treatment F		0.000		0.000		0.737		0.933		0.928		1.077		16.479		1.296	
Treatment Prob(F)		1.000		1.000		0.696		0.522		0.526		0.408		0.0001		0.270	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (P=0.05, LSD).

Table 85. Two-way table for the evaluation of stubble management and N rate for ratoon crop of CLL17. H. Rouse Caffey Rice Research Station.

Crop Name	Rice		Rice		Rice		Rice		Rice		Rice						
Description	Plant-hd		Emer-hd		Tip of panicle		Lodge		Yield		Yield						
Rating Date	50% HD		50% HD		8/2/2021		8/5/2021		8/5/2021		11/1/2021						
Rating Type	days		days		Height		% plot		lb/A		lb/A						
Rating Unit	Main		Main		in		Main		Main		Ratoon						
Crop Stage Majority	Main		Main		Main		Main		Main		MC + RC						
Trt	Treatment	Rate	Growth														
No.	Name	(lb N/A)		Stage													
TABLE OF A (Cultural practices) MEANS																	
1	Normal cut	103	a	92	a	40.5	a	17.1	a	0.8	a	9948	a	3381	a	13330	a
2	Bush hog 8"	103	a	92	a	40.7	a	8.8	a	0.8	a	10033	a	3047	b	13080	a
P		1.00		1.00		0.8		0.1		0.9		0.703		0.0003		0.330	
LSD P=.05		NA		NA		0.99		11.21		0.58		444.5		166.2		514.7	
TABLE OF B (Nitrogen rates) MEANS																	
1	Urea 0 N	103	a	92	a	41.0	a	11.3	a	0.9	a	10154	a	2339	c	12493	a
2	Urea 30 lb N/A	103	a	92	a	40.5	a	12.5	a	0.5	a	10208	a	2866	b	13074	a
3	Urea 60 lb N/A	103	a	92	a	39.6	a	20.0	a	1.1	a	10242	a	3047	b	13289	a
4	Urea 90 lb N/A	103	a	92	a	41.3	a	10.0	a	0.6	a	9995	a	3478	a	13473	a
5	Urea 120 lb N/A	103	a	92	a	40.4	a	7.5	a	0.6	a	9827	a	3692	a	13519	a
6	Urea 150 lb N/A	103	a	92	a	40.9	a	16.3	a	1.1	a	9517	a	3863	a	13380	a
P		1.00		1.00		0.5		0.8		0.7		0.387		0.0001		0.208	
LSD P=.05		NA		NA		2.56		28.86		1.50		1144		427.7		1325	

Continued.

Evaluation of Stubble Management and Nitrogen Rate for Ratoon Crop of RT7521 Full Page – H. Rouse Caffey Rice Research Station

Experiment number	21-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	
% Organic matter	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	10 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 5
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide)
	Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	
	250 lb/A 0-24-24-2.8, Mar. 10
	150 lb N/A 46-0-0, Apr. 27
Water management	
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7 2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8 15 oz/A Amistar Top, Jun. 23

Table 86. Evaluation of stubble management and nitrogen rate for ratoon crop of RT7521 FullPage. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice		Rice		Rice		Rice					
Description		Plant-hd		Emer-hd		Tip of panicle		Rice		Rice		Rice		Rice		Rice					
Rating Date		50% HD		50% HD		8/2/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021		11/1/2021					
Rating Type		days		days		Height		Lodge		Yield		Yield		Yield		Yield					
Rating Unit		Main		Main		in		Main		Main		Main		Main		Main					
Crop Stage Majority		Rate		Growth		Rate		Rate		Rate		Rate		Rate		Rate					
Trt	Treatment	No.	Name	Rate (lb N/A)	Stage																
1	Normal cut	0	Urea 0 N	0	Ratoon PF	102	a	91	a	47.3	a	5.0	a	0.5	a	11539	a	2417	e	13956	a
2	Normal cut	30	Urea 30 lb N/A	30	Ratoon PF	102	a	91	a	47.5	a	40.0	a	2.8	a	11285	a	2841	de	14126	a
3	Normal cut	60	Urea 60 lb N/A	60	Ratoon PF	102	a	91	a	46.5	a	32.5	a	2.3	a	10867	a	3289	bc	14156	a
4	Normal cut	90	Urea 90 lb N/A	90	Ratoon PF	102	a	91	a	46.8	a	22.5	a	2.0	a	11190	a	3330	bc	14519	a
5	Normal cut	120	Urea 120 lb N/A	120	Ratoon PF	102	a	91	a	46.5	a	17.5	a	1.5	a	11233	a	3300	bc	14534	a
6	Normal cut	150	Urea 150 lb N/A	150	Ratoon PF	102	a	91	a	48.5	a	22.5	a	1.0	a	11432	a	3804	a	15236	a
7	Bush hog 8"	0	Urea 0 N	0	Ratoon PF	102	a	91	a	47.5	a	22.5	a	2.0	a	12213	a	2682	de	14895	a
8	Bush hog 8"	30	Urea 30 lb N/A	30	Ratoon PF	102	a	91	a	48.0	a	7.5	a	1.8	a	11887	a	2770	de	14657	a
9	Bush hog 8"	60	Urea 60 lb N/A	60	Ratoon PF	102	a	91	a	47.3	a	22.5	a	1.8	a	11779	a	2977	cd	14756	a
10	Bush hog 8"	90	Urea 90 lb N/A	90	Ratoon PF	102	a	91	a	46.8	a	25.0	a	2.3	a	11313	a	3416	ab	14729	a
11	Bush hog 8"	120	Urea 120 lb N/A	120	Ratoon PF	102	a	91	a	48.3	a	25.0	a	2.3	a	11469	a	3641	ab	15111	a
12	Bush hog 8"	150	Urea 150 lb N/A	150	Ratoon PF	102	a	91	a	48.5	a	32.5	a	2.3	a	11649	a	3510	ab	15159	a
LSD P=.05		NA	NA	NA	NA	2.31		36.43		2.20		1267.2		430.9		1255					
Standard Deviation		0.00	0.00	0.00	0.00	1.61		25.32		1.53		880.9		299.6		872.3					
CV		0.00	0.00	0.00	0.00	3.38		110.5		82.5		7.67		9.46		5.95					
Treatment F		0.00	0.00	0.00	0.00	0.849		0.609		0.650		0.662		7.967		0.918					
Treatment Prob(F)		1.00	1.00	1.00	1.00	0.595		0.808		0.773		0.762		0.0001		0.535					

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Table 87. Two-way table for the evaluation of stubble management and N rate for ratoon crop of RT7521 Full Page. H. Rouse Caffey Rice Research Station.

CULTURE																	
Crop Name		Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice					
Description		Plant-hd	Emer-hd	Tip of panicle													
Rating Date				8/2/2021	8/5/2021	8/5/2021	8/5/2021	8/5/2021	8/5/2021	11/1/2021							
Rating Type		50% HD	50% HD	Height	Lodge			Yield	Yield	Yield	Total Yield						
Rating Unit		days	days	in	% plot	rate		lb/A	lb/A	lb/A	lb/A						
Crop Stage Majority		Main	Main	Main	Main	Main	Main	Main	Main	Ratoon	MC + RC						
Trt	Treatment	Rate	Growth														
No.	Name	(lb N/A)	Stage														
TABLE OF A (Cultural practices) MEANS																	
1	Normal cut	102	a	91	a	47.2	a	23.3	a	1.7	a	11258	a	3164	a	14421	a
2	Bush hog 8"	102	a	91	a	47.7	a	22.5	a	2.0	a	11718	a	3166	a	14884	a
P		1.0		1.0		0.3		0.9		0.4		0.0791		0.9782		0.0749	
LSD P=.05		NA		NA		0.94		14.87		0.90		517.3		175.9		512.3	
TABLE OF B (Nitrogen rates) MEANS																	
1	Urea 0 N	102	a	91	a	47.4	a	13.8	a	1.3	a	11876	a	2550	d	14426	a
2	Urea 30 lb N/A	102	a	91	a	47.8	a	23.8	a	2.3	a	11586	a	2806	cd	14392	a
3	Urea 60 lb N/A	102	a	91	a	46.9	a	27.5	a	2.0	a	11323	a	3133	bc	14456	a
4	Urea 90 lb N/A	102	a	91	a	46.8	a	23.8	a	2.1	a	11251	a	3373	ab	14624	a
5	Urea 120 lb N/A	102	a	91	a	47.4	a	21.3	a	1.9	a	11351	a	3471	ab	14822	a
6	Urea 150 lb N/A	102	a	91	a	48.5	a	27.5	a	1.6	a	11541	a	3657	a	15197	a
P		1.0		1.0		0.3		0.9		0.8		0.740		0.0001		0.423	
LSD P=.05		NA		NA		2.43		38.28		2.31		1332		452.8		1319	

Continued.

Table 87. Continued.

Table 3/4- Continued																		
Crop Name	Rice	Rice	Rice		Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	
Description	Plant-hd	Emer-hd	Tip of panicle		Lodge		Lodge		Lodge		Lodge		Lodge		Lodge		Lodge	
Rating Date	50% HD	50% HD	8/2/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021		8/5/2021	
Rating Type	days	days	Height		rate		rate		rate		rate		rate		rate		rate	
Rating Unit	Main	Main	in		Main		Main		Main		Main		Main		Main		Main	
Crop Stage Majority	50% HD	50% HD	Main		Main		Main		Main		Main		Main		Main		Main	
Trt	Treatment	Rate	Growth		Growth		Growth		Growth		Growth		Growth		Growth		Growth	
No.	Name	(lb N/A)	Stage		Stage		Stage		Stage		Stage		Stage		Stage		Stage	
TABLE OF A (Cultural practices) B (Nitrogen rates) MEANS																		
1	Normal cut		102	a	91	a	47.3	a	5.0	a	0.5	a	11539	a	2417	a	13956	a
1	Urea 0 N	0 lb ai/a																
2	Bush hog 8"		102	a	91	a	47.5	a	22.5	a	2.0	a	12213	a	2682	a	14895	a
1	Urea 0 N	0 lb ai/a																
1	Normal cut		102	a	91	a	47.5	a	40.0	a	2.8	a	11285	a	2841	a	14126	a
2	Urea 30 lb N/A	30 lb ai/a																
2	Bush hog 8"		102	a	91	a	48.0	a	7.5	a	1.8	a	11887	a	2770	a	14657	a
2	Urea 30 lb N/A	30 lb ai/a																
1	Normal cut		102	a	91	a	46.5	a	32.5	a	2.3	a	10867	a	3289	a	14156	a
3	Urea 60 lb N/A	60 lb ai/a																
2	Bush hog 8"		102	a	91	a	47.3	a	22.5	a	1.8	a	11779	a	2977	a	14756	a
3	Urea 60 lb N/A	60 lb ai/a																
1	Normal cut		102	a	91	a	46.8	a	22.5	a	2.0	a	11190	a	3330	a	14519	a
4	Urea 90 lb N/A	90 lb ai/a																
2	Bush hog 8"		102	a	91	a	46.8	a	25.0	a	2.3	a	11313	a	3416	a	14729	a
4	Urea 90 lb N/A	90 lb ai/a																
1	Normal cut		102	a	91	a	46.5	a	17.5	a	1.5	a	11233	a	3300	a	14534	a
5	Urea 120 lb N/A	120 lb ai/a																
2	Bush hog 8"		102	a	91	a	48.3	a	25.0	a	2.3	a	11469	a	3641	a	15111	a
5	Urea 120 lb N/A	120 lb ai/a																
1	Normal cut		102	a	91	a	48.5	a	22.5	a	1.0	a	11432	a	3804	a	15236	a
6	Urea 150 lb N/A	150 lb ai/a																
2	Bush hog 8"		102	a	91	a	48.5	a	32.5	a	2.3	a	11649	a	3510	a	15159	a
6	Urea 150 lb N/A	150 lb ai/a																
P			1.00		1.00		0.886		0.427		0.539		0.935		0.160		0.894	
LSD P=.05			NA		NA		3.98		62.86		3.80		2187		743.7		2166	
Standard Deviation			0.00		0.00		1.61		25.32		1.53		880.9		299.6		872.3	
CV			0.00		0.00		3.38		110.5		82.5		7.7		9.5		6.0	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.

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

**Evaluation of Desiccant (potassium chlorate) Timing, Stubble Management and Milling Quality
for RT7521 FP and CLL17 – H. Rouse Caffey Rice Research Station**

Experiment number	21-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	1.22
pH	7.01
Extractable nutrients (ppm)	Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7
Crop/Variety	Rice / CLL17, RT7521FP
Planting method/date	Drill seeded / Mar. 10
Seeding rate/depth	33/10 seed/ft ² / 0.5 inches
Emergence date	Mar. 21
Harvest date	Aug. 4
Ratoon Harvest date	Nov. 1
Seed treatment/cwt	Conventional Varieties:
	Apron (fungicide) – 8.88 ml
	Maxim (fungicide) – 0.88 ml
	Release (gibberellic acid) – 10 g
	Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor- 0.137 lb ai/cwt
	Hybrids:
	Apron (fungicide)
	Dynasty (fungicide)
	Fludioxonil (fungicide)(Maxim)
	Gibberellic Acid
	Sedaxane (fungicide)
	Thiamethoxam (insecticide), Zinc
	AV-1011 (bird repellent) – 18.3 oz
	Dermacor – 0.137 lb ai/cwt
Fertilization	250 lb/A 0-24-24-2.8, Mar. 10
	120 lb N/A 46-0-0, Apr. 27
	90 lb N/A 46-0-0, Aug. 6
	(ratoon)
Water management	Underground irrigation
Flush	NA
Flood	Apr. 28
Drain	Jul. 21
Ratoon flood	Aug. 9
Ratoon drain	Oct. 11
Pest management	
Herbicides	1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command + .25% Surfactant, Mar. 9 2 pt/A Prowl H ₂ O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7 2 pt/A Prowl H ₂ O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27
Insecticides	None
Fungicides	15 oz/A Amistar Top, Jun. 8 15 oz/A Amistar Top, Jun. 23

Table 88. Evaluation of desiccant timing, stubble management, and milling quality for RT7521 FP and CLL17. H. Rouse Caffey Rice Research Station.

Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice
Description	Plant-hd	Emer-hd	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle	Tip of panicle
Rating Date	50% HD	50% HD	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021	8/2/2021
Rating Type	days	days	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
Rating Unit	Main	Main	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in
Crop Stage Majority	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD
Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt	Trt
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1	RT 7521FP - Normal cut	101	b	90	b	47.3	a	11598	a	62.6	g	72.1	a	2886	fg	14483	bcd
2	RT 7521FP - Bush hog 8"	101	b	90	b	48.0	a	11786	a	63.3	fg	72.3	a	2818	fg	14604	bc
3	RT 7521FP - Normal cut	101	b	90	b	47.5	a	11903	a	63.3	fg	71.7	a	3011	efg	14914	ab
4	RT 7521FP - Bush hog 8"	101	b	90	b	48.0	a	12187	a	64.8	de	72.9	a	2736	g	14924	ab
5	RT 7521FP - Normal cut	101	b	90	b	48.0	a	11968	a	66.0	bcd	72.2	a	3590	ab	15558	a
6	RT 7521FP - Bush hog 8"	101	b	90	b	47.5	a	12145	a	64.4	ef	72.2	a	3442	a-d	15587	a
7	CLL17 - Normal cut	103	a	92	a	40.8	b	10113	b	65.8	cd	71.6	a	3656	a	13769	c-f
8	CLL17 - Bush hog 8"	103	a	92	a	40.3	b	10244	b	66.0	bcd	71.7	a	3166	c-f	13410	ef
9	CLL17 - Normal cut	103	a	92	a	40.5	b	10024	b	66.9	abc	72.0	a	3112	def	13136	f
10	CLL17 - Bush hog 8"	103	a	92	a	41.5	b	10751	b	67.3	ab	71.9	a	3246	b-e	13997	c-f
11	CLL17 - Normal cut	103	a	92	a	41.0	b	10641	b	67.6	a	72.1	a	3515	abc	14157	b-e
12	CLL17 - Bush hog 8"	103	a	92	a	41.3	b	10252	b	67.6	a	72.1	a	3465	a-d	13718	def
LSD P=.05																	
Standard Deviation																	
CV																	
Treatment F																	
Treatment Prob(F)																	

NA = Could not calculate LSD (% mean diff) because error mean square = 0.

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

Table 89. Two-way table for the desiccant timing, stubble management, and milling for RT7521 FP and CLL17. H. Rouse Caffey Rice Research Station.

Crop Name Description Rating Date Rating Type Rating Unit Crop Stage Majority	Trt	Treatment No. Name	Rice		Rice Emer-hd	Rice Tip of panicle 8/2/2021	Rice		Rice 8/4/2021	Rice		Rice 11/18/2021	Rice Total 11/18/2021	Rice Ratoon	Rice	Total Yield lb/A	MC + RC	
			Plant-hd	50% HD days			Main	Main		Yield lb/A	Milling %							Main
TABLE OF A (Variety) MEANS																		
1	RT 7521FP		101	b	90	b	47.7	a	11931	a	64.1	b	72.2	a	3080	b	15012	a
2	CLL17		103	a	92	a	40.9	b	10337	b	66.8	a	71.9	b	3360	a	13698	b
P			1.0		1.0		0.0001		0.0001		0.0001		0.032		0.0005		0.0001	
LSD P=05			NA		NA		0.85		326.6		0.532		0.309		146.5		357.9	
TABLE OF B (Timing of Application) MEANS																		
1	14 days pre harvest		102	a	91	a	44.1	a	10935	a	64.4	c	71.9	a	3132	b	14067	b
2	7 days pre harvest		102	a	91	a	44.4	a	11216	a	65.6	b	72.1	a	3026	b	14243	ab
3	1 day pre harvest		102	a	91	a	44.4	a	11252	a	66.4	a	72.2	a	3503	a	14755	a
P			1.0		1.0		0.74		0.225		0.000		0.389		0.0001		0.009	
LSD P=05			NA		NA		1.25		482.3		0.786		0.457		216.4		528.6	
TABLE OF C (Cultural Practice) MEANS																		
1	Normal cut		102	a	91	a	44.2	a	11041	a	65.361	a	71.946	a	3295	a	14336	a
2	Bush hog 8"		102	a	91	a	44.4	a	11227	a	65.542	a	72.176	a	3146	b	14373	a
P			1.0		1.0		0.6		0.254		0.493		0.138		0.046		0.834	
LSD P=05			NA		NA		0.85		326.6		0.532		0.309		146.5		357.9	
TABLE OF A (Variety) B (Timing of Application) MEANS																		
1	RT 7521FP		101	b	90	b	47.6	a	11692	a	62.934	a	72.193	a	2852	b	14544	a
1	14 days pre harvest																	
2	CLL17		103	a	92	a	40.5	a	10178	a	65.900	a	71.634	a	3411	a	13590	a
1	14 days pre harvest																	
1	RT 7521FP		101	b	90	b	47.8	a	12045	a	64.039	a	72.307	a	2874	b	14919	a
2	7 days pre harvest																	
2	CLL17		103	a	92	a	41.0	a	10387	a	67.075	a	71.925	a	3179	ab	13566	a
2	7 days pre harvest																	
1	RT 7521FP		101	b	90	b	47.8	a	12057	a	65.193	a	72.194	a	3516	a	15573	a
3	1 day pre harvest																	
2	CLL17		103	a	92	a	41.1	a	10447	a	67.570	a	72.113	a	3490	a	13937	a
3	1 day pre harvest																	
P			1.0		1.0		0.878		0.932		0.533		0.439		0.009		0.296	
LSD P=05			NA		NA		2.18		840.6		1.372		0.797		377.2		921.2	

Continued.

Table 89. Continued.

Table 6-2. Continued.																	
Crop Name	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	Rice	
Description	Plant-hd	Emer-hd	Tip of panicle	Height	Yield	Head	Total	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield	
Rating Date	50% HD	50% HD	8/2/2021	in	lb/A	11/18/2021	11/18/2021	8/4/2021	11/18/2021	11/18/2021	11/18/2021	11/18/2021	11/18/2021	11/18/2021	11/18/2021	11/18/2021	
Rating Type	days	days	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	
Rating Unit	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	
Crop Stage Majority	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	50% HD	
Trt	Treatment																
No.	Name																
TABLE OF A (Variety) C (Cultural Practice) MEANS																	
1	RT 752IFP	101	b	90	b	47.6	a	11823	a	63.960	a	72.000	a	3162	a	14985	a
1	Normal cut																
2	CLL17	103	a	92	a	40.8	a	10259	a	66.763	a	71.892	a	3428	a	13687	a
1	Normal cut																
1	RT 752IFP	101	b	90	b	47.8	a	12039	a	64.151	a	72.463	a	2999	a	15038	a
2	Bush hog 8"																
2	CLL17	103	a	92	a	41.0	a	10416	a	66.933	a	71.889	a	3293	a	13708	a
2	Bush hog 8"																
P		1.0		1.0		1.0		0.853		0.968		0.134		0.846		0.928	
LSD P=.05		NA		NA		1.59		614.1		1.0017		0.5818		275.5		672.9	
TABLE OF B (Timing of Application) C (Cultural Practice) MEANS																	
1	14 days pre harvest	102	a	91	a	44.0	a	10855	a	64.209	d	71.855	a	3271	a	14126	a
1	Normal cut																
2	7 days pre harvest	102	a	91	a	44.0	a	10963	a	65.063	bcd	71.838	a	3061	a	14025	a
1	Normal cut																
3	1 day pre harvest	102	a	91	a	44.5	a	11305	a	66.813	a	72.144	a	3553	a	14857	a
1	Normal cut																
1	14 days pre harvest	102	a	91	a	44.1	a	11015	a	64.625	cd	71.971	a	2992	a	14007	a
2	Bush hog 8"																
2	7 days pre harvest	102	a	91	a	44.8	a	11469	a	66.051	ab	72.395	a	2991	a	14461	a
2	Bush hog 8"																
3	1 day pre harvest	102	a	91	a	44.4	a	11199	a	65.950	abc	72.163	a	3454	a	14652	a
2	Bush hog 8"																
P		1.0		1.0		0.680		0.309		0.021		0.315		0.449		0.285	
LSD P=.05		NA		NA		2.18		840.6		1.372		0.797		377.2		921.2	

Continued.

Evaluation of Nitrogen Source and Timing for Ratoon Nitrogen Fertilization – H. Rouse Caffey Rice Research Station

Experiment number: 21-CM-28

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.....: 1.22

pH.....: 7.01

Extractable nutrients (ppm).....: Ca-1445; Cu-1.47; Mg-246; P-18.6; K-74; Na-95; S-5.30; Zn-11.7

Crop/Variety: Rice / CLL17

Planting method/date: Drill seeded / Mar. 10

Seeding rate/depth.....: 33 seed/ft² / 0.5 inches

Emergence date.....: Mar. 21

Harvest date: Aug. 5

Ratoon Harvest date.....: Nov. 1

Seed treatment/cwt: **Conventional Varieties:**

 Apron (fungicide) – 8.88 ml

 Maxim (fungicide) – 0.88 ml

 Release (gibberellic acid) – 10 g

 Zinc Plus (10% Zn and 4.9% combined sulfur) – 296 ml

 AV-1011 (bird repellent) – 18.3 oz

 Dermacor- 0.137 lb ai/cwt

Fertilization: 250 lb/A 0-24-24-2.8, Mar. 10

 120 lb N/A 46-0-0, Apr. 27

Water management: Underground irrigation

Flush: NA

Flood: Apr. 28

Drain: Jul. 21

Ratoon flood: Aug. 9

Ratoon drain: Oct. 11

Pest management:

Herbicides.....: 1.5 qt/A Glyphosate + 2 oz/A Sharpen + 4 oz/A Command +

 .25% Surfactant, March 9

 2 pt/A Prowl H₂O + 1.5 oz/A Gambit + .25% Surfactant, Apr. 7

 2 pt/A Prowl H₂O + 2 qt/A Stam + .25 oz/A Permit, Apr. 27

Insecticides: None

Fungicides.....: 15 oz/A Amistar Top, Jun. 8

 15 oz/A Amistar Top, Jun. 23

Table 90. Evaluation of nitrogen source and timing for ratoon nitrogen fertilization of CLL17. H. Rouse Caffey Rice Research Station.

Crop Name		Rice		Rice		Rice		Rice		Rice	
Description		Plant-hd		Emer-hd		Tip of panicle		Rice		Rice	
Rating Date		50% HD		50% HD		8/2/2021		8/5/2021		11/1/2021	
Rating Type		days		days		Height		Yield		Yield	
Rating Unit		Main		Main		in		lb/A		lb/A	
Crop Stage Majority		Main		Main		Main		Main		Ratoon	
Trt		Rate									
Treatment		(lb N/A)									
No. Name											
1	Urea all at harvest	92	103 a	92 a	92 a	39.8 a	9638 a	2509 d	12186 a		
2	Urea all post ratoon flood	92	103 a	92 a	92 a	40.5 a	9118 a	4301 a	13419 a		
3	Urea 1/2 dry ground before har	46	103 a	92 a	92 a	40.5 a	9305 a	3731 bc	13178 a		
	Urea 1/2 at 7 d Postflood	46									
4	Urea 1/2 after harvest	46	103 a	92 a	92 a	39.3 a	9812 a	3895 ab	13707 a		
	Urea 1/2 at 7 d Postflood	46									
5	Agrotain all at harvest	92	103 a	92 a	92 a	39.3 a	9622 a	3396 c	13017 a		
6	Agrotain all post ratoon flood	92	103 a	92 a	92 a	39.8 a	10064 a	3629 bc	13614 a		
7	Agrotain 1/2 dry ground before	46	103 a	92 a	92 a	41.5 a	9901 a	3900 ab	13801 a		
	Agrotain 1/2 at 7 d Postflood	46									
8	Agrotain 1/2 after harvest	46	103 a	92 a	92 a	40.5 a	9853 a	3523 bc	13376 a		
	Agrotain 1/2 at 7 d Postflood	46									
LSD P=.05			NA	NA	NA	1.97	1069.0	424.8	995.7		
Standard Deviation			0.00	0.00	0.00	1.34	719.6	288.9	670.3		
CV			0.0	0.0	0.0	3.34	7.45	8.0	5.04		
Treatment F			0.00	0.00	0.00	1.311	0.776	13.166	2.379		
Treatment Prob(F)			1.00	1.00	1.00	0.293	0.615	0.0001	0.066		

NA = Could not calculate LSD (% mean diff) because error mean square = 0.
Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

ROTATIONAL CROP RESEARCH

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

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 (K) and phosphorus (P) rate and time of application, sulfur (S) fertilization rate, and zinc (Zn) fertilization rate.

Effects of planting date and maturity group on soybean yield, and fertility trials were conducted at H. Rouse Caffey Rice Research Station (HRCRRS) south unit. Off-station soybean fertility trials were unable to be planted at Iowa (Calcasieu parish) due to excessive and continuous rainfall during the optimum time of planting.

A date of planting trial was conducted for the ninth consecutive year in 2021. Six plantings for the date of planting trial were achieved for the 2021 trial at the H. Rouse Caffey Rice Research Station. Actual dates of planting were April 6, April 22, May 6, June 1, June 10, and July 8. The trial evaluated three early Group IV (4.0 – 4.4) soybean varieties (AG40XF1, S17PR-499RS, AG43X0, and AG44XF2); four Group IV (4.6 – 4.8) soybean varieties (S16-5540R, AG47XF2, CZ4770X, and AG48X9) and four Group V (5.0 – 5.6) soybean varieties (S16-3747RY, AG53XF2, AG55XF0, and AG56X8). Only one date of planting on June 10 was able to be harvested. The average yield is shown in Table 1.

Six trials for fertilizer rate and time of application were planted at H. Rouse Caffey Rice Research Station. Trials evaluated potassium fertilizer rate and time of application, phosphorus fertilizer rate and time of application, zinc, and sulfur fertilization rates. Results from 2021 trials indicated that the optimum K rate was 60 lb K₂O/A whereas optimum time for K application was between V3 and V5. No significant difference was observed in P rate of application but the optimum time for P application was between V5 and R5 growth stage. Zn and S fertilization rates were not altered for the soybean yield.

Evaluation of Date of Planting on Non-irrigated Soybeans in Southwest Louisiana – H. Rouse Caffey Rice Research Station (South Unit)

Experiment number: 2021 Soybean Date of Planting at Crowley

Site and design

Location/Cooperator: Rice Research Station (South Unit)

Tillage type.....: Fall stale

Experimental design: Randomized complete block

Number of reps: 4

Plot size.....: 5.33 ft. x 20 ft.

Row width/rows per plot.....: 16 inch / 4

Soil type: Crowley Silt Loam

% Organic matter.....: 1.59

pH.....: 7.04

Extractable nutrients (ppm).....: Ca-2456; Cu-2.58; Mg-178; P-51.64; K-142; Na-45; S-6.1; Zn-16.4

Crop/Variety: Soybean / See Treatment Name

Planting method.....: Drill seeded

Planting date: DOP 1 – April 6

DOP 2 – April 22

DOP 3 – May 6

DOP 4 – June 1

DOP 5 – June 10

DOP 6 – July 8

Seeding rate/depth.....: 130,000 seed/acre / 0.5-1 inch

Emergence date.....: DOP 1 – April 14

DOP 2 – April 29

DOP 3 – May 12

DOP 4 – June 9

DOP 5 – June 16

DOP 6 – July 16

Harvest date: DOP 1 – Did not harvest

DOP 2 – Did not harvest

DOP 3 – Did not harvest

DOP 4 – Did not harvest

DOP 5 – October 12

DOP 6 – Did not harvest

Seed treatment/cwt: NA

Fertilization.....: 250 lb/A 0-24-24-2.8, November 3, 2020

Water management

Flush: None

Comments: DOP 1,2,3,4 and 6 were not harvested because of poor stands from excessive rainfall throughout the year.

Continued.

Continued:

Pest management

Herbicides..... : 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7
1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12
1.5 pt/A Basagran + 2.25 pt/A Poast + 1.33 pt/A Charger Max + 1% COC,
July 6
16 oz/A Gramoxone SL 2.0 + 0.0025% NIS, Oct. 6 (DOP 5)

Insecticides : 1 lb/A Acephate, Jun. 3 (DOP 1 & 2)
1 lb/A Acephate, Jun. 17 (DOP 1,2,3)
1 lb/A Acephate + 10 oz/A Besiege + 1% NIS, Aug. 18

Fungicides..... : 7 oz/A Quadris Top SBx, Jun. 3 (DOP 1 & 2)
7 oz/A Quadris Top SBx + 1% NIS, Jun. 17 (DOP 1,2,3)
13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 1. Evaluation of date of planting on non-irrigated in southwest Louisiana. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name	Soybeans	Soybeans	Soybeans	Soybeans	Soybeans	Soybeans
Description	Group	Maturity	Height	Lodging	Moisture	Yield
Rating Date			10/12/2021	10/12/2021	10/12/2021	10/12/2021
Rating Unit		days	in	0-5	%	bu/A
Trt	Treatment					
No.	Name					
1	DOP-5 (Jun 10)		104.5 e	36.0 a-d	0.0 a	12.68 f
	AG40XF1	4.0				68.2 a-d
2	DOP-5 (Jun 10)		104.5 e	38.8 abc	0.0 a	14.33 bc
	S17PR-499RS	4.2				62.4 cd
3	DOP-5 (Jun 10)		106.0 de	39.8 ab	0.0 a	14.18 bc
	AG43X0	4.3				69.6 abc
4	DOP-5 (Jun 10)		105.5 de	33.8 cd	0.0 a	14.33 bc
	AG44XF2	4.4				61.0 d
5	DOP-5 (Jun 10)		107.0 d	35.8 a-d	0.0 a	15.13 a
	S16-5540R	4.6				66.0 bcd
6	DOP-5 (Jun 10)		106.3 de	35.0 bcd	0.0 a	14.38 bc
	AG47XF2	4.7				65.6 bcd
7	DOP-5 (Jun 10)		110.5 c	38.0 abc	1.0 a	14.70 ab
	CZ4770X	4.7				71.6 ab
8	DOP-5 (Jun 10)		112.5 b	38.0 abc	1.5 a	14.00 cd
	AG48X9	4.8				75.4 a
9	DOP-5 (Jun 10)		114.0 ab	34.5 cd	0.8 a	13.90 cde
	S16-3747RY	5.0				72.6 ab
10	DOP-5 (Jun 10)		115.0 a	40.8 a	0.0 a	13.48 de
	AG53XF2	5.3				68.9 abc
11	DOP-5 (Jun 10)		113.5 ab	32.8 d	0.5 a	13.83 cde
	AG55XF0	5.5				69.2 abc
12	DOP-5 (Jun 10)		113.0 b	31.0 d	1.0 a	13.28 ef
	AG56X8	5.6				67.1 bcd
LSD P=.05		1.79	5.17	1.55	0.651	7.87
Standard Deviation		1.24	3.59	1.08	0.453	5.47
CV		1.14	9.93	271.76	3.23	8.03
Treatment F		43.17	2.700	1.000	8.400	2.236
Treatment Prob(F)		0.0001	0.0134	0.4671	0.0001	0.0367

Note: Only one date of planting was able to be harvested (see the header sheet).
Means followed by the same letter or symbol do not significantly differ (P=.05, LSD).

**Evaluation of Potassium (K) Fertilizer Rate of Application on Soybean Yield – H. Rouse Caffey Rice
Research Station (South Unit)**

Experiment number	21-CS-SB-01
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	Oct. 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12 2 qt/A Glyphosate + 1% NIS, August 20 16 oz/A Gramoxone + .0025% NIS, September 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, Aug. 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 2. Evaluation of potassium (K) fertilizer rate of application on soybean yield. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Maturity		Tip of Plant		Moisture	
Rating Date								10/26/2020	
Rating Type		Plant-R8		Emerg-R8		Height			
Rating Unit		days		days		in		%	
Trt No.	Treatment Name	Rate (lb K ₂ O/A)	Growth Stage						bu/A
1	Untreated Check	0	ATPLAN	126.0 a	121.0 a	32.3 a	11.6 b	40.6 c	
2	Murate of Potash 0-0-60	30	ATPLAN	126.5 a	121.5 a	33.0 a	11.4 b	49.0 bc	
3	Murate of Potash 0-0-60	60	ATPLAN	125.5 a	120.5 a	33.3 a	13.3 a	54.0 ab	
4	Murate of Potash 0-0-60	90	ATPLAN	126.0 a	121.0 a	35.0 a	12.8 ab	52.5 ab	
5	Murate of Potash 0-0-60	120	ATPLAN	126.0 a	121.0 a	32.8 a	13.3 a	55.9 ab	
6	Murate of Potash 0-0-60	150	ATPLAN	125.5 a	120.5 a	33.8 a	14.0 a	57.7 a	
LSD P=.05									
Standard Deviation				3.13	3.13	2.50	1.41	8.46	
CV				2.07	2.07	1.66	0.94	5.61	
				1.65	1.71	4.98	7.36	10.87	
Treatment F									
Treatment Prob(F)				0.132	0.132	1.331	4.682	4.826	
				0.9826	0.9826	0.3042	0.0089	0.0079	

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

**Evaluation of Potassium (K) Fertilizer Time of Application on Soybean Yield – H. Rouse Caffey Rice
Research Station (South Unit)**

Experiment number	21-CS-SB-02_K Timing
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	Oct. 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12 2 qt/A Glyphosate + 1% NIS, Aug. 20 16 oz/A Gramoxone + .0025% NIS, Sept. 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, Aug. 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 3. Evaluation of potassium (K) fertilizer time of application on soybean yield. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Maturity		Tip of Plant		Moisture	
Rating Date						10/8/2021		10/8/2021	
Rating Type		Plant-R8		Emerg-R8		Height			
Rating Unit		days		days		in		%	
Trt	Treatment	Rate		Growth					
No.	Name	(lb K ₂ O/A)		Stage					
1	Untreated Check	0							
2	Muriate of Potash 0-0-60	120		ATPLAN					
3	Muriate of Potash 0-0-60	120		V1					
4	Muriate of Potash 0-0-60	120		V3					
5	Muriate of Potash 0-0-60	120		V5					
6	Muriate of Potash 0-0-60	120		R1					
7	Muriate of Potash 0-0-60	120		R3					
8	Muriate of Potash 0-0-60	120		R5					
9	Muriate of Potash 0-0-60	120		R6					
LSD P=.05		4.13		4.13		2.52		2.51	
Standard Deviation		2.83		2.83		1.73		1.72	
CV		2.1		2.3		5.41		12.85	
Treatment F		2.642		2.642		5.043		4.436	
Treatment Prob(F)		0.0312		0.0312		0.0009		0.0021	

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

**Evaluation of Phosphorus (P) Fertilizer Rate of Application on Soybean Yield – H. Rouse Caffey Rice
Research Station (South Unit)**

Experiment number	21-CS-SB-03
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	Oct. 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12 2 qt/A Glyphosate + 1% NIS, August 20 16 oz/A Gramoxone + .0025% NIS, September 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, Aug. 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 4. Evaluation of phosphorus (P) fertilizer rate of application on soybean yield. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Maturity		Tip of Plant		Moisture		Yield	
Rating Date						10/8/2021		10/8/2021		10/8/2021	
Rating Type		Plant-R8		Emerg-R8		Height					
Rating Unit		days		days		in		%		bu/A	
Trt	Treatment	Rate		Growth							
No.	Name	(lb P ₂ O ₅ /A)		Stage							
1	Untreated Check	0		ATPLAN		131.3	a	126.3	a	30.0	c
2	Triple superphosphate	30		ATPLAN		129.0	a	124.0	a	30.5	bc
3	Triple superphosphate	60		ATPLAN		133.3	a	128.3	a	31.0	abc
4	Triple superphosphate	90		ATPLAN		128.3	a	123.3	a	30.5	bc
5	Triple superphosphate	120		ATPLAN		126.8	a	121.8	a	31.8	a
6	Triple superphosphate	150		ATPLAN		128.3	a	123.3	a	31.5	ab
LSD P=.05		4.65				4.65		1.03		1.59	
Standard Deviation		3.08				3.08		0.68		1.05	
CV		2.38				2.48		2.21		8.8	
Treatment F		2.360				2.360		3.826		2.043	
Treatment Prob(F)		0.0906				0.0906		0.0196		0.1303	

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

**Evaluation of Phosphorus (P) Fertilizer Time of Application on Soybean Yield – H. Rouse Caffey Rice
Research Station (South Unit)**

Experiment number	21-CS-SB-04_P Timing
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	October 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, June 12 2 qt/A Glyphosate + 1% NIS, August 20 16 oz/A Gramoxone + .0025% NIS, September 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, August 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, August 20

Table 5. Evaluation of phosphorus (P) fertilizer time of application on soybean yield. H. Rouse Caffey Rice Research Station (South Unit).

Crop Name		Soybeans		Soybeans		Soybeans		Soybeans	
Description		Maturity		Maturity		Tip of Plant		Moisture	
Rating Date						10/8/2021		10/8/2021	
Rating Type		Plant-R8		Emerg-R8		Height			
Rating Unit		days		days		in		%	
Trt No.	Treatment Name	Rate (lb P ₂ O ₅ /A)	Growth Stage						bu/A
1	Untreated Check	0		132.8 ab	127.8 ab	30.0 a	12.0 a		49.0 cd
2	Triple superphosphate	120	ATPLAN	130.5 bc	125.5 bc	32.0 a	10.0 a		54.8 ab
3	Triple superphosphate	120	V1	126.0 d	121.0 d	30.3 a	11.0 a		52.6 abc
4	Triple superphosphate	120	V3	126.8 cd	121.8 cd	30.8 a	10.5 a		51.7 bcd
5	Triple superphosphate	120	V5	130.0 bc	125.0 bc	31.3 a	11.6 a		54.9 ab
6	Triple superphosphate	120	R1	125.5 d	120.5 d	31.3 a	11.2 a		53.4 ab
7	Triple superphosphate	120	R3	125.5 d	120.5 d	29.3 a	10.9 a		53.7 ab
8	Triple superphosphate	120	R5	135.3 a	130.3 a	30.0 a	12.1 a		55.8 a
9	Triple superphosphate	120	R6	135.3 a	130.3 a	30.3 a	11.8 a		48.2 d
LSD P=.05				3.86	3.86	2.14	1.36		3.70
Standard Deviation				2.65	2.65	1.46	0.93		2.54
CV				2.04	2.12	4.79	8.27		4.81
Treatment F				9.230	9.230	1.307	2.330		4.331
Treatment Prob(F)				0.0001	0.0001	0.2869	0.0521		0.0024

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

Evaluation of Sulfur (S) Fertilizer Rate of Application on Soybean Yield – H. Rouse Caffey Rice Research Station (South Unit)

Experiment number	21-CS-SB-05
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	Oct. 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12 2 qt/A Glyphosate + 1% NIS, August 20 16 oz/A Gramoxone + .0025% NIS, September 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, Aug. 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 6. Evaluation of sulfur (S) fertilizer rate of application on soybean yield, H. Rouse Caffey Rice Research Station (South Unit).

Crop Name	Soybeans		Soybeans		Soybeans		Soybeans		Soybeans						
Description	Maturity		Maturity		Tip of Plant		Moisture		Yield						
Rating Date					10/8/2021		10/8/2021		10/8/2021						
Rating Type	Plant-R8		Emerg-R8		Height										
Rating Unit	days		days		in		%		bu/A						
Trt	Treatment	Rate		Growth											
No.	Name	Rate		Stage											
1	Urea	52.5	lb ai/A	ATPLAN		134.5	a	129.5	a	30.5	a	10.6	c	53.5	a
2	50 lbs ammonium sulfate	12	lb ai/A	ATPLAN		135.3	a	130.3	a	29.3	a	11.6	ab	50.6	a
	Urea	42	lb ai/A	ATPLAN											
3	100 lbs ammonium sulfate	24	lb ai/A	ATPLAN		135.3	a	130.3	a	29.0	a	11.7	a	52.0	a
	Urea	31.5	lb ai/A	ATPLAN											
4	150 lbs ammonium sulfate	36	lb ai/A	ATPLAN		136.0	a	131.0	a	29.8	a	10.6	c	54.8	a
	Urea	21	lb ai/A	ATPLAN											
5	200 lbs ammonium sulfate	48	lb ai/A	ATPLAN		134.5	a	129.5	a	29.3	a	11.4	ab	53.9	a
	Urea	10.5	lb ai/A	ATPLAN											
6	250 lbs ammonium sulfate	60	lb ai/A	ATPLAN		134.5	a	129.5	a	29.5	a	10.8	bc	49.6	a
7	None					134.5	a	129.5	a	29.8	a	11.5	ab	50.3	a
LSD P=.05		2.16		2.16		1.48		0.76		4.65					
Standard Deviation		1.45		1.45		1.00		0.51		3.13					
CV		1.08		1.12		3.37		4.61		6.01					
Treatment F		0.661		0.661		0.984		3.570		1.636					
Treatment Prob(F)		0.6817		0.6817		0.4646		0.0165		0.1947					

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

Evaluation of Zinc (Zn) Fertilizer Rate of Application on Soybean Yield – H. Rouse Caffey Rice Research Station (South Unit)

Experiment number	21-CS-SB-06
Site and design	
Location/Cooperator	Rice Research Station (South Unit)
Tillage type	Fall Stale
Experimental design	Randomized complete block
Number of reps	4
Plot size	5.33 ft. x 20 ft.
Row width/rows per plot	16 inch / 4
Soil type	
% Organic matter	1.26
pH	5.76
Extractable nutrients (ppm)	Ca-1227; Cu-1.72; Mg-239; P-8.2; K-72; Na-38; S-10; Zn-4.85
Crop/Variety	
Planting method/date	Drill seeded / May 7
Seeding rate/depth	130,000 seed/acre / 1 inches
Emergence date	May 13
Harvest date	Oct. 8
Seed treatment/cwt	
NA	
Fertilization	
NA	
Water management	
Flush	NA
Pest management	
Herbicides	1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, May 7 1.5 qt/A Glyphosate + 1.33 pt/A Charger Max, Jun. 12 2 qt/A Glyphosate + 1% NIS, August 20 16 oz/A Gramoxone + .0025% NIS, September 24 (desiccant)
Insecticides	10 oz/A Besiege + 1 lb/A Acephate + 1% NIS, Aug. 20
Fungicides	13.7 oz/A Trivapro + 1% NIS, Aug. 20

Table 7. Evaluation of zinc (Zn) fertilizer rate of application on soybean yield. H. Rouse Caffey Rice Research Station (South Unit).

Station (South Only)													
Crop Name				Soybeans		Soybeans		Soybeans		Soybeans		Soybeans	
Description				Maturity		Maturity		Tip of Plant		Moisture		Yield	
Rating Date								10/8/2021		10/8/2021		10/8/2021	
Rating Type				Plant-R8		Emerg-R8		Height					
Rating Unit				days		days		in		%		bu/A	
Trt No	Treatment Name	Rate (lb Zn/A)	Growth Stage										
1	0 Zn			137.0	a	132.0	a	30.0	a	11.9	a	50.1	a
2	5 lb Zn/A (from ZNSO4 35.5%Zn)	5	ATPLA N	136.8	a	131.8	a	30.0	a	11.3	a	48.8	a
3	7.5 lb Zn/A (from ZNSO4 35.5%Zn)	7.5	ATPLA N	136.5	a	131.5	a	29.0	a	11.5	a	50.4	a
4	10 lb Zn/A (from ZNSO4 35.5%Zn)	10	ATPLA N	137.0	a	132.0	a	30.8	a	11.2	a	44.5	a
5	15 lb Zn/A (from ZNSO4 35.5%Zn)	15	ATPLA N	137.0	a	132.0	a	30.0	a	11.4	a	46.2	a
6	20 lb Zn/A (from ZNSO4 35.5%Zn)	20	ATPLA N	137.0	a	132.0	a	28.5	a	11.2	a	44.3	a
LSD P=.05				0.98		0.98		1.25		1.52		7.44	
Standard Deviation				0.65		0.65		0.83		1.01		4.94	
CV				0.47		0.49		2.79		8.83		10.42	
Treatment F				0.417		0.417		3.850		0.219		1.245	
				0.829		0.829		0.019		0.948		0.337	
Treatment Prob(F)				5		5		2		6		0	

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

2021 RICE DISEASE CONTROL STUDIES

C. deNux and L.L. Monte

INTRODUCTION

Numerous diseases pose major threats to rice (*Oryza sativa* L.) production. In Louisiana, sheath blight (*Rhizoctonia solani* Kuhn), blast (*Pyricularia grisea* Sacc.), and narrow brown leaf spot (*Cercospora oryzae* (Racib.) O. Const.) continue to be the most important rice diseases 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 second crop production. In 2010 and 2011, the strobilurin fungicide-resistant sheath blight pathogen was detected in Acadia Parish. 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 management 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. 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. With present production costs and the low rice prices, yield and quality losses can represent negative net returns due to rice diseases. Development of effective disease management practices will increase the net returns.

Major goals of the project have been:

1. Monitor changes in the status of rice diseases to identify research needs.
2. Develop and conduct field screening programs to evaluate rice disease resistance.
3. Develop and conduct screening programs to evaluate pesticide efficacy, timing, and rates.
4. Improve disease management strategies for rice blast, sheath blight, bacterial panicle blight, narrow brown leaf spot and other foliar, stem, grain, and seedling diseases of rice by integrating scouting techniques, host resistance, cultural management, and pesticides.

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

2021 RRS First Planting

Trial: Variety Trial and DN-1-3

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: one 6 ft row

Planting Method/Date: Drill Seeded/ April 6

Fertilization: Pre-flood 46-0-0, May 27

Experimental Design: Randomized complete block design with 2-4 replications

Water Management: Flooded, May 31; Drained, August 6

Herbicides: Tank-mix Stam 3 qt/A; Permit 1/3 oz/A; Preference 1.6 oz/A; Prowl H2O 1.5 pt/A, April 28
Tank-mix Stam 3 qt/A; Facet 36 oz/A; Landax 1 oz/A; Permit 1/2 oz/A; COC 1 pt/A, May 27

Insecticides: Tank-mix Dermacor 1.75 oz/A, April 7

Fungicides: None

Inoculation Dates: *Rhizoctonia solani* culture grown on rice grain/hull mixture, June 24
Burkholderia gumae (BPB) inoculum prepared in lab, July 14, 16, 21, 23 and 27

Application Equipment: CO₂ backpack sprayer, single-tip hand wand, 20 gal/A

Disease Ratings: See tables 1-9

Drained: August 6

Harvest:

Results: See tables 1-9

2021 RRS Second Planting

Trial: Variety Trial and DN 4-6

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: one 6 ft row

Planting Method/Date: Drill Seeded/ May 27

Fertilization: Pre-flood 46-0-0, June 16

Experimental Design: Randomized complete block design with 2-4 replications

Water Management: Flooded, June 18; Drained, September 3

Herbicides: Tank-Mix Stam 3 qt/A; Permit ½ oz/A; Command 6 oz/A, June 14
Tank-Mix Stam 2 qt/A; Permit ½ oz/A; Facet 2 oz/A; Command 6 oz/A; COC 2 qt./A, June 16

Insecticides: Tank-Mix Dermacor 1.75 oz/A, June 1

Fungicides: None

Inoculation Dates: natural inoculum

Application Equipment:

Application Dates: Growth Stage Time Temp Wind RH Clouds Dew

Disease Ratings: See tables 1-9

Drained: September 14

Harvest:

Results: See tables 1-9

Comments: Rainfall washed first spraying on June 14. Another application was made pre-flood.

Table 1. 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 Rice Research Station, Crowley, LA. 2021.

Pest Name		SB		BS		NBLS		Blast		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
1	CL111	4.5	abc	0.8	-	0.3	ab	2	cde	0	-
2	CL153	3.5	abc	0.3	-	1	a	1.5	cde	0	-
3	CLL15	3.8	abc	1.8	-	0.5	ab	3	bc	0	-
4	CLL16	2.5	a-d	0	-	0	b	0.8	de	0	-
5	CLL17	4.5	abc	1	-	0	b	1.3	cde	2.3	-
6	CLM04	1.5	cd	0.8	-	0.3	ab	1.8	cde	0.3	-
7	Cheniere	2.8	a-d	0.5	-	0	b	1.5	cde	0	-
8	Mermentau	2.8	a-d	0.8	-	0	b	2.3	cd	0	-
9	Thad	3.3	a-d	0.5	-	0	b	1.3	cde	0.3	-
10	Jupiter	2	a-d	0.3	-	0.5	ab	1.3	cde	0	-
11	Lynx	2.3	a-d	0.8	-	0.3	ab	1.8	cde	0	-
12	Titan	4	abc	0.8	-	0.3	ab	1.5	cde	0	-
13	PVL02	4	abc	0.5	-	0.3	ab	1.5	cde	0	-
14	PVL03	4.3	abc	1.3	-	0	b	1	cde	1.8	-
15	LAH199	3.3	a-d	0.8	-	0	b	1	cde	0	-
16	LAH200	1.8	bcd	1	-	0	b	1	cde	0	-
17	Diamond	2.3	a-d	0.8	-	0	b	1.8	cde	0	-
18	CL151	4.3	abc	1.3	-	0	b	2.5	bcd	0.5	-
19	Trinity	2.5	a-d	1	-	0	b	0	e	0	-
20	RU1902212	3.3	a-d	1.5	-	0	b	2.5	bcd	0	-
21	RU2002126	2.5	a-d	0	-	0	b	1	cde	1.3	-
22	PVL01	4.5	abc	1.8	-	0	b	4	b	1.5	-
23	Jewel	2	a-d	0	-	0	b	1.3	cde	0	-
24	DGL274	2.3	a-d	0.8	-	0	b	1.3	cde	0	-
25	DGL263L	4.8	ab	1.3	-	0	b	2.5	bcd	1.5	-
26	XP753	3.5	abc	0	-	0.5	ab	0.5	de	0	-
27	RTv7231MA	5	a	1.3	-	0	b	1	cde	0	-
28	RT7301	3.3	a-d	0.3	-	0	b	1	cde	0	-
29	RT7501	0.5	d	0	-	0	b	0.7	de	0	-
30	RT7321FP	3.8	abc	0.5	-	0	b	0.5	de	0.5	-
31	RT7521FP	2	a-d	0	-	0.5	ab	1.5	cde	0	-
32	RT7401	1.8	bcd	0.3	-	0	b	1	cde	0	-
33	M201	4.3	abc	1.5	-	0.8	ab	7.8	a	0	-
LSD P=.05		1.55		1.05		0.49		1.1		1.51	

Continued.

Table 1. Continued.

Standard Deviation	1.1	0.74	0.35	0.78	1.08
CV	35.47	104.56	232.31	46.74	360.84
Replicate F	2.64	2.569	1.631	0.311	0.952
Replicate Prob(F)	0.0539	0.0588	0.1874	0.8173	0.4188
Treatment F	4.011	2.004	2.136	11.933	1.326
Treatment Prob(F)	0.0001	0.0051	0.0025	0.0001	0.1501

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 2. Disease reaction of various rice varieties and experimental lines to leaf blast, sheath blight (SB), bacterial panicle blight (BPB), and rotten neck blast at the Rice Research Station, Crowley, LA. 2021. (URN Group I).

Pest Name		SB		BS		NBLS		Blast		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
1	RU2101001	3.6	-	0.5	-	0.5	-	1.5	-	0	-
2	RU1902207	3.6	-	0.3	-	0.8	-	2.2	-	0	-
3	RU2004091	1.9	-	0	-	0.8	-	0.9	-	0	-
4	RU2003084	1.9	-	0	-	0.3	-	0.6	-	0	-
5	RU2101005	2.6	-	0	-	0	-	1.9	-	0	-
6	RU1902212	2.4	-	0.3	-	0	-	1.9	-	0	-
7	RU2004099	2.8	-	0.3	-	0.3	-	1	-	0	-
8	RU2003112	2.4	-	0.3	-	0.5	-	1.3	-	0	-
9	JEWEL	3	-	0.5	-	0.3	-	1	-	0	-
10	RU2002126	2.6	-	0.3	-	0	-	0.2	-	1.3	-
11	RU2004083	1.9	-	0.3	-	0	-	0.6	-	0	-
12	RU1903104	2	-	0.3	-	0.3	-	1.1	-	0.8	-
13	RU1801101	2.7	-	0.3	-	0	-	1.1	-	1.5	-
14	20DGL274	2.1	-	0.3	-	0.5	-	1.5	-	0	-
15	RU2004191	4.1	-	0.3	-	0	-	1	-	0	-
16	RU2003016	3.7	-	1	-	0.3	-	1.5	-	0	-
17	RU1601010	2.6	-	0.5	-	0	-	0.8	-	0	-
18	CL153	1.6	-	0.3	-	0	-	1.3	-	0	-
19	PRESIDIO	3.4	-	0	-	0.3	-	1.7	-	0	-
20	DG263L	3.4	-	0.8	-	0	-	0.9	-	0	-
LSD P=.05		2.38 - 2.44		0.69		0.81		1.17 - 1.47		1.31	
Standard Deviation		0.48t		0.49		0.57		0.38t		0.92	
CV		26.65t		162.22		252.86		29.12t		526.83	
Replicate F		0.714		0.704		0.566		0.934		1.588	
Replicate Prob(F)		0.5479		0.5537		0.6394		0.4301		0.2022	
Treatment F		0.729		1.067		0.805		1.067		0.932	
Treatment Prob(F)		0.7736		0.4073		0.6921		0.4068		0.549	

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 at the Rice Research Station, Crowley, LA. 2021. (URN Group II).

Pest Name		SB		BS		NBLs		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
21	RU1901165	0.9	-	0	-	0	-	0.7	-	0	-
22	RU2002182	0.8	-	0.2	-	0.3	-	0.7	-	0	-
23	RU2004187	2.3	-	0.7	-	0.3	-	0.7	-	0	-
24	RU1303153	1.6	-	0.2	-	0	-	0.6	-	0	-
25	RU2001185	1.2	-	0.2	-	0	-	1.5	-	0.8	-
26	RU2002150	3.3	-	0	-	0	-	0.5	-	0	-
27	RU2004087	2.2	-	0	-	0	-	1.7	-	0	-
28	RU1603138	2.3	-	0.4	-	0	-	1.1	-	0	-
29	RU2001125	2.8	-	0	-	0	-	2.1	-	0	-
30	192L1111	3.1	-	0	-	0	-	0.8	-	0	-
31	RU2004115	3.7	-	0.2	-	0	-	1.2	-	0	-
32	RU1303138	2.3	-	0.4	-	0	-	0.2	-	0	-
33	RU1901033	3.3	-	0.2	-	0	-	1	-	1.3	-
34	191L1123	2.7	-	0.4	-	0	-	0.6	-	0	-
35	RU2004195	3.4	-	0	-	0.3	-	1.3	-	0	-
36	RU1403141	2.6	-	0	-	0	-	1.1	-	0	-
37	191L2051	3.2	-	0.2	-	0.3	-	1.3	-	0	-
38	WELLS	3.9	-	0.2	-	0	-	1.2	-	0	-
39	CLL16	2.6	-	0.4	-	0	-	1.2	-	0	-
40	DIAMOND	1.3	-	0.4	-	0	-	1.7	-	0	-
LSD P=.05		1.88 - 2.30		0.62 - 0.67		0.32		1.14 - 1.42		0.93	
Standard Deviation		0.45t		0.23t		0.23		0.37t		0.66	
CV		26.63t		28.1t		451.12		29.76t		656.95	
Replicate F		1.823		0.717		0.655		0.551		0.695	
Replicate Prob(F)		0.1532		0.546		0.583		0.6498		0.5588	
Treatment F		1.543		0.992		0.828		1.077		0.939	
Treatment Prob(F)		0.1055		0.4836		0.6666		0.3973		0.541	

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 at the Rice Research Station, Crowley, LA. 2021. (URN Group III).

Pest Name		SB		BS		NBLS		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
41	RU2101041	2.3	-	0.3	ab	0	-	1.5	-	0	-
42	RU1702183	3.8	-	0	b	0	-	1.5	-	0	-
43	RU2004147	3.8	-	0.3	ab	0	-	1.8	-	0	-
44	RU2003092	4.3	-	0	b	0	-	1.8	-	0	-
45	RU1801238	3	-	0	b	0.3	-	2	-	0	-
46	RU1902026	4.5	-	0	b	0.3	-	1.5	-	1.3	-
47	RU2004055	2	-	1.3	a	0	-	1	-	0	-
48	RU1603144	2	-	0	b	0	-	1.5	-	1	-
49	RU1901081	3	-	0	b	0	-	1.3	-	0	-
50	RU1902034	4.3	-	0	b	0.8	-	1.8	-	0	-
51	RU2004071	2.5	-	0	b	0.3	-	1.5	-	0	-
52	RU1303181	3	-	0	b	0	-	1.3	-	0	-
53	RU1901137	3.8	-	0.3	ab	0	-	1.3	-	0	-
54	RU2002114	3	-	0	b	0.3	-	1.3	-	0	-
55	RU2004131	4	-	0.3	ab	0	-	1.8	-	0	-
56	RU2003215	1.8	-	0.8	ab	0	-	1.3	-	0	-
57	RU2004179	3.5	-	0	b	0.5	-	2	-	0	-
58	CHENIERE	2	-	0	b	0.3	-	1.3	-	0	-
59	COCODRIE	2.3	-	0.3	ab	0	-	2	-	0	-
60	CLL17	2.5	-	0	b	0	-	2	-	0	-
LSD P=.05		2.8		0.66		0.56		1.19		0.99	
Standard Deviation		1.98		0.46		0.4		0.84		0.7	
CV		64.83		285.4		312.16		54.05		619.79	
Replicate F		0.04		1.924		1.47		1.188		2.083	
Replicate Prob(F)		0.9891		0.1362		0.2327		0.3226		0.1126	
Treatment F		0.786		1.875		1.073		0.548		1	
Treatment Prob(F)		0.7132		0.0358		0.4017		0.9264		0.475	

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 Rice Research Station, Crowley, LA.2021. (URN Group IV).

Pest Name		SB		BS		NBLS		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
61	RU1901129	3	-	0.3	-	0	-	1.4	-	0	-
62	RU1902227	4.3	-	0.3	-	0	-	0.7	-	0	-
63	RU2004219	1.8	-	0.5	-	0.3	-	0.3	-	0	-
64	RU1603113	4.3	-	0.3	-	0	-	0.6	-	0	-
65	RU2101065	3.5	-	0.5	-	0	-	1.1	-	0	-
66	191M1068	3.5	-	0.5	-	0	-	1.2	-	0	-
67	RU2004111	1.5	-	0	-	0	-	1.2	-	0	-
68	RU2003220	3.5	-	0.5	-	0	-	1.7	-	0	-
69	RU1801145	2	-	0	-	0	-	0.6	-	0	-
70	191M1074	3.8	-	0.5	-	0	-	0.4	-	1	-
71	RU2004224	1.8	-	0	-	0	-	0.4	-	1.5	-
72	RU1703172	1.3	-	0.3	-	0	-	1	-	1	-
73	RU2101073	3.8	-	0	-	0	-	2.1	-	0	-
74	191M1171	2.3	-	0.3	-	0	-	1.5	-	0	-
75	RU2104075	2.8	-	0.5	-	0	-	0.6	-	0	-
76	RU1703129	4	-	0	-	0.3	-	1.1	-	0	-
77	RU1803196	2.5	-	0.3	-	0	-	1.2	-	0	-
78	JUPITER	3.5	-	0.3	-	0	-	0.6	-	0	-
79	ROYJ	2	-	0.3	-	0	-	0.9	-	0	-
80	TITAN	3	-	0.3	-	0	-	1	-	0	-
LSD P=.05		2.11		0.64		0.23		1.21 - 1.53		1.24	
Standard Deviation		1.49		0.45		0.16		2.87t		0.88	
CV		51.72		172.69		637.98		52.59t		500.05	
Replicate F		2.337		1.683		0.655		1.02		3.199	
Replicate Prob(F)		0.0832		0.1808		0.583		0.3906		0.03	
Treatment F		1.634		0.701		0.931		1.003		1	
Treatment Prob(F)		0.0788		0.8021		0.5499		0.4713		0.475	

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 Rice Research Station, Crowley, LA. 2021. (URN Group V).

Pest Name		SB		BS		NBLB		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
81	RU2101081	0.5	-	0	-	0	-	0	-	1.5	-
82	191M1192	0.5	-	0	-	0	-	1.5	-	0	-
83	RU2104083	2.5	-	0	-	0	-	1.9	-	1	-
84	RU2103084	0	-	0	-	0	-	0.4	-	0	-
85	RU2001085	1	-	0.5	-	0	-	2	-	0	-
86	RU2002086	1.5	-	0	-	0	-	0.4	-	0	-
87	RU2104087	2.5	-	0	-	0	-	1	-	0	-
88	RU2103088	2.5	-	0	-	0	-	0	-	0	-
89	RU2101089	1	-	0	-	0	-	1.5	-	0	-
90	192L1072	4.5	-	0	-	0	-	2	-	0	-
91	RU2104091	1	-	0	-	0	-	0.4	-	0	-
92	RU2103092	2.5	-	0	-	0	-	0	-	0	-
93	RU2001093	0.5	-	0	-	0	-	1	-	0	-
94	LAH199	2.5	-	0.5	-	0	-	0	-	0	-
95	RU2104095	1.5	-	0	-	0	-	0.4	-	0	-
96	RU2103096	2	-	0.5	-	0	-	0.8	-	0	-
97	RU2101097	2.5	-	0	-	0	-	0.4	-	0	-
98	LAH200	1.5	-	0.5	-	0	-	0.4	-	0	-
99	RU2104099	2.5	-	0	-	0	-	3	-	0	-
100	RU2103100	2.5	-	0	-	0	-	1	-	1	-
101	RU2101101	3	-	0	-	0	-	1	-	1.5	-
102	191M1131	3	-	0	-	0	-	1.2	-	0	-
103	RU2104103	2	-	0	-	0	-	1	-	0	-
104	RU2003104	3.5	-	0	-	0	-	2	-	0	-
105	RU2101105	4	-	0	-	0	-	1.9	-	0	-
106	191L1189	3	-	0	-	0.5	-	0.4	-	0	-
107	RU2104107	4	-	0.5	-	0	-	1.5	-	0	-
108	RU2103108	5	-	0	-	0	-	0.4	-	0	-
109	RU2101109	2	-	0	-	0	-	1	-	0	-
110	192M1111	3	-	0	-	0	-	0	-	0	-
111	RU2104111	3.5	-	0	-	0	-	2	-	0	-
112	RU2103112	3.5	-	0	-	0	-	1.5	-	0	-

Continued.

Table 6. Continued.

113	RU2101113	3.5	-	0	-	0	-	1.5	-	0	-
114	192M1128	4	-	0	-	0	-	1.2	-	0	-
115	RU2104115	1	-	0	-	0	-	2	-	0	-
116	RU2103116	3.5	-	0.5	-	0	-	1	-	0	-
117	RU2101117	3	-	0	-	0	-	1.5	-	0	-
118	LYNX	3	-	0	-	0	-	0.4	-	0.5	-
119	CLM04	2.5	-	0.5	-	0	-	0.4	-	0	-
120	CLL15	2.5	-	0	-	0	-	1	-	0	-
LSD P=.05		3.37		0.6		0.23		1.86 - 2.14		1.19	
Standard Deviation		1.67		0.29		0.11		0.35t		0.59	
CV		67.99		336.82		894.43		29.08t		426.1	
Replicate F		0.288		1.295		1		0.471		0.328	
Replicate Prob(F)		0.5943		0.262		0.3235		0.4965		0.5703	
Treatment F		1.006		0.852		1		1.454		0.895	
Treatment Prob(F)		0.4932		0.6898		0.5		0.1233		0.6341	

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 Rice Research Station, Crowley, LA. 2021. (URN Group VI).

Pest Name		SB		BS		NBLS		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
121	RU2001121	4.5	-	0	-	0	-	1.5	-	0	-
122	191L1184	3.5	-	0.5	-	0	-	2.3	-	1.5	-
123	RU2104123	2	-	0	-	0	-	1.9	-	0	-
124	RU2103124	1.5	-	0	-	0	-	0.4	-	0	-
125	RU2101125	3.5	-	0	-	0	-	2	-	0	-
126	191L2009	5.5	-	0	-	0	-	3.4	-	0	-
127	RU2104127	2	-	0	-	0	-	2.7	-	0	-
128	RU2103128	2	-	0	-	0	-	0.4	-	0	-
129	RU2001129	2.5	-	0	-	0	-	0.4	-	0	-
130	191L2025	3.5	-	0	-	0	-	2	-	0	-
131	RU2104131	3	-	0	-	0	-	2.9	-	0	-
132	RU1703132	4	-	0	-	0	-	1.5	-	0	-
133	RU2001133	3.5	-	0.5	-	0	-	1.2	-	0	-
134	191L2066	3	-	0	-	0	-	0.4	-	0	-
135	RU2104135	1.5	-	0	-	0	-	2.5	-	0	-
136	RU1603187	2.5	-	0	-	0	-	1.2	-	0	-
137	RU2101137	4	-	0	-	0	-	2.3	-	0	-
138	191L2073	3.5	-	0	-	0	-	1	-	0	-
139	RU2104139	4.5	-	0	-	0	-	1	-	0	-
140	RU2103140	2.5	-	0	-	0	-	0.4	-	0	-
141	RU2101141	1	-	0	-	0	-	0.4	-	0	-
142	191L2090	3.5	-	0.5	-	0	-	1	-	0	-
143	RU2104143	4	-	0	-	0	-	3.9	-	0	-
144	RU1903144	2.5	-	0	-	0	-	1	-	0	-
145	RU2001145	2	-	0	-	0	-	1.9	-	0	-
146	191L2100	7	-	0	-	0	-	1.9	-	0	-
147	RU2104147	5	-	0	-	0	-	2.5	-	0	-
148	RU2103148	2.5	-	0	-	0	-	1.2	-	0	-
149	RU2101149	2.5	-	0	-	0	-	2.3	-	0	-
150	RU2102150	4.5	-	0	-	0	-	2.3	-	0	-
151	RU2104151	6	-	0.5	-	0	-	2.9	-	0	-
152	RU2103152	4.5	-	0	-	0	-	1.5	-	0	-

Continued.

Table 7. Continued.

153	RU2001153	5	-	0	-	0	-	0.8	-	0	-
154	191L1190	3	-	0	-	0	-	1.5	-	0	-
155	RU2104155	5	-	0	-	0	-	2	-	0	-
156	RU2103156	1.5	-	0	-	0	-	1.5	-	0	-
157	191L1033	3.5	-	0	-	0	-	1.5	-	0	-
158	191L1030	3.5	-	0	-	0	-	0.4	-	0	-
159	RU1603178	3	-	0	-	0	-	1.5	-	0	-
160	THAD	0.5	-	0	-	0	-	1.2	-	0	-
LSD P=.05		3.66		0.45		.		2.58 - 3.00		0.68	
Standard Deviation		1.81		0.22		0		0.45t		0.34	
CV		54.56		447.21		0		31.55t		894.43	
Replicate F		0.647		1		0		1.331		1	
Replicate Prob(F)		0.4262		0.3235		1		0.2557		0.3235	
Treatment F		1.191		0.923		0		0.914		1	
Treatment Prob(F)		0.2941		0.5981		1		0.6098		0.5	

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 Rice Research Station, Crowley, LA. 2021. (URN Group VII).

Pest Name		SB		BS		NBLS		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
161	RU2101161	2.7	-	0	-	0	-	1.9	-	0	-
162	192L1486	2.9	-	0	-	0	-	1.5	-	0	-
163	RU2104163	2.3	-	0	-	0	-	0	-	0	-
164	RU2103164	1.9	-	0	-	0	-	0	-	0	-
165	RU2101165	1.5	-	0.5	-	0	-	0.4	-	0	-
166	RU2002070	1.8	-	0	-	0	-	1.5	-	0	-
167	RU2104167	1.5	-	0	-	0	-	0	-	0	-
168	RU1803168	1.9	-	0	-	0	-	0.8	-	0	-
169	RU2101169	6.5	-	0	-	0	-	1	-	0	-
170	193L1099	3.1	-	0	-	0	-	1.5	-	0	-
171	RU2104171	2	-	0	-	0	-	1	-	0	-
172	RU2103172	2.5	-	0	-	0	-	0.8	-	0	-
173	RU2101173	2.7	-	0	-	0	-	1.9	-	0	-
174	RU2002174	3.5	-	0	-	0	-	1.5	-	0	-
175	RU2104175	4.4	-	0	-	0	-	0.8	-	0	-
176	RU1803176	1.8	-	0	-	0	-	0.4	-	0	-
177	RU2101177	1.5	-	0	-	0	-	1.5	-	0	-
178	193L2012	1.5	-	0	-	0	-	0.4	-	0	-
179	RU2104179	4.8	-	0	-	0	-	0.4	-	0	-
180	RU2103180	3.4	-	0	-	0	-	0.8	-	0	-
181	RU2101181	3.4	-	0	-	0	-	1.5	-	0	-
182	193L2052	2.7	-	0	-	0	-	1	-	0	-
183	RU2104183	3.5	-	0	-	0	-	0.8	-	0	-
184	RU2103184	2.3	-	0	-	0	-	0.4	-	0	-
185	RU2101185	1.9	-	0	-	0	-	0.4	-	0	-
186	193L2086	4.5	-	0	-	0	-	1.5	-	0	-
187	RU2104187	3.1	-	0	-	0	-	0.8	-	0	-
188	RU2103188	2.2	-	0	-	0	-	0.4	-	2	-
189	RU1901189	4.4	-	0	-	0	-	0.4	-	0	-
190	192L1544	1.5	-	0	-	0	-	0	-	0	-
191	RU2104191	2.3	-	0	-	0	-	0.8	-	0	-
192	RU2103192	3.1	-	0	-	0	-	0	-	0	-
193	RU2101193	3.8	-	0	-	0	-	1.5	-	2	-

Continued.

Table 8. Continued.

194	192L1596	2.7	-	0	-	0	-	0.8	-	0	-
195	RU2104195	6	-	0	-	0	-	2.3	-	2.5	-
196	RU2103196	1.9	-	0	-	0	-	0.4	-	0	-
197	RU2101197	2.3	-	0	-	0	-	0.8	-	0	-
198	CL163	4	-	0	-	0	-	1.5	-	1.5	-
199	PVL02	5.4	-	0	-	0	-	1	-	1.5	-
200	PVL03	2.9	-	0	-	0	-	1	-	2.5	-
LSD P=.05		5.23 - 5.43		0.23		.		2.12 - 2.37		2.29	
Standard Deviation		0.65t		0.11		0		0.42t		1.13	
CV		35.61t		894.43		0		36.55t		377.24	
Replicate F		0.179		1		0		0.359		0.039	
Replicate Prob(F)		0.6744		0.3235		1		0.5527		0.8444	
Treatment F		0.495		1		0		0.72		0.857	
Treatment Prob(F)		0.9846		0.5		1		0.8457		0.6841	

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 Rice Research Station, Crowley, LA. 2021. (URN Group VIII).

Pest Name		SB		BS		NBLS		BLAST		SB	
Rating Date		8/12/2021		8/12/2021		8/12/2021		9/19/2021		9/19/2021	
Number of Subsamples		1		1		1		1		1	
Trt	Treatment	1		2		3		4		5	
No.	Name										
201	RU2101201	3	-	0	-	0	-	0.5	-	0	-
202	RU2002232	2.5	-	0	-	0	-	1.5	-	0	-
203	RU2103203	1.5	-	0	-	0	-	1.5	-	0	-
204	RU2104204	3.5	-	0	-	0	-	1	-	3.5	-
205	RU2003205	3	-	0	-	0	-	3.5	-	0	-
206	RU1901206	4.5	-	0	-	0.5	-	1.5	-	0	-
207	191L1125	3.5	-	0	-	0	-	1	-	0	-
208	RU2101208	4	-	0	-	0	-	1.5	-	0	-
209	RU2104209	2	-	0	-	0	-	0.5	-	0	-
210	RU2103210	3	-	0	-	0	-	0	-	0	-
211	RU2101211	2	-	0	-	0	-	1.5	-	0	-
212	RU2002166	4	-	0	-	0	-	1.5	-	0	-
213	RU2002066	2.5	-	0	-	0	-	1.5	-	0	-
214	RU2104214	5.5	-	0	-	0	-	2	-	0	-
215	RU2103215	2	-	0	-	0	-	0	-	0	-
216	RU2101216	1.5	-	0	-	0	-	0	-	0	-
217	192L1687	4.5	-	0	-	0	-	1	-	0	-
218	RU2101218	2	-	0	-	0	-	1	-	0	-
219	RU2104219	4	-	0	-	0	-	3.5	-	0	-
220	RU2103220	2.5	-	0	-	0	-	0.5	-	0	-
221	RU2101221	4	-	0	-	0	-	2	-	0	-
222	192L2160	1.5	-	0	-	0	-	2	-	0	-
223	RU2103223	3.5	-	0	-	0	-	0	-	2	-
224	RU2104224	6	-	0	-	0	-	1	-	1.5	-
225	RU1903225	2.5	-	0	-	0	-	1.5	-	0	-
226	RU2101226	1.5	-	0	-	0	-	2	-	0	-
227	192L2171	4.5	-	0	-	0	-	2	-	0	-
228	RU2101228	5	-	0	-	0	-	1	-	0	-
229	RU2104229	3.5	-	0	-	0	-	1.5	-	0	-
230	RU1803230	2.5	-	0	-	0	-	1.5	-	0	-
231	RU1901231	2	-	0	-	0	-	1	-	0	-
232	192L2050	2.5	-	0	-	0	-	2	-	0	-

Continued.

Table 9. Continued.

233	192L2134	3	-	0	-	0	-	2	-	0	-
234	RU2101234	5.5	-	0	-	0	-	1	-	1	-
235	RU2103235	3.5	-	0	-	0	-	1	-	0	-
236	RU2101236	3.5	-	0	-	0	-	3.5	-	0	-
237	ANTONIO	4.5	-	0	-	0	-	1.5	-	0	-
238	SANTEEGOLD	5	-	0	-	0	-	1	-	0	-
239	AROMA17	3	-	0	-	0	-	1.5	-	0	-
240	REX	0.5	-	0	-	0	-	1	-	0	-
LSD P=.05		4.08		.		0.23		2.29		1.94	
Standard Deviation		2.02		0		0.11		1.13		0.96	
CV		62.75		0		894.43		82.51		479.05	
Replicate F		5.171		0		1		0.622		3.486	
Replicate Prob(F)		0.0286		1		0.3235		0.4353		0.0694	
Treatment F		0.807		0		1		1.111		1	
Treatment Prob(F)		0.747		1		0.5		0.3725		0.5	

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

2021 RRS SB1 Fungicide Test

Trial: RRS SB1 Fungicide Test

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 16ft

Planting Method/Date: Drill Seeded/ April 6

Fertilization: Pre-flood 46-0-0, May 27

Experimental Design: Randomized complete block design with four replications

Water Management: Flooded, May 31; Drained, August 4

Herbicides: Tank-mix Stam 3 qt/A; Permit 1/3 oz/A; Preference 1.6 oz/A; Prowl H20 1.5 pt/A, April 28

Tank-mix Stam 3 qt/A; Facet 36 oz/A; Landax 1 oz/A; Permit ½ oz/A; COC 1 pt/A, May 27

Insecticides: Tank-mix Dermacor 1.75 oz/A, April 7

Fungicides: Various

Inoculation Dates: *Rhizoctonia solani* culture grown on rice grain/hull mixture, June 18

Application Equipment: CO₂ backpack sprayer, 3-tip (TJ8002) hand wand, 20 gal/A

Application Dates:

	<u>Growth Stage</u>	<u>Time</u>	<u>Temp</u>	<u>Wind</u>	<u>RH</u>	<u>Clouds</u>	<u>Dew</u>
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July 1	Boot/Heading	11:03	88°F	2.5 mph	25%	50%	None
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Disease Ratings: See table 10

Drained: August 6

Harvest: August 19

Results: See table 10

Comments:

Table 10. Effect of fungicide application on sheath blight (SB) development rice yield and milling. H. Rouse Caffey Rice Research Station, Crowley, LA. 2021

Pest Name				SB		Yield		Total		Head	
Rating Date				8/12/2021		8/19/2021		10/26/2021		10/26/2021	
Number of Subsamples				1		1		1		1	
Trt	Treatment		Rate	1		2		3		4	
No.	Name	Rate	Unit								
1	Check			2.5	-	10.22	-	71.775	-	58.605	-
2	Amistar Top	14	fl oz/A	1	-	10.065	-	71.535	-	59.285	-
3	Elegia	32	fl oz/A	2	-	10.203	-	71.683	-	57.975	-
4	Sercadis	6.8	fl oz/A	2	-	10.385	-	71.443	-	56.095	-
5	Flint	4.6	fl oz/A								
6	Tilt	10	fl oz/A	2.8	-	10.75	-	71.508	-	54.57	-
7	Quadris	12	fl oz/A	2	-	9.668	-	71.83	-	53.775	-
8	Quilt Xcel	21	fl oz/A	1.5	-	10.065	-	71.878	-	56.91	-
9	Artisan	40	fl oz/A	2.5	-	9.703	-	71.717	-	56.5	-
10	Azterknot	22	fl oz/A	1.8	-	9.59	-	71.153	-	54.458	-
LSD P=.05				1.28		1.6297		1.0932		4.9949	
Standard Deviation				0.88		1.1167		0.7455		3.4226	
CV				43.9		11.09		1.04		6.06	
Replicate F				0.865		5.562		2.003		3.964	
Replicate Prob(F)				0.4728		0.0048		0.143		0.0199	
Treatment F				1.541		0.453		1.575		1.281	
Treatment Prob(F)				0.1956		0.8767		0.1842		0.2992	

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

RICE INSECTS RESEARCH

FOLIAR-APPLIED CHLORANTRANILIPROLE EFFICACY AGAINST RICE PEST COMPLEX

B.E. Wilson, J.M. Villegas, and K.J. Landry

Chlorantraniliprole is widely used as a seed treatment in rice to control the rice water weevil (RWW), *Lissorhoptrus oryzophilus*, and stem borers including the Mexican rice borer (*Eoreuma loftini*). These seed treatments are applied prophylactically, and there are few alternative control measures that can be applied during the season to control both pests. Two separate trials were conducted at the LSU AgCenter H. Rouse Caffey Rice Research Station in Crowley, Louisiana to evaluate potential for use of a new chlorantraniliprole product (Vantacor®) which is formulated for foliar applications.

Rice was drill-planted in small field plots (4.1 ft wide and 18 ft long) following a randomized block design with four replications. Treatments included Dermacor and Cruiser 5FS seed treatments, Vantacor foliar applications at multiple rates and timings, and zeta-cypermethrin (Mustang Maxx®) foliar applications. Vantacor and Mustang Maxx insecticides were applied using a CO₂-pressurized backpack sprayer calibrated to deliver 15 GPA at 30 psi. At grain maturity, entire plots were harvested with a small-plot combine and rough grain weights were adjusted to 12% moisture. Data collected in both trials were analyzed separately 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 Tukey's HSD ($\alpha = 0.05$).

Differences in weevil densities were detected among treatments at two (Trial 1) and three (Trial 2) sampling dates as well as whitehead density in both trials (Tables 2 and 3). Differences were detected in rice yields among treatments in Trial 2, but not Trial 1. In trial 1, both the Dermacor seed treatment and Vantacor applied pre-flood (alone) consistently reduced weevil densities relative to other treatments. In trial 2, insecticide treatments including Dermacor, Vantacor applied pre-plant (alone), and Cruiser + Vantacor applied pre-flood consistently reduced weevil densities compared to other treatments. Dermacor seed treatment, Vantacor applied pre-flood, and Vantacor applied postflood reduced whitehead densities in trial 2. In trial 2, yields were in higher Cruiser + Vantacor applied pre-flood relative to other treatments (Table 3).

Collectively, results suggest Vantacor has potential to provide effective pest control in the absence of seed treatments. Further research is needed to determine the most effective rates and timings.

Table 1. Field activities and corresponding dates

Activity	Trial 1	Trial 2
Planting	29-Apr	4-May
Pre-plant insecticide application	29-Apr	4-May
Pre-flood insecticide application	9-Jun	17-Jun
Permanent flood	10-Jun	18-Jun
Post-flood insecticide application	16-Jun	24-Jun
Weevil core sampling 1	1-Jul	8-Jul
Weevil core sampling 2	6-Jul	14-Jul
Weevil core sampling 3	12-Jul	22-Jul
Whitehead count	16-Aug	20-Aug
Harvest	26-Aug	31-Aug

Table 2. Weevil density, whitehead density, and yield as affected by insecticide treatments (LS Means \pm SE), Trial 1, H. Rouse Caffey Rice Research Station, 2021

Treatment	RWW immatures per core				
	3 WAF (± 1.6)	4 WAF (± 1.4)	5 WAF (± 1.4)	Whiteheads/ plot* (± 1.8)	Yield lb/A (± 143)
Nontreated	9.8	12.1 ab	13.0 a	5.5 ab	7638
Vantacor 1.7 fl oz preplant	6.3	8.8 bc	11.0 ab	5.0 ab	7770
Cruiser5FS + Vant. 1.2 preflood	3.6	6.6 cd	8.1 abc	7.8 ab	8100
Cruiser5FS	7.5	7.4 cd	8.8 abc	11.3 a	8120
Dermacor X100	5.9	4.3 d	5.6 c	3.5 b	7879
Vantacor 1.7 fl oz preflood	5.9	6.3 cd	7.0 bc	4.5 b	7948
Vantacor 1.7 fl oz postflood	6.8	6.3 cd	7.0 bc	4.5 b	7948
Vant. 1.2 + Mustang Maxx post	7.3	12.8 a	13.0 a	3.8 b	7886
		8.6 c	11.0 ab	6.5 ab	8136
<i>F</i> _{7,23} =	1.66	6.13	2.58	2.13	1.86
<i>P</i> =	0.17	<0.01	0.04	0.08	0.12

Means within a column which share a letter are not significantly different.

*Letter groups reflect differences at the $\alpha = 0.10$ level.

Table 3. Weevil density, whitehead density, and yield as affected by insecticide treatments (LS Means \pm), Trial 2, H. Rouse Caffey Rice Research Station, 2021

Treatment	3 WAF (± 1.2)	4 WAF (± 2.1)	5 WAF (± 1.7)	Whiteheads/ plot (± 1.3)	Yield lb/A (± 222)
Nontreated	11.9 ab	14.6 ab	12.0 ab	6.5 bc	6471 bc
Vantacor 1.7 fl oz preplant	6.0 cd	7.0 c	4.4 d	6.5 bc	6621 abc
Cruiser5FS + Vant. 1.2 preflood	5.5 cd	7.1 c	5.6 cd	9.8 a	7242 a
Cruiser5FS	7.4 bc	8.1 c	9.4 abc	7.5 ab	7116 ab
Dermacor X100	1.8 d	4.3 c	3.9 d	1.3 d	6973 ab
Vantacor 1.7 fl oz preflood	5.0 cd	9.6 bc	8.0 bcd	4.0 cd	6662 abc
Vantacor 1.7 fl oz postflood	12.4 a	15.3 ab	13.0 a	4.3 cd	6070 c
Vant. 1.2 + Mustang Maxx post	12.3 a	17.4 a	13.5 a	5.3 bc	6465 bc
<i>F</i> _{7,23} =	5.69	5.85	5.47	5.67	2.83
<i>P</i> =	<0.01	<0.01	<0.01	<0.01	0.03

EVALUATION OF FOLIAR-APPLIED INSECTICIDES FOR CONTROL OF RICE STINK BUG

B.E. Wilson, K.J. Landry, and J.M. Villegas

The rice stink bug (RSB), *Oebalus pugnax*, represents a major threat to headed rice throughout the southern U.S. Rice stink bug feeding reduces head yield and increases rice peck thereby impacting rough rice value and farm revenue. Foliar applied insecticides are the primary control strategy for RSB. Continued evaluations of insecticide efficacy against RSB is needed because of concerns about development of pyrethroid resistance.

Foliar applied insecticides were evaluated in a small plot trial in 2021 in a randomized block design with four replications. Pre-treatment sweep net samples revealed mean captures across plots were 8.9 RSB adults and nymphs per 10 sweeps, well above the recommended treatment threshold of three per 10 sweeps. Insecticides were applied 28 July 2021 with a CO₂-pressurized backpack sprayer calibrated to deliver 15 gallons per acre. Treatments included Warrior® (lambda-cyhalothrin, at 1.9 fl. oz/acre), Tenchu® (dinotefuran, at 8 fl. oz/ acre), and Endigo ZCX® (lambda-cyhalothrin + thiamethoxam at 4 and 5 fl. oz/acre). RSB captures were recorded from ten sweeps per plot at 2, 5, 9, and 12 days after treatment (DAT). Data from each sampling date were analyzed separately with ANOVAs which included treatment as a fixed effect and replication as a random effect. Means were separated with Tukey's HSD.

Insecticide treatments influenced RSB capture at all four sampling dates (Table 1). The lowest captures at each sampling date were recorded from plots treated with Tenchu. Warrior and Endigo ZCX did not reduce infestations relative to non-treated controls at 12 DAT. These results indicate all treatments can provide initial control, but that Tenchu provides the longest period of pest suppression.

Table 1. RSB sweep net captures as affected by insecticide treatments, H. Rouse Caffey Rice Research Station, 2021.

Treatment	RSB adults and nymphs per 10 sweeps			
	2 DAT	5 DAT	9 DAT	12 DAT
Non-treated Control	4.0 a	3.5 a	6.5 a	5.3 a
Warrior	0.5 b	1.5 ab	0.8 b	2.5 ab
Endigo ZCX (4 oz)	0.3 b	1.0 ab	1.3 b	1.8 ab
Endigo ZCX (5 oz)	0.0 b	1.3 ab	1.0 b	2.0 ab
Tenchu	0.0 b	0.5 b	0.3 b	1.5 b
$F_{4,15} =$	8.14	3.03	5.13	3.17
$P =$	0.001	0.051	0.008	0.045

SUSCEPTIBILITY TO INSECT PESTS AMONG ADVANCED BREEDING LINES IN THE VARIETY DEVELOPMENT PROGRAM

B.E. Wilson, K.J. Landry, and J.M. Villegas

Rice varieties differ in susceptibility to key insect pests including the rice water weevil (RWW), *Lissorhoptrus oryzophilus*, and the Mexican rice borer, *Eoreuma loftini*. Field trials were conducted to evaluate resistance to these pests among advanced lines in the LSU variety development program. Key commercial varieties (CLL17 and PVL03) along with varieties with known levels of susceptibility (Jupiter= susceptible check; Jefferson = resistant check) were also included.

Untreated rice seed of each variety was planted 16 May 2021 in a randomized block design with 4 replications. Weevil cores were collected at 3, 4, and 5 weeks after establishment of permanent flood (WAF) on 23 Jul, 30 Jul, and 4 Aug 2021, respectively. The numbers of stem borer-associated whiteheads were recorded at 100% heading on 16 September 2021. Plots were harvested for collection of yield data on 8 Oct 2021. All data were analyzed with generalized linear mixed models (SAS Proc Glimmix) with variety as a fixed effect and replication as a random effect. Means were separated with Tukey's HSD.

RWW infestations at each planting date along with whitehead density were influenced by variety (Table 1). Jupiter was most infested at each RWW sampling date and had the highest whitehead density. CON1902212 and CON2002126 were among the most resistant to stem borers based on the low whitehead densities observed. These varieties were approved for commercial release under the names "Advant" and "Addi Jo", respectively. Yields did not differ among varieties.

Table 1. RWW infestations, stem borer density, and rice yields as affected by varieties, H. Rouse Caffey Rice Research Station, 2021.

Treatment	Immature RWW per core			Whiteheads/ m ² (± 0.2 SE)	Rice yield (lbs/acre) (± 3.96 SE)
	3 WAF (± 4.4 SE)	4 WAF (± 6.6 SE)	5 WAF (± 6.6 SE)		
Jupiter	40.3 a	39.6 a	49.6 a	2.0 a	5381
Jefferson	13.1 b	4.6 b	18.7 c	0.5 b	4081
PVL03	19.9 ab	16.0 ab	27.8 bc	0.5 b	5439
CLL17	24.1 ab	19.4 ab	29.2 bc	1.2 ab	5556
CL1902034	24.6 ab	19.0 ab	26.1 bc	0.9 ab	4999
CL1902026	21.9 ab	22.8 ab	28.7 bc	0.7 b	5610
CL1702183	15.6 ab	8.9 b	27.9 bc	0.2 b	5068
CON1902212	17.8 ab	12.6 b	26.8 bc	0.1 b	5884
CON1202207	19.0 ab	16.5 ab	27.2 bc	1.1 ab	5058
CON2002126	16.8 ab	19.2 ab	32.4 b	0.4 b	4764
<i>F</i> _{9,29} =	2.99	2.87	7.79	5.68	1.67
<i>P</i> =	0.012	0.015	<0.001	<0.001	0.14

EFFECTS OF STORED RICE VARIETY ON DAMAGE BY THE LESSER GRAIN BORER

E.M. Doherty, B.E. Wilson, and Q. Sun

Stored rice pest resistance is of growing importance as growers are increasingly storing harvests for prolonged period. *Rhyzopertha dominica* (F.) is among the most damaging pests of stored rice, however, rice varieties are not equally susceptible to stored rice pests. We tested susceptibility to *R. dominica* across 13 varieties of rice, which included some of the most commonly grown varieties in Louisiana and some recently developed varieties. Vials containing 24g of rice were created for each variety. There were six vials of each treatment in each experimental replicate, and three experimental trails (N=234). Ten mixed-sex adult *R. dominica* were introduced to each vial. After two weeks, the beetles were removed and damage to the rice was measured. Vials were then monitored for two months, after which, damage by progeny was weighed. Data were examined using one-way analyses of variance. Observed differences between the varieties suggest that variety impacts resistance toward *R. dominica* adults ($F_{12,218} = 8.72, p < 0.01$) and larvae ($F_{12,217} = 38.60, p < 0.01$).

Table 1. Damage to rice samples by lesser grain borer larvae and adults. Different letters indicate significant differences between varieties.

Variety	Larval Damage (g \pm 32.83 SE)	Adult Damage (g \pm 1.45 SE)
CL111	586.61 a	12.39 bc
Frontiere	514.44 ab	16.98 a
CL151	477.53 b	10.35 bcd
CL153	354.96 c	13.57 ab
Cheniere	308.54 cd	7.91 de
Jupiter	327.04 cd	3.12 g
CLXL745	288.88 cde	9.67 cd
Gemini - 214CL	250.35 de	9.63 cd
Caffey	207.45 ef	4.03 fg
Mermentau	153.35 f	7.18 def
Jazzman 2	40.96 g	7.46 def
PVL02	3.46 g	7.20 def
XP753	40.71 g	5.36 efg

EVALUATION OF CHEMICAL PROTECTANTS FOR STORED RICE INSECT CONTROL

E.M. Doherty, B.E. Wilson and Q. Sun

Insecticides are a major expense of rice storage, thus, ensuring the efficacy of products is vital. There are numerous grain protectants on the market, but some have never been evaluated in rough rice. Chemical protectant treatments were applied to Mermentau rice in 22-liter metal trash bins. Each bin was assigned one of five different treatments, including: diatomaceous earth (Crawling Insect Killer, Garden Safe, Bridgeton, MO), methoprene (Diacon-D IGR[®], Central Life Sciences, Schaumburg, IL), deltamethrin (Centynal[®], Central Life Sciences, Schaumburg, IL), a commercial formulation of methoprene and deltamethrin (Diacon IGR *PLUS*[®], Central Life Sciences), and a control group without insecticides. One hundred pest beetles, 50 lesser grain borer (*Rhyzopertha dominica*) and 50 rice weevil (*Sitophilus oryzae*), were added to each bin each month for 6 months. After 6 months, the contents of bins were sieved and weighed. Data was examined using one-way analyses of variance. Across treatments we found large differences in damage weight ($F_{4,16} = 5.05$, $p < 0.01$) and beetle biomass ($F_{4,16} = 38.33$, $p < 0.01$) (Table 1). Treatments containing methoprene (Diacon) provided the best control followed by deltamethrin. Diatomaceous earth provide no appreciable suppression compared to non-treated controls.

Table 1. Damage to rice samples and biomass of beetle pests across different insecticide treatments. Different letters indicate significant differences between varieties.

Insecticide	Damage Weight (g \pm 16.31 SE)	Beetle Biomass (g \pm 0.89 SE)
Diatomaceous Earth	192.08 a	14.86 a
Control	163.09 ab	14.42 a
Deltamethrin	144.58 bc	6.90 b
Deltamethrin+Methoprene	124.19 bc	7.36 b
Methoprene	102.61 c	3.93 c

REGIONAL EXPANSION OF INVASIVE APPLE SNAIL (*POMACEA MACULATA*) IN SOUTHWEST LOUISIANA

J.M. Lucero and B.E. Wilson

The apple snail, *Pomacea maculata*, is a global invasive rice pest. Within the last decade, the apple snail has established itself in Louisiana, but has only recently begun infesting rice farms in the southwestern region. Adult snails have large, brown-green or gold shells and lay large, pink egg masses. Their fast-reproductive rate and voracious appetite allow the snails to reach high population densities in natural bodies of water as well as rice and crawfish ponds. Because of the potential of apple snails to become pests, it is important to determine the locality of apple snails in Louisiana and study their expansion into rice and crawfish production systems. In order to determine current apple snail distribution and future range expansion, we set up 46 sites in rice and crawfish ponds surrounding the Mermentau River, Vermilion River, and Bayou Lacassine. PVC pipes are placed at each site and used as structures for egg masses to be laid on to facilitate snail detection. Sites are monitored monthly, and egg mass and adult sightings are recorded. Spatial analysis with QGIS software is being used to map current data, and this data is then used to extrapolate future expansion (Figure 1). Environmental factors including temperature and several water parameters are also recorded to identify factors that are conducive to apple snail establishment.

Observations from the initial site survey showed *P. maculata* occurrence in five parishes: Jefferson Davis, Lafayette, Iberia, Vermilion, and Cameron Parishes (Figure 1A). Over the last two years, monthly site surveying recorded expansion of *P. maculata* within these parishes as well as documenting snail presence in Acadia Parish. *P. maculata* appeared to be expanding its range north at an average rate of approximately 6 km per year. The spatial interpolation through QGIS assisted in showing a constant probability of apple snail presence along most of the southern border of the map. The majority of positive sites were located in Cameron Parish and Vermilion Parish near Grand Lake and Lake Arthur. The most northern location reached by *P. maculata* was in Jennings, Louisiana, with high numbers of egg masses being found on the edges of Bayou Nezpique in 2021 (Figure 1C). According to the analysis, the main predictor for the probability of apple snail presence was dissolved oxygen. With a decrease in dissolved oxygen, there is a decrease in the probability of apple snail presence in a water body. Continuous site surveying and prediction analysis are needed in order to get a better understanding of current *P. maculata* distribution, rates of expansion, and factors that make areas conducive for their establishment. Future studies will focus on looking at other parameters, such as salinity, that may be associated with *P. maculata* presence.

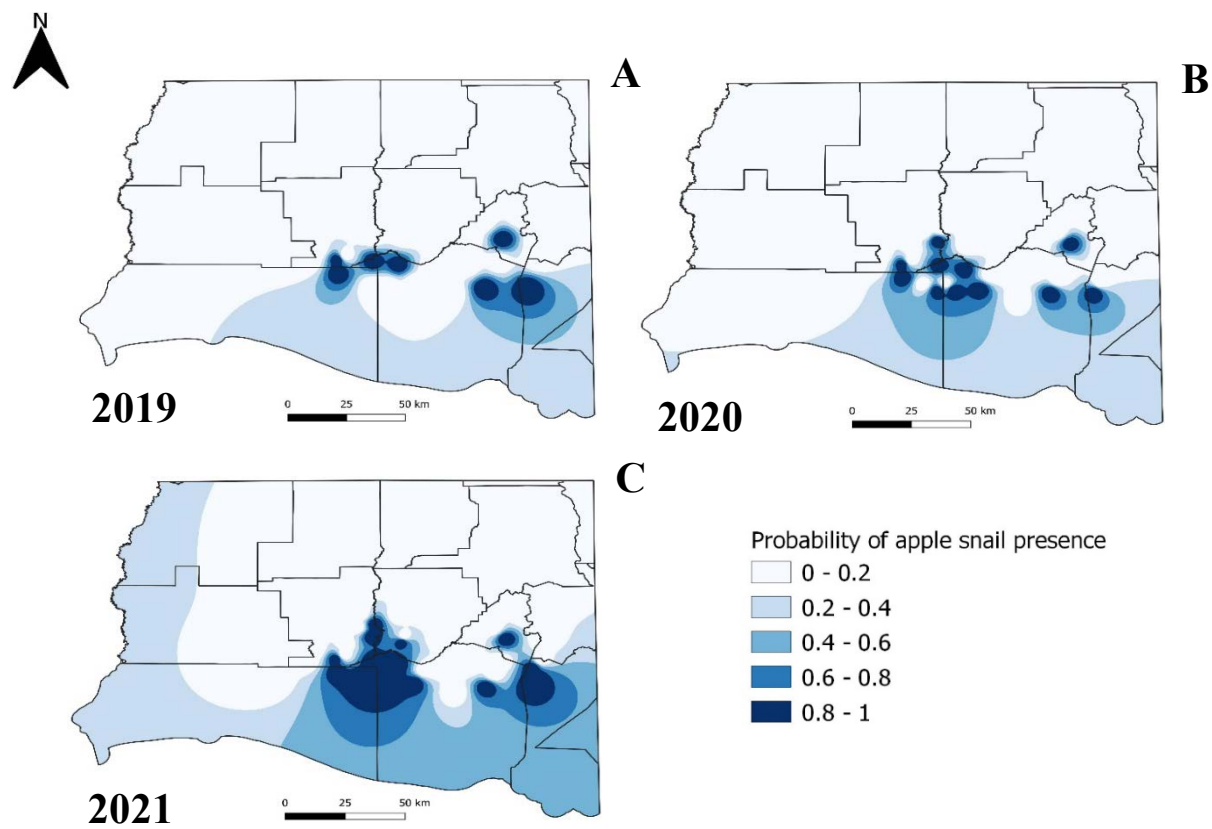


Figure 1. Estimated distribution of apple snails in rice and crawfish production regions of southwest Louisiana as of 2019–2021. Maps based on monitoring of 46 rice and crawfish sites.

EVALUATION OF CHEMICAL CONTROL FOR INVASIVE APPLE SNAILS EGG MASSES

J.M. Lucero and B.E. Wilson

The lethal effect of crop oil (Prime Oil® adjuvant, phyto bland paraffinic oil) on invasive apple snail (*Pomacea maculata*) eggs was assessed in a toxicity assay trial at the LSU Rice Entomology Lab. *P. maculata* egg masses were hand collected in Abbeville, Louisiana. The experiment was conducted using 60 120.5-g foam cups, 2 62.5-L clear plastic storage bins, and a 240-mL adjustable spray bottle. The toxicity assay had a completely randomized design with three treatments, one egg mass per cup, and 20 replications per treatment for a total of 60 egg masses. The three treatments consisted of a control (0), low (5%), and high (10%). The low and high percentages were calculated based on a ratio of crop oil to water. Each individual egg mass was sprayed and fully coated with approximately 3.75 mL of the solution. The containers were kept in a laboratory under a photoperiod of light (14 hours): dark (10 hours) at $25 \pm 2^\circ\text{C}$. There was an acclimation period of 24 hours, and mortality was assessed during a two-week period after initial egg mass exposure to the crop oil. The number of hatchlings inside the cups was counted for each egg mass at the end of the two-week period. Data were analyzed using generalized linear mixed models (SAS, PROC GLIMMIX) with treatment as a fixed effect and replication as a random effect. Hatching success per egg mass data were analyzed with a binomial distribution, and hatchling data were analyzed with Gaussian distributions. Means were separated using Tukey's HSD ($\alpha = 0.05$).

The results showed a total of 14 egg masses ($70\% \pm 10.3$ [SE]) hatched in the control, 9 egg masses ($45\% \pm 11.1$ [SE]) hatched in the low treatment, and 3 egg masses ($15\% \pm 8.0$ [SE]) hatched in the high treatment. Treatment ($F_{2, 38} = 5.30$; $P = 0.009$) had a significant effect on hatching success per egg mass. The control contained the highest hatching success per egg mass and was significantly different to the high treatment but not to the low treatment. Treatment ($F_{2, 38} = 7.96$; $P = 0.001$) also had a significant effect on the number of hatchlings, which was approximately 8.7-fold greater in the control than in the low or high treated egg masses (Figure 1). Future studies should be conducted to further examine which application methods of crop oil work best and at what frequencies in order to determine the lowest rates needed for effective *P. maculata* egg mass control.

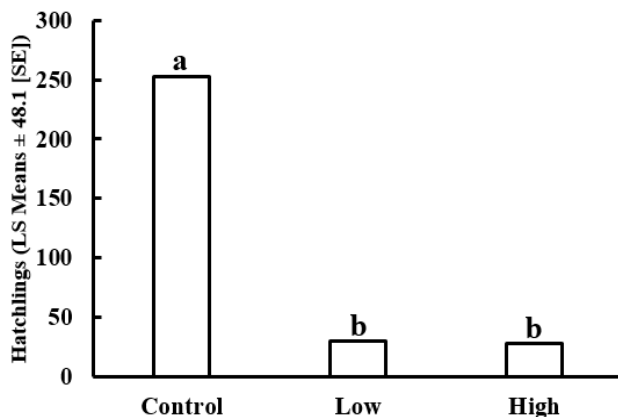


Figure 1. Mean *P. maculata* hatchling count among three treatments of a crop oil adjuvant after a 2-week period. Bars that share a letter are not significantly different (Tukey's HSD, $\alpha=0.05$).

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 173,990 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 for farmers to 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 dehusked 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.

2021 ACTIVITIES

Of the 747 cwt. of foundation seed rice sold in 2021, the varieties and quantities were as follows: Mermentau, 66 cwt.; Frontier, 117.5 cwt.; Cheniere, 198 cwt.; Jupiter, 258 cwt.; Titan, 87 cwt.; Jazzman, 116 cwt.; Toro-2, 40 cwt.; and Della-2, 155 cwt.

The HRCRRS's foundation seed crop in 2021 consisted of 10 acres of Cheniere, 1.5 acres of AddiJo, 8 acres of Della-2, and 6 acres of Jupiter.

Headrows of Cheniere, Jupiter, AddiJo, Avant, and Della-2 were grown for replenishment of breeder seed stock.

WEED MANAGEMENT IN HERBICIDE-RESISTANT/TOLERANT AND CONVENTIONAL RICE

L.C. Webster, E.P. Webster, W.B. Greer, D.C. Walker, and J.A. Williams

Research Summary to Date: Weed management studies were conducted at the H. Rouse Caffey Rice Research Station (RRS), Northeast Research Station (NERS) in 2021. The Rice Weed Management program is currently evaluating experimental herbicides for use in rice production and will be evaluating additional experimental herbicides in the coming years. Weed management in rice will continue to be more effective as new technologies and new herbicides become available.

Loyant in Water-Seeded Rice. Two field studies were conducted in 2021 on the RRS in Crowley, LA to evaluate the early season use of Loyant in water-seeded rice production. The weeds evaluated in this study were barnyardgrass, Indian jointvetch, and rice flatsedge. Loyant was applied at 8 and 16 fl oz/A to the soil surface 48-hours prior to the seeding flooding and seeding (SURFACE), directly onto the pregerminated seed 24-hours following seeding and immediately after removal of the seeding flood (SEED), and at pegging (PEG). For all weeds evaluated, an increase in weed control was observed at the SEED and PEG timings compared with the SURFACE timing. This is most likely due to Loyant having more POST activity compared with soil activity. However, due to the rice injury observed at the SEED timing this application timing should be avoided. The optimal timing for Loyant is the PEG rice growth stage, due to the reduced rice injury as well as increased weed control. At the time of the PEG application the rice that had established a root system with at least one true leaf appears to be more tolerant to applications of Loyant in water-seeded rice production. The results from Loyant applied at the SURFACE timing do suggest that Loyant has soil residual activity, but this residual activity was dependent on weed species. Loyant appears to have more soil activity for Indian jointvetch and rice flatsedge when compared with barnyardgrass. For optimal broad-spectrum weed control Loyant should be applied to pegging rice. Early season weed interference proved to play a key role in rough rice yield more so than injury from Loyant.

Gambit in Water-Seeded Rice. Two field studies were conducted in 2021 on the RRS in Crowley, LA to evaluate the early season use of Gambit in water-seeded rice production. The weeds evaluated in this study were Texasweed, Indian jointvetch, and rice flatsedge. Gambit was applied at 1 and 1.5 oz/A at the same applications timings as described above. These results suggest that the high rate of Gambit applied directly on pregerminated rice seed should be avoided. Rice injury from Gambit at 1.5 oz/A was 28% when applied at the SEED timing. By applying Gambit at the lower rate rice injury can be reduced; however, weed control may be impacted. Overall, Gambit controlled the broadleaf and sedge weeds evaluated in this trial 85 to 97%. However, due to the lack of grass control from Gambit, a herbicide that offers grass activity will need to be include in the herbicide program.

Loyant residual activity on ducksalad. Field studies were conducted in 2020 and 2021 at the RSS in Crowley, Louisiana to determine the residual control of ducksalad using Loyant applied at 0, 4, 8, 12, and 16 fl oz/A when surface-coated on urea postflood and as a postflood liquid spray application. A plastic ring was placed firmly in the soil for water/herbicide containment and was kept weed free, using glyphosate, prior to application. Surface-coated urea applications of Loyant were more effective at delaying ducksalad emergence, petiolate leaf development, flowering and reducing fresh weight biomass compared with postflood liquid spray applications when applied into a flooded environment. Postflood liquid spray applications of Loyant were not as effective as surface-coated Loyant on urea when applied into an existing flood prior to ducksalad emergence. This is likely a result of postflood liquid spray applications of Loyant dissipating with downward movement through the water column. Increasing the rate of Loyant in postflood liquid spray applications increased performance, but not to the levels of residual activity obtained from surface-coated urea applications. Surface-coated urea applications of Loyant can reach the soil surface quicker, which reduces the amount of herbicide dissipation into the water column. Reaching the soil surface quickly increases the amount of Loyant available at the soil surface to inhibit growth of ducksalad and potentially other germinating weeds. However, for already emerged weeds a liquid spray application is more effective than a surface-coated application of Loyant.

Aquatic Weed Management Application Methods with Gambit and Loyant. Field studies were conducted in 2020 and 2021 at the RSS in Crowley, Louisiana to evaluate aquatic weed control with Gambit at 1 and 1.5 oz/A and Loyant at 8 and 16 fl oz/A applied separately and as mixtures, both surface-coated on urea and as foliar liquid sprays. The aquatic weeds evaluated were ducksalad, floating primrose-willow, pickerelweed, and grassy arrowhead

(bulltongue). If targeting ducksalad, Loyant at any rate or application method evaluated can be utilized for control. If targeting floating primrose-willow, Gambit containing treatments applied at either rate evaluated provided adequate control. However, Loyant applied alone was not effective when targeting floating primrose-willow. Foliar liquid spray applications of Gambit or Loyant were both effective at controlling grassy arrowhead. However, surface-coated urea applications containing Loyant increased grassy arrowhead control compared with Gambit applied alone. A decrease in control of Pickerelweed with Loyant surface-coated on urea alone was observed compared with Gambit surface-coated on urea alone. No differences in pickerelweed control were observed when Gambit and Loyant were applied alone as a foliar liquid sprays. Improved control was observed with foliar liquid spray applications due to better coverage on emerged aquatic weeds. However, surface-coated-urea applications containing Loyant controlled ducksalad more effectively than Gambit due to the majority of the plant being submerged under water at the time of application.

RICE PRODUCTION ECONOMICS RESEARCH IN 2021

M.A. Deliberto

The 2021 projected cost and return rice enterprise budgets were developed in December 2020 for alternative rice production systems in Louisiana. One of the research objectives in developing these enterprise budgets is 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 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 at 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 \$450.73 per acre of variable costs and \$542.03 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 \$503.90 per acre of variable costs and \$593.92 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 \$658.68 per acre of variable costs and \$744.35 per acre for total specified costs. Net return estimates for the ratoon crop production system (Table 4) are based on production cost estimates of \$120.31 per acre of variable costs and \$143.82 per acre for total specified costs.

To further assist rice producers in planning for the 2021 crop year, the Projected 2021 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 2021, and the model will automatically generate estimates for net returns above variable and total production costs. Farm program payments 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, 2021.

Percent	Yield (cwt.)	Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
		Rice Market Price (\$/cwt)								
		\$9.60	\$10.20	\$10.80	\$11.40	\$12.00	\$12.60	\$13.20	\$13.80	\$14.40
----- (\$/A) -----										
80%	56.0	-32	-12	9	29	49	70	90	110	131
85%	59.5	-8	13	35	57	79	100	122	144	166
90%	63.0	15	38	62	85	108	131	155	178	201
95%	66.5	39	63	88	113	137	162	187	212	236
100%	70.0	62	88	115	141	167	193	219	245	272
105%	73.5	86	113	141	169	196	224	252	279	307
110%	77.0	109	138	167	197	226	255	284	313	342
115%	80.5	133	163	194	224	255	286	316	347	378
120%	84.0	156	188	220	252	284	317	349	381	413

Net returns above total specified costs for a tenant operator are 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, 2021.

Percent	Yield (cwt.)	Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
		Rice Market Price (\$/cwt)								
		\$9.60	\$10.20	\$10.80	\$11.40	\$12.00	\$12.60	\$13.20	\$13.80	\$14.40
----- (\$/A) -----										
80%	56.0	-84	-64	-43	-23	-3	18	38	58	79
85%	59.5	-60	-39	-17	5	27	49	70	92	114
90%	63.0	-37	-14	10	33	56	79	103	126	149
95%	66.5	-13	11	36	61	86	110	135	160	185
100%	70.0	10	36	63	89	115	141	167	194	220
105%	73.5	34	61	89	117	144	172	200	227	255
110%	77.0	57	86	116	145	174	203	232	261	290
115%	80.5	81	111	142	173	203	234	264	295	326
120%	84.0	104	136	168	201	233	265	297	329	361

Net returns above total specified costs for a tenant operator are 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, 2021.

Percent	Yield (cwt.)	Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
		Rice Market Price (\$/cwt)								
		\$9.60	\$10.20	\$10.80	\$11.40	\$12.00	\$12.60	\$13.20	\$13.80	\$14.40
		----- (\$/A) -----								
80%	64.0	-175	-152	-128	-105	-82	-59	-36	-12	11
85%	68.0	-148	-123	-98	-73	-48	-23	1	26	51
90%	72.0	-121	-95	-68	-41	-15	12	38	65	92
95%	76.0	-94	-66	-38	-9	19	47	75	104	132
100%	80.0	-67	-37	-7	22	52	82	112	142	172
105%	84.0	-40	-9	23	54	86	118	149	181	212
110%	88.0	-14	20	53	86	120	153	186	220	253
115%	92.0	13	48	83	118	153	188	223	258	293
120%	96.0	40	77	113	150	187	223	260	297	333

Net returns above total specified costs for a tenant operator are 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, 2021.

Percent	Yield (cwt.)	Percent								
		80%	85%	90%	95%	100%	105%	110%	115%	120%
		Rice Market Price (\$/cwt)								
		\$9.60	\$10.20	\$10.80	\$11.40	\$12.00	\$12.60	\$13.20	\$13.80	\$14.40
		----- (\$/A) -----								
80%	18.4	16	22	29	36	42	49	56	62	69
85%	19.6	23	30	38	45	52	59	66	73	81
90%	20.7	31	39	46	54	62	69	77	85	92
95%	21.9	39	47	55	63	71	79	87	96	104
100%	23.0	46	55	64	72	81	90	98	107	115
105%	24.2	54	63	72	81	91	100	109	118	127
110%	25.3	62	72	81	91	100	110	119	129	139
115%	26.5	70	80	90	100	110	120	130	140	150
120%	27.6	77	88	98	109	120	130	141	151	162

Net returns above total specified costs for a tenant operator are 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 IN 2021¹

R. Levy and K. A. Fontenot

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 11 parishes (Acadia, Avoyelles, East Carroll, Evangeline, Madison, Morehouse, St. Landry, and Vermilion). From 1999 to 2020, 150 fields had been included in the verification program. In 2021, the program included four fields (Figure 1), in the parishes of Acadia, Allen, Calcasieu, and Vermilion.

The fields were visited on at least a weekly basis by a Specialist, Extension Associate, or County Agent. Production practice recommendations were made by the Specialist, Associate, or Agent. These recommendations included, but were not limited to; variety selection, 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 7,472 pounds/A, 46.1 bbl/A, 166 bu/A at 12% moisture. Second crop was harvested in Allen and Vermilion parish, adding another 1806 pounds/A average to the total, for a final average of 8,339 pounds/A, 51.4 bbl/A, or 185 bu/A. This is the 8th highest ranked overall yield of the verification program in the 24 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 field.

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 2021.

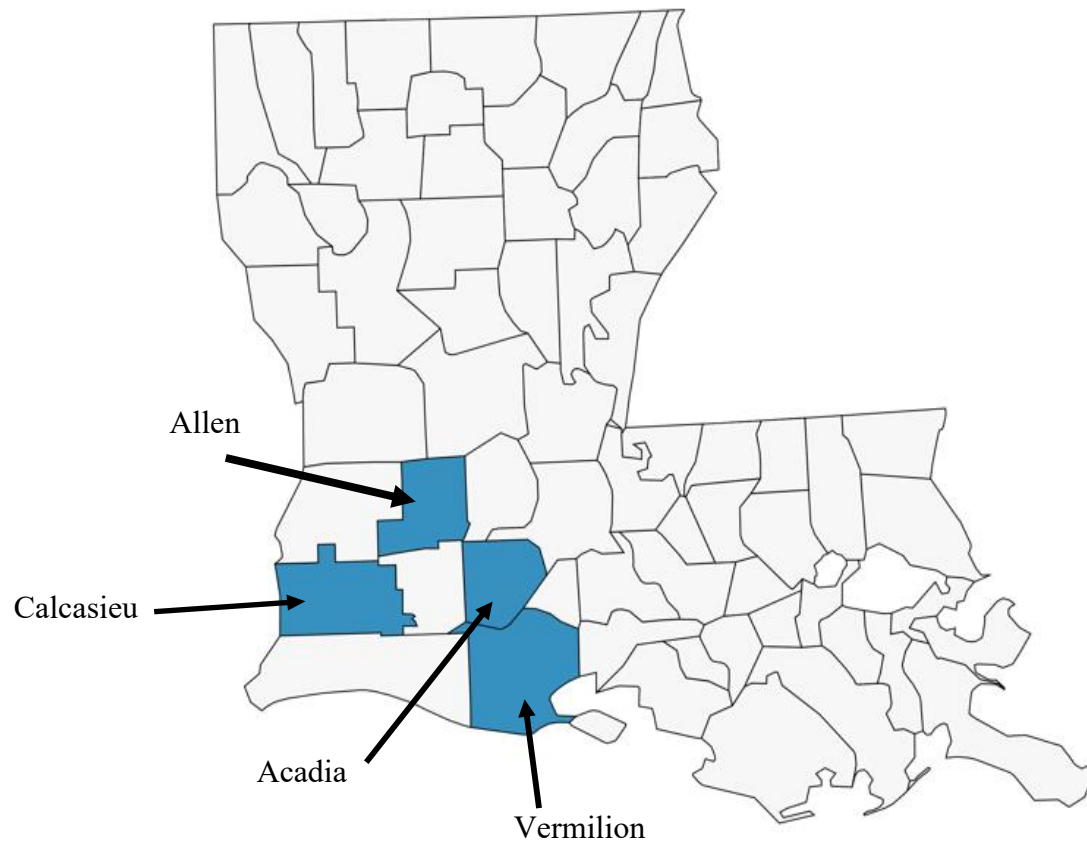


Table 1. Yields of Verification Fields in 2021.

Parish	Acres	Variety	Cwt/A green	Bbl/A green	Bu/A green	Cwt/A dry	Bbl/A dry	Bu/A dry
Acadia	82	CLL17	84.71	52.29	188	78.37	48.3	174
Allen ¹	30	RT7501	100.46	62.1	223.6	94.99	58.6	211
Calcasieu	18.5	RT7521	87.48	54	194	78.47	48.4	174
Vermilion ¹	63	CLL17	95.26	58.8	211.6	85.88	52.9	190.2
Total Acres	193.5							

¹ Figures include totals from First crop and Ratoon crop

Table 2. 2021 Louisiana Rice Research Verification Program Yield, Milling, and Economic Summary.

Parish	Variety	Yield at 12% Moisture (cwt/A)	Milling (% Whole / % Total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ²	Return on Variable Costs (\$/A) ^{1,2}
Acadia	CLL17	78.37	69.3/72.7	659.39	8.41	367.55
Allen ³	RT7501	94.99	63.1/71.8	757.26	7.97	487.29
Calcasieu	RT7521	78.4	No sample	682.52	8.69	346.05
Vermilion ³	CLL17	85.88	64.2/71.9	718.25	8.36	407.07

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transporting, drying, storing, or fixed costs.

² This value was obtained using a selling price of \$13.10/cwt

³ Figures include totals from First and Ratoon crop

ACADIA PARISH

This 82-acre field had an excellent prepared seedbed after laser leveling in the fall and holding water all winter. On March 26 the field was water planted with 100 pounds per acre of dermacor X-100 and AV1011 treated CLL17 seed. Pre-Plant basic fertilizer comprised of 250 pounds of 0-16-39 plus 50 pounds of Sulfur per acre was applied prior to planting. Six ounces of command herbicide was incorporated on the fertilizer prior to application.

On April 6 the seed was pegged well and pipping. On April 13 the rice was at one leaf growth stage, the field had been drained and the stand was very uniform and vigorous in growth. Drainage was excellent with no potholes and very little water left in ditches. By April 27 the rice reached 3-4 leaf stage with a few primarily broad leaf weeds present. Recommendations for herbicide application and fertilization were applied on April 30 with 100 pounds per acre of 33% nitrogen applied and 5 oz of newpath + .33 oz of permit herbicide. By May 11 plants were tillering well. Persistent rain showers had delayed the second application of herbicide and fertilizer, so the rice was slightly yellow in color. On May 14 five ounces of newpath + .33 oz of herbimax + 10 oz of dynapak were applied to control weeds and grasses. Rice was tillering well on May 22 when 175 pounds of urea was applied. Vigorous plants with excellent color grew rapidly reaching green ring stage on June 3. On June 8, 100 pounds of urea was applied again with rainy weather delaying application. Plant growth and development was very uniform throughout the growing season. Plants were monitored for disease pressure but never reached any thresholds needed for control. During the heading stages plants were very uniform in emergence of heads as well as flowering. Very few rice stink bugs were found, never reaching any threshold level throughout the heading and ripening stages. The decision to drain the field was made on July 27.

Harvest began on August 12 when several samples showed moisture at 18 to 18.9%. Harvest was completed on August 13. Yields were as follows:

84.71 cwt/a, 52.29 bbl/a, or 188 bu/a

Adjusted to 12 % moisture totals were:

78.27 cwt/a, 48.3 bbl/a, or 174 bu/a

ACADIA PARISH

Cooperator: Johnathon Rockett
Agent: Jeremy Hebert
Consultant: Eddie Parrott
Field Size: 82 acres

Cultural Practices

Variety: CLL17

Seeding Rate: 100 lb/A

Method of Planting: Clearwater

Date of Planting: 3/26/21

Water Management: Delayed flood

Date of Emergence: 4/10/21

Growth and Development

Stage	Observation Date
Green Ring	6/3
PD	6/13
50% Heading	7/1
Drain for Harvest	7/27
Harvest	8/12 & 8/13

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	78.37	69.3/72.7	659.39	8.41	367.55

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$ 13.10/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
3/26	0-16-39 + 50 S	250	0	40	98	50	0
4/30	33%	100	33	0	0	0	0
5/22	46-0-0	175	81	0	0	0	0
6/8	46-0-0	100	46	0	0	0	0
Total			160	40	98	50	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Sedges, Red weed	3/26	6 oz Command
	4/30	5 oz Newpath + .33 oz Permit
	5/14	5 oz Newpath + .33 oz Herbimax+ 10 oz Dynapak

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
	Seed Treatment	Dermacor X100

Comments:

Item	Description	Cost/A	Acres		Total
Herbicide Burndown					\$0.00
Application cost- herbicide					\$0.00
Field Work, Discing etc.					\$0.00
Water leveling, Bed leveling etc					\$0.00
Ditching	150 Hp tractor & ditcher	\$1.23	82		\$100.86
Seed	CLL17 @ 100 #/A + seed treatments	\$165.00	82		\$13,530.00
Seed treatment (if separate)					\$0.00
Planting	Aerial Application	\$8.05	82		\$660.10
Fertilizer	250 #/A of 0-16-39 + 50 #/A sulfur	\$119.00	82		\$9,758.00
Application cost - fertilizer	Aerial Application	\$16.87	82		\$1,383.34
Herbicide	6 oz Command impregnated on basic fertilizer	\$6.10	82		\$500.20
Application cost herb	Included with basic fertilizer				\$0.00
Herbicide	5 oz Newpath + .33 oz Permit	\$22.48	82		\$1,843.36
Application cost herb	Aerial Application	\$8.65	82		\$709.30
Fertilizer	100 #/A of 33% Nitrogen	\$21.78	82		\$1,785.96
Application cost - fertilizer	Aerial Application	\$7.75	82		\$635.50
Fertilizer	175 #/A 46% Urea	\$53.37	82		\$4,376.34
Application cost - fertilizer	Aerial Application	\$11.81	82		\$968.42
Herbicide	5 oz Newpath + .33 oz Herbimax + 10 oz Dynapak	\$21.75	82		\$1,783.50
Application cost-Herbicide	Aerial Application	\$8.65	82		\$709.30
Fertilizer	100 #/A of 46% Urea	\$30.50	82		\$2,501.00
Application cost-fertilizer	Aerial Application	\$7.75	82		\$635.50
Fungicide					\$0.00
Application cost-fungicide					\$0.00
Fungicide					\$0.00
Application cost -fungicide					\$0.00
Insecticide					\$0.00
Application cost -insecticide					\$0.00
Harvest -cart 1 w tractor		\$6.43	82		\$527.26
Harvest - combine 1		\$45.53	82		\$3,733.46
Water costs		\$96.69	82		\$7,928.58
					\$0.00
First Crop Totals		\$659.39			\$54,069.98

Ratoon Crop

Item	Description	Cost/A	Acres		Total
Ratoon Crop Manipulation					\$0.00
Ratoon Crop Fertilizer					\$0.00
Ratoon Fertilizer Application Cost					\$0.00
Ratoon Crop Water Cost					\$0.00
Ratoon Crop Harvest Cart 1					\$0.00
Ratoon crop Harvest Combine 1					\$0.00
Ratoon Crop Totals		\$0.00			\$0.00
	Total for 1st Crop & Ratoon	\$659.39			\$54,069.98

ALLEN PARISH

This 30-acre field was worked in the fall and water leveled in early March. Drainage on this field was excellent giving the producer excellent ability to control water. Thirty pounds per acre of RT7501 treated seed was water planted on March 26. Seed was pegged and pipping well on March 30, with emergence date set at April 6. Basic fertilizer consisting of 250 pounds of 5-20-30 was applied on April 12. Plants were at the 2-3 leaf stage on April 13 with the stand being uniform and growth being very good. Weeds present included many upland weeds as well as normal low land weeds which included, wooly croton, ragweed, purple ammannia, bulrush, and alligator weed. Very few grass plants were present. Persistent rain showers delayed timely applications of herbicide and fertilizer. One gallon of propanil plus 4 oz of command plus .33 oz of permit were applied for weed control on April 26. The next day 225 pounds of urea was applied followed by flood irrigation. Herbicide activity looked excellent. Plants growing well into early May although a few rice water weevils and feeding scars on leaves were found in different areas of the field. On May 14, 100 pounds of 33% nitrogen fertilizer was applied and by May 18 the plants had an excellent dark green color and were tillering very well. Plants were checked each week by pulling plants and checking root growth, tillering, and overall plant color and health. Green ring stage of growth was reached on June 3. On June 10, 200 pounds of 25-15-15 fertilizer was applied. The extra phosphorous and potash were added due to soil test levels being in the low range, and because this field will be ratoon cropped. Plants reached 50% heading stage on July 28 and were checked for disease and insects weekly up to July 28 when decision was made to drain the field for harvest.

Harvest began on August 11, with harvest moisture levels between 17 and 18%. Harvest was stopped after cutting about 2 hours due to rain. Harvest resumed the next day and was completed with the following yields on the 30-acre field: 8,692 pounds/A, 53.65 bbls/A, 193 bu/A which averaged 17.4% moisture. When adjusted to 12% moisture the yields are: 8,170 lbs/A, 50.4 bbls/A, and 181.5 bu/A.

Rain after harvest delayed the manipulation of the stubble until it could be rolled about a week after harvest. The conditions for rolling were not good, and due to water in some cuts in the field the stubble bent but did not break or crack as needed. The result was rice plants in 3 to 4 different stages of growth during the ratoon crop. On August 26, 100 pounds/A of urea was applied to the ratoon stubble. Persistent rain showers affected the ratoon crop during the flowering period. The unevenness of the ratoon crop persisted until harvest in late October. Ratoon harvest yield was as follows: 1,377 pounds/A, 8.5 bbl/A, 30.6 bu/A at 15% moisture. When adjusted to 12% moisture yields were: 1,329 pounds/A, 8.2 bbl/A, 29.5 bu/A.

Total harvest results adjusted to 12 % moisture are: 9,499 pounds/A, 58.6 bbl/A, and 211 bu/A.

ALLEN PARISH

Cooperator: Eric Savant

Agent: Todd Fontenot

Consultant: Ruston Gilder

Field Size: 30

Cultural Practices

Variety: RT7501

Seeding Rate: 30 lb/A

Method of Planting: Water

Date of Planting: 3/26/21

Water Management: Delayed Flood

Date of Emergence: 4/6/21

Growth and Development

Stage	Observation Date
Green Ring	6/3
PD	6/14
50% Heading	7/1
Drain for Harvest	7/28
Harvest	8/11 & 8/12

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	81.70	63.1/71.8	637.63	7.80	433.30
Ratoon Crop	13.29	N/A	119.60	8.90	55.44
Total	94.99		757.23	7.97	488.74

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$13.10/cwt.

³ Values include first and ratoon crop.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	ZN (lb/A)
4/12	5-20-30	250	13	50	75	0	0
4/27	46%	225	104	0	0	0	0
5/14	33%	100	33	0	0	0	0
6/10	25-15-15	200	50	30	30	0	0
Ratoon							
8/26	46%	100	46	0	0	0	0
Totals			246	80	105	0	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Wooly Croton, Ragweed, Sedges, Purple Ammannia, Bulrush	4/26	1 gal Propanil + .33 oz Permit + 4 oz Command

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
RWW Prevention	3/26	Dermacor X-100

Item	Description	Cost/A	Acres		Total
Herbicide Burndown					\$0.00
Application cost- herbicide					\$0.00
Field Work, Discing etc.					\$0.00
Water leveling, Bed leveling etc	375 HP Tractor & 30' Water Level	\$32.76	30		\$982.80
Ditching	150 HP Tractor & Ditcher	\$1.23	30		\$36.90
Seed	RT 7501 @ 30 #/A + Treatments	\$132.00	30		\$3,960.00
Seed treatment (if separate)					\$0.00
Planting	Aerial Application	\$9.86	30		\$295.80
Fertilizer	250 #/A of 5-20-30	\$63.75	30		\$1,912.50
Application cost - fertilizer	Aerial Application	\$15.32	30		\$459.60
Herbicide	1 gal Propanil + .33 oz Permit + 4 oz Command	\$43.36	30		\$1,300.80
Application cost herb	Aerial Application	\$10.28	30		\$308.40
Herbicide					\$0.00
Application cost herb					\$0.00
Fertilizer	225 #/A 46% Urea	\$62.46	30		\$1,873.80
Application cost - fertilizer	Aerial Application	\$17.57	30		\$527.10
Fertilizer	100 #/A of 333% Nitrogen	\$22.28	30		\$668.40
Application cost - fertilizer	Aerial Application	\$7.96	30		\$238.80
Fertilizer	200 #/A of 25-15-15	\$54.97	30		\$1,649.10
Fungicide	Aerial Application	\$15.18	30		\$455.40
Application cost -fungicide					\$0.00
Insecticide					\$0.00
Application cost -insecticide					\$0.00
Harvest - cart 1 w tractor		\$6.43	30		\$192.90
Harvest - cart 2 w tractor					\$0.00
Harvest - combine 1					
Harvest - combine 2		\$45.53	30		\$1,365.90
Water costs		\$96.69	30		\$2,900.70
					\$0.00
First Crop Totals		\$637.63	31		\$19,128.90

Ratoon Crop

Item	Description	Cost/A	Acres		Total
Ratoon Crop Manipulation	150 HP Tractor + 30" Roller	4	30		\$120.00
Ratoon Crop Fertilizer	100 #/A of 46% Urea	32.46	30		\$973.80
Ratoon Fertilizer Application	Aerial Application	7.66	30		\$229.80
Ratoon Crop Water Cost		23.75	30		\$712.50
Ratoon Crop Harvest Cart 1		6.43	30		\$192.90
Ratoon crop Harvest Combine 1		45.33	30		\$1,359.90
Ratoon Crop Totals					\$3,588.90
	Total for 1st Crop & Ratoon	\$757.26	30		\$22,717.80

CALCASIEU PARISH

The Calcasieu verification field was an 18.5-acre section of a 90-acre piece farmed by the producer. A burn-down application of 36 oz of roundup plus 5 oz of rifle was applied in February to control grasses and weeds. Basic fertilizer consisting of 240 pounds of 0-19-34 plus 10 pounds of zinc per acre was applied on March 10. That same day 22.5 pounds per acre of RT7521 pre-treated seed was drill planted, and 6 oz of command, plus 5 oz of preface plus .5 pounds of herbimax herbicide was applied by a ground spray rig. On March 16 the seed was pegging well and emergence on the field was noted as March 24. On April 6, the rice was at 2 leaf growth and somewhat bleached from the command and tattered and desiccated due to strong winds and cold temperatures of the previous week. These conditions persisted in early April as cooler temps and much rain slowed early season growth. By April 20 the plants had two tillers and was coming out of the bleaching and resuming somewhat normal growth. On April 27 the second herbicide application of 5 oz preface plus 1 oz gambit plus 32 oz propanil, and 100 pounds of 21-7-7-14 fertilizer was made. Red rice pressure noted in the northeastern corner upped the preface rate in that area to 6 oz. In early May, severe rain caused flooding, not only of the field but large sections of blacktop road prevented access to the field. Rainfall of 15 to 16 inches had been common in that area.

The plants reached green ring growth stage on May 14 and PD on May 22. On May 24, 135 pounds/A of 36-0-13 was applied. A kernel smut preventative application of 10 oz of tilt fungicide was made on June 19. The field was checked weekly to monitor growth stages and check for disease and insects until the decision to drain the field was made on July 19 by the producer.

Harvest was on August 8 with the following yield at a 21.2% moisture level: 8,748 pounds/A, 54 bbl/A, 194 bu/A. When adjusted to 12 % moisture the yields are: 7,847 pounds/A, 48.4 bbl/A, and 174 bu/A. This field was not ratoon cropped as crawfish had been stocked during the early part of the growing season.

CALCASIEU PARISH

Cooperator: Joel Stelly
Agent: Jimmy Meaux
Consultant: Blake Buller
Field Size: 18.5 acres

Cultural Practices

Variety: RT7521
Method of Planting: Drill
Water Management: Delayed flood

Seeding Rate: 22.5lb/A
Date of Planting: 3/10/21
Date of Emergence: 3/24/21

Growth and Development

Stage	Observation Date
Green Ring	5/14
PD	5/22
50% Heading	6/15
Drain for Harvest	7/19
Harvest	8/8

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	78.47	N/A ³	682.52	8.69	346.05

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$13.10/cwt.

³ Milling unavailable due to lack of sample from producer

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	ZN (lb/A)
3/10	0-19-34-0-4.2	240	0	46	82	0	10
4/27	21-7-7-14	100	21	7	7	14	0
4/30	46%	200	92	0	0	0	0
5/24	36-0-13	135	49	0	18	0	0
Season Total			162	53	107	14	10

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
	Burndown	36 oz Roundup + 5 oz Rifle
Grasses, sedge, duck salad, red rice	3/10	5oz Preface +.5 pounds Herbimax + 6 oz Command
Red rice, alligator weed, hemp sesbania	4/27	5 oz Preface +1 oz Gambit + 1 qt Propanil
	4/27	2 oz Command on fertilizer

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Kernel Smut prophylactic treatment	6/19	10 oz Tilt

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed treatment 3/01	Cruiser Seed Treatment

Comments:

Item	Description	Cost/A	Acres		Total
Herbicide Burndown	35 oz/A Rdup + 5 oz/A Rifle	\$8.44	18.5		\$156.14
Application cost- herbicide	Ground Rig Application	\$8.25	18.5		\$152.63
Field Work, Discing etc.	375 HP Tractor + 32' Disc (twice)	\$19.20	18.5		\$355.20
Water leveling, Bed leveling etc	375 HP Tractor + 32' Shanks	\$7.46	18.5		\$138.01
Ditching	150 HP Tractor + Ditcher	\$1.23	18.5		\$22.76
Seed	RT 7521 @ 22.5 #/A	\$174.00	18.5		\$3,219.00
Seed treatment (if separate)	Cruiser Insecticide	\$7.50	18.5		\$138.75
Planting	375 Hp Tractor + 20' Seed Drill	\$10.90	18.5		\$201.65
Fertilizer	240 #/A of 0-19-34 + 10 #/A Zinc	\$55.32	18.5		\$1,023.42
Application cost - fertilizer	Ground Rig Application	\$7.50	18.5		\$138.75
Herbicide	6 oz Command + 5 oz Preface + .5 # Herbimax	\$24.74	18.5		\$457.69
Application cost herb	Ground Rig Application	\$8.25	18.5		\$152.63
Herbicide	5 oz Preface + 1 oz Gambit + 32 oz Propanil	\$41.69	18.5		\$771.27
Application cost herb	Ground Rig Application	\$8.50	18.5		\$157.25
Fertilizer	100 #/A of 21-7-7 -14 + 2 oz/A Command	\$20.66	18.5		\$382.21
Application cost - fertilizer	Aerial Application	\$8.50	18.5		\$157.25
Fertilizer	200 #/A of 46% Urea + Agrotain	\$49.16	18.5		\$909.46
Application cost - fertilizer	Ground Rig Application	\$14.00	18.5		\$259.00
Fertilizer	135 #/A of 36-0-13	\$28.96	18.5		\$535.76
Application cost-fertilizer	Aerial Application	\$10.00	18.5		\$185.00
Fertilizer					\$0.00
Application cost-fertilizer					\$0.00
Fungicide	10 oz/A of Tilt	\$6.64	18.5		\$122.84
Application cost-fungicide	Aerial Application	\$8.50	18.5		\$157.25
Fungicide					\$0.00
Application cost -fungicide					\$0.00
Insecticide					\$0.00
Application cost -insecticide					\$0.00
Harvest -cart 1 w tractor		\$6.43	18.5		\$118.96
Harvest - combine 1		\$45.53	18.5		\$842.31
Water costs	(Paid by Landlord) will budget for comparison	\$101.16	18.5		\$1,871.46
					\$0.00
First Crop Totals		\$682.52			\$12,626.62

Ratoon Crop

Item	Description	Cost/A	Acres		Total
Ratoon Crop Manipulation					\$0.00
Ratoon Crop Fertilizer					\$0.00
Ratoon Fertilizer Application Cost					\$0.00
Ratoon Crop Water Cost					\$0.00
Ratoon Crop Harvest Cart 1					\$0.00
Ratoon crop Harvest Combine 1					\$0.00
Ratoon Crop Totals		\$0.00			\$0.00
	Total for 1st Crop & Ratoon	\$0.00			\$12,626.62

VERMILION PARISH

The Vermilion field was in 2 sections with a highway dividing the 63-acre field. This field was disced twice, then chisel plowed, and bed leveled to prepare the seedbed. After this work the field was flooded. On March 26 CLL17 treated seed was flown into the flood at a rate of 75 pounds/A. Basic fertilizer consisting of 225 pounds of 0-26-26 was flown in on April 2. On April 6 the seed was pegged well and pipping, and being flushed to incorporate fertilizer, maintain moisture and red rice control. Cooler temperatures and heavy winds were slowing growth, and this was followed with a week of some heavy rain. Heavy broad leaf weed infestation was noted on April 20 with hemp sesbania, joint vetch, alligator weed, purple Ammannia, sedges, and some light barnyard grass in areas. An herbicide application of 6 oz newpath plus 2 oz of gambit was made on April 24. The field was fertilized on April 29 with 200 pounds/A of urea plus 12 pounds of sulfur.

Plants grew well despite some heavy rains and cooler temperatures. On May 25 the plants were showing some root pruning with injury from water weevil larvae. The field was drained for control of rice water weevil larvae on that day. Some checked stems were very close to green ring stage of growth. After drying for 3 days the field was fertilized with 100 pounds/A of urea fertilizer and re-flooded. Although slightly late the application benefitted the plants well in their vigorous stage of re-growth after draining and firming up the soil. On June 10 quilt fungicide was applied at a rate of 10 oz/A as a prophylactic application to prevent kernel smut. Blast lesions were observed on barn yard grass plants on the edge of the field, but none were seen on rice plants. The 50% heading stage of growth was reached on June 18, and weekly monitoring of the field for disease and insects continued. Neither disease nor stink bug levels reached any level to cause any concern. The field was drained for harvest on July 13.

Harvest began on August 3 but after harvesting and sending two truckloads to the drier facility, the moisture was too high at a level of 22%. Harvest was suspended until August 7, when the remainder of the field was harvested with an average moisture level of 17.5%. First crop yields were: 7,339 pounds/A, 45.3 bbl/A, or 163 bu/A at 17.5%. When adjusted to 12% moisture the yields were: 6,554 pounds/A, 40.4 bbl/A, or 145.6 bu/A.

Following harvest, the field was fertilized with 250 pounds/A of 30-10-10 fertilizer and flooded up for a ratoon crop. The stubble grew well and was uniform in growth although slightly thin. The field was harvested in late October with a yield of 2,187 pounds/A, 13.5 bbl/A, or 48.6 bu/A at 18% moisture. After adjusting for 12% moisture yields are as follows: 2,034 pounds/A, 12.5 bbl/A, or 45.2 bu/A.

The overall yield for the Vermilion field when first crop and ratoon crop are combined and adjusted for 12% moisture is as follows: 8,588 pounds/A, 52.9 bbl/A, or 190.2 bu/A.

VERMILION PARISH

Cooperator: Aaron Lee

Agent: Andrew Granger, Jeremy Hebert

Consultant: None

Field Size: 63 acres

Cultural Practices

Variety: CLL17

Method of Planting: Water

Water Management: Delayed Flood

Seeding Rate: 75 pounds/A

Date of Planting: 3/26

Date of Emergence: 4/08

Growth and Development

Stage	Observation Date
Green Ring	5/30
PD	6/4
50% Heading	6/18
Drain for Harvest	7/13
Harvest	8/3 & 8/7

Note: Harvest Delayed due to high moisture content.

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	65.54	64.2/71.9	574.44	8.76	284.44
Ratoon	20.34		143.81	7.07	122.65
Total	85.88		718.25	8.36	407.09

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$13.10/cwt.

³ Values include first and ratoon crop.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)	S (lb/A)	Zn (lb/A)
4/2	0-26-26	225	0	59	59	0	0
4/29	46-0-0-6	200	92	0	0	12	0
5/31	46%	100	46	0	0	0	0
Ratoon							
8/12	30-10-10	250	75	25	25	0	0
Season Total			213	84	84	12	0

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Sedge, Grasses, Jointvetch, hemp sesbania, dayflower, purple Ammannia	4/24	6oz Newpath + 2 oz Gambit

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Kernel Smut Prevention	6/10	10 oz Quilt

Note: Recommendation made due to severe kernel smut pressure in adjoining field last season.

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
RWW lesions, plants with unstable root base	5/28	Field drained for RWW control

Note: Rice recovered very quickly when flooded after draining for rice water weevil control.

Item	Description	Cost/A	Acres		Total
Herbicide Burndown					\$0.00
Field Work, Discing etc.	300 Hp Tractor + 28' Chisel Plow	\$7.77	63		\$489.51
Field Work, Discing etc.	300 Hp Tractor + 26' Disc Twice	\$19.20	63		\$1,209.60
Water leveling, Hipping rows	300 Hp Tractor + 32' Bed Level	\$7.46	63		\$469.98
Ditching	125 Hp Tractor + Ditcher	\$1.23	63		\$77.49
Seed	CLL17 @ 75#/A + AV1011 + Seed Treatments	\$103.20	63		\$6,501.60
Seed treatment (if separate)					\$0.00
Planting	Aerial Appliction	\$10.22	63		\$643.86
Fertilizer	225 #/A of 0-26-26	\$56.23	63		\$3,542.49
Application cost - fertilizer	Aerial Application	\$11.49	63		\$723.87
Herbicide	6 oz/A Newpath + 2 oz/A Gambit	\$53.64	63		\$3,379.32
Application cost herb	Aerial Application	\$10.22	63		\$643.86
Herbicide					\$0.00
Application cost herb					\$0.00
Fertilizer	200 #/A of 46% Urea + 12#/A Sulfur	\$57.34	63		\$3,612.42
Application cost - fertilizer	Aerial Application	\$10.86	63		\$684.18
Fertilizer	100 #/A of 46% Urea	\$28.73	63		\$1,809.99
Application cost - fertilizer	Aerial Application	\$9.18	63		\$578.34
Fertilizer					\$0.00
Application cost-fertilizer					\$0.00
Fertilizer					\$0.00
Application cost-fertilizer					\$0.00
Fungicide	10 oz/A of Quilt	\$29.27	63		\$1,844.01
Application cost-fungicide	Aerial Application	\$9.75	63		\$614.25
Fungicide					\$0.00
Application cost -fungicide					\$0.00
Insecticide					\$0.00
Application cost -insecticide					\$0.00
Harvest - cart 1 w tractor		\$6.43	63		\$405.09
Harvest - combine 1		\$45.53	63		\$2,868.39
Water costs		\$96.69	63		\$6,091.47
					\$0.00
First Crop Totals		\$574.44			\$36,189.72

Ratoon Crop

Item	Description	Cost/A	Acres		Total
Ratoon Crop Manipulation					\$0.00
Ratoon Crop Fertilizer	250 #/A of 30-10-10	56.23	63		\$3,542.49
Ratoon Fertilizer Application Cost	Aerial Applicator	11.49	63		\$723.87
Ratoon Crop Water Cost		24.13	63		\$1,520.19
Ratoon Crop Harvest Cart 1		6.43	63		\$405.09
Ratoon crop Harvest Combine 1		45.53	63		\$2,868.39
Ratoon Crop Totals		\$143.81			\$9,060.03
	Total for 1st Crop & Ratoon	\$718.25			\$45,249.75

Summary of Management Practices and Economic Data per Acre for 2021 Verification Fields

Parish	Planting Method	Rice Variety	Planting Date	Water Mgmt.	Seed Costs \$/A	Planting Costs \$/A	Herbicide Costs \$/A	Herbicide App. Costs \$/A
Acadia	Water	CLL17	3/26	Delayed	165.00	8.05	50.33	17.30
Allen ¹	Water	RT7501	3/26	Delayed	132.00	9.80	43.36	10.28
Calcasieu	Drill	RT7521	3/10	Delayed	181.50	10.90	74.87	23.00
Vermilion ¹	Water	CLL17	3/26	Delayed	103.20	10.22	53.64	10.22

Table 1

Summary of Management Practices and Economic Data per Acre for 2021 Verification Fields

Table 1 cont.

Parish	Fertilizer Costs \$/A	Fertilizer App. Costs \$/A	Fungicide Costs \$/A	Fungicide App. Costs \$/A	Insecticide Costs \$/A ¹	Insecticide App. Costs \$/A	Water Costs \$/A
Acadia	224.65	44.18	N/A	N/A	N/A	N/A	96.69
Allen ¹	235.92	63.69	N/A	N/A	N/A	N/A	96.69
Calcasieu	154.10	40.00	8.50	6.43	N/A	N/A	101.16
Vermilion ¹	198.53	43.02	29.27	9.75	N/A	N/A	96.69

¹ Value includes first and ratoon crop

Summary of Management Practices and Economic Data for 2021 Verification Fields

Table 1 cont.

Parish	Harvest Date	Yield at 12% Moisture ¹			Milling % % Whole/% Total	Variable Costs (\$/A)	Cost of Production (\$/cwt) ²	Return on Variable Costs (\$/A) ²
		cwt	bbls	bu				
Acadia	8/12-8/13	78.37	48.3	174	69.3/72.7	659.39	8.41	367.55
Allen¹	8/11-8/12	94.99	58.6	211	63.1/71.8	757.26	7.97	487.29
Calcasieu	8/8	78.40	48.4	174	None taken	682.52	8.69	346.05
Vermilion¹	8/3 & 8/7	85.88	52.9	190.2	64.2/71.9	718.25	8.36	407.07

¹ Value includes first and ratoon crop

² Value obtained using selling price of \$13.10/cwt

Table 3. Twenty Four-Year Louisiana Rice Research Verification Summary.

1998 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	53.0	32.8	118.1	5,314
Avoyelles	32.5	42.9	154.4	6,950
Calcasieu*	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*	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

* Yield includes second crop.

1999 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	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*	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

* Yield includes second 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*	21.6	37.7	135.7	6,107
TOTALS	393.8	35.7	128.4	5,780

* Yield includes second crop.

2001 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	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*	61.9	39.4	142.0	6,388
Concordia	79.6	36.1	130.1	5,853
Evangeline*	20.8	52.7	189.7	8,538
Jefferson Davis*	21.6	57.3	206.4	9,289
Richland	65.9	46.0	165.5	7,447
St. Landry*	40.6	51.1	184.0	8,282
Vermilion*	33.3	52.4	188.7	8,493
TOTALS	489.1	45.9	165.3	7,438

* Yield includes second crop.

Table 3. Continued.

2002 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	38.4	49.8	179.3	8,068
Allen*	25.1	46.0	165.6	7,452
Avoyelles	37.4	49.9	179.6	8,084
Beauregard*	49.5	53.1	191.2	8,602
Calcasieu*	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*	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*	32.0	49.8	179.4	8,072
TOTALS	433.6	46.6	167.8	7,551

* Yield includes second 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*	35.7	46.1	166.0	7,469
Avoyelles	37.4	50.1	180.4	8,116
Beauregard*	45.7	48.7	175.2	7,884
Concordia	79.5	49.2	177.1	7,970
Evangeline*	48.4	44.5	160.2	7,209
Jefferson Davis*	52.9	28.7	103.3	4,649
Richland	40.2	44.7	160.8	7,234
St. Landry*	32.7	61.1	220.0	9,898
Vermilion*	33.0	40.0	144.0	6,480
TOTALS	462.7	45.7	164.5	7,404

* Yield includes second crop.

Table 3. Continued.

2004 Verification Acres and Yields				
Parish	Acres	Yield at 12% Moisture		
		Barrels/A	Bushels/A	Pounds/A
Allen*	53.2	40.9	147.1	6,620
Avoyelles	33.3	32.8	118.0	5,307
Beauregard*	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*	42.3	38.5	138.6	6,237
Natchitoches	47.2	44.1	158.8	7,144
St. Landry*	60.1	65.1	234.3	10,543
Vermilion*	30.0	42.1	151.6	6,824
TOTALS	455.7	42.3	152.2	6,848

* Yield includes second crop.

2005 Verification Acres and Yields*				
Parish	Acres	Yield at 12% Moisture		
		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

* No ratoon crop was harvested in the verification program in 2005.

Table 3. Continued.

2006 Verification Acres and Yields*				
		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

* 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*	38.9	55.8	201	9,046
Vermilion*	36.6	46.0	166	7,451
West Carroll	40.2	45.4	164	7,356
TOTALS	267.3	51.2	184	8,293

* Yield includes second 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*	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*	37.7	52	189	8,481
St. Landry	60.2	48	173	7,801
Vermilion*	51.1	70	252	11,359
TOTALS	387.6	51	183	8,228

* Yield includes second crop.

Table 3. Continued.

2009 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	56.6	70.9	255.3	11,489
Avoyelles	28.6	50.7	182.5	8,214
Calcasieu*	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*	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*	41.5	66.9	241.0	10,843
TOTALS	359.9	56.0	201.7	9,078

* Yield includes second 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*	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

* Yield includes second 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 second 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
Jeff 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
Jeff Davis ¹	42.6	83.8	301.6	13,574
Vermilion ¹				
W. Carroll	32.2	51.4	185.1	8,329
TOTALS	118.5			9,931

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
Vermilion ²	18			
Richland	24	42	151	6,902
TOTALS³	112	60.4	217	9,814

¹ Yield includes second 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 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 second crop.

² Yield calculated on 5 acres, total field area 90 acres

2018 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Avoyelles	31	46.47	167.2	7528
Calcasieu ¹	16.9	47.7	171.3	7730
East Carroll	6 ²	56.2	202.6	9117
Vermilion	30	49.2	177.2	7978
TOTALS	83.9	48.3	174.1	7843

¹ Yield includes second crop.

² Yield calculated on 6 acres, total field area 90 acres

2019 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia	8	37.4	134.6	6060
Evangeline	31	37.4	134.6	6060
Jeff Davis ¹	18	54.1	194.6	8766
Morehouse	13	38.9	140.2	6309
TOTALS	70	41.96	151	6801

¹ Yield includes second crop.

2020 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia	42	54.6	197	8849
Evangeline	46	40.16	144.5	6506
Jeff Davis	9.5	41.5	149	6722
Vermilion	30	47.7	171	7727
TOTALS	127.5	46.78	168.3	7581

No Ratoon crop harvested in 2020 Verification program.

2021 Verification Acres and Yields				
		Yield at 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia	82	48.3	174	7837
Allen ¹	30	58.6	211	9499
Calcasieu	18.5	48.4	174	7840
Vermilion ¹	63	52.9	190.2	8588
TOTALS	193.5	51.4	185	8339

¹ Value includes first and ratoon crop

1998 – 2021 Rice Research Verification Yield Summary

Verification Totals			Verification Parish Totals ¹		
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	9,814	159,514	6,549	3,265
2017	123.2	8,686	50,176	7,482	1,204
2018	83.9	7,843	77,214	6,580	1,263
2019	70	6,801	241,093	6,705	726
2020	127.5	7,581	*	*	*
2021	193.5	8,339	*	*	*
Totals	5,934.1		48,016,954		

* Not available at press time.

¹ 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 lbs/A

Acknowledgments

We would like to thank the rice producers of Louisiana whose check-off contributions help support this program and the Louisiana Rice Research Board for approving the funding of this project.

We appreciate all the time and effort put forth by the cooperators and County Agents who worked diligently with us week after week to make this project a success.

Finally, we would like to express our gratitude to the following rice scientists for assisting us with their expertise: Don Groth (Plant Pathology), who assisted with the recommendations on disease control; Eric Webster (Weed Control), whose advice on weed control proved extremely useful; Blake Wilson (Entomology), who assisted with insect control; and Adam Famoso (Rice Breeding), who assisted with variety selection and whose lab provided the milling data.

STATION PERSONNEL

Dustin L. Harrell¹, Professor-----**Resident Coordinator**

Donald E. Groth², Professor-----**Resident Coordinator**

Jennifer A. Gary³ Administrative Coordinator 3

Kimberly G. Guidry Accounting Specialist 2

Carol D. LeDoux Administrative Program Specialist-A

Donna L. Sonnier Custodian 1

Roxanne A. Trahan⁴ Administrative Coordinator 3

Kim J. Landry⁵ Safety Coordinator/Research Associate

Raymond R. Dilly, Jr.⁶ Safety Coordinator/Research Associate

Adam N. Famoso, Associate Professor-----**Rice Breeding**

Brijesh Angira Assistant Professor-Research

Jose Moreno Amores Postdoctoral Researcher

Karen F. Bearb⁷ Research Associate/Coordinator

Valerie B. Dartez Research Associate

Jennifer D. Dartez Research Farm Specialist 2

Blaise Frey⁸ Research Associate

Christopher Hernandez Postdoctoral Researcher

Joseph John, II Research Associate Specialist

Colby LeJeune⁹ Research Associate

Madeline C. LeJeune Laboratory Technician Assistant 1

Brady L. Williams Research Farm Specialist 2

Tommaso Cerioli Graduate Assistant

Raul Guerra Graduate Assistant

Maria Montiel¹⁰ Graduate Assistant

Donald E. Groth², Professor-----**Rice Pathology**

Caitlin deNux Research Associate/Specialist

Laura L. Monte Research Farm Specialist 2

Dustin L. Harrell¹, Professor/Research Coordinator-----**Rice Agronomy/Rotational Crops/Extension**

Matthew Breaux¹¹ Research Associate Assistant

Jacob S. Fluitt Research Associate/Specialist

Jason R. Hartman Research Farm Specialist 1

James P. Leonards Research Associate/Specialist

Manoch Kongchum¹², Associate Professor-Research-----**Rice Agronomy/Rotational Crops**

Brent Theunissen, Research Associate/Coordinator/Manager-----**Farm Management**

Brandon J. Frey Research Farm Manager 1

Paul A. Miller Research Farm Specialist 1

Jimmy D. Pellerin Research Farm Specialist 2

Thomas J. Reed Research Farm Specialist 2

Ty Henderson Research Farm Specialist 1

¹ Appointed Resident Coordinator 02/01/2021; Resigned 12/01/2021

² Retired 01/31/2021

³ Appointed 09/13/2021

⁴ Resigned 06/30/2021

⁵ Assigned to Safety Coordinator 03/01/2021

⁶ Retired 02/28/2021

⁷ Retired 01/03/2021

⁸ Appointed 01/01/2021

⁹ Appointed 01/01/2021

¹⁰ Appointed 05/17/2021

¹¹ Appointed 02/15/2021

¹² Promoted to Associate Professor 07/01/2021

STATION PERSONNEL

(Continued)

Mark G. Shirley, Agent ----- **Aquaculture**
John J. Sonnier Research Farm Specialist 2

James H. Oard, Professor	Rice Hybrid Breeding
Weiki Li	Visiting Scientist
Tara L. Roy	Research Farm Specialist 1
Jessica L. Thornton	Research Associate/Specialist
Anna H. Borjas Artica ¹³	Graduate Assistant
Paola Mosquera ¹⁴	Postdoctoral Researcher

Dean J. LeJeune, Research Farm Maintenance Manager -----Maintenance Department	
Nathan T. Breaux	Maintenance Repairer 2
Justin P. Sarver	Maintenance Repairer 2

Blake E. Wilson, Assistant Professor ----- **Rice Entomology**
Kim J. Landry Research Associate/Specialist

Herry S. Utomo, Professor ----- **Marker-Assisted Selection Breeding/Biotechnology**
 Hayden J. Dugas Research Farm Specialist 1
 Gretchen M. Zaunbrecher Research Associate/Specialist

Ida Wenefrida, Associate Professor-Research----- Biotechnology

Richard E. Zaunbrecher, Research Associate/Coordinator -----Foundation Seed Rice

¹³ Resigned 12/31/2021

¹⁴ Graduated 05/07/2021; Appointed 06/16/2021

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	Graduate Assistant

Michael E. Salassi, Professor-----**Economics**
Department of Agricultural Economics and Agribusiness

Michael J. Stout, Professor	Rice Entomology
Department of Entomology	
Blake E. Wilson	Assistant Professor
Megan M. Mulcahy	Graduate Assistant
James M.P. Villegas	Research Associate

Eric P. Webster¹⁵, Professor	Rice Weed Control
School of Plant, Environmental and Soil Sciences	
Benjamin M. McKnight ¹⁶	Postdoctoral Researcher
L. Connor Webster	Graduate Assistant
John Williams	Graduate Assistant

¹⁵ Resigned 09/01/2021

¹⁶ Graduated 2020

COOPERATING PERSONNEL

Cooperating personnel on research projects at the H. Rouse Caffey Rice Research Station include the following:

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

Boyd Padgett - Interim----- **Soybeans**
Dean Lee Research and Extension Center
Louisiana State University Agricultural Center

Anthony Rivera----- **Rice Breeding**
University of Puerto Rico Research & Extension Center
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

William F. Futch----- **Bird Control**
USDA Animal Damage Control
Crowley, Louisiana

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Dr. Luke LaBorde, Interim LSU Vice President for Agriculture

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

September 2022

**The LSU AgCenter and LSU provide equal
opportunities in programs and employment.**

**This project was partially supported by the USDA National
Institute of Food and Agriculture.**

**This research was supported in part by funding provided by
rice producers through the Louisiana Rice Research Board.**