

Louisiana Rice Research Verification Program 2007



J. K. Saichuk and K. J. Landry



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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; Natalie Hummel (Entomology), who assisted with insect control; and Steve Linscombe (Rice Breeding), whose lab provided the milling data.

LOUISIANA RICE RESEARCH VERIFICATION PROGRAM - 2007¹

J.K. Saichuk and K.J. Landry

Introduction

The Louisiana Rice Research Verification Program (LRRVP) began in 1997 in three parishes: Allen, Calcasieu and Jeff Davis. In 1998, the program was funded and expanded to 10 parishes: Acadia, Avoyelles, Calcasieu, East Carroll, Evangeline, Jeff Davis, Madison, Morehouse, St. Landry and Vermilion. From 1999 to 2006, 81 fields were included in the verification program. In 2007, the program only included seven fields because one cooperator dropped out at the last minute (Figure 1).

The fields were visited on at least a weekly basis by a Specialist, County Agent or the Extension Associate. Production practice recommendations were made by the Specialist or Agent. These recommendations included, but were not limited to, fertilization, weed control, disease control, insect control and water management to a limited degree. The fields were followed from planting to harvest.

Yield data were collected for each of the fields (Table 1). Yields of the first crop averaged 7662 lb/A (170 bu/A or 47 bbl/A) at 12 % moisture. This is the highest first crop yield average the program has ever achieved. Second crop was harvested in Jeff Davis and Vermilion parishes adding another 2057 lb/A to the total for a final average of 7728 lb/A (172 bu/A or 48 bbl/A).

Economic data continue to reveal large production cost differences between growers. It is also clear that more needs to be done to help farmers reduce production costs (Table 2).

The program continues to provide an accurate evaluation of current recommendations and provide insight into other areas of research. The educational value of the program to all concerned (farmers, researchers 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. 2007 Louisiana Rice Research Verification Program Parishes.

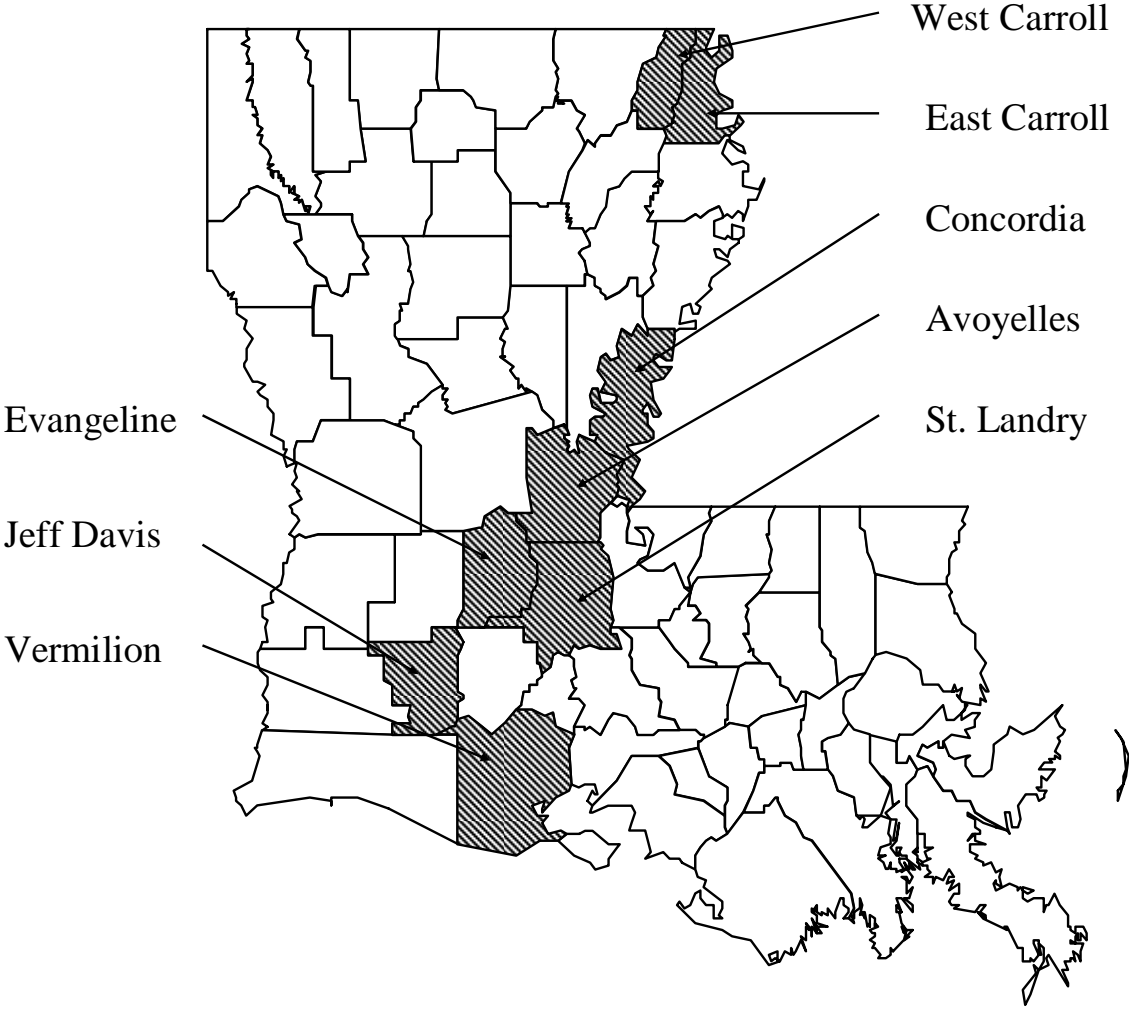


Table 1. 2007 Louisiana Rice Research Verification Program Yield Summary.

Parish	Acres in Verification Program	Verification Yield/A @ 12% Moisture		Verification Program			Average Parish Yield ¹	Parish Acreage	Total Parish Production
		1st Crop Alone	Second Crop	Total Yield/A	1st Crop Production	Total Production			
Avoyelles	40.9	9187	0	9187	375,748	375,748	6966	12,800	89,164,800
Concordia	53.8	8680	0	8680	466,984	466,984	6750	9,805	66,183,750
East Carroll	23.0	7917	0	7917	182,091	182,091	7650	6,002	45,915,300
Evangeline – St. Landry	33.9	8122	0	8122	275,336	275,336	6349	36,475	231,579,775
Jeff Davis	38.9	5630	1821	7451	219,007	289,844	6480	66,500	430,920,000
Vermilion	36.6	6739	2307	9046	246,647	331,084	5832	48,699	284,012,568
West Carroll	40.2	7356	0	7356	295,711	295,711	7650	3,076	23,531,400
TOTAL	267.3	53,631	4128						
						Verif Avg	Parish Avg		Difference
Average yield (lb/A)					7712	8293	6501	183,357	1792

Table 2. 2007 Louisiana Rice Research Verification Program Yield, Milling and Economic Summary.

Parish	Variety	Yield @ 12% Moisture (cwt/A)¹	Milling (% Whole / % Total)	Variable Costs (\$/A)²	Cost of Production (\$/cwt)²	Return on Variable Costs (\$/A)^{2,3}
Avoyelles	Cocodrie	9187	58.2 / 73.2	354.64	4.06	610.00
Concordia	Cocodrie	8680	60.4 / 71.2	384.63	4.40	526.77
East Carroll	CL171	7917	46.7 / 73.6	400.59	5.05	430.70
Evangeline – St. Landry	XP723	8122	63.5 / 72.8	396.23	5.11	456.58
Jeff Davis	Cocodrie	7451	62.9 / 71.9	551.27	6.51	231.08
Vermilion	CL171	9046	57.0 / 74.6	528.10	5.83	421.73
West Carroll	CL161	7356	64.2 / 71.5	346.57	4.70	425.81

1 - Figure includes ratoon crop yield.

2 - 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.

3 - This value was obtained using a selling price of \$10.50/cwt.

AVOYELLES PARISH

The field in Avoyelles Parish was laser leveled in 2006 but not put into production that year. This was the first time rice was grown on the field. It was set on zero grade so there were no internal levees in the field. The heavy red clay was plowed and grooved, producing an excellent seedbed into which Cocodrie seed was aerially sown.

At about the two-tiller growth stage, symptoms of phosphorus deficiency began to appear. Symptoms were worse in the two adjacent fields, which were in their second year of rice production, than in the verification field. This is a problem first noticed several years before and now considered a regular occurrence on the heavy red clay soils of Avoyelles and Rapides parishes. These soils typically test high in phosphorus content yet require the addition of phosphorus post-flood because the nutrient is apparently tied up by high calcium levels. These soils also require sulfur in some situations.

When rice reached internode elongation (green ring), some areas in the field exhibited the aforementioned late-season sulfur deficiency symptoms. Instead of using urea as a topdressing we recommended 160 lb/A of a blend of urea and ammonium sulfate (33% N).

Even though no sheath blight could be found just prior to split boot, an application of fungicide was made to protect the crop from smut and the sheath rot/narrow brown leaf spot complex experienced in 2006.

One application of insecticide was applied when stink bugs remained at about 2/3 threshold for about 3 weeks. This application was based on experience rather than any published recommendation because there are no research data on long-term sub-threshold stink bug populations on rice. Even though it is the opinion of the specialist, the application was warranted.

A record 9717 lb/A (60 bbl/A or 216 bu/A) at 16.8% moisture was harvested. When adjusted to 12%, the yield was 9187 lb/A (56.7 bbl/A or 204 bu/A). The somewhat lower head rice yields were probably associated with the lower than recommended grain moisture at harvest.

AVOUELLES PARISH

Cooperator: Johnny Coco
Agent: Carlos Smith and Trent Clark
Field Size: 40.9

Cultural Practices

Variety: Cocodrie
Method of Planting: Water Seeded
Water Management: Delayed Flood
Seeding Rate: 130 lb/A
Date of Planting: April 16
Date of Emergence: April 28

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	6-13	5-29
PD	6-25	6-8
50% Heading	7-18	7-3
Drain for Harvest	8-17	
Harvest	8-31	8-7

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ¹	Return on Variable Costs (\$/A) ^{1,2}
1st Crop	97.17	58.2/73.2	354.64	4.06	610.00
2nd Crop	--	--	--	--	--

Average Parish Yield (1st and 2nd Crop): cwt/A.

¹Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage or fixed costs.

²This value was obtained using a selling price of \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
5-22	46-0-0-+ agrotain	200	92		
6-1	0-46-0	50		23	
6-14	33-0-0-12S	160	53		
Total	--	--	145	23	

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Pigweed, Sprangletop, Barnyardgrass, Narrowleaf Aster, Morningglory	5-9	1 gal Propanil
Morningglory, Sprangletop, Pigweed, Johnsongrass,	5-16	1 gal Duet

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
(preventative)	7-5	14 oz Stratego

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-26	Karate
Rice Stink Bug	7-24	Karate

CONCORDIA PARISH

In Concordia Parish, Cocodrie was drilled in a heavy clay soil on a slightly sloping but laser smoothed field. Levees were pulled following drilling. Plastic irrigation tubing was used to both convey water to the field and flood it via gates installed in the tubing in each paddy. Flushing was not required because of timely rain.

Shortly after emergence, Command herbicide injury was observed in the top paddy and, to some extent, in the second paddy as well. Most of this injury, though, obviously was expected to be cosmetic only.

When the crop was ready for establishment of the permanent flood, a recommendation of Duet plus Permit to be followed by an application of 250 lb/A of urea and flood establishment was made. Two passes of the wrong herbicide were applied to the top and bottom of the field before the pilot could be alerted. Then upon application of the recommended herbicide, the first four passes contained something that injured the crop severely. At harvest, we determined 2.2 acres of the 53.8 acres had been completely killed.

Just prior to split boot, a mixture of Quadris and Quilt was applied as a preventative measure for false smut, kernel smut and the sheath rot/narrow brown leaf spot complex.

This field is one of the few verification fields since the beginning of the program in 1997 that did not require an insecticide application to control stink bugs.

We harvested our second highest yield of 2007 from this field. Yield was 9029 lb/A (56 bbl/A or 201 bu/A) at 15.4% moisture. This converted to 8680 lb/A (54 bbl/A or 193 bu/A) at 12% grain moisture. Had the 2.2 acres not been lost, the yield would have been 9414 lb/A (58 bbl or 209 bu/A) at 15.4% the equivalent of 9050 lb/A (56 bbl/A or 201 bu/A) at 12%. This would have set our all-time record for the verification program.

CONCORDIA PARISH

Cooperator: Noble Guedon

Agent: Glen Daniels

Field Size: 53.8 Acres

Cultural Practices

Variety: Cocodrie

Method of Planting: No-till Drill

Water Management: Delayed Flood

Seeding Rate: 100 lb/A

Date of Planting: March 30

Date of Emergence: April 9

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	5-30	5-25
PD	6-15	6-5
50% Heading	6-28	6-28
Drain for Harvest	7-25	
Harvest	8-22	8-2

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ¹	Return on Variable Costs (\$/A) ^{1,2}
1st Crop	86.80	60.4/71.2	384.63	4.40	526.77
2nd Crop	--	--	--	--	--

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
3-7	9-15-27 Zn S	150	13.5	22.5	40.5
5-10	46-0-0	250	115		
6-1	46-0-0	100	46		
Total	--	--	174.5		

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
--	3-3	1 lb Roundup + .4 oz Harmony + Surfactant
--	3-31	1.13 lb Roundup + 24.1 oz Command
Morningglory, Barnyardgrass, Soybean, Sedge, Johnsongrass, Sesbania, Crabgrass	5-9	1 gal Duet + .75 Permit

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight/ Hist. of Smut	6-26	14 oz Quilt + 6 oz Quadris

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-17	Karate

EAST CARROLL PARISH

The verification field in East Carroll Parish was one of two planted to CL171, a variety not yet receiving a recommendation from the LSU AgCenter; but because of its anticipated recommendation and the limited seed availability, we planted it with the intention of being able to give it a “real world” look.

The farmer drilled the seed at the rate of 83 lb/A, a rate more than adequate considering the ideal seed bed. Because a cold front brought low temperatures to the state at the time of planting and because the soil was too dry for emergence, we recommended holding off on flushing until temperatures began to rise. A few days later we recommended flushing. A perfect stand resulted. Diammonium phosphate (0-46-0) was applied at the rate of 75 lb/A just ahead of the flush. Early phosphorus deficiency had been noted the year before in surrounding area.

The initial application of Newpath plus Prowl was followed by Newpath plus Permit. By the end of the season, the field was still very clean. A hand application of 2,4-D was made to the levees to control hemp sesbania.

Mustang Max was used to control rice water weevils shortly after establishment of permanent flood.

A week prior to panicle differentiation (PD) sheath blight was picked up. This was the first field in the program in 2007 to show signs of heavy sheath blight pressure. When the crop reached late boot, an application of 14 ounces of Quilt plus 6 ounces of Quadris was made. The lower rate of Quilt and higher rate of Quadris were out of concern for the length of time protection from sheath blight would be needed. At harvest, very little sheath blight had come through the canopy.

One application of methyl parathion was made to control stink bugs.

The farmer harvested 8206 lb/A (51 bbl/A or 182 bu/A) at 15.1% moisture, which translated to 7917 lb/A (49 bbl/A or 176 bu/A) at 12% grain moisture. The disappointing head rice yields were in all likelihood a consequence of the low harvest moisture. This indicates that even though CL161 is one of the parents of this variety, it does not have the milling stability of CL161 at low moisture.

EAST CARROLL PARISH

Cooperator: Ken Fairchild

Agent: Donna Lee

Field Size: 22.9 acres

Cultural Practices

Variety: CL171

Seeding Rate: 83 lb/A

Method of Planting: Drill

Date of Planting: April 7

Water Management: Delayed Flood

Date of Emergence: April 21

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	6-7	6-1
PD	6-19	6-10
50% Heading	7-15	7-3
Drain for Harvest	8-2	
Harvest	8-27	8-7

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ¹	Return on Variable Costs (\$/A) ^{1,2}
1st Crop	79.17	46.7/73.6	400.59	5.05	430.70
2nd Crop	--	--	--	--	--

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
4-28	18-46-0	75	14	35	
5-16	46-0-0	240	110		
	46-0-0	120	55		
Total	--	--	179	35	

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Sedge	--	New Path 4 oz + Prowl
Sesbania, Morningglory	5-15	New Path 4 oz + 1 oz Permit
Sesbania	6-18	2,4-D

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight/Stem Rot	7-21	Quilt 14 oz + Quadris 6 oz

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-15	Mustang Max
Rice Stink Bug	7-19	Methyl Parathion

EVANGELINE – ST. LANDRY PARISH

Dry seed of the hybrid XP723 were flown into a less than ideal seedbed at the rate of 30 lb/A. The specialist should have recommended against this and will in all future similar situations. Under ideal conditions, this method might have been successful, but the conditions were not ideal. This was further complicated by a cold front while trying to flush the field. Eventually, some parts of the field had to be replanted.

As expected, the extended period of flushing and replanting compromised weed control. Conventional weeds were controlled with herbicides, but nothing could be done about red rice that emerged during the 2 to 3 weeks of alternately flooding and draining the field. This forced the farmer to abandon his intention of producing a second crop.

A nearby recreational fish pond restricted the use of insecticide as a spray to control rice water weevils. Because all of the early-season nitrogen had already been applied, Mustang EW was impregnated on 100 pounds of potassium fertilizer. Potassium was chosen as the carrier because it was the cheapest fertilizer source at the time.

Propiconazole fungicide was applied to prevent kernel smut, false smut and the sheath rot/narrow brown leaf spot complex. No sheath blight was observed prior to this fungicide application.

Determining drain time on this field proved to be very difficult for several reasons. First, the hybrids in general tended to shatter, making early drain imperative. The tillering ability of the hybrids also spreads out the maturity of panicles within a single plant along with the field in general. Replanting a portion of the field only added more to the mix. Because the best rice was in the area not replanted, drain timing was biased to favor that portion of the field.

The farmer harvested a very surprising 8846 lb/A (55 bbl/A or 197 bu/A) at 19.2% grain moisture or 8122 lb/A (50 bbl/A or 180 bu/A) at 12% moisture. There was some debate about the yield because of the difficulty encountered in the use of new truck scales. If anything, the yield was higher than we are reporting. Milling yield on this field was an exceptional 63.5/72.8% (head/total), the best in the verification program this year. Clearly, the hybrids must be harvested at high moisture to maximize both yield and milling. One can only wonder “what if” there had been a good stand to begin with and a second crop harvested as well.

EVANGELINE – ST. LANDRY PARISH

Cooperator: Jeffrey Sylvester
Agent: Keith Fontenot & Keith Normand
Field Size: 33.9 acres

Cultural Practices

Variety: XP723 **Seeding Rate:** 29 lb/A
Method of Planting: Water Seeded **Date of Planting:** March 28
Water Management: Pinpoint Flood **Date of Emergence:** April 4

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	5-26	
PD	6-4	
50% Heading	6-23	
Drain for Harvest	7-18	
Harvest	8-10	

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A)¹	Cost of Production (\$/cwt)¹	Return on Variable Costs (\$/A)^{1,2}
1st Crop	81.22	63.5/72.8	396.23	5.11	456.58
2nd Crop	--	--	--	--	--

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
5-8	46-0-0	50	23		
5-8	18-46-0	100	18	46	
5-12	0-0-60	100			60
6-9	46-0-0	115	53		
Total	--	--	94	46	60

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Knotgrass	5-7	15 oz Clincher + 1 pt Crop Oil
Sesbania, Cocklebur, Barnyardgrass, Sedge, Alligatorweed, Morningglory, Eclipta	5-8	1 oz Londax + .25 oz Permit
Sedge	5-22	1 oz Permit

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
--	6-21	Propimax

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-12	Mustang Max + K ₂ O
Rice Stink Bugs	6-26	1 ½ pt Malathion

JEFF DAVIS PARISH

By the time we visited the field in Jeff Davis Parish that had been chosen to be in the verification program, it was under a deep flood thus difficult to evaluate in terms of seedbed or potential weed problems. In spite of this, we agreed to the farmer's intentions of water seeding Cocodrie.

It was obvious as soon as the field was drained following seeding that we had made an error. A heavy population of knotgrass, alligatorweed, mannagrass, roundleaf mud plantain and other weeds greeted us. Potential for red rice necessitated careful water management in conjunction with critical decisions concerning herbicides.

Clincher was applied when rice was barely one leaf so a flood could be established to suppress red rice. Heavy rain and cold temperatures followed necessitating an application of zinc chelate and delaying an application of herbicide to control the broadleaf weeds. The first application of nitrogen fertilizer was also applied during the brief drain interval between planting and re-flooding. Once the rice had recovered and application of Londax plus Regiment was made.

By the following week, excellent herbicide activity was observed on the weeds. Rice water weevils were detected and an insecticide application recommended.

The next week the top paddy (in the center of the field with slope in two directions) was low on water while the bottom paddies had too much water in them. Herbicide injury to plants in the two bottom paddies caused us to recommend draining them. It was apparent later that water movement from the top paddy to the bottom paddies carried with it both nitrogen fertilizer and herbicide. We observed no herbicide injury in the top paddies, poorer weed control and nitrogen shortage in comparison with the bottom paddies, which suffered crop injury, excellent weed control and no nitrogen deficit.

The uneven maturity, crop injury and nearby sensitive plants prevented a 2,4-D injury to the first crop. Clearly, it would have been beneficial particularly in alligatorweed control. This field had the heaviest stink bug pressure of all of the verification fields. It was sprayed three times to keep the numbers down.

A disappointing 5998 lb/A (37 bbl/A or 133 bu/A) at 17.7% moisture. When adjusted to 12% moisture, the yield was 5630 lb/A (35 bbl/A or 125 bu/A).

The field was immediately fertilized with nitrogen, flooded and 2,4-D was applied to produce a second crop.

The second crop produced 1821 lb/A (11.2 bbl/A or 40 bu/A) at 12% moisture. This brought the total for the field to 7451 (46.0 bbl/A or 166 bu/A).

JEFF DAVIS PARISH

Cooperator: Ronnie “Blue” Zaunbrecher

Agent: Eddie Eskew

Field Size: 38.9 acres

Cultural Practices

Variety: Cocodrie

Seeding Rate: 120 lb/A

Method of Planting: Water Seeded (pre sprout)

Date of Planting: March 29

Water Management: Pinpoint Flood

Date of Emergence: April 3

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	5-16	5-14
PD	5-23	5-25
50% Heading	6-13	6-19
Drain for Harvest	7-15	
Harvest	8-6	7-24

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A)¹	Cost of Production (\$/cwt)¹	Return on Variable Costs (\$/A)^{1,2}
1st Crop	56.30	62.9/71.9	464.95	8.26	126.20
2nd Crop	18.21	--	86.31	4.74	104.90

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
4-3	24-0-21	300	72		63
4-18	Zn	.75			
5-14	46-0-0	150	69		
Total	--	--	141		63

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Knotgrass, Alligatorweed, Mannagrass, Roundleaf Mud Plantain	4-3	Clincher 15 oz/A + 1 qt Crop Oil
Alligatorweed, Roundleaf Mud Plantain	4-22	1 oz Londax + .5 oz Regiment + 2 gal UAN/100+Freeway

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight	6-15	19 oz Stratego

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-4	Mustang Max
Rice Stink Bug	6-22	Karate
Rice Stink Bug	6-28	Karate
Rice Stink Bug	7-12	Karate

VERMILION PARISH

The verification field in Vermilion Parish is the second of two planted to CL171, a variety not yet receiving a recommendation from the LSU AgCenter; but because of its anticipated recommendation and the limited seed availability, we planted it with the intention of being able to give it a “real world” look.

The majority of this fall stale seedbed field did not require an application of burndown herbicide so we elected to omit it all together. Part of the decision was the knowledge that we would be able to apply Newpath herbicide shortly after planting. Only one weed persisted through all herbicide applications; this weed is narrow leaved aster. It is increasing in prevalence throughout the rice growing area, especially in reduced tillage fields.

Record cold weather moved into the area requiring the application of a shallow flood to the field to provide some protection to the young seedlings. This also delayed some of the herbicide application. Once the weather changed, we were able to complete our herbicide application and make an application of insecticide to control the rice water weevil.

From there the crop took off. It looked outstanding. Fungicide was applied as a preventative to the narrow brown leaf spot / sheath rot complex. Insecticide was applied to control rice stink bugs.

Frequent rain after draining the field delayed harvest. Moisture was checked by hand and found to be in the mid-twenties 1 week and had dropped to 14% by the next week as soon as it stopped raining. This low grain moisture at harvest contributed to the low milling yields.

The farmer reported this field had never produced more than 36 bbl/A. Looking at the field before the combines started harvesting we expected a yield in the middle to high 40s (bbl) per acre. Yield was 6917 lb/A (43 bbl/A or 154 bu/A) at 14.3% moisture or 6739 lb/A (42 bbl or 150 bu/A) at 12% grain moisture.

At the request of the farmer, we agreed to allow him to flail mow the field. It was also fertilized and flooded immediately to produce a second crop.

Second crop was harvested in standing water held for crawfish production. The no-till seedbed prevented the typical severe rutting of the field that would normally have been expected. Yield was 1821 lb/A (11.2 bbl/A or 40 bu/A) at 12% moisture for a total of 7451 lb/A (46 bbl/A or 166 bu/A). The farmer said this field had never produced more than 5832 lb/A (36 bbl/A or 130 bu/A) before.

Although panicle rice mites were detected in the second crop there was apparently little effect on yield of the second crop.

VERMILION PARISH

Cooperator: Christian Richard

Agent: Howard Cormier

Field Size: 36.6 acres

Cultural Practices

Variety: CL171

Method of Planting: No-till Drill

Water Management: Delayed Flood

Seeding Rate: 75 lb/A

Date of Planting: March 23

Date of Emergence: March 31

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	5-17	5-17
PD	6-3	5-26
50% Heading	6-25	6-19
Drain for Harvest	7-13	
Harvest	8-6	7-24

Yield, Milling and Economic Data

	Yield @ 12 % Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ¹	Return on Variable Costs (\$/A) ^{1,2}
1st Crop	67.39	57.0/74.6	424.00	6.29	283.67
2nd Crop	23.07	--	104.41	4.53	137.82

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
3-9	0-23-34 + S + Zn	250		58	85
4-18	46-0-0	180	83		
5-16	46-0-0	125	58		
8-8	46-0-0	160	74		
Total	--	--	140	58	85

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Sedge, Narrow Leaved Aster, Dock, Gratiola, Barnyardgrass, Broadleaf Signalgrass, Jointvetch	4-2	NewPath 4 oz + NIS
Sedge	4-16	NewPath 4 oz + Permit 1 oz + Londax .25 oz

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
(preventative)	6-12	Quilt 21 oz + Quadris 3 oz

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	4-25	Mustang Max
Rice Water Weevil	5-2	Mustang Max
Rice Stink Bug	6-27	Mustang Max

WEST CARROLL PARISH

In West Carroll Parish, CL161 was drilled into heavy clay soil at 83 lb/A. Diammonium phosphate (DAP) was applied at the rate of 100 lb/A and 4 oz of NewPath was sprayed just ahead of flushing. The DAP was applied because it was successful in the area in 2005. These are soils that will test high in phosphorus, but plants will exhibit early-season phosphorus deficiency. Even though it appears to be a transitory situation, the critical need for phosphorus early in the season warrants the application.

Prowl herbicide was included in the first NewPath application because of the history of sprangletop. The only other herbicide applied was the second application of NewPath a couple of weeks later.

Seventy percent of a total of 155 pounds of nitrogen was applied just ahead of initial flood establishment. Insecticide was applied shortly after flooding to control rice water weevils. A second application of Karate was made about 3 weeks later because rice water weevil adults were detected again.

A nearby application of glyphosate to soybeans apparently drifted across the field between permanent flood establishment and green ring. While it is impossible to estimate its effect on yield, it clearly delayed maturity.

An application of fungicide was made to control sheath blight and to prevent both kernel smut and false smut.

Rice stink bugs reached threshold values and an appropriate insecticide was applied.

The field produced 8012 lb/A (50 bbl or 178 bu/A) at 19.2% moisture, which equates to 7356 lb/A (45 bbl/A or 164 bu/A) at 12% grain moisture. Considering the yield potential of CL161, this was an outstanding yield.

WEST CARROLL PARISH

Cooperator: Steve Rye
Agent: Myrl Sistrunk
Field Size: 40.2 acres

Cultural Practices

Variety: CL161	Seeding Rate: 83 lb/A
Method of Planting: Drill	Date of Planting: March 23
Water Management: Delayed Flood	Date of Emergence: April 1

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	5-31	5-27
PD	6-16	6-7
50% Heading	7-7	6-26
Drain for Harvest	7-30	-
Harvest	8-27	7-31

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt/A)	Milling Yield (% whole / % total)	Variable Costs (\$/A) ¹	Cost of Production (\$/cwt) ¹	Return on Variable Costs (\$/A) ^{1,2}
1st Crop	80.12	64.2/71.5	346.57	4.70	425.81
2nd Crop	--	--	--	--	--

Average Parish Yield (1st and 2nd Crop): cwt/A.

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 \$10.50/cwt.

Fertilization

Date	Source	Rate (lb/A)	N (lb/A)	P (lb/A)	K (lb/A)
4-13	18-46-0	100	18	46	
5-8	46-0-0	235	108		
5-31	46-0-0	100	46		
Total	--	--	172		

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
--	--	Touchdown
Barnyardgrass, History of Sprangletop	4-12	NewPath 4 oz + Prowl 2 1/3 pt
--	5-7	NewPath 4 oz + Surfactant
Sesbania	6-14	2,4-D Levees

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight/Hist. of Smut	6-26	Quilt 14 oz + Quadris 5 oz/A

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	5-11	Karate
Rice Water Weevil	5-24	Karate

Table 3. Ten-Year Louisiana Rice Research Verification Summary.

1998 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	53.0	32.8	118.1	5314
Avoyelles	32.5	42.9	154.4	6950
Calcasieu*	60.0	34.1	122.8	5524
East Carroll	33.9	41.1	148.0	6658
Evangeline	33.0	42.9	154.4	6950
Jeff Davis*	61.8	37.3	134.3	6043
Madison	36.6	39.0	140.4	6318
Morehouse	63.0	33.8	121.7	5476
St. Landry	37.1	38.2	137.5	6188
Vermilion	16.7	29.4	105.8	4763
TOTALS	427.6	37.2	133.7	6018.4

* Yields include second crop.

1999 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	31.1	37.4	134.6	6059
Avoyelles	32.5	46.6	167.8	7549
Calcasieu	49.3	34.6	124.6	5605
Catahoula	30.4	33.4	120.2	5411
East Carroll	36.1	47.0	169.2	7614
Evangeline	22.3	43.1	155.2	6982
Jeff Davis*	26.6	30.8	110.9	4990
Madison	38.1	39.0	140.4	6318
St. Landry	30.1	38.8	139.7	6286
Vermilion	23.8	36.5	131.4	5913
TOTALS	320.3	38.7	139.4	6272.7

* Yields include second crop.

2000 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia	53.3	39.4	141.8	6383
Avoyelles	63.2	36.7	132.1	5945
Calcasieu	22.1	25.1	90.4	4066
Catahoula	39.6	36.4	131.0	5897
East Carroll	45.1	49.1	176.8	7956
Evangeline	19.9	38.2	137.5	6188
Jeff Davis	30.6	26.7	96.1	4325
Morehouse	27.7	28.3	101.9	4585
St. Landry	70.7	39.2	141.1	6350
Vermilion*	21.6	37.7	135.7	6107
TOTALS	393.8	35.7	128.4	5780.2

* Yields include second crop.

Table 3. Continued.

2001 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	60.6	50.8	182.9	8230
Allen	41.6	35.1	126.4	5686
Avoyelles	63.2	38.1	137.2	6172
Calcasieu*	61.9	39.4	142.0	6388
Concordia	79.6	36.1	130.1	5853
Evangeline*	20.8	52.7	189.7	8538
Jeff Davis*	21.6	57.3	206.4	9289
Richland	65.9	46.0	165.5	7447
St. Landry*	40.6	51.1	184.0	8282
Vermilion*	33.3	52.4	188.7	8493
TOTALS	489.1	45.9	165.3	7437.8

* Yields include second crop.

2002 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia*	38.4	49.8	179.3	8068
Allen*	25.1	46.0	165.6	7452
Avoyelles	37.4	49.9	179.6	8084
Beauregard*	49.5	53.1	191.2	8602
Calcasieu*	41.4	42.4	152.6	6869
Concordia	67.6	48.2	173.5	7808
Evangeline	42.0	37.6	135.4	6091
Jeff Davis*	31.7	45.0	162.0	7290
Richland	35.8	42.1	151.5	6819
St. Landry	32.7	48.8	175.7	7906
Vermilion*	32.0	49.8	179.4	8072
TOTALS	433.6	46.6	167.8	7551.0

* Yields include second crop.

2003 Verification Acres and Yields				
		Yield @ 12% Moisture		
Parish	Acres	Barrels/A	Bushels/A	Pounds/A
Acadia	57.2	44.0	158.4	7128
Allen*	35.7	46.1	166.0	7469
Avoyelles	37.4	50.1	180.4	8116
Beauregard*	45.7	48.7	175.2	7884
Concordia	79.5	49.2	177.1	7970
Evangeline*	48.4	44.5	160.2	7209
Jeff Davis*	52.9	28.7	103.3	4649
Richland	40.2	44.7	160.8	7234
St. Landry*	32.7	61.1	220.0	9898
Vermilion*	33.0	40.0	144.0	6480
TOTALS	462.7	45.7	164.5	7403.7

* Yields include second crop.

Table 3. Continued.

2004 Verification Acres and Yields				
Parish	Acres	Yield @ 12% Moisture		
		Barrels/A	Bushels/A	Pounds/A
Allen*	53.2	40.9	147.1	6620
Avoyelles	33.3	32.8	118.0	5307
Beauregard*	21.8	42.5	153.3	6899
Concordia	82.3	36.0	130.0	5843
East Carroll	54.8	45.8	165.0	7427
Evangeline	30.7	34.8	125.2	5638
Jeff Davis*	42.3	38.5	138.6	6237
Natchitoches	47.2	44.1	158.8	7144
St. Landry*	60.1	65.1	234.3	10543
Vermilion*	30.0	42.1	151.6	6824
TOTALS	455.7	42.3	152.2	6848.2

*Yields include second crop.

2005 Verification Acres and Yields				
Parish	Acres	Yield @ 12% Moisture		
		Barrels/A	Bushels/A	Pounds/A
Acadia	28.9	39.6	143.8	6427
Allen	76.7	25.6	92.0	4140
Avoyelles	32.1	35.9	129.3	5819
Calcasieu	49.0	51.0	184.0	8282
Concordia	60.5	43.0	156.0	7003
East Carroll	30.4	47.9	172.7	7771
Evangeline	30.0	37.1	133.6	6014
Jeff Davis	39.2	32.5	117.0	5264
Natchitoches	30.0	43.3	156.0	7022
Richland	47.4	49.2	177.2	7974
St. Landry	61.7	47.5	170.9	7689
Vermilion	52.8	40.9	147.3	6631
TOTALS	538.7	41.1	148.3	6669.7

*Yields include second crop.

2006 Verification Acres and Yields				
Parish	Acres	Yield @ 12% Moisture		
		Barrels/A	Bushels/A	Pounds/A
Avoyelles	41.8	43.0	155.0	6972
Concordia	54.7	50.8	183.0	8237
East Carroll	60.4	44.5	150.0	7210
Evangeline	29.4	32.3	116.0	5227
Jeff Davis	21.5	43.8	157.8	6000
St. Landry	40.9	36.8	132.5	5962
Vermilion	29.6	37.0	133.3	7100
West Carroll	50.1	53.1	191.2	8603
TOTALS	328.4	43.4	156.4	7040

*Yields include second crop.

2007 Verification Acres and Yields

Parish	Acres	Yield @ 12% Moisture		
		Barrels/A	Bushels/A	Pounds/A
Avoyelles	40.9	56.7	204	9187
Concordia	53.8	53.6	193	8680
East Carroll	23.0	49.0	176	7917
Evangeline – St. Landry	33.9	50.1	180	8122
Jeff Davis*	38.9	55.8	201	9046
Vermilion*	36.6	46.0	166	7451
West Carroll	40.2	45.4	164	7356
TOTALS	267.3	51.2	184	8293

*Yields include second crop

1998 - 2007 Verification Summary					
Verification Totals			Verification Parish Totals		
Year	Acres	Pounds/A	Acres	Pounds/A	Verification - Parish
1998	427.6	6018.4	475,103	5052	966.4
1999	320.3	6272.7	444,015	5502	770.7
2000	393.8	5780.2	385,824	5620	160.2
2001	489.1	7437.8	412,286	5794	1643.8
2002	433.6	7551.0	412,630	5764	1787
2003	462.7	7403.7	327,843	5843	1560.7
2004	455.7	6848.2	311,606	5582	1266.2
2005	538.7	6669.6	402,759	6165	504.6
2006	328.4	7039.5	185,249	5644	1395.5
2007	267.3	8293.3	183,357	6501	1792
Totals	4117.2	6931.4	3,540,672	5746.7	1184.7